Alimentiv, AcelaBio, and PharmaNest Unite To Revolutionize Precision Medicine and AI Digital Pathology for NASH/MASH Clinical Trials

1231 words
9 November 2023
ENP Newswire
ENPNEW
English

Release date - 08112023

LONDON - Alimentiv Inc., AcelaBio Inc., and PharmaNest Inc. are pleased to announce their collaborative effort aimed at revolutionizing precision medicine and artificial intelligence (AI)-enabled digital pathology solutions for metabolic dysfunction-associated steatohepatitis (MASH), previously known as nonalcoholic steatohepatitis (NASH) **clinical trials**.

This collaboration will enable clinical trial sponsors to quantify the histological effects of compounds and gain deeper insight into underlying mechanisms in MASH-targeted therapies using state-of-the-art spatial transcriptomics and AI-powered single-fiber and single-cell digital pathology. By harnessing the collective expertise of Alimentiv, AcelaBio, and PharmaNest, this collaboration will establish an integrated ecosystem that seamlessly combines high throughput specialty anatomic and molecular pathology, precision medicine technologies, bioinformatics, and AI-powered digital pathology image analysis. Integrating these cutting-edge solutions is a significant advancement in applying novel technologies to enable high-quality end-to-end tissue assays, allowing clinical trial sponsors to drive scientific discoveries and accelerate drug development in MASH, a disease with a growing impact and currently no approved therapies.

AcelaBio, a CAP/CLIA-certified clinical research laboratory known for its end-to-end digital pathology workflows, will carry out tissue sample analysis to generate whole slide images and molecular data. 'Our collaboration holds great potential for the advancement of MASH clinical research to further the identification and quantification of digital pathology biomarker data and to enhance clinical development,' said Niels Vande Casteele, Ph.D., President of AcelaBio. 'By creating seamless workflows integrating advanced sample analysis, digital pathology, bioinformatics, and AI-powered analysis, we can unlock new opportunities to identify biomarker signatures within the spatial context of the tissue.'

The collaborative efforts of Alimentiv, AcelaBio, and PharmaNest will facilitate the seamless integration of robust digital pathology operational workflows and Artificial Intelligence in MASH **clinical trials**, ultimately leading to the development of personalized therapies and improving patient outcomes.

'Alimentiv prioritizes leading with science through our commitment to developing innovative early clinical trial designs and outcome assessments. Our expertise in endpoint assessments and precision medicine analyses, including bioinformatics and AI-powered digital pathology biomarker quantitation, positions us along with our collaborative partners to innovate and transform the landscape of MASH **clinical trials**,' said Wendy Teft, Ph.D., VP of Precision Medicine at Alimentiv. 'Through the integration of our respective technologies and expertise, we aim to empower clinical trial sponsors with the necessary tools to improve the quality of histological endpoints, uncover novel biomarkers, and accelerate drug development timelines by gaining comprehensive insights into the underlying mechanisms of action in MASH targeted therapies.'

PharmaNest, recognized for its excellence in MASH digital pathology and Artificial Intelligence analysis services, will play a pivotal role in this collaboration by providing high-resolution, single-fiber, and single-cell quantitative image analysis and AI-powered biomarkers from the same images reviewed by pathologists for critical endpoint assessments. Together, these organizations will enhance the quality of current histological endpoints required for the interim FDA approval of therapies in MASH and enable the analysis of complex data sets, leading to a comprehensive understanding of MASH pathology and the discovery of new biomarkers.

'Using our digital pathology FibroNest platform, the automated high-resolution quantification of the phenotype of fibrosis severity and related tissue injury from the same slides reviewed by pathologists offers a robust and scalable method to generate continuous scores that resolve faint changes in fibrosis severity and disease activity and can be used in MASH Trials to assist pathologists and enrich the quantification of the effect of an intervention. Our Fibrosis Digital Pathology biomarker, Ph-FCS, offers exceptional performance as a diagnostic tool for early and severe fibrosis. The recently published results showing that it can also predict liver-related events and outcomes opens the road for its future qualification as a likely surrogate endpoint in MASH studies,' says Mathieu Petitjean, Ph.D., CEO of PharmaNest. 'The partnership with Alimentiv and AcelaBio will ensure sponsors receive a superb end-to-end digital pathology tissue assay where pre-analytical conditions are well controlled during the length of a study.

The collaboration between Alimentiv, AcelaBio, and PharmaNest represents a substantial leap forward in integrating precision medicine and digital pathology solutions for MASH **clinical trials**. By uniting their expertise, these organizations aim to further enhance early drug development efficiency to get safe and effective treatments to patients in a more expedient fashion.

Clinical trial sponsors interested in accessing the benefits of this service collaboration are encouraged to contact the respective organizations for further information.

About Alimentiv Inc.

Alimentiv is a global gastroenterology-focused contract research organization (CRO) providing **clinical trials**, central image management, precision medicine, and real-world evidence services to the pharmaceutical and biotechnology industries. Headquartered in London, Ontario, Alimentiv employs more than 500 people across its operations in Canada, the United States, Europe, Asia-Pacific, and Latin America. The organization's unique model combines the efforts of internationally recognized academic researchers and operational experts to offer integrated solutions to customers. Over the past 20 years, Alimentiv has become a recognized expert in clinical trial design, central image management solutions, outcome measure development, and precision medicine for drug development in GI. Today, Alimentiv provides services in more than 50 countries worldwide, collaborates with leading universities and academic institutions across the globe, and works with many leading pharmaceutical and biotechnology organizations to bring new and improved treatment options to patients. Alimentiv is committed to investment in medical research and development, focusing on identifying barriers to drug development and pursuing solutions that advance GI research. The research findings are operationalized into an efficient clinical trial methodology for clients that aligns with emerging regulatory standards. In collaboration with leading experts, Alimentiv has pioneered the development, validation, and standardization of outcome measures and technology, shaping the evolving clinical trial landscape for multiple indications and providing meaningful long-term consequences for patients, their treatment, and society.

About AcelaBio (US) Inc.

AcelaBio is a state-of-the-art, CAP/CLIA-accredited, contract research organization delivering end-to-end histopathology and precision medicine services for pharmaceutical, biotech, and academic institutions. AcelaBio provides high-throughput digital pathology services to support multicenter, global **clinical trials** and has the flexibility to develop and validate biomarker assays for novel or existing protein or molecular targets. For discovering novel biomarker signatures and interrogating the spatial biology of tissues, AcelaBio implemented 10X Genomics Visium Spatial Transcriptomics into its workflows. AcelaBio's laboratory capabilities are applicable across a wide range of therapeutic indications, including gastroenterology, oncology, and dermatology. AcelaBio is highly specialized in testing gastrointestinal tissues from patients with inflammatory bowel diseases (e.g., Crohn's disease and ulcerative colitis), eosinophilic gastrointestinal diseases (e.g., eosinophilic esophagitis), and liver diseases (metabolic dysfunction-associated steatohepatitis). AcelaBio employs operational, scientific, and medical experts, including U.S. board-certified pathologists, who are dedicated to delivering reliable, high-quality data and imagery.

About PharmaNest

PharmaNest is a Digital Pathology and Artificial Intelligence company focused on the development and validation of novel histological standards for the quantification of Inflammation and fibrosis. Its multivendor platform, FibroNest, is delivered worldwide via the cloud and used in multiple pre-clinical and clinical studies across several fibrotic conditions, including MASH, PBC, PSC, IBD, EoE, Sjogren's, Fibro-Immuno-oncology and more.

[Editorial queries for this story should be sent to newswire@enpublishing.co.uk]

Electronic News Publishing Ltd.

Document ENPNEW0020231109ejb9000ej

Clario's Oncology Webinar Series Part 1 -- Revolutionizing Oncology Clinical Trials: The Transformative Power and Promise of AI-Enhanced Medical Imaging

477 words
9 November 2023
08:30
PR Newswire
PRN
English

In this free webinar, which is Part 1 of Clario's Oncology Webinar Series, learn about the current advancements of AI that are enhancing the efficiency of oncology **clinical trials** with a focus on medical imaging. Additionally, the featured speakers will explore the exciting potential that deep learning and generative AI hold in this dynamic field.

TORONTO, Nov. 9, 2023 /PRNewswire-PRWeb/ -- The integration of artificial intelligence (AI) with medical imaging in oncology **clinical trials** has brought about a profound transformation. Its advancements have revolutionized diagnostic accuracy and prognostic insights with advanced image segmentation methods enabling precise delineation of pathological areas and enhancing treatment response measurements. Furthermore, AI's predictive capabilities offer new avenues for anticipating disease progression and improving therapeutic strategies, all while ensuring patient privacy. Overall, the adoption of AI in oncology **clinical trials** promises a journey of innovation, encompassing precision diagnostics, predictive modeling and therapy evolution. This journey navigates complex aspects like patient privacy, data integrity and stakeholder engagement.

In this discussion, we will delve into the current advancements of AI that are enhancing the efficiency of oncology **clinical trials** with a focus on medical imaging. Additionally, we will explore the exciting potential that deep learning and generative AI hold in this dynamic field.

Esteemed speakers, Kim Nguyen, Joel Schaerer and Alex Boudreau, will explore how AI is transforming medical imaging for oncology-focused **clinical trials**.

Join experts from Clario, Kim Nguyen, Director, Data Science, Data Science and Delivery; Joël Schaerer, Director, Tech Product Development, Research & Development -- Imaging; and Alex Boudreau, Director, AI, Research & Development -- Imaging, for the live webinar on Tuesday, November 28, 2023, at 11am EST (4pm GMT/UK). This webinar is Part 1 of Clario's Oncology Webinar Series.

For more information, or to register for this event, visit Clario's Oncology Webinar Series.

ABOUT XTALKS

Xtalks, powered by Honeycomb Worldwide Inc., is a leading provider of educational webinars to the global life science, food and medical device community. Every year, thousands of industry practitioners (from life science, food and medical device companies, private & academic research institutions, healthcare centers, etc.) turn to Xtalks for access to quality content. Xtalks helps Life Science professionals stay current with industry developments, trends and regulations. Xtalks webinars also provide perspectives on key issues from top industry thought leaders and service providers.

To learn more about Xtalks visit http://xtalks.com[http://xtalks.com]

For information about hosting a webinar visit http://xtalks.com/why-host-a-webinar/[http://xtalks.com/why-host-a-webinar/]

Media Contact

Vera Kovacevic, Xtalks, +1 (416) 977-6555 x371, vkovacevic@xtalks.com

View original content to download multimedia:https://www.prweb.com/releases/clarios-oncology-webinar-series-part-1--revolutionizing-oncology-**clinical-trials**-the-transformative-power-and-promise-of-ai-enhanced-medical-imaging-301983198.html[https://www.prweb.com/releases/clarios-oncology-webinar-series-part-1--revolutionizing-oncology-clinical-trials-the-transformative-power-and-promise-of-ai-enhanced-medical-imaging-301983198.html]

SOURCE Xtalks

(END)

PR Newswire Association, Inc.

Document PRN0000020231109ejb9000bw

Press Release: Mainz Biomed Partners with Liquid Biosciences to Harness the Power of Artificial Intelligence (AI) to Develop Next-generation Colorectal Screening Test

1623 words
9 November 2023
08:01
Dow Jones Institutional News
DJDN
English

Mainz Biomed Partners with Liquid Biosciences to Harness the Power of Artificial Intelligence (AI) to Develop Next-generation Colorectal Screening Test

Collaboration to utilize cutting-edge AI analysis platform for **clinical trials** and cancer screening test processing

BERKELEY, Calif. and MAINZ, Germany, Nov. 09, 2023 (GLOBE NEWSWIRE) -- Mainz Biomed NV (NASDAQ:MYNZ) ("Mainz Biomed" or the "Company"), a molecular genetics diagnostic company specializing in the early detection of cancer, announced today a strategic partnership with Liquid Biosciences, a bio-analytics company leveraging its proprietary AI analysis technology platform (EMERGE) to serve the biopharma and diagnostics industries along with academic institutions.

The collaboration builds upon Mainz Biomed's initial utilization of EMERGE to analyze the Company's ColoFuture study, which recently reported groundbreaking results including sensitivity for colorectal cancer of 94% with a specificity of 97% and a sensitivity for advanced adenoma of 80%. ColoFuture is an international multi-center clinical trial which assessed the potential to integrate a portfolio of novel gene expression (mRNA) biomarkers into ColoAlert(R) , Mainz Biomed's highly efficacious, and easy-to-use screening test for colorectal cancer (CRC) being commercialized across Europe and in select international territories. This proprietary family of mRNA biomarkers represents a potentially game-changing innovation in CRC screening as the portfolio has previously demonstrated the ability to detect CRC lesions, including advanced adenomas, a type of pre-cancerous polyp often attributed to this deadly disease.

Under the terms of the partnership, the utility of EMERGE in Mainz Biomed's product development pipeline will be extended to include analysis of its eAArly DETECT study (the U.S. arm of the ColoFuture clinical trial), and the forthcoming U.S. pivotal FDA PMA trial (ReconAAsense) which, if successful, will enable Mainz Biomed to further advance its current test's capabilities and commercialize a next-generation, gold standard, self-administered CRC screening tool. The eAArly DETECT clinical trial, a multi-center feasibility study is enrolling 265 subjects across 22 sites and remains on track to report results in Q4 2023. The goal at completion will result in a single fixed machine learning/AI-based algorithm, developed utilizing the evolutionary EMERGE platform, integrated into the next-generation product's test report.

"As artificial intelligence continues to disrupt every aspect of the healthcare sector, we are excited to establish a robust partnership with a genuine leader in the field as we head into the final development stage of our next-generation CRC screening test," commented Guido Baechler, Chief Executive Officer of Mainz Biomed. "We look forward to continuing our highly productive partnership with the Liquid Biosciences team as we execute on our mission to bring the most effective self-administered cancer detection products to the market."

Since launching the EMERGE bio-analytics platform, Liquid Biosciences is widely considered to be the premier analytical partner to the life sciences industry. Its technology has been deployed in over 170 projects for Big Pharma and emerging therapeutic and diagnostic companies covering biomarker discovery, clinical trial screening and post-FDA approval services such as patient treatment selection and optimal dosing regiments. Key attributes of EMERGE that make it superior to mainstream AI and machine learning analytical solutions include its computational speed, ability to handle millions of variables and operate agnostically, without any assumptions or constraints. It was designed as a scalable, unbiased methodology to produce transparent algorithms from complex data, without any prior assumptions. This enables the identification of variables with relatively low expression, but which may be functionally important because of the non-linear interactions pervasive in complex biologic systems.

"We are excited to extend our relationship with Mainz Biomed into a formal partnership as we take great pride in working with companies who represent disruptive innovation that will impact disease prevention and treatment," commented Patrick Lilley, Chief Executive Officer of Liquid Biosciences. "The work Mainz Biomed is doing will be crucial to saving lives from a disease where mortality is driven by late detection. As such, we are very pleased to have the opportunity to play an integral role in helping it develop the next generation of its pioneering products."

Please visit Mainz Biomed's official website for investors at mainzbiomed.com/investors/ for more information.

Please follow us to stay up to date:

LinkedIn

X (Previously Twitter)

Facebook

About ColoAlert(R)

ColoAlert(R) , Mainz Biomed's flagship product, delivers high sensitivity and specificity in a user-friendly, at-home colorectal cancer (CRC) screening kit. This non-invasive test can be indicative of tumors as determined by analyzing tumor DNA, offering better early detection than fecal occult blood tests (FOBT). Based on PCR-technology, ColoAlert(R) detects more cases of colorectal cancer than other stool tests and allows for an earlier diagnosis (Dollinger et al., 2018). The product is commercially available in select EU countries through a network of leading independent laboratories, corporate health programs and via direct sales. To receive marketing approval in the US, ColoAlert(R) will be evaluated in the FDA-registration trial 'ReconAAsense.' Once approved in the US, the Company's commercial strategy is to establish scalable distribution through a collaborative partner program with regional and national laboratory service providers across the country.

About Colorectal Cancer

Colorectal cancer (CRC) is the third most common cancer globally, with more than 1.9 million new cases reported in 2020, according to World Cancer Research Fund International. The US Preventive Services Task Force recommends that screening with stool DNA tests such as ColoAlert(R) should be conducted once every three years starting at age 45. Each year in the US, 16.6 million colonoscopies are performed. However, roughly one-third of US residents aged 50-75 have never been screened for colon cancer. This gap in screening represents a $4.0B+ total market opportunity in the US.

About Mainz Biomed N.V.

Mainz Biomed develops market-ready molecular genetic diagnostic solutions for life-threatening conditions. The Company's flagship product is ColoAlert(R) , an accurate, non-invasive and easy-to-use, early-detection diagnostic test for colorectal cancer based on real-time Polymerase Chain Reaction-based (PCR) multiplex detection of molecular-genetic biomarkers in stool samples. ColoAlert(R) is currently marketed across Europe. The Company is running a pivotal FDA clinical study for US regulatory approval. Mainz Biomed's product candidate portfolio also includes PancAlert, an early-stage pancreatic cancer screening test. To learn more, visit mainzbiomed.com.

For media inquiries -

In Europe:

MC Services AG

Anne Hennecke/Caroline Bergmann

+49 211 529252 20

mainzbiomed@mc-services.eu

In the U.S.:

Josh Stanbury

+1 416 628 7441

josh@sjspr.co

For investor inquiries, please contact info@mainzbiomed.com

About Liquid Biosciences

Liquid Biosciences radically reduces diagnostic and drug development risk, time, and cost, from pre-clinical research through regulatory approval. Our Emerge bio-analytics platform agnostically discovers and models the nonlinear dynamics of how biology, behavior, and circumstances interact to drive patient outcomes. Our mathematical evolution technology goes beyond artificial intelligence's capabilities, and has produced superior accuracy, novel insights, and explainability in every head-to-head comparison with other analytic methods. Liquid Biosciences' clients are major biopharma firms, diagnostic companies, and world-class research institutions. We've completed over 165 major analytic projects across 44 diseases, using the full spectrum of clinical trial, real-world, and multi-omics biomarker data. For more information about Liquid Biosciences, visit www.liquidbiosciences.com[http://www.liquidbiosciences.com].

Forward-Looking Statements

Certain statements made in this press release are "forward-looking statements" within the meaning of the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995. Forward-looking statements may be identified by the use of words such as "anticipate", "believe", "expect", "estimate", "plan", "outlook", and "project" and other similar expressions that predict or indicate future events or trends or that are not statements of historical matters. These forward-looking statements reflect the current analysis of existing information and are subject to various risks and uncertainties. As a result, caution must be exercised in relying on forward-looking statements. Due to known and unknown risks, actual results may differ materially from the Company's expectations or projections. The following factors, among others, could cause actual results to differ materially from those described in these forward-looking statements: (i) the failure to meet projected development and related targets; (ii) changes in applicable laws or regulations; (iii) the effect of the COVID-19 pandemic on the Company and its current or intended markets; and (iv) other risks and uncertainties described herein, as well as those risks and uncertainties discussed from time to time in other reports and other public filings with the Securities and Exchange Commission (the "SEC") by the Company. Additional information concerning these and other factors that may impact the Company's expectations and projections can be found in its initial filings with the SEC, including its annual report on Form 20-F filed on April 7, 2023. The Company's SEC filings are available publicly on the SEC's website at www.sec.gov[http://www.sec.gov]. Any forward-looking statement made by us in this press release is based only on information currently

available to Mainz Biomed and speaks only as of the date on which it is made. Mainz Biomed undertakes no obligation to publicly update any forward-looking statement, whether written or oral, that may be made from time to time, whether as a result of new information, future developments or otherwise, except as required by law.

(END) Dow Jones Newswires

November 09, 2023 08:01 ET (13:01 GMT)

Document DJDN000020231109ejb9003dh

EQS-News: Mainz Biomed Partners with Liquid Biosciences to Harness the Power of Artificial Intelligence (AI) to Develop Next-generation Colorectal Screening Test

1745 words
9 November 2023
08:01
Dow Jones Newswires German
RTDJGE
English

Issuer: Mainz BioMed N.V. / Key word(s): Miscellaneous
Mainz Biomed Partners with Liquid Biosciences to Harness the Power of Artificial Intelligence (AI) to Develop Next-generation Colorectal Screening Test
2023-11-09 / 14:01 CET/CEST
The issuer is solely responsible for the content of this announcement.
=---

Mainz Biomed Partners with Liquid Biosciences to Harness the Power of Artificial Intelligence (AI) to Develop Next-generation Colorectal Screening Test

Collaboration to utilize cutting-edge AI analysis platform for **clinical trials** and cancer screening test processing

BERKELEY, US - MAINZ, Germany - NOVEMBER 9, 2023 - Mainz Biomed NV (NASDAQ:MYNZ) ("Mainz Biomed" or the "Company"), a molecular genetics diagnostic company specializing in the early detection of cancer, announced today a strategic partnership with Liquid Biosciences, a bio-analytics company leveraging its proprietary AI analysis technology platform (EMERGE) to serve the biopharma and diagnostics industries along with academic institutions.

The collaboration builds upon Mainz Biomed's initial utilization of EMERGE to analyze the Company's ColoFuture study, which recently reported groundbreaking results including sensitivity for colorectal cancer of 94% with a specificity of 97% and a sensitivity for advanced adenoma of 80%. ColoFuture is an international multi-center clinical trial which assessed the potential to integrate a portfolio of novel gene expression (mRNA) biomarkers into ColoAlert^®, Mainz Biomed's highly efficacious, and easy-to-use screening test for colorectal cancer (CRC) being commercialized across Europe and in select international territories. This proprietary family of mRNA biomarkers represents a potentially game-changing innovation in CRC screening as the portfolio has previously demonstrated the ability to detect CRC lesions, including advanced adenomas, a type of pre-cancerous polyp often attributed to this deadly disease.

Under the terms of the partnership, the utility of EMERGE in Mainz Biomed's product development pipeline will be extended to include analysis of its eAArly DETECT study (the U.S. arm of the ColoFuture clinical trial), and the forthcoming U.S. pivotal FDA PMA trial (ReconAAsense) which, if successful, will enable Mainz Biomed to further advance its current test's capabilities and commercialize a next-generation, gold standard, self-administered CRC screening tool. The eAArly DETECT clinical trial, a multi-center feasibility study is enrolling 265 subjects across 22 sites and remains on track to report results in Q4 2023. The goal at completion will result in a single fixed machine learning/ AI-based algorithm, developed utilizing the evolutionary EMERGE platform, integrated into the next-generation product's test report.

"As artificial intelligence continues to disrupt every aspect of the healthcare sector, we are excited to establish a robust partnership with a genuine leader in the field as we head into the final development stage of our next-generation CRC screening test," commented Guido Baechler, Chief Executive Officer of Mainz Biomed. "We look forward to continuing our highly productive partnership with the Liquid Biosciences team as we execute on our mission to bring the most effective self-administered cancer detection products to the market."

Since launching the EMERGE bio-analytics platform, Liquid Biosciences is widely considered to be the premier analytical partner to the life sciences industry. Its technology has been deployed in over 170 projects for Big Pharma and emerging therapeutic and diagnostic companies covering biomarker discovery, clinical trial screening and post-FDA approval services such as patient treatment selection and optimal dosing regiments. Key attributes of EMERGE that make it superior to mainstream AI and machine learning analytical solutions include its computational speed, ability to handle millions of variables and operate agnostically, without any assumptions or constraints. It was designed as a scalable, unbiased methodology to produce transparent algorithms from complex data, without any prior assumptions. This enables the identification of variables with relatively low expression, but which may be functionally important because of the non-linear interactions pervasive in complex biologic systems.

"We are excited to extend our relationship with Mainz Biomed into a formal partnership as we take great pride in working with companies who represent disruptive innovation that will impact disease prevention and treatment," commented Patrick Lilley, Chief Executive Officer of Liquid Biosciences. "The work Mainz Biomed is doing will be crucial to saving lives from a disease where mortality is driven by late detection. As such, we are very pleased to have the opportunity to play an integral role in helping it develop the next generation of its pioneering products."

Please visit Mainz Biomed's official website for investors at mainzbiomed.com/investors/ for more information.

Please follow us to stay up to date:

LinkedIn

X (Previously Twitter)

Facebook

About ColoAlert^®

ColoAlert^®, Mainz Biomed's flagship product, delivers high sensitivity and specificity in a user-friendly, at-home colorectal cancer (CRC) screening kit. This non-invasive test can be indicative of tumors as determined by analyzing tumor DNA, offering better early detection than fecal occult blood tests (FOBT). Based on PCR-technology, ColoAlert^® detects more cases of colorectal cancer than other stool tests and allows for an earlier diagnosis (Dollinger et al., 2018). The product is commercially available in select EU countries through a network of leading independent laboratories, corporate health programs and via direct sales. To receive marketing approval in the US, ColoAlert^® will be evaluated in the FDA-registration trial 'ReconAAsense.' Once approved in the US, the Company's commercial strategy is to establish scalable distribution through a collaborative partner program with regional and national laboratory service providers across the country.

About Colorectal Cancer

Colorectal cancer (CRC) is the third most common cancer globally, with more than 1.9 million new cases reported in 2020, according to World Cancer Research Fund International. The US Preventive Services Task Force recommends that screening with stool DNA tests such as ColoAlert® should be conducted once every three years starting at age 45. Each year in the US, 16.6 million colonoscopies are performed. However, roughly one-third of US residents aged 50-75 have never been screened for colon cancer. This gap in screening represents a USD4.0B+ total market opportunity in the US.

About Mainz Biomed N.V.

Mainz Biomed develops market-ready molecular genetic diagnostic solutions for life-threatening conditions. The Company's flagship product is ColoAlert®, an accurate, non-invasive and easy-to-use, early-detection diagnostic test for colorectal cancer based on real-time Polymerase Chain Reaction-based (PCR) multiplex detection of molecular-genetic biomarkers in stool samples. ColoAlert® is currently marketed across Europe. The Company is running a pivotal FDA clinical study for US regulatory approval. Mainz Biomed's product candidate portfolio also includes PancAlert, an early-stage pancreatic cancer screening test. To learn more, visit mainzbiomed.com.

For media inquiries - press@mainzbiomed.com
In Europe:
MC Services AG
Anne Hennecke/Caroline Bergmann
+49 211 529252 20
mainzbiomed@mc-services.eu
In the U.S.:
Josh Stanbury

+1 416 628 7441
josh@sjspr.co
For investor inquiries, please contact info@mainzbiomed.com
About Liquid Biosciences
Liquid Biosciences radically reduces diagnostic and drug development risk, time, and cost, from pre-clinical research through regulatory approval. Our Emerge bio-analytics platform agnostically discovers and models the nonlinear dynamics of how biology, behavior, and circumstances interact to drive patient outcomes. Our mathematical evolution technology goes beyond artificial intelligence's capabilities, and has produced superior accuracy, novel insights, and explainability in every head-to-head comparison with other analytic methods. Liquid Biosciences' clients are major biopharma firms, diagnostic companies, and world-class research institutions. We've completed over 165 major analytic projects across 44 diseases, using the full spectrum of clinical trial, real-world, and multi-omics biomarker data. For more information about Liquid Biosciences, visit www.liquidbiosciences.com[http://www.liquidbiosciences.com].
Forward-Looking Statements
Certain statements made in this press release are "forward-looking statements" within the meaning of the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995. Forward-looking statements may be identified by the use of words such as "anticipate", "believe", "expect", "estimate", "plan", "outlook", and "project" and other similar expressions that predict or indicate future events or trends or that are not statements of historical matters. These forward-looking statements reflect the current analysis of existing information and are subject to various risks and uncertainties. As a result, caution must be exercised in relying on forward-looking statements. Due to known and unknown risks, actual results may differ materially from the Company's expectations or projections. The following factors, among others, could cause actual results to differ materially from those described in these forward-looking statements: (i) the failure to meet projected development and related targets; (ii) changes in applicable laws or regulations; (iii) the effect of the COVID-19 pandemic on the Company and its current or intended markets; and (iv) other risks and uncertainties described herein, as well as those risks and uncertainties discussed from time to time in

other reports and other public filings with the Securities and Exchange Commission (the "SEC") by the Company. Additional information concerning these and other factors that may impact the Company's expectations and projections can be found in its initial filings with the SEC, including its annual report on Form 20-F filed on April 7, 2023. The Company's SEC filings are available publicly on the SEC's website at www.sec.gov[http://www.sec.gov]. Any forward-looking statement made by us in this press release is based only on information currently available to Mainz Biomed and speaks only as of the date on which it is made. Mainz Biomed undertakes no obligation to publicly update any forward-looking statement, whether written or oral, that may be made from time to time, whether as a result of new information, future developments or otherwise, except as required by law.
=----------

=----------
Language: English
Company: Mainz BioMed N.V.
Robert-Koch-Strasse 50
55129 Mainz
Germany
Internet: mainzbiomed.com
EQS News ID: 1765947

End of News EQS News Service
=----------

Image link: https://eqs-cockpit.com/cgi-bin/fncls.ssp?fn=show_t_gif&application_id=1765947&application_name=news[https://eqs-cockpit.com/cgi-bin/fncls.ssp?fn=show_t_gif&application_id=1765947&application_name=news]

(END) Dow Jones Newswires

09-11-23 1301GMT

Document RTDJGE0020231109ejb9000nx

Sculpting Proteins With Code: Use Of Generative AI In Protein Design

June Juyeon Han

1060 words
9 November 2023
Mondaq Business Briefing
BBPUB
English

In this article, we discuss how generative AI can provide a shortcut for developing therapeutic candidates.

In the world of complex biological networks, Artificial Intelligence (AI) is providing significant guidance to disease modelling and drug discovery processes. Developing a therapeutic cure for a disease requires the critical but extremely challenging process of identifying the structure and mechanism of a suitable target protein or cellular pathway that can be modulated by antibodies or drugs.

Current **clinical trials** have a high failure rate of around 84.6%1. This startling statistic reflects the biological uncertainties faced by an average clinical trial. AI is playing a growing role in therapeutics development, with its targeted therapeutic development based on large datasets. Among the emerging trends, generative AI, a subset of AI, has shown immense potential. In this article, we discuss how generative AI can provide a shortcut for developing therapeutic candidates.

Rise of Generative AI

Generative AI is a type of Artificial Intelligence that can create a wide variety of data, such as texts and images from one or more prompts (or inputs). The 'generative' ability to create new data is a huge step forward from the more conventional 'discriminative' approach. For instance, discriminative models can be trained on English and French texts, and used to classify whether a new sentence is in English or French. The ultimate goal of discriminative models is to separate one class from another. On the other hand, generative AI models can rapidly utilise a significant volume of unlabelled data. Once a generative AI model learns patterns from existing data, this knowledge generates new and unique outputs. Recent breakthroughs in the field, such as in GPTs (Generative Pre-trained Transformers) can complete a sentence or write a full essay in response to a question.

Generative AI for therapeutics and Medicine

So how can generative AI be applied to develop novel therapeutics? One way is to use Generative AI to design the proteins themselves, which act as novel therapeutics. For instance, AI can design antibodies that provide targeted defence against a certain disease target, or synthesise therapeutic proteins to replace a protein that is abnormal or deficient in a particular disease.

Generative AI is extensively used in predicting and designing novel protein structures. Proteins are composed of a sequence of amino acids with distinctive properties, arranged in a certain order. Based on this one-dimensional amino acid sequence, proteins fold into intricate three-dimensional forms that allow them to perform biological activities. For example, a series of hydrophilic amino acid chains can form a functional unit exposed to the surface of the proteins to bind a target, or a combination of certain amino acids can be used to carry out a catalytic function.

Some generative AI models predict the probability of the next amino acid in the sequence based on the previous amino acids in the sequence. Similar to the way that natural language processing models identify semantic and grammatical rules (such as the order of the subject and verb, present and past tense), amino acid sequence patterns, local structure motifs of the proteins, including alpha helices and beta sheets, and the tertiary structure building upon these, can also be learned. This way, large language models can be used to generate functional protein sequences.

Some of the protein building platforms make use of a transformer architecture that employs self-attention mechanisms1. Such platforms were originally designed to identify the highest correlations amongst words within a sentence - or amino acids in a protein in this case. Using billions of known amino acid sequences as inputs to the transformer AI models, the self-attention mechanism allows testing, for example, of pairwise amino acid interaction between every single amino acid in the input sequenceii. The pairwise interaction is critical in determining a final 3D structure that can perform a desired function, such as target binding or catalysis. To lower the complexity in the pairwise interaction analysis, a patent application from Deepmind (US20210166779A1) discloses a method that performs sequence alignment and introduces an embedding layer based on the alignment results. An embedding layer, a hidden layer in the deep neural network, maps each amino acid to a low-dimensional vector, where each dimension represents a particular feature of the protein.

Other generative AI models can create completely new protein structures from image-like representations of the protein, instead of an amino acid sequence2. A protein is broken down into triplet frames which contain unique spatial information. This set of image-like representations of existing proteins is fed into a generative diffusion model, which involves injecting noise to disrupt the original structures3. The model monitors the escalating noise levels and then reverses the process, converting random pixels into distinct images that represent entirely new proteins.

Conclusion

The use of generative AI in protein design significantly reduces the time it takes to find the right candidate for therapeutics by optimising certain parts of the protein against the target. In the past couple of years since the generative AI has been used in protein design, the experimental landscape has completely transformed, replacing the need for a laborious screening process. Further, an accurate prediction on the protein interaction with its partners, as well as how these can go wrong, provides an insight to clinical solutions.

Moreover, the generative AI approach is revolutionising our understanding of protein structure by providing insights into the intricate relationships between amino acids, paving the way for accurate functional predictions. The journey of exploring vast protein landscapes towards a deeper understanding of biological processes continues to unfold.

Footnotes

1. Pun et al., AI-powered therapeutic target discovery, Trends in Pharmacological Sciences 44(9) 561-572

212. Madani et al. , W. R. Large language models generate functional protein sequences across diverse families. Nat.Biotechnology. (2023)

3. Jin Lee et al., Score-based generative modeling for de novo protein design. Nature Computational Science (2023)

June Juyeon Han

Keltie LLP

No. 1 London Bridge

London

SE1 9BA

UK

Tel: 207329 8888

Fax: 207329 1111

URL: www.keltie.com[http://www.keltie.com]

Mondaq Limited

Document BBPUB00020231109ejb90006i

Patient centricity

Major issues in clinical research addressed by AI-powered community

Liza Laws

414 words
8 November 2023
WRBM Global Pharma
GPHAR
English

myTrialsConnect, a research community powered by artificial intelligence (AI) has been launched following a partnership between Elligo Health Research and Avallano.

Elligo, a healthcare-enabling research organization teamed with Avallano, a data privacy and healthcare technology company to create the community built to serve patients, providers, sites, and the biopharma industry.

John Potthoff, Elligo CEO, said: "myTrialsConnect addresses one of the major issues of clinical research today — finding qualified patients and engaging them before, during, and after the study.

"By utilizing the abundance of healthcare data with AI, this **clinical trials**' ecosystem will bring value to all patients, providers, and researchers not only during studies but also beyond participation in **clinical trials**."

There are a number of ways patients can join the community including through social media, as part of a clinical trial, or as a patient in a healthcare provider's network. Once they have joined, they receive a copy of their full medical record, educational materials that are oriented to their particular interest and conditions, and customized messages.

Messages will alert patients when they are eligible for a particular clinical trial based on an automated review of their medical records and chatbot-based surveys, which gather additional information (such as social determinants of health) that are not typically found in the medical record.

Healthcare providers will be offered information and services which aims to give them a 360-degree view of their patients' entire medical journey and by providing an open and direct communication channel that can be customized to serve the interests of each provider's patient population.

For the biopharmaceutical industry, myTrialsConnect creates a virtual waiting room of patients who have been qualified via medical records and additional protocol-specific data not found in electronic health records (EHRs), and who have seen a description of the study and expressed their interest in participating.

The companies say this removes two of the biggest delays in getting patients into trials — the time to fully qualify them and the need to find patients who want to participate.

"From gathering precise real-world data to safely leveraging AI's predictive powers, we are working together to streamline trial processes," said Avallano CEO and chief technology officer Paul Della Maggiora.

"This patient-first ecosystem has the power to redefine outcomes in clinical research, giving deeper insights to all users, drastically reduce recruitment time, and inspire patient trust and retention through engagement."

William Reed Business Media LTD.

Document GPHAR00020231108ejb80002t

BPGbio Highlights AI-Developed Late-Stage Therapeutics Assets at 8th Annual INVEUR$TIVAL Showcase in Partnership with Jefferies

629 words
8 November 2023
ENP Newswire
ENPNEW
English

Release date - 07112023

BOSTON - BPGbio, Inc., a leading biology-first AI-powered biopharma that focuses on oncology, neurology, and rare diseases, today announced plans to present on their groundbreaking AI-developed therapeutics portfolio at the upcoming INVEUR$TIVAL Showcase in partnership with Jefferies, being held on November 13, 2023 in London, United Kingdom.

BPGBio will present as part of the event's Biotech Late Growth Stage track. BPGbio's President and CEO, Niven R. Narain, PhD, and Executive Chairman Daniel Elliott will detail the company's progress in advancing BPM31510, their lead drug candidate currently in Phase 2b and Phase 2a trials for Glioblastoma Multiforme (GBM) and Pancreatic Cancer, respectively. Last month, an independent medical advisory board recommended advancement into phase 2b trials for pancreatic cancer. BPM31510 for pancreatic cancer has received Orphan Drug designation from the US FDA. BPM31510 acts by targeting the mitochondrial machinery and tumor microenvironment (TME) to create a metabolic shift in cancer cells, leading to cancer cell death.

'We're thrilled to present the progress of our AI-developed late-stage clinical assets to investors, industry peers and partners as we continue to advance our pipeline,' said Dr. Narain. 'The success of our lead candidate, BPM31510, in **clinical trials** underscores our biology-first approach to AI drug discovery, which guided our development team throughout the process and optimized our **clinical trials** with the appropriate patient cohort. We eagerly anticipate advancing these trials, building on our early successes, and applying this approach to other aggressive cancers and diseases with significant unmet medical needs.'

The executives will also provide insights into the company's growing portfolio of therapeutic targets and candidates, including several that are in late-stage **clinical trials**, which have been identified through BPGBio's proprietary AI-powered NAi Interrogative Biology Platform. This platform identifies targets, biomarkers, and drugs and assists the development team through both the developmental and clinical trial stages. NAi is now commercially available to pharma, academic and government organizations. The NAi Platform consists of an industry leading 100,000 sample, clinically annotated biobank, with purpose-built Bayesian AI. The platform uses the world's current fastest supercomputer, Frontier, at Oak Ridge National Laboratory (ORNL), making it the only fully integrated high-performance computing (HPC) platform in the biopharmaceutical industry for AI-driven target nomination, discovery, and molecule design.

BPGbio's therapeutic pipeline also includes drug candidates for epidermolysis bullosa (EB, orphan drug), squamous cell carcinoma (SCC, orphan drug), sarcopenia, solid and liquid tumors, Huntington's disease (orphan drug) and Parkinson's disease.

The company's diagnostic pipeline includes its prostate diagnostic test pstateDx, as well as tests being developed and validated for the detection of Parkinson's disease (ParkinsonDx), pancreatic cancer (PancDx), breast cancer, and liver disease.

About BPGbio, Inc.

BPGbio is a leading biology-first AI-powered clinical stage biopharma and diagnostics company focused on oncology, neurology, and rare diseases. The company has a deep portfolio of AI-developed pipeline of therapeutics, including several in late-stage development. BPGBio's novel approach is underpinned by NAi, its proprietary AI-powered Interrogative Biology Platform, protected by over 400 US and international patents; the world's largest clinically annotated non-governmental biobank and exclusive access to the most powerful supercomputer in the world. With these tools, BPGbio is redefining how patient biology can be modeled using unbiased AI. Headquartered in Boston, the company is at the forefront of a new era in medicine, combining patient biology, data, and AI to transform the way we understand aging, human performance, and diagnose and treat disease.

Contact:

Email: media@bpgbio.com

[Editorial queries for this story should be sent to newswire@enpublishing.co.uk]

Electronic News Publishing Ltd.

Document ENPNEW0020231108ejb8000jm

ACR: Researchers Say AI Model Accurately Identifies, Predicts Joint Damage in Hand X-Rays

Distributed by Contify.com
1332 words
7 November 2023
Contify Life Science News
ATPHAM
English

A new study presented at the American College of Rheumatology's annual meeting demonstrates that a deep learning system can accurately identify and predict joint space narrowing and erosions in hand radiographs of patients with rheumatoid arthritis (RA). The study used a convolutional neural network (CNN)-based algorithm called You Only Look Once (YOLO) to detect joints in hand X-rays. The researchers then applied a vision transformer model (VTM) to predict each joint's erosion and joint space narrowing score. The models showed high accuracy in identifying target joints and predicting joint space narrowing and erosion.

Key Highlights:

* The VTM was validated using more than 2,200 hand X-rays from 381 RA patients with physician-assigned SvH scores.

* The AI models cannot replace human radiologists but can enhance the overall quality and efficiency of radiograph scoring analysis when used in conjunction with radiologist judgment.

* The study has limitations as the radiographs were obtained from cohorts composed almost entirely of white women, and the findings may not apply to under-represented races and ethnicities.

Original Press Release:

ATLANTA, Nov. 7 -- American College of Rheumatology issued the following news release:

New research at ACR Convergence 2023, the American College of Rheumatology's (ACR) annual meeting, shows that a deep learning system could accurately identify and predict joint space narrowing and erosions in hand radiographs of patients with rheumatoid arthritis (RA) (Abstract #0745). Radiographs are the most commonly used imaging technique for detecting and monitoring RA in the hand. Radiologists frequently use the well-validated Sharp/van der Heidje (SvH) method to evaluate joint space narrowing and erosions by grading specific locations in each hand and wrist. However, SvH scoring is time-consuming and requires expertise that isn't always available. This has led to an increased use of deep learning (also called machine learning) to analyze hand X-ray data in RA. According to Carol Hitchon, MD, FRCPC, MSc, an associate professor at the University of Manitoba and a clinician scientist in rheumatology and lead co-author of the study, "Machine learning offers a powerful and complementary approach to traditional RA detection and diagnosis methods. It enhances the accuracy, efficiency, and objectivity of RA radiograph assessment, while providing the potential for early damage detection and valuable insights into the disease." For the current study, Hitchon and colleagues aimed to develop and validate a deep learning system for the automated detection of joints and prediction of SvH scores in hand X-rays of patients with RA. They used a convolutional neural network (CNN)-based algorithm called You Only Look Once (YOLO). CNN is a deep learning neural network often used in computer vision and recognition tasks that has been successfully used in medical image classification. YOLO is a type of CNN model specifically designed for real-time object detection in images and videos and known for speed and efficiency in image processing. Hitchon and colleagues used a recent version of YOLOv516, which they have shown is more than 90% accurate at detecting hand joints. The YOLO model was trained to detect joints in 240 training and 89 evaluation pediatric hand radiographs from the Radiologic Society of North America database. The researchers boxed and labeled the various joints of interest: proximal interphalangeal, metacarpophalangeal, wrist, distal radius, and distal ulna. The joint detection model was validated with 54 clinician-labeled X-rays from four adult RA patients who had been followed for more than a decade. Researchers then applied a vision transformer model (VTM) to predict each joint's erosion and joint space narrowing score. Hitchon explains that a VTM is a deep learning architecture designed to efficiently process and understand sequences of data. "It works by splitting an image into small patches, transforming or flattening the patches into a sequence, making low dimensional linear embeddings from the flattened patches, adding the positional embeddings, then feeding the encoded sequence into a standard transformer encoder for the remaining prediction task," she says. The VTM was validated using more than 2,200 hand X-rays from 381 RA patients who had physician assigned SvH scores. Patients were drawn from the Canadian Early Arthritis Cohort, a multicenter Canadian research study. These scored radiographs were used as the gold standard for this study. The joint detection model was trained to detect the entire wrist, but the researchers had SvH scores for individual wrist joints, so they trained a separate model to detect joint space narrowing and erosion in each joint. When they evaluated the accuracy of their models, they found: * The joint detection model accurately identified target joints. The pediatric data F1 score was 0.991, and the adult data F1 score was 0.812. (In machine learning, the F1 score is a metric that measures a model's accuracy). * VTM predictions for joint space narrowing and erosion were highly accurate. The root main squared error, which evaluates the accuracy of predictions, was 0.91 and 0.93, respectively. * The multi-task models predicted SvH erosion and joint space narrowing scores of individual wrist joints with moderate accuracy (0.6 to 0.91) Hitchon says they were not surprised by their model's performance. "The AI technologies we applied to this study have been successfully and widely used in other domains, some of which have been commercialized. Compared with the performance of the model in other domains, our performance is relatively low in predicting radiograph scoring for some joint types, such as the wrist. [This] may be due to the relatively small sample size in our study or the complexity of wrist joint anatomy," she notes. Hitchon also says the model performance does not match that of human radiologists for joints like the wrist. "The AI models cannot replace human radiologists at this stage, but they will be excellent complementary tools that can enhance the overall quality and efficiency of radiograph scoring analysis when used in conjunction with radiologist judgment. In addition, [these models] may be applicable to the interpretation of large volumes of X-rays in **clinical trials** ." The study has two main limitations: Radiographs were obtained from cohorts composed almost entirely of white women and the findings may not apply to races and ethnicities traditionally under-represented in research studies. Hitchon acknowledges that the findings need to be replicated in other groups. The model also does not have the ability to learn and become more accurate with subsequent images, although Hitchon says they are developing a new deep learning framework so that the model will have continual learning ability when new data are available. This study received local funding from the Health Science Centre Foundation, a hospital-based charity in Winnipeg, Manitoba, Canada. One of the co-authors, Pingzhao Hu, is supported by the Canada Research Chair Program. The Canadian Early Arthritis Cohort, which provided one set of radiographs, is funded by multiple sources.

About ACR Convergence

ACR Convergence, the annual meeting of the American College of Rheumatology, is where rheumatology meets to collaborate, celebrate, congregate, and learn. With more than 320 sessions and thousands of abstracts, it offers a superior combination of basic science, clinical science, business education and interactive discussions to improve patient care. For more information about the meeting, visit the ACR Convergence page, or join the conversation on Twitter by following the official hashtag (#ACR23).

About the American College of Rheumatology

Founded in 1934, the American College of Rheumatology (ACR) is a not-for-profit, professional association committed to advancing the specialty of rheumatology that serves nearly 8,500 physicians, health professionals, and scientists worldwide. In doing so, the ACR offers education, research, advocacy and practice management support to help its members continue their innovative work and provide quality patient care. Rheumatology professionals are experts in the diagnosis, management and treatment of more than 100 different types of arthritis and rheumatic diseases.

[Category: Health Care, Health Care Equipment, Artificial Intelligence]

Source: American College of Rheumatology

Document ATPHAM0020231108ejb7000rz

CORRECTING AND REPLACING: BioPhy Launches Breakthrough AI Platform to Accelerate the Trillion Dollar Drug Development Market

909 words
7 November 2023
12:31
Business Wire
BWR
English

The Company Has Raised $4.5M in Funding for its AI Operating System Designed to Help Pharmaceutical Companies Accelerate Drug Development

PHILADELPHIA--(BUSINESS WIRE)--November 07, 2023--

BioPhy today launched its AI operating system that radically accelerates the identification and development of the most promising drug candidates. By combining scientific, clinical and regulatory insights with a proprietary operational assessment model, BioPhy's AI platform is designed to assess biological feasibility and predict the likelihood a clinical trial will have a positive outcome, steering capital allocation and expediting time to market. In live testing during the last 27 months, the validated technology predicted the outcomes of over 1,500 **clinical trials** with 80 percent accuracy, solidifying BioPhy's ability to save pharmaceutical companies millions of dollars in clinical development. BioPhy's generative AI supports the critical functions that drive drug development such as clinical operations, regulatory affairs and quality assurance.

The company is currently in pilot and commercial agreements with several leading pharmaceutical companies and has raised $4.5 million in funding from Chelsea Clinton and Caroline Kassie's Metrodora Ventures, Audere Capital, and TRCM, as well as prominent figures in life sciences including Jeff Marrazzo, co-founder and former CEO of Spark Therapeutics, which was recently acquired by Roche for nearly $5 billion. BioPhy was co-founded by Dave Latshaw II, PhD, MBA, who is a computational biomolecular and chemical engineer by training and most recently led the deployment of more than 20 programs that leveraged AI across several drug development functions at Johnson & Johnson's Advanced Technologies Center of Excellence. This impacted $16 billion in yearly sales, reducing costs by 20 percent, and a 50 percent increase in reliability. His work has been recognized by the World Economic Forum, McKinsey & Company, and the National Academy of Engineering.

"Working inside the four walls of a major pharmaceutical company, I experienced first-hand how AI can be leveraged to solve the inefficiencies that come with functions supporting drug development, including R&D, Search and Evaluation, Quality, and Regulatory. Biotechnology organizations are manually combing through scientific literature, conducting lab experiments, and using traditional statistical analysis to identify promising compounds," said Dave Latshaw II, PhD, CEO and Co-Founder of BioPhy. "Inefficiencies like these in drug development mean that billions of dollars are wasted every year by even the world's leading companies, tragically resulting in significant delays that cost lives and fewer therapies reaching patients in need. That's why we designed BioPhy's platform, which harnesses the power of predictive and generative AI to dramatically increase the likelihood of clinical success, improve capital efficiency and decrease development timelines for pharmaceutical companies, government agencies, and more."

BioPhy works with several leading pharmaceutical and life science companies, including innovators like Ambrose Healthcare, a specialist pharmaceutical company in rare diseases, to identify the most promising target/drug opportunities and design their **clinical trials**. These organizations partner with BioPhy because its platform delivers 80 percent accuracy in predicting and guiding clinical trial success across all endpoints and phases - achieving insights that have historically taken months or years, to be delivered within a few days. Its expanding AI operating system for drug development currently consists of two products:

-- BioPhyRx: a generative AI solution designed to create a centralized, intuitive environment for accessing scientific and regulatory resources. Using large language models, this platform helps pharmaceutical companies in all stages of development by analyzing and interpreting scientific literature, **clinical trials**, regulatory guidelines and submissions, quality assurance documents, and other industry-specific sources to provide accurate and up-to-date information on demand.

-- BioLogicAI: a predictive AI engine that provides customized insights to aid life science companies through all stages of the drug development process including clinical trial endpoint predictability, indication selection, licensing, drug repurposing, asset acquisitions, and divestment. BioLogicAI also benchmarks the biological feasibility of preclinical assets against those in development or already approved by the FDA.

"If there's anything we learned from the past few years amid a global pandemic and a slew of new illnesses that have come from it, it is that the need to bring drugs to market - quickly and effectively - has never been greater," said Caroline Kassie, Managing Partner at Metrodora Ventures. "In fact, research shows that with just a 10 percent improvement in the success rates of **clinical trials** from AI is predicted to lead to an additional 250 novel therapies over the next 10 years. I'm excited to partner with Dave and the BioPhy team, who are dedicated to turning this prediction into a reality."

BioPhy is currently working with organizations across life sciences, U.S. government and intelligence agencies, financial services, and the public sector, in order to help them navigate the world of drug development and regulatory compliance. To learn more, visit biophy.ai.

About BioPhy

Leveraging the possibilities of modern science and advanced technologies, BioPhy is committed to transforming the way promising drugs are identified, developed, and tested. With the help of its patent-pending predictive AI engine, BioPhy works to enhance the outcomes of **clinical trials**, reduce failure rates and accelerate the pace of developing new drugs with the goal of improving the quality of healthcare outcomes across the globe.

View source version on businesswire.com: https://www.businesswire.com/news/home/20231107044450/en/[https://www.businesswire.com/news/home/20231107044450/en/]

CONTACT:

Bruno Solari, biophy@solcomms.co

SOURCE: BioPhy

(END)

Business Wire, Inc.

Document BWR0000020231107ejb7000fh

The new civil rights frontier: artificial intelligence

Devika Rao, The Week US

661 words
7 November 2023
The Week
TWKUS
English

Experts worry that AI could further inequality and discrimination

Artificial intelligence[https://theweek.com/news/technology/960453/pros-and-cons-of-artificial-intelligence] is continuing to grow in many industries. It is expected to replace 85 million jobs globally by 2025 as well as potentially generate 97 million new roles, according to the Future of Jobs Report 2020[https://www.weforum.org/publications/the-future-of-jobs-report-2020/digest] from the World Economic Forum. However, the growth of artificial intelligence[https://theweek.com/politics/biden-signs-executive-order-to-regulate-generative-ai] is shedding light on another problem: a lack of diversity within its components. AI is trained with existing data, but much of the data excludes women and people of color, raising questions as to whether the technology can be properly applied across the board.

How can AI be biased?

AI has to build up its knowledge base through machine learning, essentially training the technology by feeding it data. The problem is much of our pre-existing data excludes a vast number of people, namely women and minorities. The most poignant example is in health data[https://theweek.com/feature/briefing/1025613/ai-harmful-health], where "80% or more of **clinical trials** have historically relied on the western population when it comes to patient recruitment," Harsha Rajasimha, founder and executive chairman of the Indo-US Organization for Rare Diseases, a nonprofit that studies rare diseases, told MedTech Intelligence[https://medtechintelligence.com/feature_article/ai-and-the-lack-of-diversity-in-data-implications-and-the-path-forward-for-rare-disease-research/amp/].

Many worry that biases will become inherently ingrained into AI systems[https://theweek.com/artificial-intelligence/1024341/ai-the-worst-case-scenario]. "If you mess this up, you can really, really harm people by entrenching systemic racism further into the health system," Mark Sendak, a lead data scientist at the Duke Institute for Health Innovation, told NPR[https://www.npr.org/sections/health-shots/2023/06/06/1180314219/artificial-intelligence-racial-bias-health-care]. This problem may already be in the works, as there have already been instances where facial recognition software was unable to identify Black faces. "The impact on minority communities — especially the Black community — is not considered until something goes wrong," California Rep. Barbara Lee (D) said during a panel[https://chicagocrusader.com/how-ai-affects-black-communities-at-cbc-experts-talk-diversity-concerns-hopes-for-artificial-intelligence/] at the annual Congressional Black Caucus legislative conference. For example, AI technology could inadvertently discriminate between white and Black job applicants based on previous data on job hirings.

How can it be fixed?

The biases within artificial intelligence often reflect the biases of humanity as a whole. "Our propensity to think fast and fill in the blanks of information by generalizing and jumping to conclusions explains the ubiquity of biases in any area of social life," wrote Fast Company[https://www.fastcompany.com/90839154/is-ai-bad-for-diversity]. This translates into much of the data we have on Earth — and therefore what gets imprinted onto AI. "AI can only be unbiased if it learns from unbiased data, which is notoriously hard to come by," Fast Company added. Even if an AI algorithm is created to be unbiased, "it doesn't mean that the AI won't find other ways to introduce biases into its decision-making process," Vox[https://www.vox.com/technology/23738987/racism-ai-automated-bias-discrimination-algorithm] wrote.

The good news is that experts believe that this is a problem that can be solved. "Even though the early systems before people figured out these techniques certainly reinforced bias, I think we can now explain that we want a model to be unbiased, and it's pretty good at that," Sam Altman, the founder of OpenAI, told Rest of World[https://restofworld.org/2023/3-minutes-with-sam-altman/]. "I'm optimistic that we will get to a world where these models can be a force to reduce bias in society, not reinforce it."

Some programs are trying to get ahead of the curve; There is a new AI model called Latimer that "deeply incorporates cultural and historical perspectives of Black and Brown communities," Forbes[https://www.forbes.com/sites/kalinabryant/2023/10/30/how-new-ai-model-counters-bias-providing-an-equitable-future-for-all/?sh=481d1b931cce] reported. "We are establishing the building blocks of what the future of AI needs to include, and in doing so, we are working to create an equitable and necessary layer of technology that can be utilized by all demographics," Latimer Founder and CEO John Pasmore told Forbes. Most experts agree that AI has a lot of potential to do good[https://theweek.com/tech/the-pros-and-cons-of-ai-companions] in a number of industries as long as actions are taken to consider the pitfalls. "AI is not bad for diversity — if diversity is part of the design itself," Fast Company concluded.

Future Publishing Ltd.

Document TWKUS00020231107ejb70005m

Amsety Announces ACRE, an AI-Based Solution to Improve Patient Enrollment in Clinical Trials for Liver Disease

651 words
7 November 2023
08:36
PR Newswire
PRN
English

Amsety Announces ACRE, an AI-Based Solution to Improve Patient Enrollment in **Clinical Trials** for Liver Disease

PR Newswire

CARLSBAD, Calif., Nov. 7, 2023

Amsety is connecting the dots in patient recruitment--with a novel way to engage with liver patients

CARLSBAD, Calif., Nov. 7, 2023 /PRNewswire/ -- Amsety, a liver health solutions start-up announced the release of its new artificial intelligence-driven Amsety Clinical Recruitment Engine ("ACRE"). ACRE combines decisional AI and messaging tools with a proprietary, self-selected database of over half a million users to help efficiently reach and effectively communicate with liver patients. As proven in the first pilot projects, ACRE is an effective way to engage candidates for **clinical trials** and educational outreach in the context of liver health and other metabolic diseases.

Millions of Americans with Liver Disease, Yet **Clinical Trials** Are Struggling with Patient Recruitment

Despite over 100 million Americans being affected by liver disease, clinical trial recruiters experience a shortage of eligible liver patients to enroll in their studies resulting in high recruitment failure rate, prolonged clinical studies, and delay in drug development.

Currently, the average rate of enrollment for NASH/MASH studies in the US and Europe is just 0.1 patient per site per month,* which leads to significant cost overruns and delays important therapies for patients.

"The MASH clinical trial state has been plagued with elevated screen failure rates, often exceeding 85%. For completion of the numerous forthcoming phase 3 trials, we can estimate more than 40,000 to 50,000 screens will be needed to meet randomization goals", shared Dr. Guy W. Neff, M.D., MBA, FAASLD, of Covenant Metabolic Specialists.

"The medical community is under immense pressure to develop pharmaceuticals able to prevent or even reverse liver fibrosis in this population," adds Dr. Tarek Hassanein, M.D. of Southern California Liver Centers.

What is ACRE?

ACRE is a proprietary technology developed by Amsety combining an AI tool, a number of patient engagement tools, and the company's huge Database of over 500,000 highly motivated and engaged users with liver and metabolic diseases. ACRE offers a novel method to activate patients more rapidly and efficiently for recruitment into **clinical trials** and disease education.

"ACRE is connecting the many dots in patient recruitment. Successful patient enrollment in **clinical trials** is impossible without finding the right way to engage and communicate with liver patients, as well as increase patients' awareness about liver health, and ACRE is the first AI-powered tool to offer all these capabilities at once," says Mustafa Behan, Founder of Amsety.

The patient engagement tools employed in ACRE include the Amsety Bar, the first nutrition bar to support liver health, the BetterLix App, an AI-powered App to support healthy habits, as well as online tools such as the Liver Health Score.

Amsety will be presenting ACRE alongside Amsety Bar(R) and the BetterLix App at the upcoming AASLD Liver Meeting(R) in Boston from November 10th until November 14th, 2023 (Booth #: D3039).

About Amsety

Amsety is a liver health tech start-up with a mission is to improve the quality of life of liver patients by offering a holistic approach to liver health. Amsety created Amsety Bar(R), the first nutrition bar supporting liver health, the BetterLix App, an AI-based mobile application that guides individuals towards liver-healthier habits, and the Liver Health Score, a free online quiz to determine how liver-healthy one's lifestyle is. For more information, visit www.liversciences.com[http://www.liversciences.com] and www.amsety.com[http://www.amsety.com].

Contact us at:

Mustafa Behan, Founder & CEO of Amsety

368128@email4pr.com

(442) 244-5115

View original content to download multimedia:https://www.prnewswire.com/news-releases/amsety-announces-acre-an-ai-based-solution-to-improve-patient-enrollment-in-**clinical-trials**-for-liver-disease-301978729.html[https://www.prnewswire.com/news-releases/amsety-announces-acre-an-ai-based-solution-to-improve-patient-enrollment-in-clinical-trials-for-liver-disease-301978729.html]

SOURCE Amsety

(END)

PR Newswire Association, Inc.

Document PRN0000020231107ejb7000cx

Artificial Intelligence at ICON: How a world-leading healthcare intelligence CRO is transforming the delivery of clinical trials, Upcoming Webinar Hosted by Xtalks

464 words
7 November 2023
08:30
PR Newswire
PRN
English

In this free webinar, gain insights into how ICON approaches artificial intelligence (AI). Attendees will learn how ICON's award-winning AI solutions help identify the best sites the first time, accurately predict post-marketing requirements and rapidly connect key opinion leaders in a given rare disease space. The featured speakers will discuss the future of AI in clinical research.

TORONTO, Nov. 7, 2023 /PRNewswire-PRWeb/ -- Discover an innovative webinar delving into how ICON -- a healthcare intelligence clinical research organization (CRO) -- uses award-winning artificial intelligence (AI) solutions to transform the future of clinical research. AI is a general term for software that mimics human cognition or perception. Rapid progress in AI is transforming many industries with considerable impact, including **clinical trials**.

In this webinar, the featured speakers will discuss how ICON, a healthcare intelligence CRO is helping to transform clinical trial delivery. Topics and learnings include:

-- How ICON approaches AI

-- ICON's award-winning AI solutions help identify the best sites the first time, accurately predict post-marketing requirements and rapidly connect key opinion leaders in a given rare disease space

-- The future of AI in clinical research

Join the featured speakers to learn how ICON is using AI to improve industry processes and help solve problems people didn't once think possible.

Join experts from ICON, Gerard Quinn, VP, IT Innovation & Informatics; Michael Phillips, Senior Director, Innovation & Informatics; and Gilyana Borlikova, PhD, Manager, Innovation & Informatics, for the live webinar on Monday, November 27, 2023, at 10am EST (4pm CET/EU-Central).

For more information, or to register for this event, visit Artificial Intelligence at ICON: How a world-leading healthcare intelligence CRO is transforming the delivery of **clinical trials**.

ABOUT XTALKS

Xtalks, powered by Honeycomb Worldwide Inc., is a leading provider of educational webinars to the global life science, food and medical device community. Every year, thousands of industry practitioners (from life science, food and medical device companies, private & academic research institutions, healthcare centers, etc.) turn to Xtalks for access to quality content. Xtalks helps Life Science professionals stay current with industry developments, trends and regulations. Xtalks webinars also provide perspectives on key issues from top industry thought leaders and service providers.

To learn more about Xtalks visit http://xtalks.com[http://xtalks.com]

For information about hosting a webinar visit http://xtalks.com/why-host-a-webinar/[http://xtalks.com/why-host-a-webinar/]

Media Contact

Vera Kovacevic, Xtalks, +1 (416) 977-6555 x371, vkovacevic@xtalks.com

View original content to download multimedia:https://www.prweb.com/releases/artificial-intelligence-at-icon-how-a-world-leading-healthcare-intelligence-cro-is-transforming-the-delivery-of-**clinical-trials**-upcoming-webinar-hosted-by-xtalks-301979059.html[https://www.prweb.com/releases/artificial-intelligence-at-icon-how-a-world-leading-healthcare-intelligence-cro-is-transforming-the-delivery-of-clinical-trials-upcoming-webinar-hosted-by-xtalks-301979059.html]

SOURCE Xtalks

(END)

PR Newswire Association, Inc.

Document PRN0000020231107ejb7000ca

Generative AI in Healthcare Market to Reach $30.4 Billion, by 2032 at 34.9% CAGR: Allied Market Research

Allied Market Research; PR Newswire
1072 words
6 November 2023
20:00
PR Newswire Europe
TWOTEN
English

Generative AI in healthcare is a transformative technology that leverages artificial intelligence to create, generate, or simulate data, images, or text within the medical field. This innovative application of AI has the potential to revolutionize various aspects of healthcare, from diagnostics and treatment planning to medical research and education.

PORTLAND, Ore., Nov. 6, 2023 /PRNewswire/ -- Allied Market Research published a report, titled, "Generative AI in Healthcare Market[https://www.alliedmarketresearch.com/generative-ai-in-healthcare-market-A156675] by Application (Treatment, Diagnosis, Drug Discovery, and Research) and End User (Hospitals & Clinics, Healthcare Organizations, and Others): Global Opportunity Analysis and Industry Forecast, 2023–2032". According to the report, the global generative AI in healthcare market was valued at $1.6 Billion in 2022 and is estimated to reach $30.4 Billion by 2032, exhibiting a CAGR of 34.9% from 2023 to 2032.

Request Sample of the Report on Generative AI in Healthcare Market Forecast 2032- https://www.alliedmarketresearch.com/request-sample/157159[https://www.alliedmarketresearch.com/request-sample/157159]

Prime determinants of growth

The generative AI in healthcare market has experienced significant growth due to surge in adoption of the generative AI for medical diagnosis by analyzing the medical images and patient health record, efficiency of generative AI in workflow and administrative tasks, use of generative AI in personalized medicine.

Report coverage & details:

Report Coverage	Details
Forecast Period	2023—2032
Base Year	2022
Market Size in 2022	$1,550 million
Market Size in 2032	$30394.5 million
CAGR	34.9 %
No. of Pages in Report	290
Segments covered	Application, End User, and Region.
Drivers	Surge in adoption of generative AI in healthcare in medical imaging. Efficiency of generative AI in workflow and administrative t
Opportunities	Use of generative AI in drug discovery development.
Restraints	Data privacy and security risk.

Economic Downturn Analysis: Impact of Recession in 2023 on the Generative Ai In Healthcare Market

* The global recession has created challenging environment for the generative AI in healthcare market.

* The high inflation rate has negatively impacted new technological development and research activities.

* However, market for generative AI in healthcare market is expected to recover owing to growing demand of generative AI in various applications in healthcare sectors such as drug discovery and development and medical diagnosis.

Want to Explore More, Connect to our Analyst- https://www.alliedmarketresearch.com/connect-to-analyst/157159[https://www.alliedmarketresearch.com/connect-to-analyst/157159]

The diagnosis segment to maintain its leadership status throughout the forecast period

Based on application, the diagnosis segment held the highest market share in 2022, accounting for more than two-fifths of the generative AI in healthcare market revenue, owing to surge in adoption of generative AI for medical diagnosis.

The hospitals and clinics segment to maintain its leadership status throughout the forecast period

Based on end user, the hospitals and clinics segment held the highest market share in 2022, accounting for more than two-fifths of the generative AI in healthcare market revenue. This is attributed to rise in use of generative for efficiently manage hospital documentations such as patient health records, bills and other medical records.

The North America segment to maintain its leadership status throughout the forecast period

For Procurement Information- https://www.alliedmarketresearch.com/purchase-enquiry/157159[https://www.alliedmarketresearch.com/purchase-enquiry/157159]

Based on region, North America held the highest market share in 2022, accounting for more than one-third of the enteral feeding formulas market revenue. This is attributed to well-developed healthcare infrastructure and strong presence of major key players.

Leading Market Players: -

* SYNTEGRA

* IBM WATSON HEALTH CORPORATION

* GOOGLE LLC

* AMAZON

* ORACLE

* MICROSOFT

* NVIDIA CORPORATION

* INSILICO MEDICINE

* ABRIDGE AI INC.

* OPEN AI INC

The report provides a detailed analysis of these key players in the generative AI in healthcare market. These players have adopted different strategies such as product launch, acquisition, investment, partnership and **clinical trials** to increase their market share and maintain dominant shares in different regions. The report is valuable in highlighting business performance, operating segments, product portfolio, and strategic moves of market players to showcase the competitive scenario.

Comprehensive Healthcare Industry Research Studies:

mHealth Market - Global Opportunity Analysis and Industry Forecast, 2022–2032[https://www.alliedmarketresearch.com/mobile-health-market]

Biomaterials Market - Global Opportunity Analysis and Industry Forecast, 2022–2032[https://www.alliedmarketresearch.com/biomaterials-market]

Flow Cytometry Market- Global Opportunity Analysis and Industry Forecast, 2022–2032[https://www.alliedmarketresearch.com/flow-cytometry-market]

Healthcare IT Market - Global Opportunity Analysis and Industry Forecast, 2022–2032[https://www.alliedmarketresearch.com/healthcare-information-technology-market]

MRI System Market- Global Opportunity Analysis and Industry Forecast, 2022–2032[https://www.alliedmarketresearch.com/magnetic-resonance-imaging-mri-systems-market]

About Allied Market Research:

Allied Market Research (AMR) is a full-service market research and business-consulting wing of Allied Analytics LLP based in Wilmington, Delaware. Allied Market Research provides global enterprises as well as medium and small businesses with unmatched quality of "Market Research Reports" and "Business Intelligence Solutions." AMR has a targeted view to provide business insights and consulting to assist its clients to make strategic business decisions and achieve sustainable growth in their respective market domains. AMR offers its services across 11 industry verticals including Life Sciences[https://www.alliedmarketresearch.com/reports-store/life-sciences], Consumer Goods, Materials & Chemicals, Construction & Manufacturing, Food & Beverages, Energy & Power, Semiconductor & Electronics, Automotive & Transportation, ICT & Media, Aerospace & Defense, and BFSI.

We are in professional corporate relations with various companies and this helps us in digging out market data that helps us generate accurate research data tables and confirms utmost accuracy in our market forecasting. Allied Market Research CEO Pawan Kumar is instrumental in inspiring and encouraging everyone associated with the company to maintain high quality of data and help clients in every way possible to achieve success. Each and every data presented in the reports published by us is extracted through primary interviews with top officials from leading companies of domain concerned. Our secondary data procurement methodology includes deep online and offline research and discussion with knowledgeable professionals and analysts in the industry.

Contact

David Correa

1209 Orange Street,

Corporation Trust Center,

Wilmington, New Castle,

Delaware 19801 USA.

Toll Free: +1-800-792-5285

Int'l: +1-503-894-6022

UK: +44-845-528-1300

Hong Kong: +852-301-84916

India (Pune): +91-20-66346060

Fax: +1-855-550-5975

help@alliedmarketresearch.com[mailto:help@alliedmarketresearch.com]

Web: https://www.alliedmarketresearch.com[https://www.alliedmarketresearch.com/]

Follow Us on: LinkedIn[https://www.linkedin.com/company/allied-market-research/] Twitter[https://twitter.com/allied_mr]

Logo - https://mma.prnewswire.com/media/636519/Allied_Market_Research_Logo.jpg[https://mma.prnewswire.com/media/636519/Allied_Market_Research_Logo.jpg]

View original content: https://www.prnewswire.co.uk/news-releases/generative-ai-in-healthcare-market-to-reach-30-4-billion-by-2032-at-34-9-cagr-allied-market-research-301978978.html[https://www.prnewswire.co.uk/news-releases/generative-ai-in-healthcare-market-to-reach-30-4-billion-by-2032-at-34-9-cagr-allied-market-research-301978978.html]

202311062000PR_NEWS_EURO_ND__EN59827

PR Newswire Association, Inc.

Document TWOTEN0020231107ejb70008f

Rakuten Medical Presents AI-based Study in Two Posters on Immune Characteristics in Responders and Cellular Level Drug Quantification of Alluminox Treatment (Photoimmunotherapy) at SITC 2023

Distributed by Contify.com
1266 words
6 November 2023
Contify Life Science News
ATPHAM
English

Rakuten Medical presented two posters at the 38th Annual Meeting of the Society for Immunotherapy of Cancer (SITC) showcasing AI-based analyses of immune characteristics and drug quantification in patients receiving Alluminox platform (photoimmunotherapy) treatment. The first poster revealed that lower frequencies of CD8+ T cells in the blood at screening correlated with treatment response, while an increased frequency of PD-1 co-expression among CD8+ T cells in the blood also correlated with treatment outcome. Additionally, an increase in cytotoxic CD8+ T cells was observed in tumor samples, indicating an induction of the immune response following photoimmunotherapy.

Key Highlights:

* The second poster discussed a novel cellular-level drug uptake quantification method using AI-based tumor detection and cell segmentation to accurately measure high drug uptake in tumors prior to light treatment.

* These findings have the potential to improve clinical outcomes and support future preclinical studies and **clinical trials**.

Original Press Release:

Nov. 6 -- Rakuten Medical, Inc. issued the following news release:

- Identified predictive biomarkers that potentially correlate with treatment response

- A novel drug quantification method in tumor cells revealed high drug uptake at the cellular level for the first time in clinical samples

- Leveraging AI technology developed by Rakuten Institute of Technology Bengaluru, a part of the global R&D organization of Rakuten Group, Inc.

Rakuten Medical, Inc., a global biotechnology company developing and commercializing precision, cell-targeted therapies based on its proprietary Alluminox™ platform today announced the presentation of two posters of AI-based analyses at the 38th Annual Meeting of the Society for Immunotherapy of Cancer (SITC), held November 3-5, 2023, in San Diego, CA (SITC 2023). The posters present data that may be relevant to improved clinical outcomes with treatment based on Rakuten Medical's Alluminox™ platform (photoimmunotherapy).

The samples analyzed for these posters are from patients enrolled in an open-label Phase 1b/2 clinical trial (ASP-1929-181 study/ClinicalTrials.gov Identifier: NCT04305795) of ASP-1929 photoimmunotherapy in combination with anti-PD-1 for recurrent or metastatic head and neck squamous cell cancer or advanced or metastatic cutaneous squamous cell carcinoma. Promising early evaluation data from the ASP-1929-181 study[*] was presented at the American Head and Neck Society (AHNS) in July 2023 (Abstract #: S252). The studies presented at SITC 2023 utilized AI technology developed by Rakuten Institute of Technology Bengaluru, a part of Rakuten India Enterprise Private Limited and a branch of the global R&D organization of Rakuten Group, Inc., to further interpret the response data presented at AHNS. Rakuten Medical and Rakuten Institute of Technology Bengaluru have collaborated on AI-based analyses of patient samples since 2020.

Key findings presented at SITC 2023

Title: Development of an image-based tumor microenvironment analysis coupled with peripheral flow cytometry reveals a distinct immune cell phenotype in responder patients in the Phase 1b/2 study ASP-1929-181

Abstract #: 83

The first poster addresses immune characteristics between responders and non-responders who received ASP-1929 photoimmunotherapy. Potentially predictive immune biomarkers were identified using a combination of multiplex immunofluorescent imaging methods with AI-based quantification and flow cytometry analyses of peripheral blood. The study results suggest that lower frequencies of CD8+ T cells in the blood at screening correlate with treatment response. Interestingly, of CD8+ T cells in the blood, an increased frequency of PD-1 co-expression also correlates with treatment outcome. At the tumor, an increase in cytotoxic CD8+ T cells in all 22 analyzed patients was observed over the course of treatment, suggesting the induction of the immune response following photoimmunotherapy.

Title: Development of a novel, cellular-level drug uptake quantification pipeline for accurate quantification of fluorescence-conjugated therapeutics: Data from the Phase 1b/2 open-label study ASP-1929-181

Abstract #: 1307

The second poster describes the quantification of drug binding to target cells for ASP-1929 photoimmunotherapy. The preliminary data suggested that a modified drug quantification method using AI-based tumor detection and cell segmentation has the potential to accurately measure drug uptake in tumors at the cellular level. Using this method, high drug uptake (>50-100%) in tumors prior to light treatment was observed for the first time in the clinical samples. Understanding drug uptake levels could help support dose response analyses in future preclinical studies and **clinical trials**.

About Rakuten Medical, Inc.

Rakuten Medical, Inc. is a global biotechnology company developing and commercializing precision, cell targeting therapies based on its proprietary Alluminox™ platform, which, in pre-clinical studies, has been shown to induce rapid and selective cell killing and tumor necrosis. Alluminox therapies have not yet been approved outside of Japan. Rakuten Medical is committed to its mission to conquer cancer by delivering our innovative treatments as quickly as possible to as many patients as possible all over the world. The company has offices in 6 countries, including the United States, where it is headquartered, Japan, the Netherlands, Taiwan, Switzerland and India. For more information, visit www.rakuten-med.com[http://www.rakuten-med.com].

About Alluminox™ platform

The Alluminox™ platform is an investigational technology platform based on a cancer therapy called photoimmunotherapy, which was developed by Dr. Hisataka Kobayashi and team from the National Cancer Institute in the United States. Rakuten Medical is developing the Alluminox platform as a technology consisting of a drug, device, and other related components. The drug component of the platform consists of a targeting moiety conjugated with one or more dyes leading to selective cell surface binding. The device component consists of a light source that locally illuminates the targeted cells with light to transiently activate the drug. Pre-clinical data have shown that this activation elicits rapid and selective necrosis of targeted cells through a biophysical process that compromises the membrane integrity of the targeted cells. Therapies developed on the Alluminox platform may also result in local and systemic innate and adaptive immune activation due to immunogenic cell death of the targeted cancer cells and/or the removal of targeted immunosuppressive cells within the tumor microenvironment. Outside of Japan, Alluminox

therapies have not yet been approved by any regulatory authority.

About ASP-1929

Rakuten Medical's first pipeline drug developed on its Alluminox™ platform is ASP-1929, an antibody-dye conjugate comprised of the antibody cetuximab and IRDye® 700DX, a light activatable dye. ASP-1929 binds to epidermal growth factor receptor (EGFR), a cancer antigen expressed in multiple types of solid tumors, including head and neck, breast, lung, colorectal, prostate and pancreatic cancers. After binding to cancer cells, ASP-1929 is locally activated by illumination with red light (690 nm), emitted by a laser device system to produce a photochemical reaction. This reaction is believed to cause damage to the membrane of cancer cells, leading to selective necrosis of cancer cells. ASP-1929 received Fast Track designation from the U.S. Food and Drug Administration (FDA) in January 2018, and is currently under investigation in a global Phase 3 clinical trial for recurrent head and neck cancer. In Japan, ASP-1929 received marketing approval from the Japanese Ministry of Health, Labor, and Welfare for unresectable locally advanced or recurrent head and neck cancer in September 2020, under the Sakigake Designation System and the Conditional Early Approval System. Outside of Japan, ASP-1929 has not yet been approved by any regulatory authority.

Footnote:

[*] These preliminary findings may change upon completion of follow up and final data analysis.

Source: Rakuten Medical, Inc.

[Category: Life Sciences, Pharmaceuticals, Artificial Intelligence]

Athena Information Solutions Pvt. Ltd.

Document ATPHAM0020231107ejb60003j

Artificial Intelligence; University of Miami Miller School of Medicine Reports Findings in Artificial Intelligence (Artificial Intelligence, Computational Simulations, and Extended Reality in Cardiovascular Interventions)

432 words
6 November 2023
Journal of Engineering
JOENG
4625
English

2023 NOV 6 (VerticalNews) -- By a News Reporter-Staff News Editor at Journal of Engineering -- New research on Artificial Intelligence is the subject of a report. According to news reporting originating in Miami, Florida, by VerticalNews journalists, research stated, "Artificial intelligence, computational simulations, and extended reality, among other 21st century computational technologies, are changing the health care system. To collectively highlight the most recent advances and benefits of artificial intelligence, computational simulations, and extended reality in cardiovascular therapies, we coined the abbreviation AISER."

The news reporters obtained a quote from the research from the University of Miami Miller School of Medicine, "The review particularly focuses on the following applications of AISER: 1) preprocedural planning and clinical decision making; 2) virtual **clinical trials**, and cardiovascular device research, development, and regulatory approval; and 3) education and training of interventional health care professionals and medical technology innovators. We also discuss the obstacles and constraints associated with the application of AISER technologies, as well as the proposed solutions."

According to the news reporters, the research concluded: "Interventional health care professionals, computer scientists, biomedical engineers, experts in bioinformatics and visualization, the device industry, ethics committees, and regulatory agencies are expected to streamline the use of AISER technologies in cardiovascular interventions and medicine in general."

This research has been peer-reviewed.

For more information on this research see: Artificial Intelligence, Computational Simulations, and Extended Reality in Cardiovascular Interventions. JACC Cardiovascular Interventions, 2023;16(20):2479-2497. JACC Cardiovascular Interventions can be contacted at: Elsevier Science Inc, Ste 800, 230 Park Ave, New York, NY 10169, USA.

Our news correspondents report that additional information may be obtained by contacting Jules Joel Bakhos, Center for Digital Cardiovascular Innovations, Division of Cardiovascular Medicine, University of Miami Miller School of Medicine, Miami, Florida, United States. Additional authors for this research include Saurabhi Samant, Wei Wu, Shijia Zhao, Ghassan S. Kassab, Behram Khan, Anastasios Panagopoulos, Janaki Makadia, Usama M. Oguz, Akshat Banga, Muhammad Fayaz, William Glass, Claudio Chiastra, Francesco Burzotta, John F. LaDisa and Paul Iaizz.

The publisher of the journal JACC Cardiovascular Interventions can be contacted at: Elsevier Science Inc, Ste 800, 230 Park Ave, New York, NY 10169, USA.

Keywords for this news article include: Miami, Florida, Cardiology, United States, Cardio Device, Medical Devices, Machine Learning, Health and Medicine, Emerging Technologies, Artificial Intelligence, Cardiovascular Research, North and Central America.

NewsRX, LLC

Document JOENG00020231106ejb6003ut

Artificial Intelligence; Findings from Fujian Medical University in the Area of Artificial Intelligence Described (Artificial Intelligence As Diagnostic Aiding Tool In Cases of Prostate Imaging Reporting and Data System Category 3: the Results of Retrospective ...)

534 words
6 November 2023
Journal of Engineering
JOENG
1059
English

2023 NOV 6 (VerticalNews) -- By a News Reporter-Staff News Editor at Journal of Engineering -- Fresh data on Artificial Intelligence are presented in a new report. According to news reporting from Fujian, People's Republic of China, by VerticalNews journalists, research stated, "To study the effect of artificial intelligence (AI) on the diagnostic performance of radiologists in interpreting prostate mpMRI images of the PI-RADS 3 category. In this multicenter study, 16 radiologists were invited to interpret prostate mpMRI cases with and without AI."

The news correspondents obtained a quote from the research from Fujian Medical University, "The study included a total of 87 cases initially diagnosed as PI-RADS 3 by radiologists without AI, with 28 cases being clinically significant cancers (csPCa) and 59 cases being non-csPCa. The study compared the diagnostic efficacy between readings without and with AI, the reading time, and confidence levels. AI changed the diagnosis in 65 out of 87 cases. Among the 59 non-csPCa cases, 41 were correctly downgraded to PI- RADS 1-2, and 9 were incorrectly upgraded to PI-RADS 4-5. For the 28 csPCa cases, 20 were correctly upgraded to PI-RADS 4-5, and 5 were incorrectly downgraded to PI-RADS 1-2. Radiologists assisted by AI achieved higher diagnostic specificity and accuracy than those without AI [0.695 vs 0.000 and 0.736 vs 0.322, both P< 0.001]. Sensitivity with AI was not significantly different from that without AI [0.821 vs 1.000, P = 1.000]. AI reduced reading time significantly compared to without AI (mean: 351 seconds, P< 0.001). The diagnostic confidence score with AI was significantly higher than that without AI (Cohen Kappa: -0.016). With the help of AI, there was an improvement in the diagnostic accuracy of PI-RADS category 3 cases by radiologists."

According to the news reporters, the research concluded: "There is also an increase in diagnostic efficiency and diagnostic confidence."

This research has been peer-reviewed.

For more information on this research see: Artificial Intelligence As Diagnostic Aiding Tool In Cases of Prostate Imaging Reporting and Data System Category 3: the Results of Retrospective Multi-center Cohort Study. Abdominal Radiology, 2023. Abdominal Radiology can be contacted at: Springer, One New York Plaza, Suite 4600, New York, Ny, United States.

Our news journalists report that additional information may be obtained by contacting Yunjing Xue, Fujian Medical University, Union Hospital, Dept. of Radiology, 29, Xin Quan Rd, Fuzhou 350001, Fujian, People's Republic of China. Additional authors for this research include Kexin Wang, Zhangli Xing, Yang Yu, Zixuan Kong, Xiangpeng Zhao, Yuntian Chen, Bin Song, Xiangpeng Wang, Pengsheng Wu and Xiaoying Wang.

Keywords for this news article include: Fujian, People's Republic of China, Asia, Artificial Intelligence, Clinical Research, **Clinical Trials** and Studies, Data Systems, Emerging Technologies, Health and Medicine, Information Technology, Machine Learning, Fujian Medical University.

NewsRX, LLC

Document JOENG00020231106ejb6000cz

Artificial Intelligence; Data on Artificial Intelligence Reported by Hyeongsub Kim and Colleagues (Early prediction of need for invasive mechanical ventilation in the neonatal intensive care unit using artificial intelligence and electronic health records: a clinical ...)

649 words
6 November 2023
Journal of Engineering
JOENG
154
English

2023 NOV 6 (VerticalNews) -- By a News Reporter-Staff News Editor at Journal of Engineering -- New research on Artificial Intelligence is the subject of a report. According to news originating from Seoul, South Korea, by VerticalNews correspondents, research stated, "Respiratory support is crucial for newborns with underdeveloped lung. The clinical outcomes of patients depend on the clinician's ability to recognize the status underlying the presented symptoms and signs."

Our news journalists obtained a quote from the research, "With the increasing number of high-risk infants, artificial intelligence (AI) should be considered as a tool for personalized neonatal care. Continuous monitoring of vital signs is essential in cardiorespiratory care. In this study, we developed deep learning (DL) prediction models for rapid and accurate detection of mechanical ventilation requirements in neonates using electronic health records (EHR). We utilized data from the neonatal intensive care unit in a single center, collected between March 3, 2012, and March 4, 2022, including 1,394 patient records used for model development, consisting of 505 and 889 patients with and without invasive mechanical ventilation (IMV) support, respectively. The proposed model architecture includes feature embedding using feature-wise fully connected (FC) layers, followed by three bidirectional long short-term memory (LSTM) layers. A mean gestational age (GA) was 36.61 ? 3.25 weeks, and the mean birth weight was 2,734.01 ? 784.98 g. The IMV group had lower GA, birth weight, and longer hospitalization duration than the non-IMV group (P < 0.05). Our proposed model, tested on a dataset from March 4, 2019, to March 4, 2022. The mean AUROC of our proposed model for IMV support prediction performance demonstrated 0.861 (95%CI, 0.853-0.869). It is superior to conventional approaches, such as newborn early warning score systems (NEWS), Random Forest, and eXtreme gradient boosting (XGBoost) with 0.611 (95%CI, 0.600-0.622), 0.837 (95%CI, 0.828-0.845), and 0.0.831 (95%CI, 0.821-0.845), respectively. The highest AUPRC value is shown in the proposed model at 0.327 (95%CI, 0.308-0.347). The proposed model performed more accurate predictions as gestational age decreased. Additionally, the model exhibited the lowest alarm rate while maintaining the same sensitivity level. Deep learning approaches can help accurately standardize the prediction of invasive mechanical ventilation for neonatal patients and facilitate advanced neonatal care."

According to the news editors, the research concluded: "The results of predictive, recall, and alarm performances of the proposed model outperformed the other models."

For more information on this research see: Early prediction of need for invasive mechanical ventilation in the neonatal intensive care unit using artificial intelligence and electronic health records: a clinical study. BMC Pediatrics, 2023;23(1):525. BMC Pediatrics can be contacted at: Bmc, Campus, 4 Crinan St, London N1 9XW, England. (BioMed Central - www.biomedcentral.com/[http://www.biomedcentral.com/]; BMC Pediatrics - www.biomedcentral.com/bmcpediatr/[http://www.biomedcentral.com/bmcpediatr/])

The news correspondents report that additional information may be obtained from Hyeongsub Kim, VUNO Inc., Seoul, South Korea. Additional authors for this research include Younga Kim, Jaewoo Choi, Kyungjae Cho, Dongjoon Yoo, Yeha Lee, Su Jeong Park, Mun Hui Jeong, Seong Hee Jeong, Kyung Hee Park, Shin-Yun Byun, Taehwa Kim, Sung-Ho Ahn, Woo Hyun Cho and Narae Lee.

The publisher's contact information for the journal BMC Pediatrics is: Bmc, Campus, 4 Crinan St, London N1 9XW, England.

Keywords for this news article include: Asia, Seoul, Business, South Korea, Machine Learning, Clinical Research, Health and Medicine, Emerging Technologies, Information Technology, Artificial Intelligence, Electronic Medical Records, **Clinical Trials** and Studies.

NewsRX, LLC

Document JOENG00020231106ejb60006y

Artificial Intelligence; Data on Artificial Intelligence Reported by Paul O'Reilly and Colleagues (Translation of tissue-based artificial intelligence into clinical practice: from discovery to adoption)

493 words
6 November 2023
Journal of Engineering
JOENG
422
English

2023 NOV 6 (VerticalNews) -- By a News Reporter-Staff News Editor at Journal of Engineering -- New research on Artificial Intelligence is the subject of a report. According to news reporting originating from Belfast, United Kingdom, by VerticalNews correspondents, research stated, "Digital pathology (DP), or the digitization of pathology images, has transformed oncology research and cancer diagnostics. The application of artificial intelligence (AI) and other forms of machine learning (ML) to these images allows for better interpretation of morphology, improved quantitation of biomarkers, introduction of novel concepts to discovery and diagnostics (such as spatial distribution of cellular elements), and the promise of a new paradigm of cancer biomarkers."

Our news editors obtained a quote from the research, "The application of AI to tissue analysis can take several conceptual approaches, within the domains of language modelling and image analysis, such as Deep Learning Convolutional Neural Networks, Multiple Instance Learning approaches, or the modelling of risk scores and their application to ML. The use of different approaches solves different problems within pathology workflows, including assistive applications for the detection and grading of tumours, quantification of biomarkers, and the delivery of established and new image-based biomarkers for treatment prediction and prognostic purposes. All these AI formats, applied to digital tissue images, are also beginning to transform our approach to **clinical trials**. In parallel, the novelty of DP/AI devices and the related computational science pipeline introduces new requirements for manufacturers to build into their design, development, regulatory and post-market processes, which may need to be taken into account when using AI applied to tissues in cancer discovery."

According to the news editors, the research concluded: "Finally, DP/AI represents challenge to the way we accredit new diagnostic tools with clinical applicability, the understanding of which will allow cancer patients to have access to a new generation of complex biomarkers."

This research has been peer-reviewed.

For more information on this research see: Translation of tissue-based artificial intelligence into clinical practice: from discovery to adoption. Oncogene, 2023. Oncogene can be contacted at: Springernature, Campus, 4 Crinan St, London, N1 9XW, England. (Nature Publishing Group - www.nature.com/[http://www.nature.com/]; Oncogene - www.nature.com/onc/[http://www.nature.com/onc/])

The news editors report that additional information may be obtained by contacting Paul O'Reilly, Sonrai Analytics, Whitla Medical Building, 97 Lisburn Rd, Belfast, BT9 7BL, UK. Additional authors for this research include Alice Geaney, Perry Maxwell, Jacqueline A. James, Darragh McArt and Manuel Salto-Tellez.

Publisher contact information for the journal Oncogene is: Springernature, Campus, 4 Crinan St, London, N1 9XW, England.

Keywords for this news article include: Europe, Cancer, Belfast, Oncology, Pathology, Biomarkers, United Kingdom, Machine Learning, Health and Medicine, Emerging Technologies, Artificial Intelligence, Diagnostics and Screening.

NewsRX, LLC

Document JOENG00020231106ejb60006z

Oncology - Brain Cancer; Researchers at University College Dublin Have Published New Data on Brain Cancer (CURATE.AI COR-Tx platform as a digital therapy and digital diagnostic for cognitive function in patients with brain tumour postradiotherapy treatment: protocol ...)

613 words
6 November 2023
Clinical Trials Week
CTRW
5271
English

2023 NOV 6 (NewsRx) -- By a News Reporter-Staff News Editor at **Clinical Trials** Week -- New study results on brain cancer have been published. According to news reporting from Dublin, Ireland, by NewsRx journalists, research stated, "Conventional interventional modalities for preserving or improving cognitive function in patients with brain tumour undergoing radiotherapy usually involve pharmacological and/or cognitive rehabilitation therapy administered at fixed doses or intensities, often resulting in suboptimal or no response, due to the dynamically evolving patient state over the course of disease. The personalisation of interventions may result in more effective results for this population."

Funders for this research include Singapore Cancer Society; Singapore Ministry of Health's National Medical Research Council; National University of Singapore, Ministry of Education; National Research Foundation Singapore; Rie2020 Advanced Manufacturing And Engineering (Ame) Programmatic Fund; Institute For Digital Medicine (Wisdm) Translational Research Programme.

The news editors obtained a quote from the research from University College Dublin: "We have developed the CURATE.AI COR-Tx platform, which combines a previously validated, artificial intelligence-derived personalised dosing technology with digital cognitive training. Methods and analysis This is a prospective, single-centre, single-arm, mixed-methods feasibility clinical trial with the primary objective of testing the feasibility of the CURATE.AI COR-Tx platform intervention as both a digital intervention and digital diagnostic for cognitive function. Fifteen patient participants diagnosed with a brain tumour requiring radiotherapy will be recruited. Participants will undergo a remote, home-based 10-week personalised digital intervention using the CURATE.AI COR-Tx platform three times a week. Cognitive function will be assessed via a combined non-digital cognitive evaluation and a digital diagnostic session at five time points: preradiotherapy, preintervention and postintervention and 16-weeks and 32-weeks postintervention. Feasibility outcomes relating to acceptability, demand, implementation, practicality and limited efficacy testing as well as usability and user experience will be assessed at the end of the intervention through semistructured patient interviews and a study team focus group discussion at study completion. All outcomes will be analysed quantitatively and qualitatively. Ethics and dissemination This study has been approved by the National Healthcare Group (NHG) DSRB (DSRB2020/00249)."

According to the news editors, the research concluded: "We will report our findings at scientific conferences and/or in peer-reviewed journals. Trial registration number NCT04848935."

For more information on this research see: CURATE.AI COR-Tx platform as a digital therapy and digital diagnostic for cognitive function in patients with brain tumour postradiotherapy treatment: protocol for a prospective mixed-methods feasibility clinical trial. BMJ Open, 2023,13(10). (BMJ Open - http://bmjopen.bmj.com/[http://bmjopen.bmj.com/]). The publisher for BMJ Open is BMJ Publishing Group.

A free version of this journal article is available at https://doi.org/10.1136/bmjopen-2023-077219[https://doi.org/10.1136/bmjopen-2023-077219].

Our news journalists report that additional information may be obtained by contacting Alexandria Remus, Insight Centre for Data Analytics, University College Dublin, Dublin, Ireland. Additional authors for this research include Tseng Tsai Yeo, David Chia, Le Nguyen, Marlena N Raczkowska, Dean Ho, Xavier Tadeo, Grady Ng Shi Kai, Agata Blasiak, Theodore Kee, Smrithi Vijayakumar, Qian Yee Chai, Fatin Aliyah, Yaromir Rusalovski, Kejia Teo, Andrea Li Ann Wong, Christopher L Asplund, Balamurugan A Vellayappan.

Keywords for this news article include: University College Dublin, Dublin, Ireland, Europe, Oncology, Brain Cancer, Radiotherapy, Clinical Research, Drugs and Therapies, Health and Medicine, **Clinical Trials** and Studies.

NewsRX, LLC

Document CTRW000020231106ejb6000ck

Health and Medicine; Investigators at Memorial Sloan-Kettering Cancer Center Report Findings in Health and Medicine (An Interpretable Ai Model for Recurrence Prediction After Surgery In Gastrointestinal Stromal Tumour: an Observational Cohort Study)

525 words
6 November 2023
Clinical Trials Week
CTRW
2676
English

2023 NOV 6 (NewsRx) -- By a News Reporter-Staff News Editor at **Clinical Trials** Week -- Investigators publish new report on Health and Medicine. According to news reporting from New York City, New York, by NewsRx journalists, research stated, "There are several models that predict the risk of recurrence following resection of localised, primary gastrointestinal stromal tumour (GIST). However, assessment of calibration is not always feasible and when per-formed, calibration of current GIST models appears to be suboptimal."

Financial support for this research came from National Cancer Institute.

The news correspondents obtained a quote from the research from Memorial Sloan-Kettering Cancer Center, "We aimed to develop a prognostic model to predict the recurrence of GIST after surgery with both good discrimination and calibration by uncovering and harnessing the non-linear relationships among variables that predict recurrence.Methods In this observational cohort study, the data of 395 adult patients who underwent complete resection (R0 or R1) of a localised, primary GIST in the preimatinib era at Memorial Sloan Kettering Cancer Center (NY, USA) (recruited 1982-2001) and a European consortium (Spanish Group for Research in Sarcomas, 80 sites) (recruited 1987-2011) were used to train an interpretable Artificial Intelligence (AI)-based model called Optimal Classification Trees (OCT). The OCT predicted the probability of recurrence after surgery by capturing non-linear relationships among predictors of recurrence. The data of an additional 596 patients from another European consortium (Polish Clinical GIST Registry, 7 sites) (recruited 1981-2013) who were also treated in the preimatinib era were used to externally validate the OCT predictions with regard to discrimination (Harrell's C-index and Brier score) and calibration (calibration curve, Brier score, and Hosmer-Lemeshow test). The calibration of the Memorial Sloan Kettering (MSK) GIST nomogram was used as a comparative gold standard."

According to the news reporters, the research concluded: "We also evaluated the clinical utility of the OCT and the MSK nomogram by performing a Decision Curve Analysis (DCA)."

For more information on this research see: An Interpretable Ai Model for Recurrence Prediction After Surgery In Gastrointestinal Stromal Tumour: an Observational Cohort Study. eClinicalMedicine, 2023;64:102200. eClinicalMedicine can be contacted at: Elsevier, Radarweg 29, 1043 Nx Amsterdam, Netherlands.

Our news journalists report that additional information may be obtained by contacting Samuel Singer, Memorial Sloan-Kettering Cancer Center, Howard 1205, 1275 York Ave, New York, NY 10065, United States. Additional authors for this research include Dimitris Bertsimas, Seehanah Tang, Angelos Koulouras, Georgios Antonios Margonis, Murray F. Brennan, Bhumika Jadeja, Cristina R. Antonescu, Javier Martin-Broto, Antonio Gutierrez, Piotr Rutkowski, Elzbieta Bylina, Pawel Sobczuk, Georgios Stasinos, Jane Wang, Emmanouil Pikoulis, William D. Tap and Ping Chi.

Keywords for this news article include: New York City, New York, United States, North and Central America, Clinical Research, **Clinical Trials** and Studies, Gastroenterology, Health and Medicine, Risk and Prevention, Surgery, Memorial Sloan-Kettering Cancer Center.

NewsRX, LLC

Document CTRW000020231106ejb600047

Technology - Eye-Tracking Technology; New Findings Reported from Osaka University Describe Advances in Eye-Tracking Technology (Ps-c01-12: Early Detection of Dementia Using Ai-based Eye-tracking Technology)

568 words
6 November 2023
Clinical Trials Week
CTRW
3478
English

2023 NOV 6 (NewsRx) -- By a News Reporter-Staff News Editor at **Clinical Trials** Week -- Researchers detail new data in eye-tracking technology. According to news reporting from Osaka University by NewsRx journalists, research stated, ": Responding to the rapid rise in the number of dementia cases is becoming increasingly urgent. A great deal of evidence indicates that early diagnosis and timely intervention lead to beneficial outcomes."

The news reporters obtained a quote from the research from Osaka University: "Vascular risk factors such as hypertension can be a potential target for dementia prevention as controlling blood pressure can reduce the risk of developing dementia later in life. A diagnostic method for the easy and accurate detection of mild symptoms of dementia is necessary to provide early intervention. Neuropsychological tests, such as the Mini-Mental State Examination (MMSE), are commonly used as a screening tool to detect cognitive impairment. These traditional neuropsychological tests are valid and reliable; however, they are not sufficiently simple and rapid as routine screening tools. Here, we developed a newly developed eye tracking-based cognitive assessment tool to detect cognitive impairment. The gaze points of the subjects were recorded by the eye-tracking device while a series of short (178 s) task movies are displayed on the monitor, and the cognitive scores are determined from the gaze plots data. Eighty participants, including 27 cognitively healthy controls (HC), 26 patients with mild cognitive impairment (MCI), and 27 patients with dementia, were assessed by both an eye tracking-based and neuropsychological tests. A strong positive correlation was observed between the MMSE and eye tracking-based cognitive scores ($r = 0.74$, $p < 0.00001$, Spearman rank test). The eye tracking-based cognitive scores also correlated well with other neuropsychological tests such as FAB and ADAS-cog, and they also demonstrated a good diagnostic performance in detecting MCI. Eye tracking-based cognitive assessment provides a new platform for a quantitative scoring and sensitive detection of cognitive impairment."

According to the news editors, the research concluded: "Furthermore, we developed an easy-to-administer cognitive assessment application for smart devices such as iPad. This will facilitate early intervention, leading to the prevention of dementia. We are currently conducting a medical device clinical trial in Japan and preparing for the global extension of this service."

For more information on this research see: Ps-c01-12: Early Detection of Dementia Using Ai-based Eye-tracking Technology. Journal of Hypertension, 2023,41(Suppl 1). The publisher for Journal of Hypertension is Ovid Technologies (Wolters Kluwer Health).

A free version of this journal article is available at https://doi.org/10.1097/01.hjh.0000914500.42384.03[https://doi.org/10.1097/01.hjh.0000914500.42384.03].

Our news journalists report that more information may be obtained by contacting Shuko Takeda, Department of Clinical Gene Therapy, Graduate School of Medicine, Osaka University, Japan. Additional authors for this research include Akane Oyama, Tsuneo Nakajima, Yuki Ito, Yoichi Takami, Yasushi Takeya, Koichi Yamamoto, Ken Sugimoto, Hiromi Rakugi, Ryuichi Morishita.

Keywords for this news article include: Osaka University, Dementia, Mental Health, Health and Medicine, Risk and Prevention, Eye-Tracking Technology, Brain Diseases and Conditions, Neurodegenerative Diseases and Conditions, Central Nervous System Diseases and Conditions.

NewsRX, LLC

Document CTRW000020231106ejb60006o

Heart Disorders and Diseases - Atrial Fibrillation; New Atrial Fibrillation Findings from Fudan University Discussed (Build a Bridge Between Ecg and Eeg Signals for Atrial Fibrillation Diagnosis Using Ai Methods)

490 words
6 November 2023
Clinical Trials Week
CTRW
3159
English

2023 NOV 6 (NewsRx) -- By a News Reporter-Staff News Editor at **Clinical Trials** Week -- Research findings on Heart Disorders and Diseases - Atrial Fibrillation are discussed in a new report. According to news originating from Shanghai, People's Republic of China, by NewsRx correspondents, research stated, "Atrial fibrillation (AF) is a very common type of cardiac arrhythmia. The main characteristic of AF is an abnormally rapid and disordered atrial rhythm causing an atrial dysfunction, which can be visualized on an electrocardiograph (ECG) and distinguished by irregular fluctuations."

Financial support for this research came from Science and Technology Commission of Shanghai Municipality (STCSM) Research Fund, China.

Our news journalists obtained a quote from the research from Fudan University, "Despite continuous and considerable efforts to analyze the pathophysiology of AF, it is challenging to determine the underlying pathogenesis of the disease in individual patients. This study aims to build a bridge between ECG and electroencephalogram (EEG) signals to probe the strong influence between human brain activity and AF by AI methods. We first found that the one-second data fragment shows the most excellent performance in our time window configuration. Secondly, in our proposed measurement, most cortical potentials were partly associated with AF. Thirdly, we found that only a few channels of data were sufficient for analysis. Finally, our experiment shows ******* wave has the best performance compared to other wave bands. By AI methods, the paper contributes to concluding that ******* wave band of EEG is the most associated brain wave type with AF. By EEG signals from typical regions, the central region, parietal and Occipital might be the most associated encephalic regions with AF."

According to the news editors, the research concluded: "The clinical trial registration number for our study is ChiCTR2300068625."

This research has been peer-reviewed.

For more information on this research see: Build a Bridge Between Ecg and Eeg Signals for Atrial Fibrillation Diagnosis Using Ai Methods. Computers in Biology and Medicine, 2023;166. Computers in Biology and Medicine can be contacted at: Pergamon-elsevier Science Ltd, The Boulevard, Langford Lane, Kidlington, Oxford OX5 1GB, England. (Elsevier - www.elsevier.com[http://www.elsevier.com]; Computers in Biology and Medicine - www.journals.elsevier.com/computers-in-biology-and-medicine/[http://www.journals.elsevier.com/computers-in-biology-and-medicine/])

The news correspondents report that additional information may be obtained from Xinhua Zeng, Fudan University, Acad Engn & Technol, 220 Handan Rd, Shanghai 200433, People's Republic of China. Additional authors for this research include Moqing Li, Feng Wu, Yang Chu, Weiguo Wei, Min Fan, Chengxin Pang and Xing Hu.

Keywords for this news article include: Shanghai, People's Republic of China, Asia, Atrial Fibrillation, Cardiac Arrhythmias, Diagnostics and Screening, Health and Medicine, Heart Disease, Heart Disorders and Diseases, Fudan University.

NewsRX, LLC

Document CTRW000020231106ejb60005e

XtalPi and CK extend partnership to develop AI cancer diagnostic models

285 words
6 November 2023
07:59
MarketLine News and Comment
DTMNTR
English

The Chinese companies plan to use AI with clinical and biomarker data to develop miRNA-based cancer diagnostic models for prognostic risk prediction.

China-based companies XtalPi and CK Life Sciences have extended their partnership agreement to develop miRNA-based postoperative molecular diagnostic models for prognostic risk prediction.

The companies plan to leverage and apply artificial intelligence (AI) algorithms developed by XtalPi to the anonymised clinical and biomarker data from cancer patients and healthy individuals included in CK's repository.

In 2022, XtalPi and CK partnered to develop an AI-enabled cancer vaccine discovery platform.

The use of AI in healthcare has been increasing in recent years. As per GlobalData's **Clinical Trials** Database, there are currently 1,490 active **clinical trials** for in vitro diagnostics (IVD) devices, 569 of which are focused on oncology diagnostic devices.

As part of the current collaboration, XtalPi and CK will identify cancer biomarkers and develop computational models for clinical diagnosis, disease management, and the discovery of novel therapeutics.

"Diagnostic and prognostic tests play a crucial role in cancer management, representing a significant aspect of comprehensive cancer care. The timely detection of cancer enables early intervention, facilitating prompt treatment initiation," said CK Life Sciences' VP and chief scientific officer, Dr Melvin Toh.

"Working with XtalPi's exceptional team of data scientists, we hope to leverage our collective strengths to develop innovative cancer molecular diagnostics that will lead to improved patient outcomes."

Other companies that have been looking at mRNA biomarkers include Mainz Biomed, which is accessing the diagnostic sensitivity and specificity of mRNA biomarkers in cancer detection as part of the ColoFuture study.

EFCE1370-C8E0-4478-8788-E38C551FEF46

Progressive Digital Media Ltd

Document DTMNTR0020231106ejb60002y

Edifecs to Speak on the Power of Artificial Intelligence at 2023 WEDI National Conference

667 words
6 November 2023
08:00
Business Wire
BWR
English

Learn how AI unlocks a new level of value-based care and clinical decisions support

BELLEVUE, Wash.--(BUSINESS WIRE)--November 06, 2023--

Edifecs, Inc., a global health information technology solutions company, is participating in multiple sessions at the Workgroup for Electronic Data Interchange (WEDI) 2023 National Conference Nov. 6-9 in Washington D.C. Dr. Summerpal Kahlon, M.D., chief medical officer at Edifecs, and Niraj Katwala, vice president of core technology at Edifecs, will lead breakout sessions on applying artificial intelligence (AI) in various facets of healthcare.

Edifecs, a leader in healthcare AI, has long offered cloud-powered Software-as-a-Service (SaaS) to deliver proven AI-driven solutions for payers, providers, and the healthcare ecosystem at large. The Edifecs AI-driven technology runs across frameworks, including risk adjustment, value-based payment, and prior authorization.

The 2023 WEDI National Conference focuses on many segments of the healthcare industry, and includes sessions developing strategies for AI governance, amplifying health equity, leveraging AI as a prior authorization tool to speed up healthcare, and building organization-wide AI strategies.

Edifecs' 2023 WEDI National Conference Engagement:

Maximizing Value Through AI: Excelling in Episodes of Care

-- WHAT: In the era of value-based care, achieving excellence in patient care is paramount. Episodes of care represent an opportunity to define, deliver, and measure the "right" amount of care for a particular condition. AI enables healthcare organizations to unlock new opportunities to maximize value across episodes. This session offers attendees insights into practical strategies that highlight how AI enhances opportunities to improve clinical outcomes, optimize resource allocation, and drive cost-effective care delivery.

-- WHEN: Nov. 7, 2:15 p.m. -- 3 p.m. EST

-- WHERE: American University's Washington College of Law, Grossman Hall

-- SPEAKER:

-- Dr. Summerpal Kahlon, M.D., chief medical officer, Edifecs

From Thin Air to Precision Data: The Power of Generative AI in Electronic Data Interchange and Medical Records

-- WHAT: Clinical decision support (CDI, HCC and DRG coding, HEDIS quality measures, and **clinical trials** recruitment) relies on unstructured clinical notes stored in the EHR. By integrating generative AI, the healthcare industry can take a transformative leap forward in predicting current clinical conditions and future clinical outcomes of members and patients. Join Edifecs expert, Niraj Katwala, as he delves into the world of generative AI, exploring how it is reshaping the future of clinical decision support.

-- WHEN: Nov. 8, 2:30 p.m. -- 3:15 p.m. EST

-- WHERE: American University's Washington College of Law, NT01, Ceremonial Classroom

-- SPEAKER:

-- Niraj Katwala, vice president, core technology, Edifecs

The full 2023 WEDI National Conference agenda is here.

For updates on the latest news and announcements at the conference, please follow Edifecs on LinkedIn.

About Edifecs

Edifecs provides market leading technology to its payer and health system customers, which serve nearly 300 million people in the U.S. healthcare market. For over 25 years, Edifecs has enabled customers to unlock greater value by aggregating, normalizing, and unifying data with its Best in KLAS interoperability platform. The Edifecs platform serves as the foundation for the solutions that eliminate stakeholder friction to overcome healthcare's biggest challenges, including accelerating value-based payment adoption and obtaining more complete and accurate care funding for alternative payment models. Edifecs' solutions incorporate natural language processing, machine learning, and artificial intelligence to provide deeper insights into patients, populations, and business processes. As new standards and regulations continually emerge from government agencies, Edifecs is a proven partner to ensure its customers maintain "evergreen" compliance. Edifecs customers include 24 of the 25 top commercial health plans in the country, 27 out of 34 of the Blue Cross Blue Shield payers, 35 of the 50 Medicaid programs, and 5 out of 10 of the largest health systems.

View source version on businesswire.com: https://www.businesswire.com/news/home/20231106524904/en/[https://www.businesswire.com/news/home/20231106524904/en/]

CONTACT: Janet Hohmann

425-435-2894

Janet.Hohmann@edifecs.com

SOURCE: Edifecs, Inc.

(END)

Business Wire, Inc.

Document BWR0000020231106ejb600048

Japan Clinical Trial: The Japan Society of Ultrasonics in Medicine Registers Clinical Trial to Study Construction of Database and Exploratory trial for Performance of **artificial Intelligence** model to support Ultrasonic Diagnosis of Liver Mass

Distributed by Contify.com
231 words
4 November 2023
Contify Life Science News
ATPHAM
English

Tokyo, Japan, Nov. 4 -- The Japan Society of Ultrasonics in Medicine has registered a clinical trial with the University Hospital Medical Information Network (UMIN) **Clinical Trials** Registry (for Japan) to study the Construction of database and exploratory trial for performance of artificial intelligence model to support ultrasonic diagnosis of liver mass. The UMIN ID of the clinical trial is UMIN000052695.

The principal investigator of the clinical trial is Masatoshi Kudo.

The study type of clinical trial is Interventional.

Objectives of the trial: Construction of a database of ultrasound (US) B-mode video images for the diagnostic testing of liver mass using AI-aided US, and conducting the exploratory trial for the evaluation of the performance of the artificial intelligence (AI) model that supports human examiners for the detection and diagnosis of liver mass in B-mode US.

The full-text of the clinical trial can be found at: https://center6.umin.ac.jp/cgi-open-bin/ctr_e/ctr_view.cgi?recptno=R000060087[https://center6.umin.ac.jp/cgi-open-bin/ctr_e/ctr_view.cgi?recptno=R000060087]

[Category: Health Care Services and Facilities, Health Care, Health Care Equipment, **Clinical Trials**, Clinical Study, Medical Science, Medicine Research, Biomedical Research, Behavioral Research, Experimentationok]

Source: UMIN-CTR Clinical Trial - Japan

Athena Information Solutions Pvt. Ltd.

Document ATPHAM0020231104ejb4000t6

AI tools are getting better at personalizing patient treatments

Lisa Phillips

408 words
3 November 2023
Insider Intelligence - Industry Briefings
INSNB
English

The news: Artificial intelligence models developed by GE HealthCare can predict patient response to immunotherapies with 70% to 80% accuracy. The models predict efficacy outcomes and the likelihood an individual patient could develop an adverse reaction.

* GE HealthCare worked with Vanderbilt University Medical Center (VUMC) and the University Medicine Essen (UME), Germany.

* The AI models were run retrospectively on more than 3,000 immunotherapy patients' data from VUMC and on 4,000 patients' data from UME.

* GE HealthCare plans to commercialize the models for drug development and clinical decision support, after getting regulatory approvals.

Zooming out: Immunotherapies use a patient's immune system to identify and attack cancer cells. They can be more effective than traditional treatments such as chemotherapy.

* Some therapies are designed to amplify an immune response while others are designed to suppress the immune response.

* The therapies don't work for all patients or on all cancers. Overall response rates are about 15% to 20%[https://www.hopkinsmedicine.org/inhealth/about-us/immunotherapy-precision-medicine-action-policy-brief#:~:text=It%20doesn't%20work%20for,are%20about%2015%20to%2020%25], per Johns Hopkins Medicine.

* Just 3% of US adult cancer patients participate in **clinical trials** and 40% of those trials fail to get minimum patient enrollment, per Johns Hopkins.

The opportunities: These AI models could help pharma companies find the best patients for their **clinical trials** and raise the potential for success.

* They could also help clinicians personalize treatments sooner for some cancer patients, resulting in fewer side effects and lower costs.

Yes, but: There's still a long way to go. Accuracy rates of 70% to 80% are good, but not near what many doctors or patients want to base a potentially harmful and costly treatment on.

* Only 11% of clinical decisions are assisted by AI tools today, but 48% of doctors said they'd like to use AI in clinical decisions[https://content-na1.emarketer.com/doctors-see-benefits-of-generative-ai-tools?_gl=1*15ruims*_ga*MTc5MzUyNTE2NS4xNjcwMjg0MTg1*_ga_XXYLHB9SXG*MTY5ODkzNzIwMi44MjUuMS4xNjk4OTM4Mzk4LjAuMC4w*_gcl_au*NzY3NTUyNTYwLjE2OTcyMDkxOTkuNzE3ODkwNTI5LjE2OTg5MzcyMTEuMTY5ODkzODM5MA..] in 2 to 3 years, per Elsevier's Clinician of the Future survey.

* It will take 5 to 10 years before doctors can use AI tools to analyze patient data[https://content-na1.emarketer.com/generative-ai-training-stage-us-health-professionals?_gl=1*v9agh4*_ga*MTc5MzUyNTE2NS4xNjcwMjg0MTg1*_ga_XXYLHB9SXG*MTY5ODkzNzIwMi44MjUuMS4xNjk4OTM4MzkxLjAuMC4w*_gcl_au*NzY3NTUyNTYwLjE2OTcyMDkxOTkuNzE3ODkwNTI5LjE2OTg5MzcyMTEuMTY5ODkzODM5MA..] in ways that human doctors can't today, per a Citi Global Insights report.

* AI tools will make inroads in healthcare based on simple economics, per Citi.

Our take: AI tools are coming closer to helping providers and patients resolve difficult issues around expensive treatments. But until they can prove their economic viability, they'll stay in development.

Executives Worldwide Who Think That Generative AI Can Significantly Disrupt Their Sector, by Industry, April 2023 (% of respondents)[https://contentstorage-na1.emarketer.com/facbebf7a24162a90fc128e9926781c4p/282731]

SyndiGate Media Inc

Document INSNB00020231104ejb300009

Artificial Intelligence; Studies from South Tyneside District Hospital Add New Findings in the Area of Artificial Intelligence (Trial Protocol for Colo-detect: a Randomized Controlled Trial of Lesion Detection Comparing Colonoscopy Assisted By the Gi Genius™ ...)

591 words
3 November 2023
Medical Devices & Surgical Technology Week
MDST
6083
English

2023 NOV 12 (NewsRx) -- By a News Reporter-Staff News Editor at Medical Devices & Surgical Technology Week -- Fresh data on Artificial Intelligence are presented in a new report. According to news reporting originating in South Shields, United Kingdom, by NewsRx journalists, research stated, "Colorectal cancer is the second commonest cause of cancer death worldwide. Colonoscopy plays a key role in the control of colorectal cancer and, in that regard, maximizing detection (and removal) of pre-cancerous adenomas at colonoscopy is imperative."

Financial supporters for this research include Medtronic, South Tyneside and Sunderland NHS Foundation Trust.

The news reporters obtained a quote from the research from South Tyneside District Hospital, "GI Genius (TM) (Medtronic Ltd) is a computer-aided detection system that integrates with existing endoscopy systems and improves adenoma detection during colonoscopy. COLO-DETECT aims to assess the clinical and cost effectiveness of GI Genius (TM) in UK routine colonoscopy practice. Methods and analysis Participants will be recruited from patients attending for colonoscopy at National Health Service sites in England, for clinical symptoms, surveillance or within the national Bowel Cancer Screening Programme. Randomization will involve a 1:1 allocation ratio (GI Genius (TM)-assisted colonoscopy:standard colonoscopy) and will be stratified by age category (<60 years, 60- <74 years, >= 74 years), sex, hospital site and indication for colonoscopy. Demographic data, procedural data, histology and post-procedure patient experience and quality of life will be recorded. COLO-DETECT is designed and powered to detect clinically meaningful differences in mean adenomas per procedure and adenoma detection rate between GI Genius (TM)-assisted colonoscopy and standard colonoscopy groups. The study will close when 1828 participants have had a complete colonoscopy. An economic evaluation will be conducted from the perspective of the National Health Service. A patient and public representative is contributing to all stages of the trial. Registered at ClinicalTrials.gov (NCT04723758) and ISRCTN (10451355)."

According to the news reporters, the research concluded: "What will this trial add to the literature? COLO-DETECT will be the first multi-centre randomized controlled trial evaluating GI Genius (TM) in real world colonoscopy practice and will, uniquely, evaluate both clinical and cost effectiveness."

This research has been peer-reviewed.

For more information on this research see: Trial Protocol for Colo-detect: a Randomized Controlled Trial of Lesion Detection Comparing Colonoscopy Assisted By the Gi Genius™ Artificial Intelligence Endoscopy Module With Standard Colonoscopy. Colorectal Disease, 2022;24(10):1227-1237. Colorectal Disease can be contacted at: Wiley, 111 River St, Hoboken 07030-5774, NJ, USA. (Wiley-Blackwell - www.wiley.com/[http://www.wiley.com/]; Colorectal Disease - onlinelibrary.wiley.com/journal/10.1111/(ISSN)1463-1318)

Our news correspondents report that additional information may be obtained by contacting Colin J. Rees, South Tyneside & Sunderland Nhs Fdn Trust, South Tyneside District Hospital, South Shields, Tyne & Wear, United Kingdom. Additional authors for this research include Alexander Seager, James S. Hampton, Laura J. Neilson, Linda Sharp, Tom J. W. Lee, Andrew Brand, Rachel Evans, Luke Vale and John Whelpton.

Keywords for this news article include: South Shields, United Kingdom, Europe, Artificial Intelligence, Cancer, Clinical Research, **Clinical Trials** and Studies, Colonoscopy, Emerging Technologies, Endoscopy, Gastrointestinal Endoscopy, Health and Medicine, Machine Learning, Minimally Invasive Surgical Procedures, Oncology, Surgery, Surgical Procedures, South Tyneside District Hospital.

NewsRX, LLC

Document MDST000020231103ejb3000q2

Artificial Intelligence; Artificial Intelligence in Cardiac Surgery: A Systematic Review

545 words
3 November 2023
Medical Devices & Surgical Technology Week
MDST
705
English

2023 NOV 12 (NewsRx) -- By a News Reporter-Staff News Editor at Medical Devices & Surgical Technology Week -- According to news reporting based on a preprint abstract, our journalists obtained the following quote sourced from medrxiv.org:

BACKGROUND Artificial intelligence has emerged as a tool to potentially increase efficiency and efficacy of healthcare and improve clinical outcomes. The growing body of knowledge of artificial intelligence applications in cardiac surgery necessitates evaluation of past studies to gain insights to the future direction of artificial intelligence applications in cardiac surgery.

This study aims to provide a systematic review of the applications of artificial intelligence in cardiac surgery. METHODS A systematic literature search on artificial intelligence applications in cardiac surgery from 2000 to 2022 was conducted in the following databases: PubMed, Embase, Europe PMC, Epistemonikos, CINAHL, Cochrane Central, Google Scholar, Web of Science, Scopus, Cambridge Core, clinicaltrials.gov, and science. Studies on the implementation of artificial intelligence applications in cardiac surgery and the provision of decision support by the application through simulating clinical decision-making processes of healthcare providers were included. Studies not in English, published only as abstracts, review papers, meta-analyses, **clinical trials** that were still in progress, and published study protocols were excluded.

This study was registered on Prospero (CRD42022377530).

RESULTS A total of 42 studies were found that reported on artificial intelligence applications in cardiac surgery, all of which are cohort studies. Nine (21.43%) of the studies measured different parameters regarding cardiac surgeries in general. Meanwhile, 6 (14.29%) studies focused on Heart Transplantation (HT), 4 (9.52%) on Transcatheter Aortic Valve Replacement (TAVR), 3 (7.14%) anchored on Aortic Stenosis, and another 3 (7.14%) on Perioperative Complications. Three topics had 2 (4.76%) studies dedicated to them, namely Coronary Artery Bypass Graft (CABG), Postoperative Atrial Fibrillation (POAF), and Acute Kidney Injury (AKI). The remaining eleven studies have their own unique disease topics, procedures or surgeries in focus (n=11, 1 (2.38%), namely Postoperative Major Bleeding, Early Coronary Revascularization, Heart Valve Surgery, Isolated Mitral Valve Replacement (IMVR), Surgical Aortic Valve Replacement (SAVR), Open-Chest Surgery, Infective endocarditis, Post-Operative Deterioration, Red Blood Cell Transfusion, AKI - related Hippocampal Damage, and Open-Heart Surgery. Regarding evaluation outcomes, 26 studies examined the performance, 32 studies examined clinician outcomes, and 2 studies examined patient outcomes. Of the 42 studies, only 13 were conducted in Lower- and Middle-Income Countries. CONCLUSION Artificial intelligence was used to predict mortality, postoperative length of stay, and complications following cardiac surgeries. It can also improve clinicians' medical decisions by providing better preoperative risk assessment, stratification, and prognostication. While the application of artificial intelligence in cardiac surgery has greatly progressed in the last two decades, more highly powered studies need to be done to assess challenges and to ensure accuracy and safety for use in clinical practice.

This preprint has not been peer-reviewed.

For more information on this research see: medrxiv.org/content/10.1101/2023.10.18.23297244v1

Keywords for this news article include: Cardiology, Aortic Valve, Heart Valves, Cardiac Surgery, Machine Learning, Health and Medicine, Emerging Technologies, Artificial Intelligence, Cardiovascular Research.

NewsRX, LLC

Document MDST000020231103ejb30001r

Artificial Intelligence; FDA approved Artificial Intelligence and Machine Learning (AI/ML)-Enabled Medical Devices: An updated landscape (Updated October 23, 2023)

320 words
3 November 2023
Medical Devices & Surgical Technology Week
MDST
447
English

2023 NOV 12 (NewsRx) -- By a News Reporter-Staff News Editor at Medical Devices & Surgical Technology Week -- According to news reporting based on a preprint abstract, our journalists obtained the following quote sourced from medrxiv.org:

As artificial intelligence (AI) has been highly advancing in the last decade, machine learning (ML) enabled medical devices are increasingly used in healthcare.

In this article, we performed comprehensive analysis of FDA approved Artificial Intelligence and Machine Learning (AI/ML)-Enabled Medical Devices and offer an in-depth analysis of clearance pathways, approval timeline, regulation type, medical specialty, decision type, recall history etc.

We found a significant surge in approvals since 2018, with clear dominance of radiology specialty in the application of machine learning tools, attributed to the abundant data from routine clinical data. The study also reveals a reliance on the 510(k)-clearance pathway, emphasizing its basis on substantial equivalence and often bypassing the need for new **clinical trials** . Also, it notes an underrepresentation of pediatric-focused devices and trials, suggesting an opportunity for expansion in this demographic. Moreover, the geographical limitation of **clinical trials** , primarily within the United States, points to a need for more globally inclusive trails to encompass diverse patient demographics.

This analysis not only maps the current landscape of AI/ML-Enabled Medical Devices but also pinpoints trends, potential gaps, and areas for future exploration, clinical trial practices, and regulatory approaches.

This preprint has not been peer-reviewed.

For more information on this research see: medrxiv.org/content/10.1101/2022.12.07.22283216v3

Keywords for this news article include: Cyborgs, Medical Devices, Machine Learning, Clinical Research, Health and Medicine, Regulatory Agencies, Emerging Technologies, Artificial Intelligence, **Clinical Trials** and Studies.

NewsRX, LLC

Document MDST000020231103ejb30003v

GE HealthCare Announces New Data Validating Artificial Intelligence Models for Predicting Patient Response to Immunotherapies

1055 words
3 November 2023
ENP Newswire
ENPNEW
English

Release date - 02112023

England - GE HealthCare's Artificial Intelligence (AI) models predict patient response to immunotherapies with 70 to 80 percent accuracy1, based on a pan-cancer cohort, according to findings to be presented at the Society for Immunotherapy of Cancer (SITC) in San Diego, U.S., by GE HealthCare, Vanderbilt University Medical Center (VUMC) and the University Medicine Essen (UME), Germany.

Originally developed based on a cohort of over 3,000 immunotherapy patients from VUMC and subsequently validated on a cohort of 4,000 patients from UME, the AI models predict efficacy outcomes and the likelihood of an individual patient developing an adverse reaction. This could enable precision care by unlocking the potential for clinicians to select the appropriate personalized treatment pathway sooner while potentially sparing unnecessary side effects and cost.

Immunotherapies use the immune system to recognize and attack cancer cells and can be more effective than traditional treatments, but response rates are often low and side effects can be severe.2 In addition to the potential benefits of these AI models in clinical use, with roughly 5,000 immunotherapies in development today3, selecting patients more likely to respond could also help drug developers to speed up and increase the likelihood of success of **clinical trials** . After regional regulatory approvals, GE HealthCare plans to commercialize the models for use both in pharmaceutical drug development and for clinical decision support.

To develop the AI models, GE HealthCare and VUMC retrospectively analyzed and correlated the immunotherapy treatment response of thousands of VUMC cancer patients, with their deidentified demographic, genomic, tumor, cellular, proteomic, and imaging data. The models presented at SITC use only routinely acquired data from the patient's electronic health record (EHR) as inputs, enabling versatility and scalability in their potential application.

'Immunotherapy can offer significant benefits for patients but given the current unpredictability of some reactions to treatment, it can also be associated with increased morbidity and cost. These results pave the way for the ability to better select which patients should benefit and which would be better suited to an alternative form of treatment,' said Travis Osterman, DO, MS, Associate Vice President for Research Informatics and Associate Chief Medical Information Officer for Vanderbilt University Medical Center, and Director of Cancer Clinical Informatics at Vanderbilt-Ingram Cancer Center.

'In our joint work, we have shown that the AI models are effective across both sides of the Atlantic, paving the way for real world applications that could offer significant benefits for cancer patients treated with immunotherapies.' said Jens Kleesiek, MD, PhD, Head of the Medical Machine Learning Department at the Institute for AI in Medicine and Associate Director of the West German Cancer Center of the University Medicine Essen.

'These results are a promising development in the journey towards precision care, selecting treatment pathways based on the individual patient's likely response. We are keen to partner with pharmaceutical companies, researchers, and clinicians to optimize and apply our AI models in therapy development and in clinical practice in a longer term,' said Julia Casey, General Manager Molecular Imaging at GE HealthCare's Pharmaceutical Diagnostics segment.

The AI models are an integral part of GE HealthCare's immuno-oncology development portfolio which includes the development of novel PET tracers. The company recently announced the first patient scanned in a Phase I clinical trial of a first-of-its kind fluorine-18 PET radiopharmaceutical specific for CD8. Almost all immunotherapies work by activating CD8+ T cells - a subpopulation of white blood cells which fight cancer - both within and outside a tumor.

GE HealthCare's Pharmaceutical Diagnostics segment is a global leader in imaging agents used to support around 100 million procedures per year globally, equivalent to three patient procedures every second. Its Molecular Imaging portfolio combines established proprietary products across cardiology, neurology, and oncology, with an innovative pipeline, all aimed at enabling better-informed diagnosis and monitoring for improved therapy decision-making and clinical outcomes.

About GE HealthCare Technologies Inc.

GE HealthCare is a leading global medical technology, pharmaceutical diagnostics, and digital solutions innovator, dedicated to providing integrated solutions, services, and data analytics to make hospitals more efficient, clinicians more effective, therapies more precise, and patients healthier and happier. Serving patients and providers for more than 100 years, GE HealthCare is advancing personalized, connected, and compassionate care, while simplifying the patient's journey across the care pathway. Together our Imaging, Ultrasound, Patient Care Solutions, and Pharmaceutical Diagnostics businesses help improve patient care from diagnosis, to therapy, to monitoring. We are an $18.3 billion business with 50,000 employees working to create a world where healthcare has no limits.

About Vanderbilt University Medical Center

Vanderbilt University Medical Center (VUMC) is the largest comprehensive research, teaching and patient care health system in the Mid-South region of the U.S., with the highest ranked adult and children's hospitals in the Southeast by U.S. News & World Report. Based in Nashville, Tennessee, VUMC sees more than 3.2 million patient visits per year in over 180 ambulatory locations, performs 91,000 surgical operations and discharges 79,000 inpatients from its main-campus adult, children's, psychiatric and rehabilitation hospitals and three regional community hospitals. The Medical Center is the largest non-governmental employer of Middle Tennesseans, with nearly 40,000 staff, including more than 3,000 physicians, advanced practice nurses and scientists appointed to the Vanderbilt University faculty.

About The University Medicine Essen (UME)

Including its four subsidiary hospitals, University Medicine Essen comprises a total of 32 clinics and 24 institutes. Around 10,000 experts provide their know-how for more than 70,000 inpatients and 300,000 outpatients per year. Several hundred physicians and scientists work together at the West German Cancer Center Essen, the comprehensive cancer center of the University Hospital Essen, to offer cancer patients innovative interdisciplinary treatment programs and individualized therapies. With standout categories in electronic functionalities and artificial intelligence, UME is ranked in the top 20 of Newsweek World's Best Smart Hospitals 2023.

Contact:

Mathilde Bouscaillou Tel: +33 647 008 271 Email: Mathilde.bouscaillou@ge.com

John Howser Tel: 615-322-4747

Achim Struchholz Email: Achim.Struchholz@uk-essen.de

[Editorial queries for this story should be sent to newswire@enpublishing.co.uk]

Electronic News Publishing Ltd.
Document ENPNEW0020231103ejb3000et

MIT - 2023-24 Takeda Fellows: Advancing research at the intersection of AI and health

MIT - Massachusetts Institute of Technology published this content on 02 Nov 2023 and is solely responsible for the information contained herein. Distributed by PUBT, unedited and unaltered, on 05 Nov 2023 04:05:20 UTC.
2449 words
2 November 2023
Science, Education and Non-profit Organizations News via PUBT
SENPO
English

Access the original document here[https://news.mit.edu/2023/takeda-fellows-advancing-research-intersection-ai-health-1102]

2023-24 Takeda Fellows: Advancing research at the intersection of AI and health

The School of Engineering has selected 13 new Takeda Fellows for the 2023-24 academic year. With support from Takeda, the graduate students will conduct pathbreaking research ranging from remote health monitoring for virtual **clinical trials** to ingestible devices for at-home, long-term diagnostics.

Now in its fourth year, the MIT-Takeda Program, a collaboration between MIT's School of Engineering and Takeda, fuels the development and application of artificial intelligence capabilities to benefit human health and drug development. Part of the Abdul Latif Jameel Clinic for Machine Learning in Health, the program coalesces disparate disciplines, merges theory and practical implementation, combines algorithm and hardware innovations, and creates multidimensional collaborations between academia and industry.

The 2023-24 Takeda Fellows are:

Adam Gierlach

Adam Gierlach is a PhD candidate in the Department of Electrical Engineering and Computer Science. Gierlach's work combines innovative biotechnology with machine learning to create ingestible devices for advanced diagnostics and delivery of therapeutics. In his previous work, Gierlach developed a non-invasive, ingestible device for long-term gastric recordings in free-moving patients. With the support of a Takeda Fellowship, he will build on this pathbreaking work by developing smart, energy-efficient, ingestible devices powered by application-specific integrated circuits for at-home, long-term diagnostics. These revolutionary devices - capable of identifying, characterizing, and even correcting gastrointestinal diseases - represent the leading edge of biotechnology. Gierlach's innovative contributions will help to advance fundamental research on the enteric nervous system and help develop a better understanding of gut-brain axis dysfunctions in Parkinson's disease, autism spectrum disorder, and other prevalent disorders and conditions.

Vivek Gopalakrishnan

Vivek Gopalakrishnan is a PhD candidate in the Harvard-MIT Program in Health Sciences and Technology. Gopalakrishnan's goal is to develop biomedical machine-learning methods to improve the study and treatment of human disease. Specifically, he employs computational modeling to advance new approaches for minimally invasive, image-guided neurosurgery, offering a safe alternative to open brain and spinal procedures. With the support of a Takeda Fellowship, Gopalakrishnan will develop real-time computer vision algorithms that deliver high-quality, 3D intraoperative image guidance by extracting and fusing information from multimodal neuroimaging data. These algorithms could allow surgeons to reconstruct 3D neurovasculature from X-ray angiography, thereby enhancing the precision of device deployment and enabling more accurate localization of healthy versus pathologic anatomy.

Hao He

Hao He is a PhD candidate in the Department of Electrical Engineering and Computer Science. His research interests lie at the intersection of generative AI, machine learning, and their applications in medicine and human health, with a particular emphasis on passive, continuous, remote health monitoring to support virtual **clinical trials** and health-care management. More specifically, He aims to develop trustworthy AI models that promote equitable access and deliver fair performance independent of race, gender, and age. In his past work, He has developed monitoring systems applied in clinical studies of Parkinson's disease, Alzheimer's disease, and epilepsy. Supported by a Takeda Fellowship, He will develop a novel technology for the passive monitoring of sleep stages (using radio signaling) that seeks to address existing gaps in performance across different demographic groups. His project will tackle the problem of imbalance in available datasets and account for intrinsic differences across subpopulations, using generative AI and multi-modality/multi-domain learning, with the goal of learning robust features that are invariant to different subpopulations. He's work holds great promise for delivering advanced, equitable health-care services to all people and could significantly impact health care and AI.

Chengyi Long

Chengyi Long is a PhD candidate in the Department of Civil and Environmental Engineering. Long's interdisciplinary research integrates the methodology of physics, mathematics, and computer science to investigate questions in ecology. Specifically, Long is developing a series of potentially groundbreaking techniques to explain and predict the temporal dynamics of ecological systems, including human microbiota, which are essential subjects in health and medical research. His current work, supported by a Takeda Fellowship, is focused on developing a conceptual, mathematical, and practical framework to understand the interplay between external perturbations and internal community dynamics in microbial systems, which may serve as a key step toward finding bio solutions to health management. A broader perspective of his research is to develop AI-assisted platforms to anticipate the changing behavior of microbial systems, which may help to differentiate between healthy and unhealthy hosts and design probiotics for the prevention and mitigation of pathogen infections. By creating novel methods to address these issues, Long's research has the potential to offer powerful contributions to medicine and global health.

Omar Mohd

Omar Mohd is a PhD candidate in the Department of Electrical Engineering and Computer Science. Mohd's research is focused on developing new technologies for the spatial profiling of microRNAs, with potentially important applications in cancer research. Through innovative combinations of micro-technologies and AI-enabled image analysis to measure the spatial variations of microRNAs within tissue samples, Mohd hopes to gain new insights into drug resistance in cancer. This work, supported by a Takeda Fellowship, falls within the emerging field of spatial transcriptomics, which seeks to understand cancer and other diseases by examining the relative locations of cells and their contents within tissues. The ultimate goal of Mohd's current project is to find multidimensional patterns in tissues that may have prognostic value for cancer patients. One valuable component of his work is an open-source AI program developed with collaborators at Beth Israel Deaconess Medical Center and Harvard Medical School to auto-detect cancer epithelial cells from other cell types in a tissue sample and to correlate their abundance with the spatial variations of microRNAs. Through his research, Mohd is making innovative contributions at the interface of microsystem technology, AI-based image analysis, and cancer treatment, which could significantly impact medicine and human health.

Sanghyun Park

Sanghyun Park is a PhD candidate in the Department of Mechanical Engineering. Park specializes in the integration of AI and biomedical engineering to address complex challenges in human health. Drawing on his expertise in polymer physics, drug delivery, and rheology, his research focuses on the pioneering field of in-situ forming implants (ISFIs) for drug delivery. Supported by a Takeda Fellowship, Park is currently developing an injectable formulation designed for long-term drug delivery. The primary goal of his research is to unravel the compaction mechanism of drug particles in ISFI formulations through comprehensive modeling and in-vitro characterization studies utilizing advanced AI tools. He aims to gain a thorough understanding of this unique compaction mechanism and apply it to drug microcrystals to achieve properties optimal for long-term drug delivery. Beyond these fundamental studies, Park's research also focuses on translating this knowledge into practical applications in a clinical setting through animal studies specifically aimed at extending drug release duration and improving mechanical properties. The innovative use of AI in developing advanced drug delivery systems, coupled with Park's valuable insights into the compaction mechanism, could contribute to improving long-term drug delivery.

This work has the potential to pave the way for effective management of chronic diseases, benefiting patients, clinicians, and the pharmaceutical industry.

Huaiyao Peng

Huaiyao Peng is a PhD candidate in the Department of Biological Engineering. Peng's research interests are focused on engineered tissue, microfabrication platforms, cancer metastasis, and the tumor microenvironment. Specifically, she is advancing novel AI techniques for the development of pre-cancer organoid models of high-grade serous ovarian cancer (HGSOC), an especially lethal and difficult-to-treat cancer, with the goal of gaining new insights into progression and effective treatments. Peng's project, supported by a Takeda Fellowship, will be one of the first to use cells from serous tubal intraepithelial carcinoma lesions found in the fallopian tubes of many HGSOC patients. By examining the cellular and molecular changes that occur in response to treatment with small molecule inhibitors, she hopes to identify potential biomarkers and promising therapeutic targets for HGSOC, including personalized treatment options for HGSOC patients, ultimately improving their clinical outcomes. Peng's work has the potential to bring about important advances in cancer treatment and spur innovative new applications of AI in health care.

Priyanka Raghavan

Priyanka Raghavan is a PhD candidate in the Department of Chemical Engineering. Raghavan's research interests lie at the frontier of predictive chemistry, integrating computational and experimental approaches to build powerful new predictive tools for societally important applications, including drug discovery. Specifically, Raghavan is developing novel models to predict small-molecule substrate reactivity and compatibility in regimes where little data is available (the most realistic regimes). A Takeda Fellowship will enable Raghavan to push the boundaries of her research, making innovative use of low-data and multi-task machine learning approaches, synthetic chemistry, and robotic laboratory automation, with the goal of creating an autonomous, closed-loop system for the discovery of high-yielding organic small molecules in the context of underexplored reactions. Raghavan's work aims to identify new, versatile reactions to broaden a chemist's synthetic toolbox with novel scaffolds and substrates that could form the basis of essential drugs. Her work has the potential for far-reaching impacts in early-stage, small-molecule discovery and could help make the lengthy drug-discovery process significantly faster and cheaper.

Zhiye Song

Zhiye "Zoey" Song is a PhD candidate in the Department of Electrical Engineering and Computer Science. Song's research integrates cutting-edge approaches in machine learning (ML) and hardware optimization to create next-generation, wearable medical devices. Specifically, Song is developing novel approaches for the energy-efficient implementation of ML computation in low-power medical devices, including a wearable ultrasound "patch" that captures and processes images for real-time decision-making capabilities. Her recent work, conducted in collaboration with clinicians, has centered on bladder volume monitoring; other potential applications include blood pressure monitoring, muscle diagnosis, and neuromodulation. With the support of a Takeda Fellowship, Song will build on that promising work and pursue key improvements to existing wearable device technologies, including developing low-compute and low-memory ML algorithms and low-power chips to enable ML on smart wearable devices. The technologies emerging from Song's research could offer exciting new capabilities in health care, enabling powerful and cost-effective point-of-care diagnostics and expanding individual access to autonomous and continuous medical monitoring.

Peiqi Wang

Peiqi Wang is a PhD candidate in the Department of Electrical Engineering and Computer Science. Wang's research aims to develop machine learning methods for learning and interpretation from medical images and associated clinical data to support clinical decision-making. He is developing a multimodal representation learning approach that aligns knowledge captured in large amounts of medical image and text data to transfer this knowledge to new tasks and applications. Supported by a Takeda Fellowship, Wang will advance this promising line of work to build robust tools that interpret images, learn from sparse human feedback, and reason like doctors, with potentially major benefits to important stakeholders in health care.

Oscar Wu

Haoyang "Oscar" Wu is a PhD candidate in the Department of Chemical Engineering. Wu's research integrates quantum chemistry and deep learning methods to accelerate the process of small-molecule screening in the development of new drugs. By identifying and automating reliable methods for finding transition state geometries and calculating barrier heights for new reactions, Wu's work could make it possible to conduct the high-throughput ab initio calculations of reaction rates needed to screen the reactivity of large numbers of active pharmaceutical ingredients (APIs). A Takeda Fellowship will support his current project to: (1) develop open-source software for high-throughput quantum chemistry calculations, focusing on the reactivity of drug-like molecules, and (2) develop deep learning models that can quantitatively predict the oxidative stability of APIs. The tools and insights resulting from Wu's research could help to transform and accelerate the drug-discovery process, offering significant benefits to the pharmaceutical and medical fields and to patients.

Soojung Yang

Soojung Yang is a PhD candidate in the Department of Materials Science and Engineering. Yang's research applies cutting-edge methods in geometric deep learning and generative modeling, along with atomistic simulations, to better understand and model protein dynamics. Specifically, Yang is developing novel tools in generative AI to explore protein conformational landscapes that offer greater speed and detail than physics-based simulations at a substantially lower cost. With the support of a Takeda Fellowship, she will build upon her successful work on the reverse transformation of coarse-grained proteins to the all-atom resolution, aiming to build machine-learning models that bridge multiple size scales of protein conformation diversity (all-atom, residue-level, and domain-level). Yang's research holds the potential to provide a powerful and widely applicable new tool for researchers who seek to understand the complex protein functions at work in human diseases and to design drugs to treat and cure those diseases.

Yuzhe Yang

Yuzhe Yang is a PhD candidate in the Department of Electrical Engineering and Computer Science. Yang's research interests lie at the intersection of machine learning and health care. In his past and current work, Yang has developed and applied innovative machine-learning models that address key challenges in disease diagnosis and tracking. His many notable achievements include the creation of one of the first machine learning-based solutions using nocturnal breathing signals to detect Parkinson's disease (PD), estimate disease severity, and track PD progression. With the support of a Takeda Fellowship, Yang will expand this promising work to develop an AI-based diagnosis model for Alzheimer's disease (AD) using sleep-breathing data that is significantly more reliable, flexible, and economical than current diagnostic tools. This passive, in-home, contactless monitoring system - resembling a simple home Wi-Fi router - will also enable remote disease assessment and continuous progression tracking. Yang's groundbreaking work has the potential to advance the diagnosis and treatment of prevalent diseases like PD and AD, and it offers exciting possibilities for addressing many health challenges with reliable, affordable machine-learning tools.

* This content was originally posted here[https://news.mit.edu/2023/takeda-fellows-advancing-research-intersection-ai-health-1102]

Document SENPO00020231105ejb2000dy

Diagnostics and Screening - Breast Cancer Screening; Reports from Yonsei University Advance Knowledge in Breast Cancer Screening (Standalone Ai for Breast Cancer Detection At Screening Digital Mammography and Digital Breast Tomosynthesis:a Systematic Review and Meta-analysis)

599 words
2 November 2023
Women's Health Weekly
WHWK
5096
English

2023 NOV 9 (NewsRx) -- By a News Reporter-Staff News Editor at Women's Health Weekly -- Current study results on Diagnostics and Screening - Breast Cancer Screening have been published. According to news reporting originating in Seoul, South Korea, by NewsRx journalists, research stated, "There is considerable interest in the potential use of artificial intelligence (AI) systems in mammographic screening. However, it is essential to critically evaluate the performance of AI before it can become a modality used for independent mammographic interpretation."

Financial support for this research came from National Institutes of Health at the New York University Grossman School of Medicine.

The news reporters obtained a quote from the research from Yonsei University, "To evaluate the reported standalone performances of AI for interpretation of digital mammography and digital breast tomosynthesis (DBT). A systematic search was conducted in PubMed, Google Scholar, Embase (Ovid), and Web of Science databases for studies published from January 2017 to June 2022. Sensitivity, specificity, and area under the receiver operating characteristic curve (AUC) values were reviewed. Study quality was assessed using the Quality Assessment of Diagnostic Accuracy Studies 2 and Comparative (QUADAS-2 and QUADAS-C, respectively). A random effects meta-analysis and meta-regression analysis were performed for overall studies and for different study types (reader studies vs historic cohort studies) and imaging techniques (digital mammography vs DBT). In total, 16 studies that include 1 108 328 examinations in 497 091 women were analyzed (six reader studies, seven historic cohort studies on digital mammography, and four studies on DBT). Pooled AUCs were significantly higher for standalone AI than radiologists in the six reader studies on digital mammography (0.87 vs 0.81, P =.002), but not for historic cohort studies (0.89 vs 0.96, P =.152). Four studies on DBT showed significantly higher AUCs in AI compared with radiologists (0.90 vs 0.79, P<.001). Higher sensitivity and lower specificity were seen for standalone AI compared with radiologists. Standalone AI for screening digital mammography performed as well as or better than radiologists."

According to the news reporters, the research concluded: "Compared with digital mammography, there is an insufficient number of studies to assess the performance of AI systems in the interpretation of DBT screening examinations."

This research has been peer-reviewed.

For more information on this research see: Standalone Ai for Breast Cancer Detection At Screening Digital Mammography and Digital Breast Tomosynthesis:a Systematic Review and Meta-analysis. Radiology, 2023;307(5). Radiology can be contacted at: Radiological Soc North America (Rsna), 820 Jorie Blvd, Suite 200, Oak Brook, Illinois, United States.

Our news correspondents report that additional information may be obtained by contacting Jung Hyun Yoon, Yonsei University, Research Institute of Radiology Science, Severance Hospital, Dept. of Radiology, College of Medicine, 50 Yonsei Ro, Seoul 03722, South Korea. Additional authors for this research include Fredrik Strand, Pascal A. T. Baltzer, Emily F. Conant, Fiona J. Gilbert, Constance D. Lehman, Elizabeth A. Morris, Lisa A. Mullen, Ritse M. Mann, Nisha Sharma, Ilse Vejborg, Linda Moy and Robert M. Nishikawa.

Keywords for this news article include: Seoul, South Korea, Asia, Breast Cancer, Breast Cancer Screening, Cancer, Cancer Detection, Clinical Research, **Clinical Trials** and Studies, Diagnostics and Screening, Health and Medicine, Mammogram, Mammography, Oncology, Risk and Prevention, Women's Health, Yonsei University.

NewsRX, LLC

Document WHWK000020231102ejb20005r

Generate:Biomedicines and Roswell Park Comprehensive Cancer Center Enter into a Collaboration Agreement to Accelerate Novel Cell Therapies for Oncology Using Generative AI

920 words
2 November 2023
ENP Newswire
ENPNEW
English

Release date - 01112023

Somerville - Generate:Biomedicines and Roswell Park Comprehensive Cancer Center today announced a strategic collaboration to discover and develop chimeric antigen receptor (CAR) T-cell therapies, and armoring technologies, for up to three oncology targets, including in ovarian cancer and other solid tumors.

In ovarian cancer alone, an estimated 314,000 women worldwide are diagnosed and over 200,000 women die each year.

Under the collaboration agreement, Generate:Biomedicines and Roswell Park will contribute toward creating optimized cell therapies, where a patient's T cells are engineered to recognize and kill tumors. In recent years, CAR T-cells have seen remarkable successes for the treatment of liquid tumors, such as leukemia and lymphoma, including FDA approvals; however, successful treatment of solid tumors remains a major challenge for the field.

The collaboration combines the programmability and scalability of The Generate Platform and Roswell Park's expertise in cell therapy design, clinical development, and manufacturing to bring best-in-class cell therapies to patients. The collaboration continues the significant momentum associated with the recently announced expansion, supported in part by New York State funds, that will make Roswell Park's Current Good Manufacturing Practice (cGMP) facilities the largest academic cell therapy center in the United States.

'This is a powerful combination that brings together Roswell Park's world-leading expertise in cell therapy manufacturing and our technology and computational power,' said Generate:Biomedicines' Executive Vice President, Research & Development, Alex Snyder, M.D. 'Dr. Brentjens - whose lab played a foundational role in development of the currently approved therapies - together with Dr. Davila and their team are among the world's leading experts in cell therapy. Together we will deliver novel CAR T-cell therapeutics rapidly to change outcomes for patients with advanced solid tumors.'

'This collaboration with Generate:Biomedicines will allow us to harness the power of generative AI to rapidly advance our research to make groundbreaking cancer therapies for patients who are in need of new treatment options,' said Renier Brentjens, M.D., Ph.D., Deputy Director and Chair of Medicine at Roswell Park Comprehensive Cancer Center.

'Getting these complex new therapies to patients can often be a lengthy and complicated process requiring versatile solutions. By tapping into The Generate Platform, we see a great opportunity to efficiently and effectively advance innovative oncology treatments from idea to clinic,' adds Marco Davila, M.D., Ph.D., Senior Vice President and Associate Director for Translational Research, Department of Medicine, Roswell Park Comprehensive Cancer Center.

Under the agreement terms, Generate:Biomedicines and Roswell Park will share research and development expenses as well as profits generated through commercialization of products that emerge from the collaboration. It is anticipated that Roswell Park will serve as a site and recommend lead investigators for Phase I and II **clinical trials** .

About Cell Therapies

Cellular therapy uses living cells to destroy and control cancer cells. They are a new form of immunotherapy, whereby T-cells are administered to patients to assist the body's ability to fight diseases like cancer. Typically, these T-cells are first extracted from a patient's blood and then are changed in a lab to enhance their targeting capabilities - consequently enabling them to identify and eliminate cancer cells.

About Generative Biology

Generative biology represents a fundamental shift in therapeutic development driven by generative artificial intelligence (AI). This approach creates never-before-seen therapeutic molecules targeted to specific biological processes involved in disease that can be modulated with a wide range of protein modalities - from short peptides to complex antibodies, enzymes, and cytokines. But the promise of generative biology goes beyond existing proteins found in nature and can create novel proteins that are purpose-built to address an existing or emerging therapeutic need. As a result, generative biology promises to leave trial-and-error drug discovery methods behind to usher in a new era of programmable drug generation that's faster, cheaper, and better tailored to specific conditions.

About Generate:Biomedicines

Generate:Biomedicines is the first drug generation company, pioneering a machine learning-powered generative biology platform with the ability to create new drugs on demand across a wide range of biologic modalities. The Generate Platform - which is a continuous loop to generate, build, measure, and learn - can drastically increase the speed at which targets and therapeutics are identified and validated. This will improve the specificity of target engagement by generated proteins and reduce the time and cost of identifying and developing clinical candidates. Generate:Biomedicines was founded by Flagship Pioneering after two years of foundational research in its Labs unit and launched in 2020.

About Roswell Park Comprehensive Cancer Center

From the world's first chemotherapy research to the PSA prostate cancer biomarker, Roswell Park Comprehensive Cancer Center generates innovations that shape how cancer is detected, treated and prevented worldwide. Driven to eliminate cancer's grip on humanity, the Roswell Park team of 4,000 makes compassionate, patient-centered cancer care and services accessible across New York State and beyond. Founded in 1898, Roswell Park was among the first three cancer centers nationwide to become a National Cancer Institute-designated comprehensive cancer center and is the only one to hold this designation in Upstate New York.

Contact:

Megan McLaughlin Email: pr@generatebiomedicines.com

Rebecca Vogt Tel: 716 845 4919 Email: rebecca.vogt@roswellpark.org

[Editorial queries for this story should be sent to newswire@enpublishing.co.uk]

Electronic News Publishing Ltd.

Document ENPNEW0020231102ejb2000ce

Generate:Biomedicines and Roswell Park Comprehensive Cancer Center enter into a collaboration agreement to accelerate novel cell therapies for oncology using generative **AI**.

129 words
1 November 2023
BioSpace
BIOELSE
English

Generate:Biomedicines and Roswell Park Comprehensive Cancer Center announced on 1 Nov 2023 a strategic collaboration to discover and develop chimeric antigen receptor (CAR) T-cell therapies, and armouring technologies, for up to three oncology targets, including in ovarian cancer and other solid tumours. Under the agreement terms, Generate:Biomedicines and Roswell Park will share research and development expenses as well as profits generated through commercialization of products that emerge from the collaboration. It is anticipated that Roswell Park will serve as a site and recommend lead investigators for Phase I and II **clinical trials**. Original Source: Generate:Biomedicines, 2023. From website: http://www.biospace.com[http://www.biospace.com].

Elsevier Science Ltd.

Document BIOELSE020231107ejb10000d

Cedars-Sinai Medical Center; Cedars-Sinai uses AI to identify people with abnormal heart rhythms

619 words
1 November 2023
Defense & Aerospace Week
DEFAER
739
English

2023 NOV 1 (VerticalNews) -- By a News Reporter-Staff News Editor at Defense & Aerospace Week -- Investigators from the Smidt Heart Institute at Cedars-Sinai found that an artificial intelligence (AI) algorithm can detect an abnormal heart rhythm in people not yet showing symptoms.

The algorithm, which identified hidden signals in common medical diagnostic testing, may help doctors better prevent strokes and other cardiovascular complications in people with atrial fibrillation-the most common type of heart rhythm disorder.

Previously developed algorithms have been primarily used in white populations. This algorithm works in diverse settings and patient populations, including U.S. veterans and underserved populations. The findings were published in the peer-reviewed journal JAMA Cardiology.

"This research allows for better identification of a hidden heart condition and informs the best way to develop algorithms that are equitable and generalizable to all patients," said David Ouyang, MD, a cardiologist in the Department of Cardiology in the Smidt Heart Institute at Cedars-Sinai, a researcher in the Division of Artificial Intelligence in Medicine, and senior author of the study.

Experts estimate that about 1 in 3 people with atrial fibrillation do not know they have the condition.

In atrial fibrillation, the electrical signals in the heart that regulate the pumping of blood from the upper chambers to the lower chambers are chaotic. This can cause blood in the upper chambers to pool and form blood clots that can travel to the brain and trigger an ischemic stroke.

To create the algorithm, investigators programmed an artificial intelligence tool to study patterns found in electrocardiogram readings. An electrocardiogram is a test that monitors electrical signals from the heart. People who undergo this test have electrodes placed on their body that detect the heart's electrical activity.

The program was trained to analyze electrocardiogram readings taken between Jan. 1, 1987, and Dec. 31, 2022, from patients seen at two Veterans Affairs health networks. The algorithm was trained on almost a million electrocardiograms and it accurately predicted patients would have atrial fibrillation within 31 days.

The AI model was also applied to medical records from patients at Cedars-Sinai and it similarly-and accurately-predicted cases of atrial fibrillation within 31 days.

"This study of veterans was geographically and ethnically diverse, indicating that the application of this algorithm could benefit the general population in the U.S.," said Sumeet Chugh, MD, director of the Division of Artificial Intelligence in Medicine in the Department of Medicine and medical director of the Heart Rhythm Center in the Department of Cardiology. "This research exemplifies one of the many ways that investigators in the Smidt Heart Institute and the Division of Artificial Intelligence in Medicine are using AI to address preemptive management of complex and challenging cardiac conditions."

The study was a collaborative effort between physicians and investigators at Cedar-Sinai and the San Francisco and Palo Alto Veterans Affairs hospitals. In addition to Ouyang, Cedars-Sinai investigators Grant Duffy and John Theurer worked on the study.

The investigators plan to continue to study the algorithm as part of prospective **clinical trials** to learn if it helps identify those at risk for heart attack and stroke. They also plan to develop more AI algorithms.

Funding: The study was funded by the National Institutes of Health and the U.S. Department of Veterans Affairs.

Keywords for this news article include: Veterans, Algorithms, Cardiology, Heart Attack, Heart Disease, Machine Learning, Atrial Fibrillation, Cardiac Arrhythmias, Health and Medicine, Risk and Prevention, Military and Defense, Emerging Technologies, Artificial Intelligence, Cedars-Sinai Medical Center, Heart Disorders and Diseases.

NewsRX, LLC

Document DEFAER0020231101ejb10000q

CE Noticias Financieras English

Japanese use AI to create new generation of drugs; understand

520 words
1 November 2023
CE NoticiasFinancieras
NFINCE
English

Researchers at Nagoya University in Japan have used artificial intelligence to synthesize a new gastric acid inhibitor drug with a better binding affinity to targets than current drugs. The creation of the compound, which shows the potential of the technology for a new generation of drugs in general, was described in a study published in the scientific journal Communications Biology.

Gastric acid is a fundamental part of food digestion, but when there is an imbalance it can attack the inner wall of the stomach and cause discomfort or, in more serious cases, gastritis, ulcers and reflux. For this reason, it is common to resort to antacid medication, which aims to inhibit the mechanism responsible for the secretion of the substance, called the proton pump. In this way, it is neutralized and the symptoms are relieved.

In the new drug, the researchers decided to focus on a more specific target of the proton pump, a complex protein structure that transports H+ protons. These, in turn, are needed to make HCl, the acid that makes up gastric acid.

To achieve this feat, the scientists used an artificial intelligence platform designed to discover new drugs, Deep Quartet. Based on the information requested, it designed more than 100 compounds with unique chemical structures aimed at the specific target of the proton pump.

They then synthesized the compounds and analyzed their binding to proteins using a microscope. Not all of them were effective, and the scientists made modifications to improve their ability. The scientists then selected the most promising compounds for testing in the laboratory.

In the experiments, which evaluated the effect on the specific target of the proton pump, the researchers observed that one of the compounds exhibited a potent binding power with the target, even superior to that seen in current drugs.

Still, to confirm that this means the drug is more effective, as well as ensuring it is safe, all the stages of pre-clinical and **clinical trials** are needed. But the initial results already excite the researchers and show how AI can open up a new path in drug development.

In this context, they stress the importance of synergy between human scientists and technology. The final compound, with the changes made by the researchers, for example, had a binding potential around 10 times greater than the initial one made by AI alone.

"We can see AI being useful for creating treatments, but not completely or automatically. We use AI to design drugs based on structure, something we humans are not so good at. But we choose real candidates to synthesize and actually improve them with our own hands. We use AI efficiently for what we're not good at. But I believe that, at least for the time being, human knowledge is ultimately necessary to make any final decision," says Kazuhiro Abe, a professor at Nagoya University's School of Pharmaceutical Sciences who took part in the study, in a statement.

Latest Next Soy pesticides killed 123 children in the countryside in 11 years, says study

Content Engine LLC

Document NFINCE0020231101ejb100jra

Definitive Healthcare Corp. - **Artificial intelligence** is redefining life sciences, but how can we get there faster

Definitive Healthcare Corp. published this content on 01 Nov 2023 and is solely responsible for the information contained herein. Distributed by PUBT, unedited and unaltered, on 01 Nov 2023 17:01:46 UTC.
1614 words
1 November 2023
Public Companies News and Documents via PUBT
LCDVP
English

Access the original document here[https://www.definitivehc.com/blog/ai-in-life-sciences]

Artificial intelligence is redefining life sciences, but how can we get there faster

To say that artificial intelligence (AI)[https://www.definitivehc.com/resources/glossary/artificial-intelligence] will be a game changer for the life sciences industry is an understatement. Biopharma[https://www.definitivehc.com/industry/biopharma] and medical device[https://www.definitivehc.com/industry/medical-devices] companies are using AI and machine learning (ML)[https://www.definitivehc.com/resources/glossary/machine-learning] to create more effective drugs, make robot-assisted surgeries possible, identify treatment-ready patients, save lives, and so much more.

While life sciences companies have used AI for years, the explosive arrival of generative AI tools like ChatGPT[https://www.definitivehc.com/blog/chatgpt] and Midjourney in 2023 ignited conversations about how the technology is used. There are some potential risks with AI, including privacy and security, the quality of the data, and the impact these tools will have on the workforce.

Despite the risks, the momentum behind AI in life sciences is building fast, and the market is ripe with untapped opportunities. To remain competitive, life sciences companies must embrace AI. We explore why in our latest AI in life sciences intelligence report[https://www.definitivehc.com/resources/research/life-sciences-ai], but if you want an overview of AI trends[https://www.definitivehc.com/blog/4-surprising-ai-healthcare-trends] in life sciences, including the use cases and challenges you should be aware of, then read on!

Leaders are enthusiastic about the AI movement, but many remain cautious

To get a better understanding of how biopharma and medical device companies think and feel about AI, and how they're integrating it into their strategies, we conducted a survey and interviewed a handful of leaders at life sciences organizations in the summer of 2023.

To summarize, nearly all survey participants and interviewees were excited about what AI could do for healthcare. A sense of caution counterbalanced their enthusiasm, as many respondents shared that there is still a lot to learn about AI's potential positive and negative impacts.

From the chart, we can see that many participants across biopharma and medical device companies rank their understanding of AI and ML as a "1," meaning that they have a lot to learn about the technology's full potential.

No one considered themselves an AI expert (Level 5), which raises questions about how difficult it is to understand the capabilities of AI and whether the market has enough knowledgeable workers to leverage the technology to its fullest potential. Survey participants felt that AI's complexity and a perceived lack of skilled talent in the market were among the biggest obstacles to broader AI adoption in the life sciences industry.

While some biopharma and medical device leaders feel that they have more to learn, that hasn't stopped major players from investing in AI. Half of the 50[https://www.cbinsights.com/research/ai-readiness-index-pharma/] largest pharmaceutical companies have entered into partnership or licensing agreements with AI companies as of 2023, and the value of the market is estimated to reach $7.09 billion by 2028[https://www.mordorintelligence.com/industry-reports/artificial-intelligence-in-life-sciences-market]. As we explore in more detail in our report, life sciences leaders acknowledge the risks and concerns surrounding AI, but feel that the potential benefits outweigh the negatives.

Which use cases should life sciences companies focus on?

Biopharma and medical device companies are using artificial intelligence to help save lives and improve patient care. Still, there are also plenty of opportunities to use the technology in other applications, too. AI and ML can help companies streamline daily operations, optimize time spent researching and analyzing data, and compete more effectively in the market.

Three life sciences use cases that benefit the most from AI include:

Mining unstructured data. The vast majority of data generated by the healthcare industry is "unstructured," such as an X-ray, an electronic health record (EHR), or clinical notes. Unstructured data are valuable because they capture the severity of a patient's condition. The problem, however, is that they are often amassed quickly and haphazardly, making any attempt at analysis difficult and time-consuming. AI takes the heavy lifting out of reviewing patient data and saves researchers valuable time searching for trends and patterns. A study by the Fred Hutchinson Cancer Center[https://www.fredhutch.org/en/research/clinical-trials/trial/analysis_of_natural_language_processing_nlp_technology_to_aid_or.html] used a natural language processing (NLP) service from Amazon[https://aws.amazon.com/comprehend/medical/] to review 10,000 sources of unstructured data per hour. Using this tool slashed the time needed to enroll relevant patients in a clinical trial from hours to seconds[https://aws.amazon.com/blogs/industries/how-natural-language-processing-can-uncover-value-from-unreachable-data-in-the-modern-medical-ecosystem/#:~:text=Fred%20Hutchinson%20Cancer%20Research%20Center,normal%20detection%20with%2070%25%20accuracy.]. Predictive analytics can also leverage unstructured data to support strategic thinking and help organizations predict shifts in the healthcare landscape.

Supporting earlier disease diagnosis. Advancements in AI and medical imaging are making faster and more accurate disease diagnosis possible. In one study, researchers found that an AI was twice as accurate[https://www.cancer.gov/research/areas/diagnosis/prevent-cervical-cancer] at positively identifying precancerous changes that would require medical attention than doctors were. The AI could also predict seven years into the future the patients who would likely develop a precancer and those who wouldn't. Not only can earlier disease diagnosis be lifesaving for cancer patients, but it can also help providers develop more targeted treatment plans, reduce medical errors, and lower the risk of patients developing long-term complications[https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7325854/].

Identifying patients for **clinical trials**. **Clinical trials** offer biopharma companies valuable information but can be difficult to pull off due to the time it takes to find the most suitable patients. Reports indicate that about 80% of all trials fail[https://www.arraylive.com/blog/how-to-increase-clinical-trial-enrollment-with-information-and-communication#:~:text=Difficulty%20enrolling%20patients%20in%20a,failure%20to%20achieve%20full%20enrollment.] to meet their original enrollment deadline, and 55% of trials are terminated for failure to achieve full enrollment[https://www.pharmaceutical-technology.com/comment/reasons-for-clinical-trial-termination/]. AI can help researchers conduct more successful trials. ML algorithms, NLP, and optical character recognition all help an AI quickly parse large datasets for the right patients, reducing patient screening time and increasing enrollment[https://medinform.jmir.org/2019/3/e14185/], sometimes by 34% and 11%, respectively.

Survey participants shared their concerns and roadblocks to AI adoption

Despite the tremendous potential that AI can have within the life sciences industry, there are some challenges and concerns that need to be addressed. The market is moving fast, and many companies are investing in AI tools, but these obstacles should be considered as we try to predict the impact AI will have on healthcare. Three of the most important roadblocks are:

Privacy and security. Healthcare organizations are attractive targets for hackers and cybercriminals, which can devastate patients and providers. Data breaches result in longer lengths of stay

at hospitals, delays in procedures, and higher complication and mortality rates. AI is no more secure against these attacks than any other form of technology-so life sciences organizations must remain vigilant of their security solutions and where network vulnerabilities lie.

Data quality. An AI is only as useful as the quality of the dataset used to train it. To squeeze the most value out of an AI system, life sciences companies must ensure their data is accurate, error-free, unbiased, and collected from diverse sources. Overcoming system biases in healthcare will be challenging. The road ahead is long, but survey participants believe that implementing standardized procedures for data collection and involving subject matter experts to check for equity and inclusivity is a strong starting point.

Ethical concerns. A common concern held among the public is that AI will make some human jobs obsolete. After all, AI can do in seconds what people need hours or days to accomplish. Despite these feelings, many survey respondents shared their optimism about the future and believe AI will create more jobs and potentially create new ones. AI technology is still in its infancy and is nowhere near capable enough to replace everything a healthcare provider does fully. Likely, AI will instead be used to support providers, helping them focus more on patient care and less on burdensome administrative tasks that cause stress and burnout.

More widespread collaboration between providers, AI vendors, and biopharma and medical device companies will be key to overcoming these barriers to adoption. What's more, collaboration will help to find the areas where AI will be most useful, allow for the sharing of best practices, and potentially increase access to higher-quality data.

Life sciences companies must embrace AI

Artificial intelligence isn't having its 15 minutes of fame-the technology is being positioned as a major force in shaping the future of the life sciences (and broader healthcare) landscape. AI is already showing its value in making research and internal processes more efficient. Still, it's also transforming how drugs are discovered and developed, making supply chains smarter and more responsive, creating personalized treatment plans, and helping launch and market products. And that might just be scratching the surface.

Knowing what's possible with AI and that the tangible benefits outweigh the potential risks means that life sciences companies can't afford to stay complacent for long. They need to embrace AI or get left behind by the competition.

If you want the full, data-driven exploration of AI's impact on the life sciences landscape, including more perspectives, use cases, and challenges, read our intelligence report: All in: Why life sciences companies must embrace AI.[https://www.definitivehc.com/resources/research/life-sciences-ai]

With how quickly the market is moving, there's no better time than now to consider how to integrate AI and ML into your company's strategy. Our AI-focused e-books for biopharma[https://www.definitivehc.com/resources/ebooks/ai-ml-pharma-biotech] and medical device[https://www.definitivehc.com/resources/ebooks/artificial-intelligence-machine-learning-medical-device-companies] companies are a great place to start.

For more of the latest trends and healthcare commercial intelligence[https://www.definitivehc.com/our-approach-healthcare-commercial-intelligence] in the life sciences industry, sign up for a free trial[https://www.definitivehc.com/free-trial] with Definitive Healthcare.

* This content was originally posted here[https://www.definitivehc.com/blog/ai-in-life-sciences]

Roswell Park Comprehensive Cancer Center, Generate:Biomedicines Enter Into Collaboration Agreement to Accelerate Novel Cell Therapies For Oncology Using Generative AI

Distributed by Contify.com
923 words
1 November 2023
Contify Life Science News
ATPHAM
English

Roswell Park Comprehensive Cancer Center and Generate:Biomedicines have entered into a collaboration agreement to accelerate the development of novel cell therapies for oncology using generative AI. The collaboration will focus on chimeric antigen receptor (CAR) T-cell therapies and armoring technologies for up to three oncology targets, including ovarian cancer and other solid tumors. The goal is to create optimized cell therapies that can recognize and kill tumors.

Key Highlights:

* Roswell Park Comprehensive Cancer Center and Generate:Biomedicines have entered into a collaboration agreement.

* CAR T-cells have shown success in treating liquid tumors like leukemia and lymphoma, but treating solid tumors remains a challenge.

* Roswell Park's expertise in cell therapy manufacturing and Generate:Biomedicines technology and computational power are seen as a powerful combination.

Original Press Release:

BUFFALO, New York & SOMERVILLE, Massachusetts, Nov. 1 -- Roswell Park Comprehensive Cancer Center issued the following news release:

- Multi-year collaboration will enable development of complex, cutting-edge cell therapies and armoring technologies for solid tumor targets Roswell Park Comprehensive Cancer Center and Generate:Biomedicines announce a strategic collaboration to discover and develop chimeric antigen receptor (CAR) T-cell therapies, and armoring technologies, for up to three oncology targets, including in ovarian cancer and other solid tumors. In ovarian cancer alone, an estimated 314,000 women worldwide are diagnosed and over 200,000 women die each year. Under the collaboration agreement, Roswell Park and Generate:Biomedicines will contribute toward creating optimized cell therapies, where a patient's T cells are engineered to recognize and kill tumors. In recent years, CAR T-cells have seen remarkable successes for the treatment of liquid tumors, such as leukemia and lymphoma, including FDA approvals; however, successful treatment of solid tumors remains a major challenge for the field. The collaboration combines the programmability and scalability of The Generate Platform and Roswell Park's expertise in cell therapy design, clinical development, and manufacturing to bring best-in-class cell therapies to patients. The collaboration continues the significant momentum associated with the recently announced expansion, supported in part by New York State funds, that will make Roswell Park's Current Good Manufacturing Practice (cGMP) facilities the largest academic cell therapy center in the United States. "This is a powerful combination that brings together Roswell Park's world-leading expertise in cell therapy manufacturing and our technology and computational power," says Generate:Biomedicines' Executive Vice President, Research & Development, Alex Snyder, MD. "Dr. Brentjens – whose lab played a foundational role in development of the currently approved therapies – together with Dr. Davila and their team are among the world's leading experts in cell therapy. Together we will deliver novel CAR T-cell therapeutics rapidly to change outcomes for patients with advanced solid tumors." Dr. Renier Brentjens "This collaboration with Generate:Biomedicines will allow us to harness the power of generative AI to rapidly advance our research to make groundbreaking cancer therapies for patients who are in need of new treatment options," says Renier Brentjens, MD, PhD, Deputy Director and Chair of Medicine at Roswell Park Comprehensive Cancer Center. Dr. Marco Davila "Getting these complex new therapies to patients can often be a lengthy and complicated process requiring versatile solutions. By tapping into The Generate Platform, we see a great opportunity to efficiently and effectively advance innovative oncology treatments from idea to clinic," adds Marco Davila, MD, PhD, Senior Vice President and Associate Director for Translational Research, Department of Medicine, Roswell Park Comprehensive Cancer Center. Under the agreement terms, Roswell Park and Generate:Biomedicines will share research and development expenses as well as profits generated through commercialization of products that emerge from the collaboration. It is anticipated that Roswell Park will serve as a site and recommend lead investigators for Phase I and II **clinical trials**.

About Roswell Park Comprehensive Cancer Center:

From the world's first chemotherapy research to the PSA prostate cancer biomarker, Roswell Park Comprehensive Cancer Center generates innovations that shape how cancer is detected, treated and prevented worldwide. Driven to eliminate cancer's grip on humanity, the Roswell Park team of 4,000 makes compassionate, patient-centered cancer care and services accessible across New York State and beyond. Founded in 1898, Roswell Park was among the first three cancer centers nationwide to become a National Cancer Institute-designated comprehensive cancer center and is the only one to hold this designation in Upstate New York. To learn more about Roswell Park Comprehensive Cancer Center and the Roswell Park Care Network, visit www.roswellpark.org[http://www.roswellpark.org], call 1-800-ROSWELL (1-800-767-9355) or email ASKRoswell@RoswellPark.org.

About Generate:Biomedicines:

Generate:Biomedicines is the first drug generation company, pioneering a machine learning-powered generative biology platform with the ability to create new drugs on demand across a wide range of biologic modalities. The Generate Platform – which is a continuous loop to generate, build, measure, and learn – can drastically increase the speed at which targets and therapeutics are identified and validated. This will improve the specificity of target engagement by generated proteins and reduce the time and cost of identifying and developing clinical candidates. Generate:Biomedicines was founded by Flagship Pioneering after two years of foundational research in its Labs unit and launched in 2020. Learn more about Generate:Biomedicines by visiting https://generatebiomedicines.com/[https://generatebiomedicines.com/] or following the company on Twitter and LinkedIn.

[Category: Pharmaceuticals, Health Care, Partnerships and Alliances]

Source: Roswell Park Comprehensive Cancer Center

Athena Information Solutions Pvt. Ltd.

Document ATPHAM0020231101ejb1000ss

UK MHRA unveils new regulatory sandbox for testing AI

464 words
1 November 2023
08:50
MarketLine News and Comment
DTMNTR
English

The regulatory sandbox is intended at providing a safe space for AI tool developers in healthcare to trial products in view of regulators before implemented.

The UK's Medicines and Healthcare products Regulatory Agency (MHRA) has announced what it describes as a 'regulatory sandbox' where artificial intelligence products are set to be tested.

Dubbed the AI Airlock, the tool is intended to allow developers a safe and isolated set of systems on which AI healthcare tools can be tested and demonstrated, before being implemented in a real-world setting.

The AI Airlock is intended to ensure that medical device manufacturers can understand and deliver what is required to ensure the real-world viability of their products, as well as offering a collaborative approach between different developers.

Paul Campbell, MHRA head of software and AI, said: "Building on the success of the regulatory sandbox, we are excited to deliver a new, world-leading methodology to support safe early access to AI for patients and healthcare.

"We need to ensure that AI is safe and properly regulated, but in a way that doesn't stifle innovation and access to the latest of medical technologies to improve patient care."

It comes after UK Prime Minister Rishi Sunak vowed to tackle fears surrounding AI's potential uses and after the Department of Health and Social Care set aside £21m in funding to roll AI tools out across the UK's National Health System (NHS).

The AI Airlock service will be intended for launch in April 2024 and will allow AI developers and medical device firms to test their AI tools in front of and with input from regulators, academics and approved government bodies, as well as other developers.

Research carried out by GlobalData found that the global AI market for healthcare is set to reach $18.8bn by 2027, up from $4.8bn in 2022. Additionally, a 2022 survey carried out by GlobalData found that 66.7% of respondents identified AI as one of the most likely disruptive technologies in the healthcare space.

In the same survey over half of respondents believe drug development and discovery has the most potential to be impacted in some way by generative AI, at 54%, with impact on **clinical trials** following behind with 22%.

Campbell added: "By moving beyond conventional product concepts and associated regulations, sandboxes like the AI-Airlock offer a unique and safe learning space for manufacturers to work with regulators and other parties to explore new, cutting-edge solutions to help resolve these challenges.

"The new AI-Airlock scheme run by the MHRA will give us answers about how best to provide safe and effective products, such as AI-driven medical devices, to the NHS and patients."

E3BA4E37-6A70-4536-B9D1-8003C4617ECA

Progressive Digital Media Ltd

Document DTMNTR0020231101ejb1000bj

AIAI Netramark to provide AI tech to biopharma company

Stockwatch
348 words
31 October 2023
Canada Stockwatch
CNSW
English

Netramark Holdings Inc (CSE:AIAI)

Shares Issued 65,637,875

Last Close 10/31/2023 $0.36

Tuesday October 31 2023 - News Release

Mr. Josh Spiegel reports

NETRAMARK SIGNS MASTER SERVICE AGREEMENT WITH A LARGE BIOPHARMACEUTICAL COMPANY

Netramark Holdings Inc. has entered into a master service agreement with a large publicly listed biopharmaceutical company.

The agreement paves the way for collaboration, whereby Netramark will employ its unique generative AI (artificial intelligence) technology platform to analyze clinical trial data from select candidate medicines of the biopharmaceutical company. The primary objective being to discover specific subpopulations, and shed light on unique patient enrichment paradigms related to drug and placebo responses.

Josh Spiegel, president of Netramark, expressed his enthusiasm: "We are elated to forge this relationship. Our advanced generative AI solutions are poised to offer profound insights into patient populations involved in **clinical trials** . This collaboration aims to enhance the success rates of late-stage **clinical trials** , aligning seamlessly with the biopharmaceutical company's dedication to expediting the development of innovative treatments for conditions with significant unmet medical needs."

The agreement follows an extensive and rigorous evaluation of Netramark by the biopharmaceutical company, including a comprehensive vendor qualification audit, ensuring adherence to the highest standards of good clinical practice (GCP).

About Netramark Holdings Inc.

Netramark is a company focused on being a leader in the development of generative artificial intelligence/machine learning (ML) solutions targeted at the pharmaceutical industry. Its product offering uses a novel topology-based algorithm that has the ability to parse patient data sets into subsets of people that are strongly related according to several variables simultaneously. This allows Netramark to use a variety of ML methods, depending on the character and size of the data, to transform the data into powerfully intelligent data that activate traditional AI/ML methods. The result is that Netramark can work with much smaller data sets and accurately segment diseases into different types, as well as accurately classify patients for sensitivity to drugs and/or efficacy of treatment.

We seek Safe Harbor.

Canjex Publishing Ltd.

Document CNSW000020231031ejav00af1

Petros Pharmaceuticals Petros Pharmaceuticals Developing Artificial Intelligence Technology for Phase 2 Equivalent Study for STENDRA

1405 words
31 October 2023
ENP Newswire
ENPNEW
English

Release date - 30102023

NEW YORK - Petros Pharmaceuticals, Inc. (NASDAQ: PTPI), a company focused on expanding consumer access to medication through over-the-counter (OTC) drug development programs, announces the development of a technological component of its self-selection study utilizing machine learning/ artificial intelligence (AI), which the Company plans to integrate into its self-selection studies for its erectile dysfunction drug STENDRAO.

The development of the technology and study design will continue to follow direct U.S. Food and Drug Administration (FDA) recommendations as well as published proposed guidelines currently being finalized by the Agency.

Fady Boctor, Petros President and Chief Commercial Officer, commented, 'We are developing this technology component using AI/machine learning in response to FDA feedback to provide an automated screening mechanism that should enhance the self-selection process and help mitigate that only men who are appropriate to use STENDRA should be able to gain access to the medication. We anticipate advancing the development of this technology tool leveraging the guidance we have already received from the FDA. In addition, we believe it will likely be refined and completed through third-party technology partnerships.'

In addition to providing encouraging guidance about the STENDRA Drug Facts Label (DFL), paving the way for initiating Petros' Self-Selection Studies (SSS), the FDA provided specific guidance regarding what it would expect of the technology component. This feedback is in addition to general guidance from the FDA regarding Additional Conditions for Nonprescription Use (ACNU) criteria that enable correct self-selection by consumers. Furthermore, it may expand OTC access to medications that formerly could only be available by prescription. An ACNU may be an innovative computerized tool, or the additional conditions may use other approaches that support the switch process.

Mr. Boctor continued, 'We continue to benefit from the FDA's guidance in our quest to make STENDRA the first erectile dysfunction drug to achieve OTC status in the United States. As previously disclosed, if we achieve positive self-selection data, including a proper testing of the technology component, and upon FDA clearance, we expect to move expeditiously into an actual use trial, akin to a Phase 3 registration trial in clinical development sequencing. We continue to believe our developmental methodology - which would include this AI-driven technology - may ultimately become a model for future programs seeking to switch prescription products to OTC marketing status,' concluded Mr. Boctor.

About Petros Pharmaceuticals

Petros Pharmaceuticals is committed to the goal of becoming a leading innovator in the emerging self-care market driving expanded access to key prescription pharmaceuticals as Over-the-Counter treatment options. Currently, Petros is pursuing increased access for its flagship prescription ED therapy, STENDRA, via potential OTC designation. If ultimately approved by the FDA for OTC access, STENDRA may be the first in its class to achieve this marketing status, also establishing company know how as a proven platform for other prospective prescription therapeutics.

About the OTC Pathway

The process of switching a prescription medication to over-the-counter (OTC) first involves the design of a Drug Facts Label (DFL) that is well understood by potential consumers. Then data must show that consumers can make an appropriate decision to use or not to use the product based only upon the information on the DFL and their personal medical history. Then consumers must demonstrate that they can properly use the product based upon the information on the DFL. To accomplish these things, the FDA ordinarily requires a consumer tested OTC DFL. This testing includes conduct of iterative Label Comprehension Studies (LCS) in the general population, Self-Selection Studies (SSS) in a population interested in using the product and in specific populations who may be harmed if they use the product, and usually one Actual Use Trial (AUT) demonstrating safe and appropriate use by consumers in a simulated OTC setting.

The regulations that FDA is currently finalizing introduced Additional Conditions for Nonprescription Use (ACNU) criteria that enable correct self-selection by consumers and may expand OTC access to medications that formerly could only be available by prescription. An ACNU may be an innovative computerized tool, or the additional conditions may use other approaches that support the switch process.

About STENDRA (avanafil)

Stendra (avanafil), originally launched by Auxilium Pharmaceuticals prior to that company's sale to Endo Pharmaceuticals, is an oral phosphodiesterase 5 (PDE5) inhibitor for the treatment of erectile dysfunction. STENDRA is not for use in women or children. It is not known if STENDRA is safe and effective in women or children under 18 years of age. (A 100-mg and 200-mg tablet can be taken as early as 15 minutes before sexual activity. STENDRA only works with sexual stimulation and should not be taken more than once a day. STENDRA can be taken with or without food; do not drink too much alcohol when taking STENDRA (for example, more than 3 glasses of wine or 3 shots of whiskey) as it can increase chances of side effects. Of people enrolled in **clinical trials** , 1.4%, 2.0%, and 2.0%, respectively, stopped taking STENDRA (50 mg, 100 mg, or 200 mg) due to side effects compared to 1.7% on placebo. Stendra was designed and developed expressly for erectile dysfunction. The Company recently undertook a relaunch of Stendra, generating gross revenues of approximately $30 million in 2019. Petros intends to accelerate the relaunch of Stendra with a well-funded commercial organization and refocused strategy.

Cautionary Note Regarding Forward-Looking Statements

This press release includes forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. These forward-looking statements are based upon Petros Pharmaceuticals, Inc.'s ('Petros,' 'we,' 'our,' 'us' or the 'Company') management's assumptions, expectations, projections, intentions, and beliefs about future events. In some cases, predictive, future-tense or forward-looking words such as 'intend,' 'develop,' 'goal,' 'plan,' 'predict', 'may,' 'will,' 'project,' 'estimate,' 'anticipate,' 'believe,' 'expect,' 'continue,' 'potential,' 'opportunity,' 'forecast,' 'should,' 'target,' 'strategy' and similar expressions, whether in the negative or affirmative, that reflect our current views with respect to future events and operational, economic and financial performance are intended to identify forward-looking statements, but are not the exclusive means of identifying such statements. Such forward-looking statements are only predictions, and actual results and the timing of certain events and circumstances may differ materially from those described by the forward-looking statements as a result of risks and uncertainties, Petros' ability to execute on its business strategy, including its plans to develop and commercialize its product candidates; Petros' ability to comply with obligations as a public reporting company; Petros' ability to maintain compliance with the Nasdaq Stock Market's listing standards; risks related to Petros' ability to continue as a going concern; risks related to Petros' history of incurring significant losses; risks related to Petros' dependence on the commercialization of a single product, STENDRA and risks related to Petros' ability to obtain regulatory approvals for, or market acceptance of, any of its products or product candidates. Additional factors that could cause actual results to differ materially from the results anticipated in these forward-looking statements are contained in the Company's periodic reports and in other filings that the Company has filed, or may file, with the U.S. Securities and Exchange Commission (the 'SEC') under the headings 'Risk Factors' and 'Management's Discussion and Analysis of Financial Condition and Results of Operations' and elsewhere. The Company cautions readers that the forward-looking statements included in this press release represent our beliefs, expectations, estimates and assumptions only as of the date of hereof and are not intended to give any assurance as to future results. New factors emerge from time to time, and it is not possible for us to predict all of these factors. Further, the Company cannot assess the effect of each such factor on our business or the extent to which any factor, or combination of factors, may cause actual results to be materially

different from those contained in any forward-looking statement. Accordingly, you should not unduly rely on any forward-looking statements.

Contact:

Email: ir@petrospharma.com

Jules Abraham Tel: 917-885-7378 Email: pr@coreir.com

[Editorial queries for this story should be sent to newswire@enpublishing.co.uk]

Electronic News Publishing Ltd.

Document ENPNEW0020231031ejav000hr

Press Release: Perimeter Medical Imaging AI Announces Initiation of New Clinical Trial Site at University of Washington/Fred Hutch Cancer Center

954 words
31 October 2023
07:45
Dow Jones Institutional News
DJDN
English

Perimeter Medical Imaging AI Announces Initiation of New Clinical Trial Site at University of Washington/Fred Hutch Cancer Center

PR Newswire

DALLAS and TORONTO, Oct. 31, 2023

DALLAS and TORONTO, Oct. 31, 2023 /PRNewswire/ - Perimeter Medical Imaging AI, Inc. (TSXV: PINK) (OTC: PYNKF) (FSE: 4PC) ("Perimeter" or the "Company") -- a commercial-stage medical technology company -- announced the initiation of an additional clinical trial site at the University of Washington / Fred Hutch Cancer Center located in Seattle, WA.

Perimeter is conducting an ongoing multi-center, randomized two-arm pivotal clinical trial evaluating the investigational Perimeter B-Series OCT combined with its proprietary ImgAssist AI software when used during breast conservation surgeries.

Meghan R. Flanagan, MD, MPD, University of Washington/Fred Hutch Cancer Center stated, "Recognizing the unmet need in the field of breast cancer margin visualization, we are pleased to become the most recent site to participate in this clinical study. Combining AI with high-resolution imaging has the potential to become a new standard of care during breast conservation surgery, by reducing the number of repeat surgeries and, ultimately, delivering better outcomes for patients."

Adrian Mendes, Perimeter's Chief Executive Officer stated, "We are focused on expediting the development of our next-gen AI technology and its clinical evaluation in an ongoing pivotal trial. Our hope is that the data generated from this study will support the commercialization of Perimeter B-Series, supporting our aim to transform cancer surgery by delivering technology that improves patient outcomes and reduces healthcare costs."

About Perimeter Medical Imaging AI, Inc.

Based in Toronto, Canada and Dallas, Texas, Perimeter Medical Imaging AI (TSX-V: PINK) (OTC: PYNKF) (FSE: 4PC) is a medical technology company driven to transform cancer surgery with ultra-high-resolution, real-time, advanced imaging tools to address areas of high unmet medical need. Available across the U.S., our FDA-cleared Perimeter S-Series OCT system provides real-time, cross-sectional visualization of excised tissues at the cellular level. The breakthrough-device-designated investigational Perimeter B-Series OCT with ImgAssist AI represents our next-generation artificial intelligence technology that is currently being evaluated in a pivotal clinical trial, with support from a grant of up to US$7.4 million awarded by the Cancer Prevention and Research Institute of Texas. The company's ticker symbol "PINK" is a reference to the pink ribbons used during Breast Cancer Awareness Month.

Neither the TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release.

Forward-Looking Statements

This news release contains statements that constitute "forward-looking information" within the meaning of applicable Canadian securities legislation. In this news release, words such as "may," "would," "could, " "will," "likely," "believe," "expect," "anticipate," "intend," "plan," "estimate," and similar words and the negative form thereof are used to identify forward-looking statements. Forward-looking information may relate to management's future outlook and anticipated events or results and may include statements or information regarding the future financial position, business strategy and strategic goals, competitive conditions, research and development activities, projected costs and capital expenditures, research and clinical testing outcomes, taxes and plans and objectives of, or involving, Perimeter. Without limitation, information regarding the potential benefits of Perimeter S-Series OCT, Perimeter B-Series OCT, and Perimeter ImgAssist; details regarding Perimeter's ongoing **clinical trials** ; and the anticipated completion date of Perimeter's **clinical trials** , are forward-looking information. Forward-looking statements should not be read as guarantees of future performance or results, and will not necessarily be accurate indications of whether, or the times at or by which, any particular result will be achieved. No assurance can be given that any events anticipated by the forward-looking information will transpire or occur. Forward-looking information is based on information available at the time and/or management's good-faith belief with respect to future events and are subject to known or unknown risks, uncertainties, assumptions, and other unpredictable factors, many of which are beyond Perimeter's control. Such forward-looking statements reflect Perimeter's current view with respect to future events, but are inherently subject to significant medical, scientific, business, economic, competitive, political, and social uncertainties and contingencies. In making forward-looking statements, Perimeter may make various material assumptions, including but not limited to (i) the accuracy of Perimeter's financial projections; (ii) obtaining positive results from trials; (iii) obtaining necessary regulatory approvals; and (iv) general business, market, and economic conditions. Further risks, uncertainties and assumptions include, but are not limited to, those applicable to Perimeter and described in Perimeter's Management Discussion and Analysis for the year ended December 31, 2022, which is available on Perimeter's SEDAR profile at www.sedar.com[http://www.sedar.com], and could cause actual events or results to differ materially from those projected in any forward-looking statements. Perimeter does not intend, nor does Perimeter undertake any obligation, to update or revise any forward-looking information contained in this news release to reflect subsequent information, events, or circumstances or otherwise, except if required by applicable laws.

View original content:https://www.prnewswire.com/news-releases/perimeter-medical-imaging-ai-announces-initiation-of-new-clinical-trial-site-at-university-of-washingtonfred-hutch-cancer-center-301972099.html[https://www.prnewswire.com/news-releases/perimeter-medical-imaging-ai-announces-initiation-of-new-clinical-trial-site-at-university-of-washingtonfred-hutch-cancer-center-301972099.html]

SOURCE Perimeter Medical Imaging, Inc.

/CONTACT: Adrian Mendes, Chief Executive Officer, Perimeter Medical Imaging AI, Inc., Toll-free: 888-988-7465 (PINK), Email: media@perimetermed.com; Glen Akselrod, Investor Relations, Bristol Capital, Telephone: 905-326-1888 ext 1, Email: glen@bristolir.com

(END) Dow Jones Newswires

October 31, 2023 07:45 ET (11:45 GMT)

Document DJDN000020231031ejav0025x

Eyestem with RetinAI to innovate geographic atrophy clinical research using advanced **AI**

Our Bureau

Distributed by Contify.com
359 words
31 October 2023
PharmaBiz
ATPHAB
English

Eyestem Research, a Bengaluru-based biotechnology company specialising in cell therapy approaches, has entered a strategic partnership with Ikerian AG and RetinAI Inc. US (RetinAI), a pioneer in clinical and imaging data management software and advanced AI-driven analytics for ophthalmology.

RetinAI's discovery platform and AI tools will enable Eyestem to advance in its mission to revolutionise treatment for geographic atrophy with its innovative cell therapy, Eyecyte-RPE.

Dr Jogin Desai, founder and CEO, Eyestem, noted, "The AI tools and the RetinAI discovery platform integrate perfectly with our vision, potentially shortening the timelines for our **clinical trials** and enhancing the accuracy of our analyses. This is not just a partnership; it's a confluence of high-end biotech innovation and artificial intelligence aiming to rewrite the narrative for patients affected by geographic atrophy worldwide."

Dr. Carlos Ciller, CEO, RetinAI, said, "Our AI-driven Discovery platform is poised to significantly accelerate research and provide enhanced insights into disease progression and outcomes. Together, we're confident that this synergy will not only enrich insights in the development of novel treatments but also manifest in delivering life-altering solutions faster to individuals affected by retinal diseases globally."

Geographic atrophy, a late-stage form of dry age-related macular degeneration (AMD), is a significant health concern worldwide. Currently, dry AMD affects 200 million individuals globally, contributing to irreversible vision loss. Compounded by an aging population, the prevalence of this serious eye disease is escalating at an alarming rate.

Eyestem is taking a significant step forward by preparing to initiate its phase I/IIa **clinical trials** for Eyecyte-RPE. This multi-centre, dose escalation, and expansion trial aims to assess Eyecyte-RPE's safety and efficacy for geographic atrophy. This trial will benefit from RetinAI's discovery platform, which will centralise data management and image analysis for the study. Moreover, RetinAI's advanced segmentation model will be leveraged for the identification and quantification of retinal biomarkers in geographic atrophy. This automated analysis will provide real-time insights on clinical endpoints, speeding up critical decision-making.

Saffron Media Pvt Ltd

Document ATPHAB0020231031ejav0002t

National Sun Yat-Sen University - NSYSU collaborated with KMU to develop the Surgery-Free AI Uric Acid Stone Prognostic System

National Sun Yat-Sen University published this content on 31 Oct 2023 and is solely responsible for the information contained herein. Distributed by PUBT, unedited and unaltered, on 31 Oct 2023 05:01:30 UTC.
734 words
31 October 2023
Science, Education and Non-profit Organizations News via PUBT
SENPO
English

Access the original document here[https://www.nsysu.edu.tw/p/406-1000-320164,r3244.php?Lang=en]

NSYSU collaborated with KMU to develop the Surgery-Free AI Uric Acid Stone Prognostic System

2023-10-31

The cross-school, cross-disciplinary research team composed of researchers from National Sun Yat-sen University (NSYSU) and Kaohsiung Medical University (KMU) announced the innovative study results for kidney stones treatment, the "Surgery-Free Artificial Intelligence (AI) Uric Acid Stone Prognostic System". This innovative system enables an efficient and speedy precision treatment for uric acid stones patients. It takes only a few seconds to identify the components of uric acid stones, which helps doctors identify patients who should receive pharmaceutical therapy instead of invasive surgery. This system was demonstrated in the 2023 Medical Taiwan International Medical, Health & Care Expo. The research team has been awarded the first prize in a creative entrepreneurship competition. The system is anticipated to proceed to the stage of commercial launch.

The research team specified the system's efficiency and convenience. It utilizes patients' physiological data and AI techniques for analysis. The inspection report can be accomplished within one second. It can quickly identify uric acid stones neither by invasive inspection nor X-ray inspection. There is no concern about the radiation effects caused by X-rays. The system is anticipated to save TWD 450 million in medical payments for the National Health Insurance (NHI).

The "Surgery-Free AI Uric Acid Stone Prognostic System" was developed by the cross-school, cross-disciplinary research team that was led by Dr. Chung-Yao Kao, a Professor of the Department of Electrical Engineering at NSYSU, and Dr. Hao-Wei Chen of the Department of Urology at KMU. The team members include Dr. Jung-Ting Lee, the assistant research fellow of NSYSU's School of Medicine, and Pei-Siou Wei, a PhD Student at NSYSU's Department of Electrical Engineering. Professor Kao indicated that the prediction model was established by machine learning methodology. Using basic clinical parameters obtained from routine urine and blood examinations, uric acid stones in kidney stones can be identified with an accuracy of nearly 90%. This system demonstrates a convenient and reliable method to distinguish uric acid stones from other stones before treatment, allowing for precise and symptomatic treatment.

Dr. Hao-Wei Chen indicated that according to medical statistics, the worldwide prevalence of kidney stones was 10%, which represents 650 million people who were undergoing various kidney stones situations, such as acute flank pain, bleeding in urine, sepsis, and hemodialysis treatment that causes impact on life. In Taiwan, the annual NHI payment for kidney stone treatment has achieved TWD 3 billion, causing a financial burden for the country. Common treatments for kidney stones include shock wave lithotripsy and surgery. However, 15% of patients with uric acid stones can be dissolved by taking medicine, and expensive and harmful surgery is unnecessary. Doctors usually identify the uric acid stones situations merely based on their experiences. The composition of the stones can only be confirmed after surgery. This results in many unnecessary surgeries and a waste of time and money.

The "Surgery-Free AI Uric Acid Stone Prognostic System" provides simple, fast, and accurate classification testing for patients with kidney and other upper urinary tract stones, assisting doctors in diagnosis and treatment. This system is sponsored by the National Science and Technology Council's research grant and cooperation projects conducted by NSYSU and KMU. It has been awarded with many innovative and creative entrepreneurship competitions. It has now completed the construction of the AI module system, and the research and development results have been published in international journals and have applied for Taiwan and US patents. It is planned to continue **clinical trials**, medical device licenses, promotion and exhibition participation, and regulations evaluation in the future. The commercial launch of the system is expected to create a new way for kidney stone treatment.

* This content was originally posted here[https://www.nsysu.edu.tw/p/406-1000-320164,r3244.php?Lang=en]

Disclaimer

National Sun Yat-Sen University published this content on 31 October 2023 and is solely responsible for the information contained therein. Distributed by Public[http://www.publicnow.com], unedited and unaltered, on 31 October 2023 05:06:44 UTC.

PUBT Inc

Document SENPO00020231031ejav001jm

U.S. Clinical Trial: Hebei Medical University Fourth Hospital Listed a New Clinical Trial to Study Dalpiciclib Plus AI (Neoadjuvant Endocrine Therapy) Compared With Neoadjuvant Chemotherapy in Early Breast Cancer (EBC)

Distributed by Contify.com
188 words
30 October 2023
Contify Life Science News
ATPHAM
English

Oct. 30 -- Hebei Medical University Fourth Hospital has listed an interventional clinical trial, Phase 2, to study the efficacy and safety of dalpiciclib combined with ai with neoadjuvant chemotherapy in ER+ HER2- postmenopausal breast cancer patients.

The trial for a sample of 144 participants from USA is currently open for recruiting.

The study is being conducted for the following purpose: This study is a multi-center, randomized, prospective phase II clinical trial aimed at exploring and evaluating the efficacy of dalpiciclib combined with AI in neoadjuvant treatment for ER strong positive（ER≥50%）, HER2-negative, Ki-67≤20%,T1-3N1M0 postmenopausal breast cancer. The primary objectives are to demonstrate non-inferiority in efficacy compared to chemotherapy and to assess its superior safety profile.

The full document can be viewed at https://clinicaltrials.gov/study/NCT06107673[https://clinicaltrials.gov/study/NCT06107673]

[Categoty: **Clinical Trials**, Clinical Study, Medical Science, Medicine Research, Biomedical Research, Behavioral Research, Experimentation]

Source: ClinicalTrials.gov

Athena Information Solutions Pvt. Ltd.

Document ATPHAM0020231031ejau000y1

Artificial Intelligence; New Findings from Bristol-Myers Squibb Company Update Understanding of Artificial Intelligence [Association of Artificial Intelligence-powered and Manual Quantification of Programmed Death-ligand 1 (Pd-l1) Expression With Outcomes In Patients ...]

605 words
30 October 2023
Pharma Business Week
PHBW
3000
English

2023 OCT 30 (NewsRx) -- By a News Reporter-Staff News Editor at Pharma Business Week -- A new study on Artificial Intelligence is now available. According to news reporting out of Princeton, New Jersey, by NewsRx editors, research stated, "Assessment of programmed death ligand 1 (PD-L1) expression by immunohistochemistry (IHC) has emerged as an important predictive biomarker across multiple tumor types. However, manual quantitation of PD-L1 positivity can be difficult and leads to substantial inter-observer variability."

Financial supporters for this research include Bristol-Myers Squibb, ONO Pharmaceutical Co., Ltd. (Osaka, Japan), Bristol-Myers Squibb.

Our news journalists obtained a quote from the research from Bristol-Myers Squibb Company, "Although the development of artificial intelligence (AI) algorithms may mitigate some of the challenges associated with manual assessment and improve the accuracy of PD-L1 expression scoring, use of AI-based approaches to oncology biomarker scoring and drug development has been sparse, primarily due to the lack of large-scale clinical validation studies across multiple cohorts and tumor types. We developed AI-powered algorithms to evaluate PD-L1 expression on tumor cells by IHC and compared it with manual IHC scoring in urothelial carcinoma, non-small cell lung cancer, melanoma, and squamous cell carcinoma of the head and neck (prospectively determined during the phase II and III CheckMate **clinical trials**). 1,746 slides were retrospectively analyzed, the largest investigation of digital pathology algorithms on clinical trial datasets performed to date. AI-powered quantification of PD-L1 expression on tumor cells identified more PD-L1-positive samples compared with manual scoring at cutoffs of >= 1% and >= 5% in most tumor types. Additionally, similar improvements in response and survival were observed in patients identified as PD-L1-positive compared with PD-L1-negative using both AI-powered and manual methods, while improved associations with survival were observed in patients with certain tumor types identified as PD-L1-positive using AI-powered scoring only."

According to the news editors, the research concluded: "Our study demonstrates the potential for implementation of digital pathology-based methods in future clinical practice to identify more patients who would benefit from treatment with immuno-oncology therapy compared with current guidelines using manual assessment."

This research has been peer-reviewed.

For more information on this research see: Association of Artificial Intelligence-powered and Manual Quantification of Programmed Death-ligand 1 (Pd-l1) Expression With Outcomes In Patients Treated With Nivolumab ± Ipilimumab. Modern Pathology, 2022;35(11):1529-1539. Modern Pathology can be contacted at: Springernature, Campus, 4 Crinan St, London, N1 9XW, England. (Nature Publishing Group - www.nature.com/[http://www.nature.com/]; Modern Pathology - www.nature.com/modpathol/[http://www.nature.com/modpathol/])

Our news journalists report that additional information may be obtained by contacting Vipul Baxi, Bristol-Myers Squibb Company, Princeton, NJ 08540, United States. Additional authors for this research include George Lee, Chunzhe Duan, Dimple Pandya, Daniel N. Cohen, Robin Edwards, Han Chang, Jun Li, Dayong Wang, Michael Montalto, Hunter Elliott, Harsha Pokkalla, Benjamin Glass, Nishant Agrawal, Abhik Lahiri, Aditya Khosla, Ilan Wapinski and Andrew Beck.

Keywords for this news article include: Princeton, New Jersey, United States, North and Central America, Algorithms, Artificial Intelligence, Biomarkers, Biotechnology, Bristol-Myers Squibb Company, Business, Diagnostics and Screening, Drugs and Therapies, Emerging Technologies, Health and Medicine, Immunologic Agents, Immunotherapy, Ipilimumab Therapy, Machine Learning, Monoclonal Antibodies, Nivolumab Therapy, Pharmaceutical Companies, Pharmaceuticals, Yervoy Therapy, Bristol-Myers Squibb Company.

NewsRX, LLC

Document PHBW000020231030ejau00076

Hematologic Diseases and Conditions - Sickle Cell Anemia; HAI-VECT(SCD): AI-Humanoid Enabled Virtual Clinical Trial for Sickle Cell Disease

360 words
30 October 2023
Clinical Trials Week
CTRW
2513
English

2023 OCT 30 (NewsRx) -- By a News Reporter-Staff News Editor at **Clinical Trials** Week -- According to news reporting based on a preprint abstract, our journalists obtained the following quote sourced from medrxiv.org:

Background: Sickle Cell Disease (SCD) remains a globally important disorder with limited therapeutic options.

This study utilizes the advanced capabilities of the DeepNEU platform v8.2 and aiHumanoid (Pat. Pend.) simulations to evaluate potential drug combinations for treating SCD, focusing on vaso-occlusive events (VOE) and associated secondary outcomes. Methods: Using data from 25 virtual patients in each of six treatment groups, therapeutic responses to each treatment were investigated. The study evaluated the primary outcome of VOE and secondary outcomes, including HbA, HbF, Quality of Life (QoL), RBC hemolysis, and Pain. Treatment toxicities were also assessed across all dosage levels.

Results: The combination of Endari (L-glutamine powder) plus Crizanlizumab (a P-selectin antibody) demonstrated superior efficacy, with significant improvements in primary and secondary endpoints.

This regimen, along with Voxelotor (a hemoglobin S polymerization inhibitor) plus Crizanlizumab, showed promising reductions in VOE, RBC hemolysis, and enhanced QoL scores. Notably, these results align with existing literature emphasizing the benefits of combination therapies in SCD management.

Furthermore, aiHumanoid simulations indicated that these treatment combinations present lower cumulative multi-organoid toxicity, potentially translating to better patient outcomes and reduced healthcare costs. Conclusion: AI-driven virtual **clinical trials** offer an innovative approach in evaluating drug combinations, presenting a robust case for the efficacy of Endari plus Crizanlizumab in managing SCD. The results warrant further research and real-world trials, potentially reshaping clinical guidelines for SCD treatment.

This preprint has not been peer-reviewed.

For more information on this research see: medrxiv.org/content/10.1101/2023.10.17.23297152v1

Keywords for this news article include: Pharmaceuticals, Robotics, Pharmacology, Therapeutics, Machine Learning, Clinical Research, Drugs and Therapies, Health and Medicine, Emerging Technologies, **Clinical Trials** and Studies, Hematologic Diseases and Conditions - Sickle Cell Anemia.

NewsRX, LLC

Document CTRW000020231030ejau0003k

InSilico Medicine; Insilico Medicine presents data on AI-designed cancer drugs at 3 major cancer conferences

478 words
30 October 2023
Clinical Trials Week
CTRW
2132
English

2023 OCT 30 (NewsRx) -- By a News Reporter-Staff News Editor at **Clinical Trials** Week -- Dec. 5-9, 2023.

Small molecule oncology target inhibitors represent the largest part of Insilico's therapeutic pipeline portfolio, which includes 31 programs across 29 targets. The Company recently entered into a licensing deal with Exelixis on its potentially best-in-class generative AI-designed USP1 inhibitor for BRCA-mutant tumors for $80m upfront and additional milestone payments and tiered royalties. That drug is currently in a Phase I clinical trial.

"Using our AI platform, we have been able to advance a number of anti-cancer therapeutics that use new mechanisms to stop tumor growth and cancer progression, including two in clinical stage," says Sujata Rao, MD, Chief Medical Officer at Insilico Medicine. Dr. Rao has extensive experience in clinical oncology practice and over 15 years in pharma leading global clinical development for cancer drugs. "Driven by a strategy of focusing on novelty, confidence, and commercial tractability, and designed to meet the high unmet medical needs of patients, we have developed a number of promising anti-cancer assets and look forward to presenting to the leading cancer conferences."

Dr. Rao showcased four of the Company's novel AI-designed cancer inhibitors at the most recent Association for Cancer Research (AACR) annual meeting.

Insilico's upcoming cancer conference presentations include:

Insilico is advancing new therapeutics using generative AI via its proprietary end-to-end Pharma.AI platform for identifying novel targets (PandaOmics), designing new drugs (Chemistry42), and predicting the outcomes of **clinical trials** (InClinico). The platform has produced four drugs that have reached **clinical trials**, including a lead drug for the devastating chronic lung disease Idiopathic Pulmonary Fibrosis (IPF), the first AI-discovered and AI-designed drug to advance to Phase II trials with patients.

"We're really encouraged by the progress of our diverse pipeline of cancer therapeutics - two of which have progressed into **clinical trials**," says Alex Zhavoronkov, PhD, founder and CEO of Insilico Medicine. "Our AI can be thought of as a 'Google for targets' that looks at every single small signal from massive datasets all over the world, including our own robotics data. It gives us signals that the target is working in a specific cancer, it already has demonstrated some efficacy, and it is going to be commercially tractable."

Dr. Rao and Insilico's Chief Business Officer Michelle Chen, PhD, along with other business development professionals, will be in attendance at the upcoming conferences. For any interest in licensing or partnerships, please contact: bd@insilicomedicine.com.

Keywords for this news article include: Cancer, Oncology, Clinical Research, InSilico Medicine, Drugs and Therapies, Health and Medicine, **Clinical Trials** and Studies.

NewsRX, LLC

Document CTRW000020231030ejau0003m

Healables Digital Health; Healables Launches $4.8M CrowdFunding Campaign, Mobilizing People to Transform Human Health and Performance with AI Personalized BioElectric Wearables

481 words
30 October 2023
Biotech Business Week
BTBW
2043
English

2023 OCT 30 (NewsRx) -- By a News Reporter-Staff News Editor at Biotech Business Week -- Healables (https://invest-in.healables.com[https://invest-in.healables.com]), a world leader in wearable digital health technology, announced the launch of a $4.8M CrowdFunding Campaign to bring AI personalized health to athletes and patients. "We're excited to offer this opportunity for physical therapists, athletes, trainers and coaches, and other retail investors to back our company on a mission to transform human health. The company that's going to do that is Healables" said Moshe Lebowitz, Co-Founder and CEO of Healables Digital Health, Inc.

"Health is broken. Not just in America, but all over the world. And it's broken because the one-size-fits-all approach does not meet the needs of the individual. We have built the team and the product that delivers personalized performance and will deliver personalized medicine" said Dr. George Lowell, MD, Healables' Co-Founder, Lead Investor, and Chief Science Officer of Healables and a Retired Colonel in the U.S. Army.

Dr. Lowell is a biotech entrepreneur with a previous successful exit. The Healables team includes medical doctors in sports medicine and pain management, and AI data scientists, electrical engineers and experts in material science, product development and user experience from Harvard University, Johns Hopkins University, MIT and other leading universities.

The secret sauce of Healables technology is the novel way that the company delivers microcurrents. Microcurrent technology has been researched in over 175 published peer-reviewed medical papers. The problem with microcurrents has been that until now, use of the technology required highly skilled professionals with a lot of hands-on time and cumbersome sticky, gooey, disposable electrodes that practically immobilized the patient.

Healables Electron Stream technology unites three patent-pending innovations that make microcurrent technology smart and accessible. First, smart textiles with built-in dry electrodes allow users to put the wearables on by themselves with complete mobility and comfort. Second, smart sessions leverage AI to enable data-driven personalization, optimized for each person. And third, remote smart time management allows both practitioners and users hands-off freedom because sessions can be monitored and modulated from anywhere at any time.

Funds from the crowdfunding campaign will help the company scale ElectroGear, its sports performance and recovery product line, and advance its medical technology through **clinical trials** focusing on non-opioid and non-steroidal solutions for musculoskeletal, pain and inflammation disorders.

As Dr. Lowell said, "It's a great feeling knowing that you can help people. We invite you to join us."

Keywords for this news article include: Biotechnology, Bioelectronics, Drugs and Therapies, Personalized Therapy, Personalized Medicine, Healables Digital Health.

NewsRX, LLC

Document BTBW000020231030ejau0003w

European Society for Medical Oncology; The potential of AI to improve cancer care is only going to grow

1372 words
30 October 2023
Journal of Engineering
JOENG
6817
English

2023 OCT 30 (VerticalNews) -- By a News Reporter-Staff News Editor at Journal of Engineering -- Lugano, Switzerland, 16 October 2023 - Artificial intelligence (AI) has made a grand entrance into the public debate this year, but researchers have long been investigating its potential to transform cancer care and improve patient outcomes. Dedicated sessions focused on AI (1,2) will be held at the ESMO Congress 2023 in Madrid, Spain, 20-24 October, to illustrate the strides being made with modern computing methods applied to oncology.

Amara's Law says that we tend to overestimate the impact of a technology in the short run and underestimate its effects in the long run. However, with any field dealing with human health, caution is warranted alongside enthusiasm and therefore, newer technologies like AI, machine learning, and big data analytics are introduced more slowly and more cautiously than in other sectors. Examples of their application in clinical practice have so far been limited to the triage of biopsy images, mammograms, and lung computed tomography (CT) scans used to screen patients for tumours, and to some areas of cancer research. However, the implementation of these technologies into mainstream oncology research and practice has been far from uniform, signalling potential barriers that risk slowing its adoption and the benefits it could bring along the cancer research and care continuum including prevention, screening, and care pathways.

Harnessing the potential of AI to improve cancer detection

Building on a qualitative study presented at the ESMO Congress 2023 (3) that explored the potential of AI-based technologies in improving cancer imaging, diagnosis, and delays in seven European countries, Dr. Raquel Perez-Lopez, a radiologist at the Vall d'Hebron Institute of Oncology in Barcelona, Spain, who was not involved in the study argues that existing, well-defined guidelines on cancer screening and diagnosis are not applied in the same way even within Europe, for reasons that may be both economic and cultural.

Perez-Lopez saw potential for emerging digital solutions to intervene upstream and prioritise patients for screening based on their medical records. "There are already AI-based platforms that allow the analysis of data routinely collected in electronic health records and medical imaging units, and which could support prevention and screening programmes by identifying individuals at risk of developing the disease. But these resources remain underutilised," said Perez-Lopez, attributing this to the lack of an adequate legal framework for patient data to be used in this way.

Controlling AI to unleash real-world research

Perhaps less tangible, but equally important applications of modern computing methods are transforming certain areas of cancer research. In the field of cancer genetics, for example, many of the mutations included in modern genomic reports used to match patients with targeted therapies were identified by AI tools comparing the genetic profiles of hundreds of thousands of patients and making predictions about their role in the development of cancer. These technologies have also recently begun to be used more broadly to analyse various types of data in real-world evidence studies (4), which are gaining traction as a means of generating evidence in settings such as rare cancers, when traditional randomised **clinical trials** are not feasible, or to bridge the frequently observed gap between results achieved in **clinical trials** and real-world patient outcomes.

It is no coincidence that the recently published "ESMO Guidance for Reporting Oncology real-World evidence (GROW)" (5), developed to guide scientific reporting in this field, also covers the subject of AI-based technologies. In particular, the ESMO-GROW guidance aims to harmonise research practices in oncology by providing detailed recommendations for the testing and validation steps necessary to report real-world data accurately and transparently. Among these recommendations are included considerations related to the use of AI algorithms for data analysis in real-world evidence studies - an inclusion that is necessary to capture all the relevant oncology-specific considerations and anticipate future developments.

"In the near future, we could see AI tools transform data processing within hospital information systems and electronic health records by making it possible to structure physicians' free-text notes and summarise vast quantities of information at the press of a button, which will greatly facilitate the extraction of real-world data from medical records to generate new research insights," said Dr. Rodrigo Dienstmann, Editor-in-Chief of ESMO Real World Data and Digital Oncology journal, and Director of Oncoclinicas Precision Medicine, Sao Paulo, Brazil, explaining that the manuscript addresses this likely upcoming scenario in which the data used for research is no longer collected and structured by a human expert, but processed and summarised by a machine.

"Adopting a standard method to assess AI technologies with the same degree of reliability with which we can evaluate medicines in **clinical trials** will be key to maximizing their benefits, while ensuring that their adoption does not increase the risk of bias that could cause inequalities in patient care." Dienstmann emphasised.

Implementing digital oncology into practice

Real-world research powered by advanced data analytics is becoming increasingly ubiquitous as a complement to **clinical trials**, and is also beginning to spread within the regulatory agencies that use it in the authorisation process of new medicines. Therefore, the ability to accurately interpret this kind of evidence will be an essential skill for all oncology professionals in the future. The ESMO Real World Data and Digital Oncology journal is a new open access, peer-reviewed platform dedicated to the publication of high-quality data science and education on the transformation of cancer care with real-world evidence and digital technologies.

According to Dienstmann, oncologists as a group are not ready for this evolution, with educational needs that will increase proportionally with the entry of AI into clinical workflows. "There is a lot of apprehension about the impact AI will have on the profession once machines outperform physicians in a number of their traditional repetitive tasks," he reported. "We need to train doctors to use these tools wisely and confidently based on a clear understanding of their value and limitations, so that machines and humans together achieve better results for patients than either of them could on their own. ESMO Real World Data and Digital Oncology journal is a resource for physicians who will be confronted with the implementation of digital oncology in their routine practice."

-END-

Notes to Editors Please make sure to use the official name of the meeting in your reports: ESMO Congress 2023 Official Congress Hashtag on social media: #ESMO23. Follow it to stay up to date and use it to take part in the conversation on X (Twitter), LinkedIn, Instagram, Facebook

Disclaimer Commentators quoted in the press release are required to comply with the ESMO Declaration of Interests policy and the ESMO Code of Conduct.

References 1 Special session "Artificial Intelligence in Prognostication" will be chaired by Sanjay Aneja and Anne Vincent-Salomon on Monday, 23 October, 14:45 to 16:15 CEST in Granada Auditorium - Hall 3 2 Educational session "Do we enter a new era of oncology with big data and artificial intelligence?" will be chaired by Rudolf S. Fehrmann and James McKay on Saturday, 21 October, 10:15 - 11:45 CEST in Cadiz Auditorium - NCC 3 Abstract 1218P 'Exploring cancer care pathways in seven European countries: Identifying obstacles and opportunities for the role of artificial intelligence' will be presented by Shereen Nabhani during onsite poster display, on Sunday, 22 October 2023 at ESMO Congress 2023. 4 "The future of real-world research is now" published in the official ESMO newspaper Daily Reporter 5 Castelo-Branco L et al. "ESMO Guidance for Reporting Oncology real-World evidence (GROW)" ESMO Real World Data & Digital Oncol 2023; 1: 10.1016/j.esmorw.2023.10.001; and Ann Oncol 2023; 34: 10.1016/j.annonc.2023.10.001

Keywords for this news article include: Genetics, Mammography, Women's Health, Medical Records, Machine Learning, Records as Topic, Clinical Research, Health and Medicine, Risk and Prevention, Emerging Technologies, Information Technology, Artificial Intelligence, Breast Cancer Screening, Diagnostics and Screening, **Clinical Trials** and Studies.

NewsRX, LLC

Document JOENG00020231030ejau0035y

Artificial Intelligence; University College London (UCL) Reports Findings in Artificial Intelligence (Artificial intelligence for dementia prevention)

458 words
30 October 2023
Journal of Engineering
JOENG
3490
English

2023 OCT 30 (VerticalNews) -- By a News Reporter-Staff News Editor at Journal of Engineering -- New research on Artificial Intelligence is the subject of a report. According to news reporting out of London, United Kingdom, by VerticalNews editors, research stated, "A wide range of modifiable risk factors for dementia have been identified. Considerable debate remains about these risk factors, possible interactions between them or with genetic risk, and causality, and how they can help in clinical trial recruitment and drug development."

Funders for this research include Medical Research Council, European Research Council, Barts Charity.

Our news journalists obtained a quote from the research from University College London (UCL), "Artificial intelligence (AI) and machine learning (ML) may refine understanding. ML approaches are being developed in dementia prevention. We discuss exemplar uses and evaluate the current applications and limitations in the dementia prevention field. Risk-profiling tools may help identify high-risk populations for **clinical trials**; however, their performance needs improvement. New risk-profiling and trial-recruitment tools underpinned by ML models may be effective in reducing costs and improving future trials. ML can inform drug-repurposing efforts and prioritization of disease-modifying therapeutics. ML is not yet widely used but has considerable potential to enhance precision in dementia prevention. Artificial intelligence (AI) is not widely used in the dementia prevention field. Risk-profiling tools are not used in clinical practice. Causal insights are needed to understand risk factors over the lifespan. AI will help personalize risk-management tools for dementia prevention."

According to the news editors, the research concluded: "AI could target specific patient groups that will benefit most for **clinical trials**."

This research has been peer-reviewed.

For more information on this research see: Artificial intelligence for dementia prevention. Alzheimer's & Dementia, 2023. Alzheimer's & Dementia can be contacted at: Wiley, 111 River St, Hoboken 07030-5774, NJ, USA.

Our news journalists report that additional information may be obtained by contacting Vasiliki Orgeta, Division of Psychiatry, University College London (UCL), London, UK. Additional authors for this research include Danielle Newby, Charles R. Marshall, Ilianna Lourida, Christopher P. Albertyn, Stefano Tamburin, Vanessa Raymont, Michele Veldsman, Ivan Koychev, Sarah Bauermeister, David Weisman, Isabelle F. Foote, Magda Bucholc, Anja K. Leist and Eugene.

Publisher contact information for the journal Alzheimer's & Dementia is: Wiley, 111 River St, Hoboken 07030-5774, NJ, USA.

Keywords for this news article include: London, Europe, Dementia, Mental Health, United Kingdom, Machine Learning, Clinical Research, Health and Medicine, Risk and Prevention, Emerging Technologies, Artificial Intelligence, **Clinical Trials** and Studies, Brain Diseases and Conditions, Neurodegenerative Diseases and Conditions.

NewsRX, LLC

Document JOENG00020231030ejau00372

Machine Learning; University College London (UCL) Hospitals NHS Foundation Trust Reports Findings in Machine Learning (AI and machine learning for clinical pharmacology)

382 words
30 October 2023
Journal of Engineering
JOENG
3489
English

2023 OCT 30 (VerticalNews) -- By a News Reporter-Staff News Editor at Journal of Engineering -- New research on Machine Learning is the subject of a report. According to news originating from London, United Kingdom, by VerticalNews correspondents, research stated, "Artificial intelligence (AI) will impact many aspects of clinical pharmacology including drug discovery and development, **clinical trials**, personalised medicine, pharmacogenomics, pharmacovigilance and clinical toxicology. The rapid progress of AI in healthcare means clinical pharmacologists should have an understanding of AI and its implementation into clinical practice."

Our news journalists obtained a quote from the research from University College London (UCL) Hospitals NHS Foundation Trust, "As with any new therapy or health technology, it is imperative that AI tools are subject to robust and stringent evaluation to ensure that they enhance clinical practice in a safe and equitable manner. This review serves as an introduction to AI for the clinical pharmacologist, highlighting current applications, aspects of model development and issues surrounding evaluation and deployment."

According to the news editors, the research concluded: "The aim of this article is to empower clinical pharmacologists to embrace and lead on the safe and effective use of AI within healthcare."

This research has been peer-reviewed.

For more information on this research see: AI and machine learning for clinical pharmacology. British Journal of Clinical Pharmacology, 2023. British Journal of Clinical Pharmacology can be contacted at: Wiley, 111 River St, Hoboken 07030-5774, NJ, USA. (Wiley-Blackwell - www.wiley.com/[http://www.wiley.com/]; British Journal of Clinical Pharmacology - onlinelibrary.wiley.com/journal/10.1111/(ISSN)1365-2125)

The news correspondents report that additional information may be obtained from Rory H. Maclean, Dept. of Clinical Pharmacology, University College London (UCL) Hospitals NHS Foundation Trust, London, UK. Additional authors for this research include David K. Ryan, Alfred Balston, Andrew Scourfield, Anoop D. Shah and Jack Ross.

The publisher's contact information for the British Journal of Clinical Pharmacology is: Wiley, 111 River St, Hoboken 07030-5774, NJ, USA.

Keywords for this news article include: Pharmaceuticals, London, Europe, Cyborgs, Pharmacology, United Kingdom, Machine Learning, Health and Medicine, Emerging Technologies.

NewsRX, LLC

Document JOENG00020231030ejau00371

Artificial Intelligence; Nanjing University Reports Findings in Artificial Intelligence (Interpretable artificial intelligence-assisted embryo selection improved single-blastocyst transfer outcomes: a prospective cohort study)

519 words
30 October 2023
Journal of Engineering
JOENG
1335
English

2023 OCT 30 (VerticalNews) -- By a News Reporter-Staff News Editor at Journal of Engineering -- New research on Artificial Intelligence is the subject of a report. According to news reporting out of Nanjing, People's Republic of China, by VerticalNews editors, research stated, "What is the pregnancy and neonatal outcomes of an interpretable artificial intelligence (AI) model for embryo selection in a prospective clinical trial? This single-centre prospective cohort study was carried out from October 2021 to March 2022. A total of 330 eligible patients were assigned to their preferred groups, with 250 patients undergoing a fresh single-blastocyst transfer cycle after the exclusion criteria had been applied."

Our news journalists obtained a quote from the research from Nanjing University, "For the AI-assisted group (AAG), embryologists selected the embryos for transfer based on the ranking recommendations provided by an interpretable AI system, while with the manual group, embryologists used the Gardner grading system to make their decisions. The implantation rate was significantly higher in the AAG than the manual group (80.87% versus 68.15%, P = 0.022). No significant difference was found in terms of monozygotic twin rate, miscarriage rate, live birth rate and ectopic pregnancy rate between the groups. Furthermore, there was no significant difference in terms of neonatal outcomes, including gestational weeks, premature birth rate, birth height, birthweight, sex ratio at birth and newborn malformation rate. The consensus rate between the AI and retrospective analysis by the embryologists was significantly higher for good-quality embryos (i.e. grade 4BB or higher) versus poor-quality embryos (i.e. less than 4BB) (84.71% versus 25%, P< 0.001)."

According to the news editors, the research concluded: "These prospective trial results suggest that the proposed AI system could effectively help embryologists to improve the implantation rate with single-blastocyst transfer compared with traditional manual evaluation methods."

This research has been peer-reviewed.

For more information on this research see: Interpretable artificial intelligence-assisted embryo selection improved single-blastocyst transfer outcomes: a prospective cohort study. Reproductive BioMedicine Online, 2023;47(6):103371. Reproductive BioMedicine Online can be contacted at: Elsevier Sci Ltd, The Boulevard, Langford Lane, Kidlington, Oxford OX5 1GB, Oxon, England. (Elsevier - www.elsevier.com[http://www.elsevier.com]; Reproductive BioMedicine Online - www.journals.elsevier.com/reproductive-biomedicine-online/[http://www.journals.elsevier.com/reproductive-biomedicine-online/])

Our news journalists report that additional information may be obtained by contacting Lei Chen, Center for Reproductive Medicine and Obstetrics and Gynecology, Nanjing Drum Tower Hospital, Affiliated Hospital of Medical School, Nanjing University, Nanjing, People's Republic of China. Additional authors for this research include Shanshan Wang and Haixiang Sun.

Publisher contact information for the journal Reproductive BioMedicine Online is: Elsevier Sci Ltd, The Boulevard, Langford Lane, Kidlington, Oxford OX5 1GB, Oxon, England.

Keywords for this news article include: Asia, Nanjing, Machine Learning, Clinical Research, Health and Medicine, Emerging Technologies, Artificial Intelligence, People's Republic of China, **Clinical Trials** and Studies.

NewsRX, LLC

Document JOENG00020231030ejau000q5

Vanderbilt University Medical Center; AI predicts blood clot risk in hospitalized children: VUMC study

969 words
30 October 2023
Journal of Engineering
JOENG
527
English

2023 OCT 30 (VerticalNews) -- By a News Reporter-Staff News Editor at Journal of Engineering -- An artificial intelligence (AI) tool developed at Vanderbilt University Medical Center accurately identified pediatric patients at high risk for blood clots in a clinical trial. However, there was no difference in outcomes compared to a control group, the researchers reported in JAMA Network Open.

One reason this may have occurred was that the recommendation to begin blood-thinning therapy in these patients were accepted by treating physicians less than 26% of the time. The treating physicians expressed concern that the therapy might cause a major bleed, although this complication was not observed during the study.

Although the outcome was surprising, the researchers said the clinical trial, called CLOT (Children's Likelihood of Thrombosis), confirmed the safety and effectiveness of the tool in a healthcare setting, and provided valuable insights into how to incorporate it successfully into clinical practice.

"There is going to be more and more AI in healthcare. Having a system established where we can assess these (models) will allow us to provide safer and more effective care to our patients," said Shannon Walker, MD, assistant professor of Pathology, Microbiology and Immunology and Pediatrics, and the paper's first author.

"This study demonstrates that a pragmatic patient-level, randomized, controlled trial is the most ethical and effective way to assess whether AI tools are safe and effective," added co-author Daniel Byrne, MS, director of AI Research at the Advanced Vanderbilt Artificial Intelligence Laboratory (AVAIL) and the Department of Biostatistics.

Although rare, blood clots that develop in pediatric patients can lengthen their hospital stay and increase the risk of post-discharge complications and death.

To identify those at high risk, Walker, Byrne, and their colleagues pored over the electronic medical records of more than 110,000 admissions to the Monroe Carell Jr. Children's Hospital at Vanderbilt.

They identified 11 factors associated with blood-clot risk, including certain lab values and diagnoses, and whether the patient had undergone surgery or had cardiology or infectious disease consults.

Using that information, they developed a predictive model that, by scanning the medical record automatically, calculated a risk score daily for every pediatric hospital admission. "This allowed us to quickly review over 100 patients a day and focus on patients who had the highest likelihood of developing blood clots," Walker said.

The trial, which ran for 15 months, from November 2020 through January 2022, included 17,000 hospitalizations. Patients were randomly divided into two groups. Risk scores for the study group were shared with their treatment teams; scores for those in the control group were not.

In the study group, scores for high-risk patients were accompanied by recommendations to initiate anti-thrombolytic therapy to prevent the development of blood clots. Patients in the control group, identified as high risk by their treating physicians without relying on the automatically generated risk score, also received blood thinners.

No bleeding complications were observed in any of the patients receiving blood thinners per the study recommendations.

At the conclusion of the trial, the researchers found no difference in the rate of blood clots between the study and control groups. An analysis of the medical records revealed the recommendation to begin blood thinners in high-risk patients in the study group was followed only 25.8% of the time.

"Without performing the trial," Walker said, "it would have been impossible to identify potential reasons the intervention was unsuccessful." It wasn't a failure of the model, she added, but could have been due to reluctance to accept the recommendations.

The application of AI to clinical practice has been met with its share of pushback, Walker said. Skeptics have argued that implementation and evaluation of the algorithms, the "nuts and bolts" of the AI tools, is not feasible, too time-consuming, and will sap already limited clinical resources.

The CLOT trial showed that results can be obtained rapidly, without taxing the time or resources of the treatment team, by automatically randomizing and enrolling patients in a clinical trial using information that already exists in the electronic medical record.

It demonstrated the feasibility of assessing the value of predictive AI models in health care. But more work needs to be done.

Walker, Byrne, and their colleagues are planning another trial to understand better the reluctance of providers to accept the recommendation to begin blood-thinning therapy in patients at high risk for blood clots, and how to overcome it.

"Vanderbilt is performing rigorous science to ensure that these AI tools are safe and improve outcomes before we claim this. Other hospitals and AI vendors are skipping the science," noted Byrne, author of a new book, Artificial Intelligence for Improved Patient Outcomes - Principles for Moving Forward with Rigorous Science.

"We need to make sure these models are performing as expected," Walker added. "The infrastructure from this trial will allow for large study populations, to determine whether interventions that use artificial intelligence are safe and effective, and to help identify the patients who may benefit the most."

Walker and Byrne's co-authors were Benjamin French, PhD, Ryan Moore, MS, Henry J. Domenico, MS, Jonathan Wanderer, MD, MPhil, Amanda Mixon, MD, MS, MSPH, C. Buddy Creech, MD, MPH, and Allison Wheeler, MD, MSCI.

The CLOT study was the Advanced Vanderbilt Artificial Intelligence Laboratory's first demonstration project. Partial support was provided by grant UL1TR002243 from the National Center for Advancing Translational Sciences, National Institutes of Health.

Keywords for this news article include: Hospitals, Pediatrics, Medical Records, Machine Learning, Records as Topic, Clinical Research, Health and Medicine, Emerging Technologies, Artificial Intelligence, **Clinical Trials** and Studies, Vanderbilt University Medical Center.

NewsRX, LLC

Document JOENG00020231030ejau0000a

SME Sector

Eyestem partners with RetinAI for treatment of geographic atrophy with AI tech

352 words
30 October 2023
The Economic Times
ECTIM
English

BANGALORE: Eyestem Research, a Bangalore-based biotechnology company, on Monday, announced that it has entered a strategic partnership with Ikerian AG and RetinAI Inc. US ("RetinAI"), a clinical and imaging data management software and AI-driven analytics for ophthalmology. The aim of this partnership is to leveraging RetinAI's Discovery platform and AI tools to help Eyestem advance in its mission of treatment for geographic atrophy with its cell therapy, Eyecyte-RPE™.Jogin Desai, Founder and CEO of Eyestem, said in a statement, "This collaboration with RetinAI marks a significant milestone in our journey. Their sophisticated AI tools and the RetinAI Discovery® platform integrate perfectly with our vision, potentially shortening the timelines for our **clinical trials** and enhancing the accuracy of our analyses. " Carlos Ciller, CEO of RetinAI, said in a statement, "We are excited to partner with Eyestem.

Our AI-driven Discovery® platform is poised to significantly accelerate research and provide enhanced insights into disease progression and outcomes. Together, we're confident that this synergy will not only enrich insights in the development of novel treatments but also manifest in delivering life-altering solutions faster to individuals affected by retinal diseases globally." Geographic atrophy, a late-stage form of dry age-related macular degeneration (AMD), is a significant health concern worldwide. Currently, dry AMD affects 200 million individuals globally, contributing to irreversible vision loss. Compounded by an aging population, the prevalence of this serious eye disease is escalating at an alarming rate. Eyestem is preparing to initiate its Phase I/IIa **clinical trials** for Eyecyte-RPE™. This multi-centre, dose escalation, and expansion trial aims to assess Eyecyte-RPE™'s safety and efficacy for geographic atrophy. This trial will benefit from RetinAI's Discovery® platform, which will centralise data management and image analysis for the study. Moreover, RetinAI's advanced segmentation model will be leveraged for the identification and quantification of retinal biomarkers in geographic atrophy. This automated analysis will provide real-time insights on clinical endpoints, speeding up critical decision-making.

Bennett, Coleman & Co., Ltd.

Document ECTIM00020231030ejau000id

DIA to Address AI, Supply Chain, Equitable Drug Development at Canada Annual Meeting

679 words
30 October 2023
09:15
Business Wire
BWR
English

Health Canada, FDA regulators will provide clarity into recent policy updates during interactive panel sessions

WASHINGTON--(BUSINESS WIRE)--October 30, 2023--

DIA will deliver a comprehensive overview of the most pressing regulatory, clinical, and pharmacovigilance challenges facing the healthcare industry, including artificial intelligence (AI) and the global supply chain, during its 21st Canada Annual Meeting on Nov. 7-8 at the Ottawa Conference and Event Centre in Ottawa, Ontario.

This signature event will bring life sciences professionals together to discuss several imperative topics, such as how to implement AI into their processes and procedures, recent progress in equitable drug development and regulatory systems, improving diversity and access in **clinical trials**, and the presence of nitrosamine impurities in certain drug products.

As in previous years, attendees will be able to discuss policy updates and priorities directly with Health Canada regulators. They will also be able to build and foster relationships with life sciences professionals while gaining additional insights, education, and knowledge to navigate relevant challenges and opportunities in their occupations.

"The rapid pace of technological advancement in healthcare, pharmaceuticals, and biotechnology has led to a near-constant evolution in the regulations that guide each ecosystem," said Tamei Elliott, Associate Director, Scientific Programs of DIA Americas. "The Canada Annual Meeting will again bring hundreds of stakeholders together so they can continue to innovate, affect change, and formulate solutions that elevate care for those who are at the center of what we do every day -- the patients."

One of the meeting's many highlights will be a panel discussion featuring Joseph Kim, the Chief Strategy Officer at ProofPilot, titled "**Clinical Trials**: Focus on Patients, Innovation and Automation." That discussion, which will take place during Session 7, will demonstrate the impact digital protocol automation has on the site and patient experience.

Kim has extensive pharmaceutical research industry knowledge, familiarity with all phases of clinical research, and a well-known history of innovation. His panel was arranged by Vatche Bartekian, the President of Vantage BioTrials and a member of the Canada Annual Meeting program committee who has contributed his insights into drug development to the pharmaceutical and medical device industry for more than 24 years.

The annual meeting will begin with three can't-miss conversations:

-- "The Future of Therapeutic Products Development: Current Emerging Trends and Technologies" (Session 1): A plenary session featuring representatives from Health Canada and the United States Food and Drug Administration (FDA) that will allow participants to ask questions about the latest regulatory requirements in this area.

-- "Advancing Agile Regulations for Drugs: Updates from Health Canada" (Session 2): A conversation that will include insight from regulators on the nation's agile licensing for drugs initiative.

-- "Integrating Equity, Diversity and Inclusion Across the Drug Product Lifecycle" (Session 3): A panel discussion that will spotlight viewpoints from Canada, the United States, and the United Kingdom on how government, industry, and patients are supporting the creation of more equitable drug development and regulatory systems.

To register for DIA's Canada Annual Meeting, visit https://www.diaglobal.org/conference-listing/meetings/2023/11/canada-annual-meeting[https://www.diaglobal.org/conference-listing/meetings/2023/11/canada-annual-meeting].

About DIA

DIA (founded as the Drug Information Association) is a global association that mobilizes life science professionals from across all areas of expertise to engage with patients, peers and thought leaders in a neutral environment on the issues of today and the possibilities for tomorrow. As a member-driven, volunteer organization, professionals from 80 countries have affected healthcare outcomes, by engaging with DIA through an unparalleled network, educational offerings, and professional development opportunities.

DIA is based in Washington, DC (US) with regional offices representing the Americas (Horsham, PA, US); Europe, the Middle East, and Africa, (Basel, Switzerland); and Asia (Beijing and Shanghai, China; Mumbai, India; and Tokyo, Japan).

Learn more at DIAglobal.org and connect with DIA on X, LinkedIn, Facebook, and Instagram.

View source version on businesswire.com: https://www.businesswire.com/news/home/20231027284402/en/[https://www.businesswire.com/news/home/20231027284402/en/]

CONTACT: Denise DiMeglio

610-228-2102

denise@gregoryfca.com

SOURCE: DIA

(END)

Business Wire, Inc.

Document BWR0000020231030ejau0006b

[AI IN ACTION] Pharmas seek efficient AI-driven drug development

816 words
30 October 2023
Korea JoongAng Daily
JOONAI
English

Pharmaceutical companies are turning to AI technology to speed up and de-risk the drug development process.

Developing a new drug is a long, arduous journey that spans over a decade and requires hundreds of millions of dollars, not to mention that about nine out of 10 drug candidates fail to get approval.

Pharmaceutical companies, therefore, have been seeking a shortcut to speed up and de-risk the process. This is where AI technology comes in.

With AI swiftly revolutionizing every facet of new drug development, from discovery to **clinical trials**, pharma companies have been scrambling to establish their own AI-powered drug development tools or forge ties with AI developers.

Daewoong Pharmaceutical established a team dedicated to AI drug development in 2021, the first among the country's traditional pharmaceutical companies.

According to Shin Seung-woo, head of Daewoong's AI drug discovery team, the company managed to condense a previously three-year-long process into just one month, using generative AI.

"[The team] used generative AI to discover a substance with better effects than a rival company's substance in only a month, and verified it in vitro," a process that would have previously taken three years, Shin told the Korea JoongAng Daily.

Daewoong has developed its own virtual screening system using generative AI and cheminformatics and also secured a customized virtual library, all of which are expected to significantly reduce the time and cost spent on new drug discovery.

"The short-term goal is to discover a lead compound within a year of the project launch," said Shin.

The CPHI Annual Report 2023, published in September, predicts that over half of new drugs approved by the U.S. Food and Drug Administration (FDA) by 2030 will involve AI during development or manufacturing.

In Korea, the number of pharmaceutical companies that have set up an AI drug development team or begun to cooperate with an AI company for research projects reached 40 in 2023, a significant jump from five in 2019, according to a recent report by the Korea Pharmaceutical and Bio-Pharma Manufacturers Association (Kpbma).

Out of 104 pipelines involving AI in Korea, 71 cases utilized the technology in drug candidate discovery, 26 in preclinical, and 7 in **clinical trials**.

HK inno.N has also developed and utilized a proprietary AI platform, inno-Sun, which predicts the activity, properties, and toxicity of small molecule structures.

"It is used for a variety of purposes, from providing useful databases for problems that occurred during the drug development to designing drug structures," explained Kim Hye-Jeong, head of HK inno.N's Innovative Drug Discovery Center.

Meanwhile, CHA Vaccine Institute, which specializes in vaccines and cell and gene therapies, is working with AI companies to develop new cancer vaccines and immunotherapies.

"It has been about a year since we started utilizing AI technology," said Yum Jung-sun, CEO of CHA Vaccine Institute.

CHA Vaccine Institute has signed a set of memorandums of understanding since last year with a research institute, a medical facility and a biotech startup for AI drug development.

The latest agreement with Pharos iBio, signed in August, is aimed at jointly developing AI-based immunotherapy against cancer.

"We are developing immuno-oncology drugs using our proprietary immunization platform, L-pampo and Lipo-pam, said the CEO, adding that "by using AI, we expect to gain a deeper understanding of the mode of action of these cancer immunotherapies."

Immunotherapy is considered the primary domain where AI technology is expected to lead significant advances.

"Immunotherapy has many advantages over conventional cancer treatments, and therefore it is important to find more suitable drug candidates," said Yum. "As there are many unexplored mechanisms in immuno-oncology, using AI to understand them can lead to new candidates."

Yet the fast-evolving AI technology is posing as many questions as answers surrounding risks of possible hallucination, lack of regulatory guidelines and more.

"There needs to be institutional guidelines on who is responsible for problems caused by generative AI's own flaws, errors in training data, and user misuse," Yum pointed out

Shin of Daewoong suggested that there is a generational and cultural gap among researchers in the use of AI, saying that "some may feel pressured to change their previous paradigm."

Shin continued, "we need to improve the understanding of AI-based drug discovery among conservative researchers, and the resulting synergy will enhance the efficiency during the process."

BY SHIN HA-NEE [shin.hanee@joongang.co.kr]

Click here to see image[https://koreajoongangdaily.joins.com/data/photo/2023/10/30/0e4dd73d-a590-4712-bcbb-49c988435224.jpg]

[SHUTTERSTOCK]

Click here to see image[https://koreajoongangdaily.joins.com/data/photo/2023/10/30/6f70a2e2-5e71-442b-a68e-c65ecffaf65d.jpg]

Click here to see image[https://koreajoongangdaily.joins.com/data/photo/2023/10/30/4ad7dc98-6900-4712-81f3-e96ea6a26519.jpg]

Shin Seung-woo, head of Daewoong Pharmaceutical's AI drug discovery team [DAEWOONG PHARAMCEUTICAL]

Click here to see image[https://koreajoongangdaily.joins.com/data/photo/2023/10/30/1d82fcb9-d27b-4300-bd8f-ac6443e005b1.jpg]

Yum Jung-sun, left, CEO of CHA Vaccine Institute, poses for a photo during a MOU signing ceremony with Pharos iBio, in August. [CHA VACCINE INSTITUTE]

JoongAng Ilbo Co., Ltd.

Document JOONAI0020231030ejau001xh

Exscientia plc; Exscientia to Present New Preclinical Data for AI-designed LSD1 and MALT1 Inhibitors at ESMO 2023

489 words
27 October 2023
Health & Medicine Week
HAMW
1739
English

2023 NOV 3 (NewsRx) -- By a News Reporter-Staff News Editor at Health & Medicine Week -- Exscientia plc (Nasdaq: EXAI) announced two abstracts to be presented at the upcoming European Society for Medical Oncology (ESMO) Congress 2023 from October 20-24, 2023 in Madrid, Spain. "We are excited to share new preclinical data on our precision-designed LSD1 and MALT1 inhibitors, which we introduced to our oncology pipeline earlier this year," said Professor Andrew Hopkins FRS FMedSci, founder and Chief Executive Officer of Exscientia. "We believe these compounds bear strong potential for differentiation, patient benefit and value creation. This data underlines how Exscientia can bring together AI design and novel translational research capabilities to create better quality drug candidates.

This also allows us to systematically identify those patient populations who have the most potential benefit well before we start **clinical trials**." Both ESMO posters will be available on the Exscientia website from their time of presentation. Poster Presentations Title: Determining anti-cancer efficacy of a reversible LSD1 inhibitor, EXS74539, in primary AML tissues with limited thrombocytopenic effects Session Title: Translational research (agnostic) Abstract Number: 2289P Date/Time: Saturday, October 21 / 12:00 PM - 1:00 PM CEST

'539 is a novel, potent, selective and reversible LSD1 inhibitor under preclinical investigation as a monotherapy or in combination with standard of care for oncology and haematology indications including acute myeloid leukaemia (AML) and small cell lung cancer (SCLC)

Leveraging primary human material and Exscientia's proprietary precision medicine platform, the Company confirmed '539's general efficacy, demonstrating that '539 induces AML cell differentiation marker expression when used on primary AML patient tissue ex vivo Combination data with first line AML and targeted therapies will be presented Title: Characterisation of EXS73565, a potent and selective MALT1 inhibitor with low drug-drug interaction risk and potential in lymphoma Session Title: Haematological malignancies Abstract Number: 832P Date/Time: Monday, October 23 / 12:00 PM - 1:00 PM CEST

Exscientia utilised generative design, machine learning and molecular dynamics approaches to precision-design '565, a potent and selective allosteric MALT1 inhibitor with a differentiated profile exhibiting low drug-drug interaction and hyperbilirubinemia risk

Preclinically, '565 exposure resulted in limited inhibition of UGT1A1, an enzyme involved in bilirubin metabolism. This approach has the potential to offer safety benefits compared to other clinical stage MALT1 inhibitors which carry a high UGT1A1 inhibition and hyperbilirubinemia risk

Significant tumour growth inhibition was observed for '565 in vivo in activated B-cell diffuse large B-cell lymphoma (ABC-DLBCL) xenograft models. Significant synergistic effects were observed for combination '565 and the BTK inhibitor ibrutinib in a xenograft model with low sensitivity to either single agent

Keywords for this news article include: Business, Exscientia plc, Risk and Prevention.

NewsRX, LLC

Document HAMW000020231027ejar00063

CE Noticias Financieras English

The advances and debates that artificial intelligence and neurotechnology offer us.

633 words
27 October 2023
CE NoticiasFinancieras
NFINCE
English

Artificial intelligence is often seen as something immense and uncontrollable, as if it were beyond our reach, which sometimes overshadows the valuable contribution it is making to fundamental fields of existence and to the promotion of new human ideals. One example is medicine. What amazing things can be achieved from nanotechnology? I learned about two studies in the journal Nature that demonstrate the possibilities it has to revolutionize our health and well-being.

The first of these studies told the story of a woman who, 18 years ago, suffered a stroke that left her unable to speak. At the time, she was a dedicated elementary school teacher and volleyball coach. Scientists at the University of California, San Francisco (UCSF) implanted electrodes in her brain that decode the neural activities associated with speaking, and artificial intelligence translated them optimally into typed words on a computer.

The second analysis showcased the case of another woman, 68, who was dealing with devastating amyotrophic lateral sclerosis (ALS). A disease that causes a gradual loss of muscle control. To her, too, brain devices working with AI-based deep learning algorithms, commonly known as deep learning, were attached. The result was equally impressive: these instruments recognized synaptic manifestations related to verbalizing.

The initial review presented interesting findings, as they yielded the reproduction of 78 words per minute, with an error rate of 25%. The next, impulse translation was performed with a lower error rate, about 9.1%. These numbers are significant findings, first, because they offer hope to those who are currently unable to communicate. Also because they open new perspectives for the recovery of other sensory abilities. And furthermore, with proper procedures and ethical responsibility, these numbers can be further refined by being supported by self-learning.

Can you imagine the possibilities this technology brings? The improvements promise to be manifold, but they also bring with them considerable challenges and duties, as these developments are driving a debate on the accompanying bioethical dilemmas. UNESCO attests to the benefits of this technology, but also to the problems that arise in connection with the use of noninvasive interventions.

As noted on its website: "Unlike many other cutting-edge technologies, neurotechnology can directly access, manipulate and emulate the structure of the brain, thereby generating information about identities, emotions and fears. When combined with artificial intelligence, its resulting potential could easily jeopardize essential concepts such as human identity, dignity, freedom of thought, autonomy, mental privacy, and well-being."

A few weeks ago we learned that Neuralink, the company run by billionaire Elon Musk, is recruiting volunteers for **clinical trials** involving its network-connected wireless chips. This project has obtained FDA clearance and aims, according to the social media post where it was announced, to give people the power to control a keyboard or computer cursor through their thoughts.

These milestones and their implications raise a number of fundamental questions: who will be the owner and custodian of this data? How will access to it be guaranteed and with what levels of accuracy? These are pertinent questions as we begin to explore and envision the future of business, and ultimately how it will shape the business and economic landscape.

We are responsible for ensuring that these advances are used to refine our contexts, while preserving the values that define us as human beings. We must ensure that it is rooted in sound ethical principles and a deep respect for dignity and privacy. Whether it is to improve our lives by restoring the ability to communicate, or to make the most of its impact on the marketplace, how will we drive its development in an equitable, responsible and sustainable way?

Nicolás Vilela, CEO and founder of ZTZ Tech Group.

Content Engine LLC

Document NFINCE0020231027ejar00i8g

TripleBlind says its privacy tools can open potential of AI

Leslie Collins

1691 words
27 October 2023
Kansas City Business Journal
KCBJ
English

Riddhiman Das got his first computer programming book from his mother and read it cover to cover. He was 6.

The drive persists for the co-founder of TripleBlind Inc., who said he thrives “working at the edge of what’s possible.”

“There’s an endless stream of curiosity that drives me,” Das said.

His grandfather also influenced his fervor for computer science.

“He was a scientist himself, and he was absolutely convinced that the information revolution we were living through was about to be as transformative to the world as the industrial revolution was and that I was born at just the right time to be a participant in it. I really bought that thesis,” Das said. “I could see the potential, and I absolutely wanted to become a part of it.”

Das helped invent TripleBlind’s data privacy technology, which now has eight patents and about 20 more pending. The Kansas City startup has attracted investors including Accenture Ventures, General Catalyst and the Mayo Clinic, which also is using the company’s technology.

“I believe that some of our most foundational and transformative medical discoveries, pharmaceutical discoveries and the ability to fight financial crime and prevent money laundering and account takeovers is limited by the types of data that we have,” Das said. “So, if you can bring about trust to how you touch data, you can allow these innovations to be unblocked.”

The company is gearing up for its big mission, with the addition of new executive talent and dreams of going public.

“TripleBlind really has the opportunity to be one of the most transformational companies globally — not just in Kansas City or the Midwest region,” said Thad Langford, a founding managing partner with Overland Park-based Flyover Capital, which invested in TripleBlind. “They’re so well-positioned to play a central role in the growth of AI (artificial intelligence) by solving one of the most critical issues that AI has within the adoption of enterprises and health care systems — and that’s the issue of data privacy.”

TripleBlind’s end-to-end privacy software allows enterprises, such as hospitals and financial institutions, to securely share regulated and private data with other parties while complying with stiff privacy regulations.

The startup’s name, Das said, is a play on “double-blind,” a term describing **clinical trials** in which neither the doctors nor patients know whether a placebo or real drug is being administered. In TripleBlind’s case, humans are blind to certain aspects of the data, but the fidelity of the de-identified and encrypted data is retained when plugged into models that analyze the data, such as an artificial intelligence algorithm. TripleBlind acts as a privacy guard and automates the anonymization of data.

Das said health care breakthroughs have been stunted because researchers had access only to health records stripped of personal information, such as gender, age, electrocardiograms and genomic characteristics.

“Well-intentioned regulation has held back progress. ... It’s removed any resemblance of an individual patient in that data, which inherently makes it impossible to be used in precision medicine,” he said. “(With TripleBlind), you allow the algorithm to use the data while ensuring the algorithm is not abusing the data, which is very important. ... We’re the only company that allows this full life cycle of AI to be done in a privacy-preserving way.”

A native of India, Das moved to Kansas City in 2008 on a student visa and graduated from the University of Missouri-Kansas City with bachelor’s and master’s degrees in computer science and electrical engineering. He liked that the early roots of UMKC’s computer science department were tied to funding from Sprint Corp. and that it helped develop talent for the Overland Park telecom company that eventually sold to T-Mobile US Inc.

The idea for TripleBlind is rooted in another locally founded tech company, EyeVerify, whose patented biometric software allowed users to forgo traditional passwords and instead log in to an account with a selfie of their eye. The company sold in 2016 to China-based Alibaba Group Holding Ltd. affiliate Ant Financial for a reported $100 million and was rebranded to Zoloz.

Das started as an intern at EyeVerify, became a product architect and then was head of international technology investments for Ant Group after EyeVerify sold. Zoloz faced headwinds of new data residency requirements in various countries and gaining trust as a Chinese company.

Having a product like TripleBlind could have made a difference, he said.

Das saw ample market potential for a startup centered around data privacy and felt emboldened by the Israeli entrepreneurs he met while working for Ant Group in Tel Aviv, where he scouted companies to invest in.

“I was inspired by the chutzpah of the Israeli entrepreneurs,” he said. “They’re in this war-torn country where the local economy isn’t necessarily all that big, and yet they’re building these very impactful companies for overseas markets from very little resources.”

If they could start companies amid those circumstances, he also should give it a shot because it’s a “desperate problem that needs to be solved,” Das said.

“Think about the power of modern medicine when it has access to all the data it needs about all of us. It has the potential to improve how we care for the rarest of diseases,” he said. “It has the potential to improve and build drugs that are specifically targeted at a particular person with a particular type of genetic characteristic.”

TripleBlind’s technology also can expedite the process for finding patients and analyzing data in **clinical trials**. It can be a revenue generator for health care providers able to securely monetize their data and can shed light on algorithm biases.

“Our partnership with the Mayo Clinic Platform has really allowed us to build trust in the overall health care industry,” Das said. “It has allowed us to also deliver the world’s first AI validation platform for health care.”

TripleBlind’s health care-related customer base includes health care providers, medical device manufacturers, pharmaceutical companies and digital health companies.

On the financial services side, TripleBlind serves two of the world’s largest commercial banks as well as investment banks and brokerages. In addition to keeping data safe in mobile banking apps, TripleBlind enables companies to securely leverage generative AI models, such as ChatGPT. One early customer, an insurance broker, is using TripleBlind-enabled generative AI to help its call center agents find information faster in individual insurance policies, such as whether a policy covers a certain event.

Last month, TripleBlind announced that Prat Moghe would be its first outside CEO. He is a serial entrepreneur and former executive vice president and general manager of Cloudera, a

California-based enterprise data management and analytics software company that sold in 2021 for about $5.3 billion.

“The next challenge ahead of us is to turn TripleBlind into a growth-stage company, and that’s really where Prat has historically operated,” said Das, who previously was CEO.

Now it’s about scale — adding customers and employees and expanding product offerings. The startup employs about 50, but Prat expects the headcount to double in the next three years.

Last year, TripleBlind hired another notable executive, CTO Craig Gentry, who has won coveted awards for his cryptography work. He’s world-renowned, Moghe said, but he’s just one example of TripleBlind’s “world-class team.”

“These are not technologies that are easy to build or prove,” Moghe said. “When you go to a customer or partners, there’s a huge hurdle to climb with convincing people and making them feel this thing works. They’ve kind of gone through that hurdle now. They’ve proven this technology.”

A growing number of companies want to take advantage of AI’s capabilities, but they’re concerned about AI privacy and its complexities, which creates the “perfect storm” for TripleBlind’s tech offering, he said.

“The market is huge. This is one of the reasons why I took this over several other options on the table,” Moghe said. “If we execute this well, this could become a public company.”

Going public won’t be easy, or quick.

To be a solid candidate for an initial public offering (IPO), a company typically needs annual revenue growth exceeding 20%, said Raffaele Sadun, who’s been involved in multiple IPOs, including as CFO of Overland Park-based SelectQuote Inc. But it’s not unheard of for companies to go public before becoming profitable, he said.

Ideally, companies need to start forging relationships with investment banks and research analysts 18 to 24 months ahead of an IPO. Once an investment bank is secured, it typically takes six to nine months to handle the other moving parts, including submitting and fine-tuning documents for the Securities and Exchange Commission. Among the last legs is a two-week “road show,” where company officials fly around the U.S. to meet with more than 100 prospective investors.

Getting to an IPO isn’t a straight shot, Sadun said. There can be stops and starts based on market conditions. SelectQuote originally planned to launch its road show on March 9, 2020 — “the week the world started shutting down because of Covid.”

The “potential is certainly there” for TripleBlind to go public, Flyover Capital’s Langford said.

“It is rare to find a company that is truly differentiated and solving one of the most important problems to one of the fastest-growing technologies and trends of our time,” he said. “And TripleBlind is positioned exactly to do that.”

Das said he hopes TripleBlind goes public. He sees the effort as a means to an end: giving it the platform for generating maximum impact with its technology.

“I think it is the dream of any entrepreneur to build a generation-defining company,” he said. “I’m truly excited that we have that opportunity ahead of us.”

American City Business Journals

Document KCBJ000020231027ejar0002w

Simbec-Orion and biotx.ai launch strategic partnership to de-risk early-stage drug development with AI supported clinical trial design.

655 words
27 October 2023
ENP Newswire
ENPNEW
English

Release date - 26102023

Simbec-Orion, a full-service mid-size CRO, and biotx.ai, a developer of AI-enabled causal modelling for drug development, have announced their strategic partnership to bring AI-powered insights and predictive models to support data-driven clinical trial design.

Simbec-Orion, a specialist in oncology, rare disease, and clinical pharmacology studies, has over 45 years' experience supporting biotech and small to mid-sized drug development companies with complex early-stage clinical development in highly competitive and specialist patient populations.

Fabrice Chartier, CEO at Simbec-Orion, commented: 'We are delighted to announce our strategic partnership with biotx.ai. biotx.ai's data-driven predictions will offer our clients a cost-effective way to generate additional data to support their clinical development strategy, by utilising causal AI models to predict clinical trial outcomes and using these insights to inform clinical trial design.'

biotx.ai's causal AI technology accurately simulates the outcomes of **clinical trials** using their extensive human genetic database, which contains 3.3 million cases spanning over 12,000 diseases, each with a full phenotype analysis. The accuracy of their causal AI has been demonstrated by successfully predicting the outcomes of eight different COVID-19 trials and has since been replicated across a range of indications and therapeutic areas.

Joern Klinger, CEO at biotx.ai, commented on the potential causal models offer when applied to clinical drug development

'Causal models at scale enable drug development: For a given drug we find all mechanisms and diseases causally affected by it. We find the best indication for our client's drug, provide evidence for the absence of specific side effects compared to competing compounds, and, most importantly, evidence for the efficacy of their compounds in humans. For several of our clients this has been instrumental to successful fundraising for their phase 2 trials.'

On the value of utilising AI-powered causal models to secure funding, Fabrice Chartier adds: 'It is a highly competitive environment for biotech companies. Investors are demanding more data, and being more selective with the projects they choose to fund. We support clients at those crucial early development stages, using our knowledge and experience to help inform their clinical development and corporate strategy. Offering our clients an opportunity to gather data on predicted clinical trial outcomes, before reaching the clinic, is a valuable tool to demonstrate a drug's true potential to investors. With this technology, we can also provide input endpoints and protocol design to maximise the chance of delivering a successful study.'

About Simbec-Orion

Simbec-Orion is a responsive and agile full-service CRO with specialist expertise in clinical pharmacology, oncology, and rare diseases. Perfectly structured to support small to mid-size biotech companies, Simbec-Orion provides full-service clinical development services with a focus on tailormade and scalable solutions. Experts in early clinical development, Simbec-Orion utilises over 45 years of experience to develop bespoke strategies which support each client's clinical and commercial objectives. Simbec-Orion is headquartered in the UK, with offices in Europe and the US.

About biotx.ai

biotx.ai are the first to apply causal modelling in drug development at scale. At its core, causal modelling mimics prospective, randomized **clinical trials** in large retrospective data - the genomes and full phenotypes and medical histories of 3.3 million patients. This allows for fast predictions of clinical success with huge statistical power, and, at scale, enables the discovery and validation of every mechanism and disease affected by a given drug. In practice biotx.ai has enabled clients to secure funding, explain the biology of their drugs and improve the design of their **clinical trials**.

Contact:

Email: information@simbecorion.com Tel: +44 (0) 1753 578 080

[Editorial queries for this story should be sent to newswire@enpublishing.co.uk]

Electronic News Publishing Ltd.

Document ENPNEW0020231027ejar000fj

CAN-FITE TO HARNESS ARTIFICIAL INTELLIGENCE TO DEVELOP NOVEL ANTI-CANCER DRUGS

1128 words
27 October 2023
ENP Newswire
ENPNEW
English

Release date - 26102023

Israel - Can-Fite BioPharma Ltd. (NYSE American: CANF) (TASE: CANF), a biotechnology company advancing a pipeline of proprietary small molecule drugs that address oncology and inflammatory diseases, today announced that it entered into an agreement with Collaborations Pharmaceuticals, Inc. (CPI) to develop anti-cancer drugs utilizing artificial intelligence (AI) and machine learning (ML) techniques.

This project will aim to develop a next-generation A3 adenosine receptor drug agonists that significantly reduce the development time and cost of bringing such drugs to market.

CPI will utilize, apply and use AI and ML tools, including their MegaSyn generative AI method, to design new molecules with high affinity and selectivity to the A3AR Can-Fite target. CPI will also perform the chemical synthesis of the newly designed molecules with the ultimate goal of developing novel and robust anti-cancer drug candidates. Can-Fite will perform the testing of the biological anti-cancer effects and validate the molecular mechanism of the novel, chemically synthesized drug candidates.

'Our vision is to deliver in silico small molecule drug candidates in a better and faster way to patients via a collaboration with Collaborations Pharmaceuticals. Our accumulated experience of bringing anti-cancer drugs which target the A3AR from lab to patients will be implemented into this AI drug development project,' stated Prof. Pnina Fishman, Executive Chairman and CSO at Can-Fite.

'We are delighted that Can-Fite chose our team of experts for this AI-led drug discovery collaboration and look forward to demonstrating what our technology can do,' said Sean Ekins, PhD, DSc., CEO and Founder of Collaborations Pharmaceuticals, Inc. We also look forward to complementing their outstanding scientific approach with our integrated technology platform and ability to generate novel and selective molecules.'

About Can-Fite BioPharma Ltd.

Can-Fite BioPharma Ltd. (NYSE American: CANF) (TASE: CANF) is an advanced clinical stage drug development Company with a platform technology that is designed to address multi-billion dollar markets in the treatment of cancer, liver, and inflammatory disease. The Company's lead drug candidate, Piclidenoson recently reported topline results in a Phase III trial for psoriasis and is expected to commence a pivotal Phase III. Can-Fite's cancer and liver drug, Namodenoson, is being evaluated in a Phase IIb trial for the treatment of steatotic liver disease (SLD), a Phase III pivotal trial for hepatocellular carcinoma (HCC), and the Company is planning a Phase IIa study in pancreatic cancer. Namodenoson has been granted Orphan Drug Designation in the U.S. and Europe and Fast Track Designation as a second line treatment for HCC by the U.S. Food and Drug Administration. Namodenoson has also shown proof of concept to potentially treat other cancers including colon, prostate, and melanoma. CF602, the Company's third drug candidate, has shown efficacy in the treatment of erectile dysfunction. These drugs have an excellent safety profile with experience in over 1,600 patients in clinical studies to date.

About Collaborations Pharmaceuticals

Collaborations Pharmaceuticals, Inc. developed MegaSyn for generative drug design. In addition they have developed Assay Central software for data curation and machine learning as well as curated model collections such as MegaTox, MegaTrans and MegaPredict. Collaborations Pharmaceuticals, Inc. performs research and development on innovative therapeutics for multiple rare and neglected diseases and consults for pharmaceutical and consumer product companies.

Forward-Looking Statements

This press release may contain forward-looking statements, about Can-Fite's expectations, beliefs or intentions regarding, among other things, its product development efforts, business, financial condition, results of operations, strategies or prospects. All statements in this communication, other than those relating to historical facts, are 'forward looking statements'. Forward-looking statements can be identified by the use of forward-looking words such as 'believe,' 'expect,' 'intend,' 'plan,' 'may,' 'should' or 'anticipate' or their negatives or other variations of these words or other comparable words or by the fact that these statements do not relate strictly to historical or current matters.

Forward-looking statements relate to anticipated or expected events, activities, trends or results as of the date they are made. Because forward-looking statements relate to matters that have not yet occurred, these statements are inherently subject to known and unknown risks, uncertainties and other factors that may cause Can-Fite's actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Important factors that could cause actual results, performance or achievements to differ materially from those anticipated in these forward-looking statements include, among other things, our history of losses and needs for additional capital to fund our operations and our inability to obtain additional capital on acceptable terms, or at all; uncertainties of cash flows and inability to meet working capital needs; the initiation, timing, progress and results of our preclinical studies, **clinical trials** and other product candidate development efforts; our ability to advance our product candidates into **clinical trials** or to successfully complete our preclinical studies or **clinical trials**; our receipt of regulatory approvals for our product candidates, and the timing of other regulatory filings and approvals; the clinical development, commercialization and market acceptance of our product candidates; our ability to establish and maintain strategic partnerships and other corporate collaborations; the implementation of our business model and strategic plans for our business and product candidates; the scope of protection we are able to establish and maintain for intellectual property rights covering our product candidates and our ability to operate our business without infringing the intellectual property rights of others; competitive companies, technologies and our industry; risks related to the COVID-19 pandemic and the Russian invasion of Ukraine; risks related to not satisfying the continued listing requirements of NYSE American and statements as to the impact of the political and security situation in Israel on our business. More information on these risks, uncertainties and other factors is included from time to time in the 'Risk Factors' section of Can-Fite's Annual Report on Form 20-F filed with the SEC on March 30, 2023 and other public reports filed with the SEC and in its periodic filings with the TASE. Existing and prospective investors are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof. Can-Fite undertakes no obligation to publicly update or review any forward-looking statement, whether as a result of new information, future developments or otherwise, except as may be required by any applicable securities laws.

Contact:

Motti Farbstein Email: info@canfite.com Tel: +972-3-9241114

Sean Ekins Email: sean@collaborationsPharmaceuticals.com

[Editorial queries for this story should be sent to newswire@enpublishing.co.uk]

Electronic News Publishing Ltd.

Document ENPNEW0020231027ejar000ev

Elligo and Avallano Launching Patient-First, AI-Powered Clinical Trials Ecosystem

524 words
27 October 2023
ENP Newswire
ENPNEW
English

Release date - 26102023

Elligo Health Research, the largest healthcare-enabling research organization, today announced a partnership with Avallano, a data privacy and healthcare technology company, to launch myTrialsConnectSM, a scalable research community powered by artificial intelligence (AI), that was built to serve patients, providers, sites, and the biopharma industry.

'myTrialsConnectSM addresses one of the major issues of clinical research today - finding qualified patients and engaging them before, during, and after the study,' said Elligo CEO John Potthoff, Ph.D. 'By utilizing the abundance of healthcare data with AI, this **clinical trials** ecosystem will bring value to all patients, providers, and researchers not only during studies, but also beyond participation in **clinical trials**.'

Patients can join through a variety of means including social media, as part of a clinical trial or as a patient in a healthcare provider's network. As a member, they receive a copy of their full medical record, educational materials that are oriented to their particular interest and conditions, and customized messages. Messages will alert patients when they are eligible for a particular clinical trial based on an automated review of their medical records and chatbot-based surveys, which gather additional information (such as social determinants of health) that are not typically found in the medical record.

For providers, myTrialsConnectSM will offer information and services directly to healthcare providers by giving them a 360-degree view of their patients' entire medical journey and by providing an open and direct communication channel that can be customized to serve the interests of each provider's unique patient population.

For the biopharmaceutical industry, myTrialsConnectSM creates a virtual waiting room of patients who have been qualified via medical records and additional protocol-specific data not found in electronic health records (EHRs), and who have seen a description of the study and expressed their interest in participating. This removes two of the biggest delays in getting patients into trials - the time to fully qualify them and the need to find patients that want to participate.

'From gathering precise real-world data to safely leveraging AI's predictive powers, we are working together to streamline trial processes,' said Avallano CEO and Chief Technology Officer Paul Della Maggiora. 'This patient-first ecosystem has the power to redefine outcomes in clinical research, giving deeper insights to all users, drastically reduce recruitment time, and inspire patient trust and retention through engagement.

About Elligo Health Research

Elligo Health Research accelerates **clinical trials** through direct access to known, diverse patients from more than 115 hospitals and major health systems, 200 healthcare-based sites, and 100 research-based sites, leveraging EHR data and utilizing our proprietary IntElligo technology. Our PatientSelect model engages our network of networks to optimize the intersection of healthcare and research and bring more patients clinical research as a care option. Elligo's SiteSelect model and Research Partner Services enable sites to seamlessly participate in trials, further advancing the development of new pharmaceutical, biotechnology, and medical device and diagnostic products.

Contact:

Tel: (512) 580-4633

[Editorial queries for this story should be sent to newswire@enpublishing.co.uk]

Electronic News Publishing Ltd.

Document ENPNEW0020231027ejar000e8

Pandit Deendayal Energy University Files Patent Application for Explainable **Artificial Intelligence** Based Multi-Imaging System for Prediction and Recommendations of the Eye Diseases

Distributed by Contify.com
337 words
27 October 2023
Indian Patent News
ATPATN
English

Kolkata, Oct. 27 -- India-based Pandit Deendayal Energy University filed patent application for explainable artificial intelligence based multi-imaging system for prediction and recommendations of the eye diseases. The inventors are Dr Yogesh Kumar and Dr Ankur Changela.

Pandit Deendayal Energy University filed the patent application on March 17, 2023. The patent application number is 202321018186 A. The international classification numbers are G05D 010000, G06N 030400, G06N 030800, G06N 050400 and G06N 200000.

The abstract of the patent published by the Controller General of Patents, Designs & Trade Marks states: "The main concept of the research is to the development of explainable AI based prediction and recommendation system for different eye diseases. Image-centric specialties like radiology, dermatology, and pathology have seen the most of AI techniques developments in medicine. In new studies, such as pre-registered prospective **clinical trials**, Using image-based data such as fundus photos and optical coherence tomography, Deep Learning systems efficiently identify cardiovascular risk factors and diseases as well as diabetic retinopathy (DR), glaucoma, age-related macular degeneration, retinopathy of prematurity, and refractive error. The cornea and lens are two of the most important refractive structures in the human eye. Vision loss and blindness can result from damage to these structures. Early detection of eye illnesses is critical for treatment development and effective patient care. So, the purpose of the present invention is to design and develop the prediction and recommendation system to early predict the different types of eye diseases such as diabetic retinopathy (DR), glaucoma, cataracts, CNV, DME and DRUSEN using explainable AI."

The Patent was published in the Issue No.31/2023 of the Patent Office Journal on Aug. 4, 2023.

About Pandit Deendayal Energy University

Pandit Deendayal Energy University, formerly Pandit Deendayal Petroleum University, has been established by GERMI as a Private University through the State Act enacted on 4 April 2007.

Athena Information Solutions Pvt. Ltd.

Document ATPATN0020231027ejar0000j

Elligo and Avallano Launching Patient-First, AI-Powered Clinical Trials Ecosystem

Distributed by Contify.com
688 words
26 October 2023
Contify Life Science News
ATPHAM
English

Elligo Health Research and Avallano have partnered to launch myTrialsConnect, an AI-powered **clinical trials** ecosystem. The platform aims to address the challenge of finding qualified patients and engaging them throughout the study. Patients can join through various means, such as social media or as part of a healthcare provider's network, and receive their full medical record, educational materials, and customized messages. For providers, myTrialsConnect offers a 360-degree view of patients' medical journey and a direct communication channel.

Key Highlights:

* myTrialsConnectSM creates a virtual waiting room of qualified patients who have expressed interest in participating in **clinical trials**.

* The ecosystem aims to streamline trial processes, gather real-world data, reduce recruitment time, and inspire patient trust and retention through engagement.

Original Press Release:

Oct. 26 -- Elligo Health Research issued the following news release:

Elligo Health Research®, the largest healthcare-enabling research organization, today announced a partnership with Avallano, a data privacy and healthcare technology company, to launch myTrialsConnectSM, a scalable research community powered by artificial intelligence (AI), that was built to serve patients, providers, sites, and the biopharma industry.

“myTrialsConnectSM addresses one of the major issues of clinical research today — finding qualified patients and engaging them before, during, and after the study,” said Elligo CEO John Potthoff, Ph.D. “By utilizing the abundance of healthcare data with AI, this **clinical trials** ecosystem will bring value to all patients, providers, and researchers not only during studies, but also beyond participation in **clinical trials**.”

Patients can join through a variety of means including social media, as part of a clinical trial or as a patient in a healthcare provider’s network. As a member, they receive a copy of their full medical record, educational materials that are oriented to their particular interest and conditions, and customized messages. Messages will alert patients when they are eligible for a particular clinical trial based on an automated review of their medical records and chatbot-based surveys, which gather additional information (such as social determinants of health) that are not typically found in the medical record.

For providers, myTrialsConnectSM will offer information and services directly to healthcare providers by giving them a 360-degree view of their patients’ entire medical journey and by providing an open and direct communication channel that can be customized to serve the interests of each provider’s unique patient population.

For the biopharmaceutical industry, myTrialsConnectSM creates a virtual waiting room of patients who have been qualified via medical records and additional protocol-specific data not found in electronic health records (EHRs), and who have seen a description of the study and expressed their interest in participating. This removes two of the biggest delays in getting patients into trials — the time to fully qualify them and the need to find patients that want to participate.

“From gathering precise real-world data to safely leveraging AI’s predictive powers, we are working together to streamline trial processes,” said Avallano CEO and Chief Technology Officer Paul Della Maggiora. “This patient-first ecosystem has the power to redefine outcomes in clinical research, giving deeper insights to all users, drastically reduce recruitment time, and inspire patient trust and retention through engagement.

For more information about Avallano’s AI-enabled clinical research, visit: https://www.avallano.com/[https://www.avallano.com/]. For more information about Elligo’s focus on the increasing access in **clinical trials**, visit: https://www.elligohealthresearch.com/only-elligo/[https://www.elligohealthresearch.com/only-elligo/].

About Elligo Health Research®

Elligo Health Research accelerates **clinical trials** through direct access to known, diverse patients from more than 115 hospitals and major health systems, 200 healthcare-based sites, and 100 research-based sites, leveraging EHR data and utilizing our proprietary IntElligo® technology. Our PatientSelect® model engages our network of networks to optimize the intersection of healthcare and research and bring more patients clinical research as a care option. Elligo’s SiteSelect model and Research Partner Services enable sites to seamlessly participate in trials, further advancing the development of new pharmaceutical, biotechnology, and medical device and diagnostic products.

Source: Elligo Health Research

[Category: Health Care Services and Facilities, Pharmaceuticals]

Athena Information Solutions Pvt. Ltd.

Document ATPHAM0020231027ejaq000vm

KAIMRC, Sanofi collaborate at FII7 to build AI-driven disease management ecosystem

Mubasher
404 words
26 October 2023
Mubasher
MUBEN
English

Riyadh – Mubasher: King Abdullah International Medical Research Center (KAIMRC) entered into a partnership with innovative global healthcare provider Sanofi at the seventh edition of the Future Investment Initiative (FII), aiming to advance clinical research in Saudi Arabia.

Upon the signed memorandum of understanding (MoU), the two sides will cooperate to establish a sustainable disease management ecosystem that is powered by artificial intelligence (AI) and real-world evidence (RWE), especially for rare diseases, oncology, and rare blood disorders.

The partnership also aims to elevate Saudi Arabia's role in global research and development (R&D) as well as healthcare innovation and promote value-based healthcare for improved patient outcomes, according to a press release.

The two sides will collaborate to advance **clinical trials** and boost expertise in various fields in line with the Ministry of National Guard Health Affairs' healthcare transformation objectives.

Executive Director of KAIMRC, Ahmed Alaskar, said: "Our partnership with Sanofi, a leading global pharmaceutical company, will enable us to share scientific and clinical expertise especially in the area of rare diseases, propelling progress towards our national goal of becoming a world leader in biotech research while laying the foundation for a sustainable, future-ready healthcare system."

It is worth noting that Sanofi has endorsed its commitment to the rare disease community in Saudi Arabia by implementing a full-spectrum patient ecosystem, including home infusion and family screening programmes.

From his side, Jean-Paul Scheuer, MCO Lead and Specialty Care General Manager at Sanofi Greater Gulf, said: "Sanofi has a long history of working with the healthcare community in KSA to accelerate innovation and find solutions to patients' unmet needs, and we're proud to reinforce our commitment as a strategic partner to Saudi Vision 2030 with this ambitious joint initiative, which opens new windows for us to contribute to the nation's healthcare transformation journey."

In 2022, the healthcare provider initiated the Combined Patient Program, which gave Saudi-based rare disease patients greater control over the management of their condition.

At the three-day FII7 event, a total of 23 entities have been strategic partners for the event, which gathered leaders from across the globe in addition to regional officials and investors.

Meanwhile, FII Institute announced four initiatives that serve three continents to support sustainability and as well as the education sector in low and middle-income countries.

Source:Mubasher

Mubasher Info

Document MUBEN00020231026ejaq000p1

KAIMRC, Sanofi agree to advance clinical research and build sustainable, AI-driven rare disease management ecosystem

641 words
26 October 2023
The Saudi Gazette
SAUDGZE
English

King Abdullah International Medical Research Center (KAIMRC) at the Ministry of National Guard Health Affairs, Saudi Arabia's leading institution in biomedical and clinical research, has signed a Memorandum of Understanding (MoU) with Sanofi to elevate the Kingdom's role in global research and development (R&D) and healthcare innovation. Signed at the Future Investment Initiative (FII) 7th Edition in Riyadh, the agreement intends to advance clinical research in KSA and establish a sustainable disease management ecosystem powered by Artificial Intelligence (AI) and Real-World Evidence (RWE), with an emphasis on rare diseases, oncology, and rare blood disorders.

The Memorandum of Understanding was signed by Dr Ahmed Alaskar, Executive Director of King Abdullah International Medical Research Center, and Jean-Paul Scheuer, MCO Lead and Specialty Care General Manager, Sanofi Greater Gulf.

Aligned with the principles of value-based healthcare, the wide-ranging partnership emphasises outcome-driven, innovative solutions, with the objective of establishing a sustainable disease management ecosystem – characterized by early and precise diagnostics, ground-breaking therapies, and effective disease management – to enhance the journey of rare disease patients. The partnership signifies a significant investment in clinical research within KSA and is anticipated to make substantial contributions to clinical research, advancing the Saudi healthcare community's understanding of genetic diseases and paving the way for predictive algorithms that can revolutionize the early detection of rare diseases.

Furthermore, Sanofi and KAIMRC will work together to advance **clinical trials** and enhance expertise in oncology, malignant haematological disorders and rare blood disorders, in line with the Ministry of National Guard Health Affairs' healthcare transformation ambitions.

Dr Ahmed Alaskar, Executive Director of King Abdullah International Medical Research Center said: "Our collaboration with Sanofi is a vital step in catalysing data-driven innovation in healthcare, moving the Kingdom towards an era of faster clinical decisions, personalized therapies, and improved diagnosis and treatment outcomes – leading to a better quality of life for patients. At KAIMRC, we're dedicated to the purpose of transforming research findings into practical applications through cutting edge biomedical R&D and innovation, that empower people to live better lives, including through strategic collaborations with key international players. Our partnership with Sanofi, a leading global pharmaceutical company, will enable us to share scientific and clinical expertise especially in the area of rare diseases, propelling progress towards our national goal of becoming a world leader in biotech research while laying the foundation for a sustainable, future-ready healthcare system."

Jean-Paul Scheuer, MCO Lead and Specialty Care General Manager, Sanofi Greater Gulf stated: "The collaboration between Sanofi and KAIMRC has the potential, collectively, to transform the healthcare landscape in KSA, contributing to improved patient outcomes and positioning the nation as a pioneer in cutting-edge clinical research. Sanofi has a long history of working with the healthcare community in KSA to accelerate innovation and find solutions to patients' unmet needs, and we're proud to reinforce our commitment as a strategic partner to Saudi Vision 2030 with this ambitious joint initiative, which opens new windows for us to contribute to the nation's healthcare transformation journey. Sanofi is going 'all in' on Artificial Intelligence and data science to speed breakthroughs for patients, and we look forward to sharing our expertise in clinical research and cognitive technologies with KAIMRC, a leading biomedical R&D and clinical research organization in KSA, to make available the tools needed to make better everyday decisions, benefiting patients and communities."

Reinforcing its commitment to the rare disease community in KSA, Sanofi has implemented a full-spectrum patient ecosystem that provides 360° support to rare disease patients – including home infusion and family screening programs. Last year, Sanofi launched the Combined Patient Program, giving rare disease patients in the Kingdom greater control over the management of their condition.

The Saudi Gazette

Document SAUDGZE020231026ejaq0005o

Press Release: New and Exciting Clinical Data on Evaxion's AI-Immunology(TM)-Based Personalized Cancer Vaccines to be Presented

1051 words
26 October 2023
08:30
Dow Jones Institutional News
DJDN
English

-- Data from Evaxion's two personalized cancer vaccine **clinical trials** to be presented at the annual meeting of the Society for Immunotherapy of Cancer (SITC)

-- These new sets of clinical data further strengthen Evaxion's position as a pioneering cancer vaccine company

COPENHAGEN, Denmark, Oct. 26, 2023 (GLOBE NEWSWIRE) -- Evaxion Biotech A/S (NASDAQ: EVAX) ("Evaxion" or the "Company"), a clinical-stage TechBio company specializing in developing AI-Immunology(TM) -powered vaccines, is proud to announce that it will be presenting clinical readouts on its two personalized cancer vaccine trials at SITC's 38th annual meeting, taking place in San Diego, California from November 1-5, 2023.

The results will be presented in two posters:

1. Title: "AI-designed personalized neoantigen vaccine, EVX-02, induces robust T-cell responses in melanoma patients"

Poster #: 623

Location: Exhibit Hall B -- San Diego Convention Center

Time: Friday, November 3, 9 a.m. - 7 p.m. PDT

This poster will be presented by Evaxion's senior project manager, Daniela Kleine-Kohlbrecher. The abstract was also selected by the SITC Communications Committee to be presented at the SITC 2023 Annual Meeting Press Conference, scheduled for Wednesday, November 1, from 12:00--1:30 p.m. PDT.

2. Title: "Effects of an AI-generated personalized neopeptide-based immunotherapy, EVX-01, in combination with pembrolizumab in patients with metastatic melanoma. A clinical trial update"

Poster #: 782-H

Location: Exhibit Hall B -- San Diego Convention Center

Time: Saturday, November 4, 9 a.m. - 8:30 p.m. PDT

This poster will be presented by principal investigator Professor Adnan Khattak from the Hollywood Private Hospital in Nedlands, Australia.

Christian Kanstrup, Chief Executive Officer at Evaxion, commented, "We are thrilled about the continuous buildup of positive clinical evidence for the unique predictive capabilities of our AI-immunology(TM) platform, which we believe holds promise for truly groundbreaking cancer treatments."

Birgitte Rønø, Chief Scientific Officer at Evaxion, expressed her enthusiasm about the upcoming conference, stating, "We are looking forward to sharing these promising clinical trial results with the SITC community, showcasing the advantages of our AI-Immunology(TM) platform to design personalized cancer vaccines. We believe this takes us one step closer to bringing novel treatments to the market and meeting the pressing global medical need for cancer patients."

About EVX-01 Phase 2 Clinical Trial

EVX-01 is Evaxion's lead clinical asset and constitutes a peptide-based personalized cancer vaccine. The Phase 2 clinical study is a self-sponsored open-label, single-arm, multi-center trial carried out in collaboration with Merck Sharp & Dohme LLC, together with leading principal investigators and research centers from Italy and Australia, and aims at evaluating the efficacy and safety of EVX-01 vaccination in combination with anti-PD1 treatment (pembrolizumab) in treatment-naive patients with metastatic or unresectable malignant stage III or IV melanoma. More information can be accessed under clinical trial ID NCT05309421 https://www.globenewswire.com/Tracker?data=p-Dumb7hHUmD9sI-WU_9OuBlNuE5b25Az3Z7ez2v4a6zASOjYpgZJyz59-XiMyB9SaaTmlnwfcZ74FjqCibrWfqt0g6GEPoZwNePr3wcqxymiF6c8LgvgmnePHodEUUB9EE4KSMtOadOEnDp0z6Tpg[https://www.globenewswire.com/Tracker?data=p-Dumb7hHUmD9sI-WU_9OuBlNuE5b25Az3Z7ez2v4a6zASOjYpgZJyz59-XiMyB9SaaTmlnwfcZ74FjqCibrWfqt0g6GEPoZwNePr3wcqxymiF6c8LgvgmnePHodEUUB9EE4KSMtOadOEnDp0z6Tpg]== .

About EVX-02 Phase 1/2a Clinical Trial

The EVX-02 Phase 1/2a represents Evaxion's first-in-human DNA-based personalized cancer vaccine study. This open-label, multi-center study aims at assessing the safety, tolerability, pharmacodynamic responses, and efficacy of EVX-02 neoantigen vaccine and anti-PD-1 treatment (nivolumab) in patients who have had a complete resection of a Stage IIIB/IIIC/IIID or Stage IV melanoma with risk of recurrence. More information can be accessed under clinical trial ID NCT04455503 https://www.globenewswire.com/Tracker?data=p-Dumb7hHUmD9sI-WU_9OrOGbEN0hGsv1si2OXCUSoBLgAI5HKrosxj2fs-8yoJ5WJeMQXHYRsVeFnVo3iX9Sey9IQBPMSop43WZuE8tNZ1Ag_f5PHFHAsyHSc7yacmCDSCjBKIEGymSauLsv6GnfA[https://www.globenewswire.com/Tracker?data=p-Dumb7hHUmD9sI-WU_9OrOGbEN0hGsv1si2OXCUSoBLgAI5HKrosxj2fs-8yoJ5WJeMQXHYRsVeFnVo3iX9Sey9IQBPMSop43WZuE8tNZ1Ag_f5PHFHAsyHSc7yacmCDSCjBKIEGymSauLsv6GnfA]== .

About EVAXION

Evaxion Biotech A/S is a pioneering TechBio company based upon its AI platform: AI-immunology(TM) . Evaxion's proprietary and scalable AI prediction models harness the power of artificial intelligence to decode the human immune system and develop novel immunotherapies for cancer, bacterial diseases, and viral infections. Based upon AI-immunology(TM) , Evaxion has developed a clinical-stage oncology pipeline of novel personalized vaccines and a preclinical infectious disease pipeline in bacterial and viral diseases with high unmet medical needs. Evaxion is committed to transforming patients' lives by providing innovative and targeted treatment options. For more information about Evaxion and its groundbreaking AI-immunology(TM) platform and vaccine pipeline, please visit our website https://www.globenewswire.com/Tracker?data=60wF7xyuj2fL0fdA0GkU3FdTjBeMvSe0eNuugeSyAIBWOR8A7k-AxuSTtM6E1QnuwBl-0FJHwDxkBVxqR8YsGrPJScqOJ1h6oAdy9jShkus[https://www.globenewswire.com/Tracker?data=60wF7xyuj2fL0fdA0GkU3FdTjBeMvSe0eNuugeSyAIBWOR8A7k-AxuSTtM6E1QnuwBl-0FJHwDxkBVxqR8YsGrPJScqOJ1h6oAdy9jShkus]= .

Forward-Looking Statement

This announcement contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of

1934, as amended. The words "target," "believe," "expect," "hope," "aim," "intend," "may," "might," "anticipate," "contemplate," "continue," "estimate," "plan," "potential, " "predict," "project," "will," "can have," "likely," "should," "would," "could," and other words and terms of similar meaning identify forward-looking statements. Actual results may differ materially from those indicated by such forward-looking statements as a result of various factors, including, but not limited to, risks related to: our financial condition and need for additional capital; our development work; cost and success of our product development activities and preclinical and **clinical trials** ; commercializing any approved pharmaceutical product developed using our AI platform technology, including the rate and degree of market acceptance of our product candidates; our dependence on third parties including for conduct of clinical testing and product manufacture; our inability to enter into partnerships; government regulation; protection of our intellectual property rights; employee matters and managing growth; our ADSs and ordinary shares, the impact of international economic, political, legal, compliance, social and business factors, including inflation, and the effects on our business from the worldwide ongoing COVID-19 pandemic and the ongoing conflict in the region surrounding Ukraine and Russia and the Middle East; and other uncertainties affecting our business operations and financial condition. For a further discussion of these risks, please refer to the risk factors included in our most recent Annual Report on Form 20-F and other filings with the U.S. Securities and Exchange Commission (SEC), which are available at https://www.globenewswire.com/Tracker?data=6j1N2BIB1nFALc7Jl7RBl07M8VwRBISTSFiRXYuCnVxJV9LZ65281QN9IsZJ2qEqmRcsUVrD6b0EuSZAojLk-w[https://www.globenewswire.com/Tracker?data=6j1N2BIB1nFALc7Jl7RBl07M8VwRBISTSFiRXYuCnVxJV9LZ65281QN9IsZJ2qEqmRcsUVrD6b0EuSZAojLk-w]== www.sec.gov[http://www.sec.gov]. We do not assume any obligation to update any forward-looking statements except as required by law.

(END) Dow Jones Newswires

October 26, 2023 08:30 ET (12:30 GMT)

Document DJDN000020231026ejaq0024e

News

Biolexis debuts subsidiary using AI to develop diabetes, weight loss drugs

Jack O'Brien

451 words
25 October 2023
MM+M - Medical Marketing and Media
MMM
English

Biolexis Therapeutics announced the launch of Metabolexis, a subsidiary focused on leveraging artificial intelligence capabilities to develop drugs for treating obesity and type 2 diabetes, Thursday morning.

Metabolexis will focus on developing three targeted oral small molecules, including isoform-specific activators of AMPK, aGLP-1/GLP-1R agonists and mTORC1 inhibitors.

According to a company press release, there are plans to file Investigational New Drug Applications for all three agents with the Food and Drug Administration by the end of Q4 2024 and initiate first-in-human phase 1 safety **clinical trials** in Q1 2025.

Currently, these drugs are in preclinical development but are expected to be supported through further development by MolecuLern, the company's AI-enabled drug discovery process. Biolexis said this process produces drug-like characteristics at a lower cost and accelerates the timeline overall.

Biolexis said the mission of Metabolexis is to develop drugs that are effective for treating type 2 diabetes and weight loss while accounting for the "significant toxicity and drug administration complications" present in other recently-approved weight-loss drugs.

The Utah-based clinical-stage drug discovery company is also aiming to eliminate the presence of the major chronic conditions associated with aging.

As such, Metabolexis will focus on targeting known regulators and pathways that control the aging process and develop drugs intended to improve the health of the world's rapidly aging population.

"We believe that our novel small molecule therapeutics delivered orally can address some of the toxicity and delivery complications associated with today's treatments," Biolexis CEO Dr. David J. Bearss said in a statement. "With the launch of Metabolexis, we have an opportunity to address this immense need by providing clinically effective, easily administered, and economically viable treatments that improve the lives of these patients."

The launch of Metabolexis comes as many other pharma companies lean into opportunities in the 'diabesity' space, which has achieved widespread attention not only in the healthcare industry but the general public, too.

A recent survey found that the demand for weight-loss drugs like Ozempic and Wegovy have resulted in nearly 90% of doctors reporting an uptick in the number of patients asking for prescriptions.

While this has led to a controversy among healthcare professionals about whether patients should be prescribed these drugs, as well as supply issues for drugmakers given the widespread off-label use of these products, the financial impact has already been felt.

According to Eli Lilly's most recent earnings report[https://www.mmm-online.com/home/channel/lilly-sues-spas-pharmacies-over-mounjaro/], revenues increased 28% year-over-year in Q2 thanks in part to the high demand for Mounjaro, which generated $979.7 million in revenue.

Haymarket Media Inc (US)

Document MMM0000020231026ejap0002t

WHO's move for regulation of AI in healthcare highlights risks posed by usage of AI tools: GlobalData

EH News Bureau

Distributed by Contify.com
450 words
25 October 2023
Express Healthcare
ATEXHC
English

The World Health Organization (WHO) has outlined several considerations for the regulation of artificial intelligence (AI) in healthcare. The WHO recently released a new publication, in which it listed key regulatory considerations, which touch on the importance of establishing safety and effectiveness in AI tools, making systems available to those who need them, and fostering dialogue among those who develop and use AI tools. The move highlights the potential challenges associated with using AI tools in healthcare, says GlobalData

The WHO recognises the potential of AI in healthcare, as it could improve existing devices or systems through strengthening **clinical trials**, improving diagnoses and treatment, and aiding the knowledge and skills of healthcare professionals.

Alexandra Murdoch, Senior Analyst, GlobalData comments: "AI has already improved several devices and systems, and there are so many benefits of AI. However, there are risks too with these tools and the rapid adoption of them."

AI technologies are and have been deployed quite quickly, and not always with a full understanding of how they will work in the long run, which could be harmful to healthcare professionals or patients. AI systems in medical or healthcare often have access to personal and medical information, so there should be regulatory frameworks in place to ensure privacy and security. There are a number of other potential challenges with AI in healthcare, such as unethical data collection, cybersecurity risks, and amplifying biases and misinformation.

A recent example of biases in AI tools comes from a study conducted by Stanford University. The study results revealed that some AI chatbots provided responses that perpetuated false medical information about Black people. The study ran 9 questions through four AI chatbots, including OpenAI's ChatGPT and Google's Bard. All four of the chatbots used debunked race-based information when asked about kidney and lung function.

Murdoch continues, "The use of false medical information is deeply concerning and could lead to a number of issues, including misdiagnoses or improper treatment for Black patients."

The WHO has released six areas for regulation of AI for health, citing a need to manage the risks of AI amplifying biases in training data. The six areas for regulation are transparency and documentation; risk management; validating data and being clear about the intended use of AI; a commitment to data quality; privacy and data protection; and fostering collaboration.

Murdoch concludes, "With these areas for regulation outlined, governments and regulatory bodies can follow them and hopefully develop some regulations to protect healthcare professionals and patients, and also use AI to its full potential in healthcare."

The Indian Express Limited

Document ATEXHC0020231026ejap00001

Ceremorphic Announces New Life Sciences Division Based on Its Proprietary Analog and AI Technology

ANI

658 words
25 October 2023
Asian News International
HNASNI
English

India, Oct. 25 -- BusinessWire India

Hyderabad (Telangana) [India], October 25: Ceremorphic, a fabless silicon and system development company, today announced the formation of a new life sciences division called "Ceremorphic Life Sciences," which has been established to transform the entire drug discovery and development process. The new division will have access to Ceremorphic's own proprietary analog and AI technology platform that will allow its team of biology and chemistry experts to begin developing drugs at a pace unprecedented in the pharmaceutical industry.

With more than 10,000 diseases in the world and only 500 drugs available today, the Ceremorphic Life Sciences platform is the first solution capable of closing that gap by bringing efficiency at each level of the current design pipeline. Recent innovations on novel algorithms, hardware and AI technology advancements have enabled computer sciences and AI to play a critical role in designing a drug in addition to traditional expertise in biology and chemistry. Ceremorphic's life sciences division leverages its over 5,000 person-year expertise of hardware, algorithms and AI to make this new architecture a reality.

"One new drug today typically requires over 10 years to develop, which can easily cost a pharma company more than USD 2 billion to bring to market," said Dr Venkat Mattela, Founder and CEO of Ceremorphic." In addition to the cost, the drug development throughput and the balance of safety and efficacy is sub-optimal. This is going to change with Ceremorphic Life Sciences new design methodology because we have developed a new platform that can speed every single phase of discovery and development and selectivity at every stage. This type of platform has been long considered the holy grail of drug development and we are making it a reality that can transform the entire pharmaceutical industry for the benefit of all of society."

Dr William Haseltine, former Professor at Harvard Medical School and Founder Chairman and CEO of Human Genome Sciences (HGS) also stated "Current In Silico methods using the wet labs have limitations on scalability to produce enough data to use AI effectively. Ceremorphic's hybrid approach utilizing analog circuit technology is unique. This approach not only accelerates computation speed, but also empowers AI to be highly effective throughout the entire development process."

How the Design Platform Works

The new platform, BioCompDiscoverX, is based on Ceremorphic's own proprietary patent pending technologies and includes a hardware software solution leveraging its own advanced silicon technology. For Ceremorphic's own drug development, the company has been seeing a huge traction with potential partners in this space who have struggled with the cost and development time it takes to bring new drugs to market today.

In alignment with our business model, Ceremorphic Life Sciences envisions developing pharmaceuticals and overseeing the essential **clinical trials** . Concurrently, we plan to collaborate with strategic partners who will be responsible for the manufacturing process of these novel drug offerings.

The BioCompDiscoverX utilizes Ceremorphic's analog and AI technology to make the In Silico Models to be more effective than traditional methods used today. This platform strives to enhance the scalability by minimizing the wet lab usage as much as possible and leverages the power of analog and AI technology. Unlike current in silico methods, Ceremorphic Life Sciences works with its own foundation models generated through its own proprietary relevant data synthesis methods.

Ceremorphic Life Sciences Division is headquartered in San Jose, CA and leverages engineering resources from Ceremorphic's state-of-the art design center in Hyderabad, India.

(ADVERTORIAL DISCLAIMER: The above press release has been provided by BusinessWire India. ANI will not be responsible in any way for the content of the same)

Asian News International

Document HNASNI0020231025ejap001p8

First Immunotherapy Success in TKI-Resistant Lung Cancer Setting Demonstrates Power of AI-driven Immune Phenotyping by Lunit SCOPE IO, newly published in JCO

869 words
25 October 2023
ENP Newswire
ENPNEW
English

Release date - 24102023

SEOUL - Lunit (KRX: 328130.KQ), a leading provider of AI-powered solutions for cancer diagnostics and therapeutics, today announced a significant breakthrough in the treatment of non-small cell lung cancer (NSCLC) with resistance to certain targeted therapies.

A groundbreaking study, conducted by Samsung Medical Center and utilizing Lunit SCOPE IO, showcases the efficacy of atezolizumab plus bevacizumab and chemotherapy for NSCLC patients with EGFR or ALK mutations. The study result was concurrently published in the Journal of Clinical Oncology (JCO, IF 50.739) and presented in an oral presentation at the ESMO (European Society of Medical Oncology) 2023 Annual Meeting. Against the backdrop of growing interest and need for an AI biomarker in medical practices, this marks the second time a study utilizing Lunit SCOPE IO has been published in the prestigious JCO.

This research marks a turning point for NSCLC patients with EGFR or ALK mutations, as prior trials faced challenges in identifying effective treatments. Patients with these mutations often respond favorably to targeted agents, but over time, the effectiveness of these treatments diminishes. Multiple leading pharmaceutical companies have attempted **clinical trials** of immunotherapy in this setting, which have not succeeded to date. This underscores the significance of this first successful phase III trial in this setting, successfully combining immunotherapy with chemotherapy and improving clinical outcomes.

The study enrolled a total of 228 NSCLC patients with activating EGFR mutation (215 patients) or ALK translocation (13 patients), who experienced progression after the relevant tyrosine kinase inhibitor (TKI) therapy. Patients were randomized into two arms: the ABCP arm (atezolizumab plus bevacizumab/paclitaxel/carboplatin) and the PC arm (pemetrexed plus carboplatin or cisplatin). The results demonstrated the superiority of the ABCP arm, with significantly higher objective response rates (ORR; 69.5% vs. 41.9%) and a longer median progression-free survival (PFS; 8.48 months vs. 5.62 months).

Lunit SCOPE IO, an AI-powered TIL analyzer for assessing immune phenotype from H&E, played a pivotal role in this research. By assessing patients' immune phenotype and predicting response to immunotherapy, Lunit SCOPE IO enabled the identification of individuals more likely to benefit from ABCP arm treatment. In the group with an Inflamed Score below 20%, there was no significant difference in PFS between ABCP arm and PC arm (8.28 months vs. 6.93 months). However, a substantial difference in PFS was observed in the group with an Inflamed Score of 20% or higher (12.91 months vs. 4.86 months), surpassing the overall study group. Immune phenotype as assessed by Lunit SCOPE IO showed predictive power in stratifying patients more likely to respond to ABCP treatment.

'The study's acceptance by the JCO and ESMO underlines the significance of our contribution to the field of lung cancer treatment. Lunit SCOPE IO's ability to quantitatively assess immune phenotype, enabling its use as a biomarker for immunotherapy, has the potential to meaningfully improve the clinical use of immunotherapy. In this case, by identifying those who will benefit most from atezolizumab plus bevacizumab, we aim to enhance the accessibility and effectiveness of this treatment,' said Brandon Suh, CEO of Lunit. 'We aim for Lunit SCOPE IO to continue to make immune phenotyping a quantitative biomarker readily accessible for research, clinical use, and companion diagnostics (CDx) business.'

About Lunit

Lunit is a deep learning-based medical AI company on a mission to conquer cancer. Our focus is on developing AI solutions for precision diagnostics and therapeutics, ensuring the right diagnosis, and treatment, at the right cost for each patient. Lunit is devoted to developing advanced medical image analytics and AI-based biomarkers via cutting-edge technology.

Founded in 2013, Lunit has been acknowledged around the world for its advanced, state-of-the-art technology and its application in medical images. As a medical AI company grounded on clinical evidence, the company's findings are presented in major peer-reviewed journals, such as the Journal of Clinical Oncology and JAMA Network Open, and global conferences, including ASCO and AACR.

After receiving FDA clearance and the CE Mark, our flagship Lunit INSIGHT suite is clinically used in approximately 2,000+ hospitals and medical institutions across 40+ countries. Lunit is headquartered in Seoul, South Korea, with offices and representatives worldwide.

About Lunit SCOPE

Lunit SCOPE is a suite of AI-powered software that analyzes tissue slide images for digital pathology and AI biomarker development, aiming to optimize workflow and facilitate more accurate and predictive clinical data for clinicians and researchers.

Lunit SCOPE platform offers multiple AI-powered tissue analysis products and assays that can streamline digital pathology workflow and diagnostics and enhance the drug development process.

Lunit SCOPE IO analyzes the tumor microenvironment (TME) based on H&E analysis and provides AI-based predictive clinical outcome information. In addition, AI-driven Immunohistochemistry (IHC) slide analysis services are offered, through products such as Lunit SCOPE PD-L1, Lunit SCOPE HER2, Lunit SCOPE ER/PR, and others.

Contact:

Email: pr@lunit.io

[Editorial queries for this story should be sent to newswire@enpublishing.co.uk]

Electronic News Publishing Ltd.

Document ENPNEW0020231025ejap000gz

$10.666 Billion Cardiac AI Monitoring and Diagnostics Markets - Global and Regional Analysis and Forecasts 2023-2032 - Partnerships and Alliances amongst Market Players Spurring Growth - ResearchAndMarkets.com

1691 words
25 October 2023
07:25
Business Wire
BWR
English

DUBLIN--(BUSINESS WIRE)--October 25, 2023--

The "Cardiac AI Monitoring and Diagnostics Market - A Global and Regional Analysis: Focus on Product, Type, Application, End User, and Country Analysis - Analysis and Forecast, 2023-2032" report has been added to ResearchAndMarkets.com's offering.

The global cardiac AI monitoring and diagnostics market was valued at $1,010.5 million in 2022 and is anticipated to reach $10,666.5 million by 2032, witnessing a CAGR of 26.88% during the forecast period 2023-2032.

Cardiac AI monitoring and diagnostics involve the application of artificial intelligence (AI) technologies in the field of cardiology to monitor, analyze, and diagnose various cardiac conditions. AI algorithms are trained using extensive datasets of cardiac images, patient data, and clinical outcomes to create models that can assist healthcare professionals in interpreting cardiac diagnostic tests and making treatment decisions. This emerging medical technology aims to enhance the accuracy, efficiency, and accessibility of cardiac care.

Several key factors are driving the growth of the global cardiac AI monitoring and diagnostics market. These include the significant burden of cardiovascular diseases worldwide, increasing government initiatives to promote AI adoption, growing research in AI for cardiology, rising regulatory approvals for AI-based cardiac diagnostic medical devices, and ongoing technological advancements in the field of cardiac AI diagnostics.

The North American region holds the largest share in the global cardiac AI monitoring and diagnostics market. This can be attributed to factors such as an already established and technologically advanced healthcare system and high levels of digital adoption.

Additionally, the Asia-Pacific region is expected to experience substantial growth during the forecast period from 2023 to 2032. This growth is driven by factors like a shortage of healthcare professionals leading to increased demand for AI-driven automation and the rising prevalence of cardiovascular diseases, which is driving demand for advanced technologies.

During the COVID-19 pandemic, AI technology played a crucial role in predicting congestive heart failure in COVID-19 patients by analyzing vital signs related to heart disease. It also assisted in assessing patients' medical history and recommending appropriate medications for treatment.

Furthermore, the pandemic underscored the advantages of implementing AI in cardiology. As a result, the COVID-19 crisis had a positive impact on the overall cardiac AI monitoring and diagnostics market, as it heightened the focus on remote monitoring, increased demand for early detection and proactive care, and accelerated technological advancements in cardiac diagnosis and monitoring.

Market Segmentation

Software to Dominate the Global Cardiac AI Monitoring and Diagnostics Market

Software: Software plays a critical role in the development of AI-based medical devices. AI-based medical devices rely on sophisticated software tools that are designed to analyze medical data, images, and other inputs to provide accurate monitoring, diagnosis, and provide treatment recommendations. These software tools typically include machine learning and deep learning algorithms that are trained on large datasets of medical images and clinical data to identify patterns and predictions.

Hardware: Hardware for cardiac monitoring and diagnosis includes the combination of artificial intelligence (AI) algorithms and specialized hardware devices designed to enhance the accuracy, efficiency, and accessibility of cardiac healthcare. These hardware devices are specifically developed to integrate AI capabilities into the monitoring and diagnostic processes, enabling advanced data analysis, real-time insights, and improved patient care.

Cardiac Diagnostics Occupy the Largest Share in the Global Cardiac AI Monitoring and Diagnostics

Cardiac Diagnostics: Cardiac diagnostics refers to the process of identifying and determining the presence, nature, and extent of cardiac diseases or abnormalities in an individual. The goal of cardiac diagnosis is to accurately identify the underlying cardiac condition, which helps guide appropriate treatment and management strategies.

The integration of artificial intelligence (AI) into cardiac diagnosis involves leveraging AI algorithms and techniques to augment and enhance the diagnostic process. It has the potential to enhance accuracy, efficiency, and accessibility while supporting healthcare professionals in providing optimal care to patients.

AI can help in cardiac diagnosis by performing data analysis of large volumes of cardiac data, including medical records, images, test results, and patient characteristics, analyzing medical images, such as echocardiograms, angiograms, or cardiac MRI scans, analyzing electrocardiogram (ECG) signals to detect and classify various arrhythmias and other cardiac abnormalities, or by providing AI-based decision support.

Cardiac Monitoring: Cardiac monitoring refers to the continuous or periodic monitoring of a patient's heart activity, typically through the use of specialized devices or systems. It involves the recording, analysis, and interpretation of various cardiac parameters to assess heart function, detect abnormalities, and monitor cardiac conditions.

The integration of AI into monitoring devices or systems enhances the accuracy, efficiency, and insights derived from the collected data. By leveraging AI algorithms, healthcare professionals can gain a deeper understanding, make timely interventions, and provide more targeted care to individuals with cardiac conditions, ultimately improving patient outcomes and quality of life.

Ischemic Heart Diseases/CAD Segment to Hold the Highest Share of the Market due to the High Prevalence

Ischemic Heart Diseases/CAD: Ischemic heart disease, also known as coronary artery disease (CAD), is a condition that occurs when the blood vessels supplying blood to the heart (coronary arteries) become narrowed or blocked, leading to reduced blood flow and oxygen to the heart muscle. CAD is the most common type of heart disease and a leading cause of heart attacks.

The primary cause of CAD is atherosclerosis, a condition characterized by the buildup of plaque on the inner walls of the coronary arteries. Plaque consists of cholesterol, fat, calcium, and other substances. Over time, the plaque can harden and narrow the arteries, restricting blood flow. The increased prevalence of ischemic heart disease is fueling the demand for advanced solutions for monitoring and diagnosis, which is expected to propel the growth of the segment.

Cardiac Arrhythmias: Cardiac arrhythmia refers to abnormal heart rhythms or irregular heartbeats. The normal rhythm of the heart is maintained by electrical signals that coordinate the contractions of the heart's chambers. When these electrical signals are disrupted, it can lead to various types of arrhythmias. Some common types of arrhythmias include atrial fibrillation (AF), ventricular tachycardia (VT), ventricular fibrillation (VF), supraventricular tachycardia (SVT), bradycardia, and premature ventricular contractions (PVCs).

Ischemic Stroke: An ischemic stroke is the most common type of stroke, accounting for about 80% of all strokes. It occurs when a blood clot or plaque buildup blocks or narrows a blood vessel, reducing or completely cutting off blood flow to a part of the brain. Without an adequate blood supply, the affected brain tissue is deprived of oxygen and nutrients, leading to damage and cell death.

Others: The others segment consists of other cardiac conditions such as hypertensive heart diseases, cardiomyopathy, valvular heart diseases, congenital heart diseases, and peripheral artery diseases, among others. AI has great potential to significantly impact the diagnosis and monitoring of these cardiac diseases, and several market players are working toward the implementation of AI for the diagnosis and monitoring of different cardiac diseases.

Hospitals to Dominate the Global Cardiac AI Monitoring and Diagnostics Market (by End User)

Based on end users, the hospital segment is expected to dominate the cardiac AI monitoring and diagnostics market.

The hospitals segment held a share of 58.22% in 2022 and is expected to grow at a CAGR of 26.06% during the forecast period 2023-2032.

Hospitals are one of the primary end users of the cardiac AI monitoring and diagnostics market. By leveraging AI technology, these devices can assist healthcare professionals in detecting abnormalities, predicting cardiac events, and aiding in the diagnosis of various cardiac conditions

Business Dynamics

Business Drivers

-- High Burden of Cardiovascular Diseases Worldwide

-- Increasing Government Initiatives for AI Adoption

-- Growing Research in the Field of AI for Cardiology

-- Increasing Regulatory Approvals of Cardiac Diagnostics AI Medical Devices

-- Technological Advancements in the Field of Cardiac AI Diagnostics

Business Restraints

-- Hesitation in Adoption and Acceptance of AI-Enabled Solutions for Cardiac Diagnosis

Business Opportunities

-- Increasing Opportunities for AI-Enabled Cardiac Diagnosis Solutions in Emerging Economies

-- Partnerships and Alliances amongst Market Players Creating an Opportunity for Growth

Key Trends

-- Rising Number of Startups in the Market

-- Increased Awareness Regarding Preventative Measures and Personalized Treatment

-- Growing Demand for Wearable Sensors for Cardiac Monitoring Leading to Increased Adoption of AI-Enabled Solutions for Home-Based Care

(MORE TO FOLLOW)

$10.666 Billion Cardiac AI Monitoring and -2-

Key Companies Profiled:

-- AliveCor Inc.

-- Aidoc

-- Boston Scientific Corporation

-- Canon Inc.

-- CathWorks

-- Circle Cardiovascular Imaging Inc.

-- General Electric Company

-- HeartFlow, Inc.

-- iRhythm Technologies, Inc.

-- Koninklijke Philips N.V.

-- Medicalgorithmics S.A.

-- Nanox.AI Ltd.

-- Siemens Healthineers AG

-- Tempus Labs, Inc.

-- Ultromics Limited.

-- Viz.ai, Inc.

Case Studies

Case Study 1: Ultromics Limited

-- The EchoGo System

-- Development

-- Use Case and Reliability

-- A Success Story

-- Partners and Recognitions

Case Study 2: CorVista Health, Inc.

-- The CorVista System

-- A Success Story

-- Ongoing **Clinical Trials**

-- Funding Scenario

-- End User Perception

-- Entry Barriers for New Entrants

Patent Analysis

-- Awaited Technological Developments

-- Patent Analysis (by Country)

-- Patent Analysis (by Year)

-- Business Models

Cardiac AI Monitoring and Diagnostics Market Impacts

-- Improved Accuracy and Efficiency

-- Early Detection of Heart Condition

-- Remote Patient Monitoring

-- Personalized Treatment Plans

-- Bridging Healthcare Gaps

-- Research and Development

-- Cost Savings

Impact of COVID-19

-- Impact on the Overall Market

-- Pre-COVID-19 Scenario

-- During COVID-19 Scenario

-- Post COVID-19 Scenario

For more information about this report visit https://www.researchandmarkets.com/r/91v5x7[https://www.researchandmarkets.com/r/91v5x7]

About ResearchAndMarkets.com

ResearchAndMarkets.com is the world's leading source for international market research reports and market data. We provide you with the latest data on international and regional markets, key industries, the top companies, new products and the latest trends.

View source version on businesswire.com: https://www.businesswire.com/news/home/20231025698885/en/[https://www.businesswire.com/news/home/20231025698885/en/]

CONTACT: ResearchAndMarkets.com

Laura Wood, Senior Press Manager

press@researchandmarkets.com

For E.S.T Office Hours Call 1-917-300-0470

For U.S./ CAN Toll Free Call 1-800-526-8630

For GMT Office Hours Call +353-1-416-8900

SOURCE: Research and Markets

(END)

Business Wire, Inc.

Document BWR0000020231025ejap0003d

Salesforce Announces Life Sciences Cloud, Bringing the World's #1 AI CRM to Pharma and MedTech Organizations

1080 words
25 October 2023
ENP Newswire
ENPNEW
English

Release date - 24102023

Life Sciences Cloud will streamline patient engagement and clinical operations with data, automation, and trusted AI.

SI-BONE is using Salesforce to automate manual processes and personalize patient outreach

Salesforce announced Life Sciences Cloud, a trusted, secure platform for pharmaceutical (pharma) and medical technology (medtech) organizations to help them speed up drug and device development, enlist and retain patients across the clinical trial journey, and leverage AI to deliver personalized experiences to customers.

Why it's important: The life sciences industry relies on accurate, accessible data to advance R&D efforts and **clinical trials**. Yet the industry sorely lags when it comes to adopting digital tools that would increase efficiency and accuracy, with 88% of healthcare and life sciences organizations not yet having realized their digital transformation goals.

Salesforce perspective: 'The life sciences industry requires integrated, compliant, and trusted solutions - powered by data, AI, and CRM - to deliver stronger stakeholder engagement from R&D through commercialization,' said Amit Khanna, SVP & GM, Health and Life Sciences. 'Salesforce is leveraging its experience in healthcare to better serve life sciences organizations by adding features for **clinical trials**, revenue management, and more personalized communication, giving the industry more powerful ways to better serve their customers.'

The Salesforce solution:

Commercial Operations (GA now) helps manage the commercial lifecycle with timely insights around contract compliance, pricing, inventory levels, and more. For example, AI-powered bots can send alerts to field reps when an item is unavailable for an upcoming procedure or offer account forecasting insights to help reps better understand where and what to sell. Commercial Operations includes:

Health Intelligence, powered by Tableau, is a predictive analytics tool that provides insights to drive informed business decisions. Now, medtech sales teams get recommended rebates, bundles, or discount pricing, helping them identify new offerings that customers can add to their existing catalogs.

Medical Sales Emails uses generative AI to automatically create tailored, secure messages notifying stakeholders like hospitals or clinics that new devices are available, or to follow-up on a sales visit with a physician.

Open Image Modal

Field representatives can get automated notifications from inventory bots - notifying them about issues like a product shortfall and suggesting a next step like transferring the item from another representative's inventory.

Clinical Operations helps life sciences organizations set up and execute efficient trials, both traditional and decentralized, to better support participants, clinical sites, studies, and sponsors. Clinical Operations includes:

Data Cloud for Health (GA now) securely connects and activates medical, social, and behavioral patient data from different sources into a unified, real-time profile. This enables pharma and medtech companies to help identify potential patient or study risks, like adherence to therapies in **clinical trials**. In addition, Data Cloud for Health can create segments from that data, such as groups that could be suitable for a new clinical trial or care program.

Chain of Custody Management (GA now) allows pharma companies to maintain a clear, traceable digital history of events for precision medicines, and validate records with e-signatures (GA Feb 2024) aligned to U.S. Food and Drug Administration regulations. This can help promote patient safety and compliant record-keeping through every stage of cell and gene therapies, from apheresis to infusion.

Participant Management (GA June 2024) will get randomized trial participants onboarded quickly with auto-matching and customized portals. This makes it faster to recruit, educate, and engage participants helping to speed up **clinical trials** and may help lower attrition rates.

Open Image Modal

With Data Cloud for Health and Einstein AI, unify clinical and non-clinical information to create holistic profiles of patients and then generate segments of target populations for specific therapies.

Pharma CRM* is an engagement platform that will help pharma organizations interact with stakeholders using individualized correspondence and their medical-, legal-, and regulatory-approved digital content. This includes managing drug samples, capturing provider consent, and streamlining dosage inquiries across various channels. Pharma CRM* will include:

Healthcare Professional (HCP) Engagement (GA October 2025) will use AI to learn from engagement data, claims, and research insights, combined with offline capabilities, to support hybrid HCP experiences. With a 360-degree view of HCPs, pharma organizations will help provide the right prescriptions to the right people while ensuring the wider availability of their treatments.

Einstein for Life Sciences (GA now) will automate manual tasks like targeted email outreach. With Knowledge Article Generation & Service Replies, liaisons can quickly find appropriate documents and repurpose successful past cases into helpful resources to address medical affairs requests within agreed-upon timeframes.

Open Image Modal

With Einstein for Life Sciences, medical service liaisons at medtech and pharma organizations can streamline inquiry management across channels with auto-generated responses and suggested documents for medical information, helping maximize productivity and get critical information to providers faster.

Customer perspective:

'SI-BONE was looking for ways to help our customer service teams spend more time innovating and less time on cumbersome, manual processes like duplicative manual data entry. With Salesforce, we were able to digitize our implant request PO process, saving our team hours each week.' - Shefali Jadhav, Sr. Business Systems Manager of IT at SI-BONE

Availability:

Commercial Operations features, including Health Intelligence and Medical Sales Emails, are generally available today.

Clinical Operations features, including Chain of Custody and Data Cloud for Health, are generally available today. Advanced Therapy e-signatures and Participant Management will be available beginning in early 2024.

Service Replies and Sales Emails are generally available today. Knowledge Articles are currently in pilot, and will be available beginning in early 2024.

HCP Engagement for Pharma will be available beginning in mid-2025.

Learn more:

Salesforce partners Accenture and Deloitte Digital will bring their implementation support and deep global industry expertise to help Salesforce accelerate Life Sciences Cloud

Learn about Salesforce for healthcare and life sciences

Learn what 400 global healthcare and life sciences leaders are doing to drive productivity, efficiency, and data effectiveness here

See the launch of Life Sciences Cloud at Dreamforce '23

*Sales automation functionality for pharma/biotech customers is not currently provided by Salesforce and will not be available until mid-2025.

Any unreleased services or features referenced here are not currently available and may not be delivered on time or at all. Customers should make their purchase decisions based upon features that are currently available.

[Editorial queries for this story should be sent to newswire@enpublishing.co.uk]

Electronic News Publishing Ltd.

Document ENPNEW0020231025ejap0005e

MIL-OSI Economics: WHO’s move for regulation of AI in healthcare highlights risks posed by usage of AI tools, says GlobalData

458 words
25 October 2023
ForeignAffairs.co.nz
PARALL
English

Source: GlobalData

The World Health Organization (WHO) has outlined several considerations for the regulation of artificial intelligence (AI) in healthcare. The WHO recently released a new publication, in which it listed key regulatory considerations, which touch on the importance of establishing safety and effectiveness in AI tools, making systems available to those who need them, and fostering dialogue among those who develop and use AI tools. The move highlights the potential challenges associated with using AI tools in healthcare, says GlobalData[https://www.globaldata.com/], a leading data and analytics company.

The WHO recognizes the potential of AI in healthcare, as it could improve existing devices or systems through strengthening **clinical trials** , improving diagnoses and treatment, and aiding the knowledge and skills of healthcare professionals.

Alexandra Murdoch, Senior Analyst at GlobalData, comments: "AI has already improved several devices and systems, and there are so many benefits of AI. However, there are risks too with these tools and the rapid adoption of them."

AI technologies are and have been deployed quite quickly, and not always with a full understanding of how they will work in the long run, which could be harmful to healthcare professionals or patients. AI systems in medical or healthcare often have access to personal and medical information, so there should be regulatory frameworks in place to ensure privacy and security. There are a number of other potential challenges with AI in healthcare, such as unethical data collection, cybersecurity risks, and amplifying biases and misinformation.

A recent example of biases in AI tools comes from a study conducted by Stanford University. The study results revealed that some AI chatbots provided responses that perpetuated false medical information about Black people. The study ran 9 questions through four AI chatbots, including OpenAI’s ChatGPT and Google’s Bard. All four of the chatbots used debunked race-based information when asked about kidney and lung function.

Murdoch continues: "The use of false medical information is deeply concerning and could lead to a number of issues, including misdiagnoses or improper treatment for Black patients."

The WHO has released six areas for regulation of AI for health, citing a need to manage the risks of AI amplifying biases in training data. The six areas for regulation are transparency and documentation; risk management; validating data and being clear about the intended use of AI; a commitment to data quality; privacy and data protection; and fostering collaboration.

Murdoch concludes: "With these areas for regulation outlined, governments and regulatory bodies can follow them and hopefully develop some regulations to protect healthcare professionals and patients, and also use AI to its full potential in healthcare."

MIL OSI Economics[http://milnz.co.nz/mil-osi-aggregation/] -

Multimedia Investments Ltd

Document PARALL0020231025ejap000s6

, Biz&Company

AI diagnosis of diseases to be available in Korea

407 words
25 October 2023
Maeil Business Newspaper
MAEIL
English

Artificial intelligence (AI) medical devices that diagnose diseases by viewing images of major body parts such as the brain, heart, and lungs via X-rays, computed tomography (CT) scans, and magnetic resonance imaging (MRIs) by paying medical fees will be available in South Korea starting November 10. It will be the first of its kind in the country, and expectations are growing that it will pave the way for the AI medical devices to be widely used moving forward.

Maeil Business Newspaper learnt on Tuesday that JBS-01K, local medical solutions provider JLK Inc.'s AI device for diagnosing cerebral infarctions that was designated as an innovative medical technology by the government in 2022, will be available for general patients from November 10 after the final committee approval on Friday and the notification period. More than 190 tertiary (university, general) hospitals where JBS-01K has been adopted will now be able to use the device to diagnose brain disorders for a fee with the patient's consent, with MRI and CT images costing 80,000 won ($59.37) and 60,000 won respectively. JLK will split the fee 50:50 with the hospital.

"AI medical devices were experimentally used in **clinical trials** until now, but the door is now open for AI medical devices to be widespread," JLK chief executive officer Kim Dong-min said. "We usage to expand rapidly to primary and secondary hospitals. The other four AI solutions, including ones for cerebral hemorrhage analyses and large vessel occlusion identification, are also expected to be non-reimbursable soon."

The industry forecasts that an era of widespread use of AI medical devices by patients has begun, with eight domestic AI medical device companies currently designated by the government as businesses with innovative medical technologies. Alongside JLK, other companies on the list include Medical AI Co., CoreLine Soft Co., and Deepnoid Co. Medical AI was designated as an innovative technology in April for its AI heart failure early detection program.

CoreLine Soft's AI brain hemorrhage image detection and diagnosis auxiliary software, NeuroCAD, was named an innovative technology on September 25. "It will be recognized as non-reimbursable early next year," CoreLine Soft managing director and chief product officer Park Jun-min said. "Hospitals will be able to use NeuroCAD as a non-reimbursable service with patients' consent as early as January 2024."

MK

[Courtesy of JLK][https://wimg.mk.co.kr/news/cms/202310/25/news-p.v1.20231025.8f6ed0c05cc8466bae9060f68dce8134_P1.jpg]

MAEKYUNG.COM Inc.

Document MAEIL00020231025ejap000dz

AI in healthcare regulation

545 words
24 October 2023
04:32
MarketLine News and Comment
DTMNTR
English

The WHO has released six areas for regulation of AI for health, citing a need to manage the risks of AI amplifying biases in training data.

The World Health Organization (WHO) has recently outlined six considerations for the regulation of artificial intelligence (AI) in healthcare. The key regulatory considerations released by the WHO touch on the importance of establishing safety and effectiveness in AI tools, making systems available to those who need them, and fostering dialogue among those who develop and use AI tools.

The WHO recognises the potential of AI in healthcare, as it could improve existing devices or systems by strengthening **clinical trials**, improving diagnoses and treatment, and aiding the knowledge and skills of healthcare professionals. AI has already improved several devices and systems, and there are so many benefits of AI. However, there are risks too with these tools and the rapid adoption of them.

AI technologies are and have been deployed quite quickly, and not always with a full understanding of how they will work in the long run, which could be harmful to healthcare professionals or patients. AI systems in medical or healthcare often have access to personal and medical information, so there should be regulatory frameworks in place to ensure privacy and security. There are a number of other potential challenges with AI in healthcare, such as unethical data collection, cybersecurity risks, and amplifying biases and misinformation.

A recent example of biases in AI tools comes from a study conducted by Stanford University. The study results revealed that some AI chatbots provided responses that perpetuated false medical information about Black people. The study ran nine questions through four AI chatbots, including OpenAI's ChatGPT and Google's Bard. All four of the chatbots used debunked race-based information when asked about kidney and lung function. The use of false medical information is deeply concerning and could lead to a number of issues, including misdiagnoses or improper treatment for Black patients.

The six areas for regulation are:

To foster trust, the publication stresses the importance of transparency and documentation, such as through documenting the entire product lifecycle and tracking development processes.

For risk management, issues like intended use, continuous learning, human interventions, training models, and cybersecurity threats must all be comprehensively addressed, with models made as simple as possible.

Externally validating data and being clear about the intended use of AI helps assure safety and facilitate regulation.

A commitment to data quality, such as through rigorously evaluating systems pre-release, is vital to ensuring systems do not amplify biases and errors.

The challenges posed by important, complex regulations—such as the General Data Protection Regulation (GDPR) in Europe and the Health Insurance Portability and Accountability Act (HIPAA) in the US—are addressed with an emphasis on understanding the scope of jurisdiction and consent requirements, in service of privacy and data protection.

Fostering collaboration between regulatory bodies, patients, healthcare professionals, industry representatives, and government partners can help ensure products and services stay compliant with regulation throughout their lifecycles.

With these areas for regulation outlined, governments and regulatory bodies can follow them and hopefully develop some regulations to protect healthcare professionals and patients, and also use AI to its full potential in healthcare.

9101BF5D-626D-4BA1-8869-D83D83A51EA2

Progressive Digital Media Ltd

Document DTMNTR0020231024ejao00083

CE Noticias Financieras English

Well-used AI could improve health treatments, WHO says

634 words
24 October 2023
CE NoticiasFinancieras
NFINCE
English

The World Health Organization (WHO) stated that Artificial Intelligence has the potential to transform healthcare treatment, but its rapid deployment without a full understanding of how it works could harm patients.

According to the WHO, AI holds great promise for healthcare, but it also poses challenges in terms of privacy and the possibility of exacerbating existing health problems.

The UN health agency released a new document detailing some of the key regulatory considerations around AI for health to enable policymakers to develop or adapt their guidance on its use.

"With the increasing availability of health data and the rapid advancement of analytical techniques - whether machine learning, logic-based or statistics-based - AI tools could transform the health sector," the organization said in a statement.

According to the WHO, AI could strengthen **clinical trials** , improve medical diagnosis and treatment, and complement medical knowledge and skills.

It could help in places with a shortage of specialists, interpreting radiological images and retinal scans.

However, the organization added that AI is being deployed rapidly, sometimes without a proper understanding of how these technologies work, "which could benefit or harm end users," both patients and practitioners.

Strong legal frameworksBy using health data, AI systems could access sensitive information, so strong legal frameworks are needed to safeguard the privacy and integrity of individuals, WHO said.

"Artificial intelligence holds great promise for health, but it also poses serious challenges, including unethical data collection, cybersecurity threats, and the amplification of bias or misinformation," WHO chief Tedros Adhanom Ghebreyesus stressed.

"This new guidance will help countries effectively regulate AI to harness its potential, whether in cancer treatment or tuberculosis screening, while minimizing risks," he added.

The WHO says AI systems depend on the code they are built with and the data they are trained on, and better regulation could help manage the risks of AI amplifying biases present in training data.

"For example, it can be difficult for AI models to accurately represent the diversity of populations, which can lead to biases, inaccuracies or even failures," WHO stressed.

"To help mitigate these risks, regulation can be used to ensure that the attributes-sex, race, and ethnicity-of individuals in training data are reported and that datasets are intentionally representative," it added.

The WHO outlined six areas for regulating AI for health. These include external validation of data, evaluation of systems prior to publication so as not to amplify biases and errors, examination of consent requirements on data privacy, and fostering collaboration between regulators, patients, governments, and healthcare professionals.

It should be recalled that months ago, an Artificial Intelligence (AI) program appeared to be able to reduce the workload of radiologists in breast cancer screening, according to early data from a study published Wednesday, although it is too early to conclude on its efficacy.

Conducted in Sweden and published in The Lancet Oncology, this study also concluded that there is no risk of radiologists using artificial intelligence (AI) software to better target their analyses. The researchers divided about 80,000 women into two groups of similar size.

All of them performed a mammogram, but the first group was screened in the conventional way, i.e., with the eyes of two independent radiologists, while the data from the second were examined first by an AI and then by a single radiologist.

The AI-assisted group recorded no worse results and even a slightly higher number of cancers were detected.

On the other hand, the rate of "false positives" - the cases in which the first exam wrongly detects cancer - was similar.

The use of this technology could reduce the workload of these physicians by half because the procedure involving artificial intelligence only requires one radiologist.

Follow El País Cali's channel on WhatsApp

Content Engine LLC

Document NFINCE0020231024ejao00fj8

Nanoform grant Global STARMAP AI License to AstraZeneca

819 words
24 October 2023
ENP Newswire
ENPNEW
English

Release date - 23102023

Finland - Nanoform Finland Plc. (Nanoform), an innovative nanoparticle medicine-enabling company today announced that it has granted AstraZeneca Plc a global online STARMAP license.

STARMAP is a digital AI version of the CESS technology that enables in-silico experiments to determine which molecules should be nanoformed. The license will enable AstraZeneca to screen molecules from drug discovery through to lifecycle management

As part of this licensing agreement, Nanoform will receive access to compound libraries and large data sets to undertake STARMAP screening and propose innovative product development concepts and strategies in collaboration with AstraZeneca.

This comes after several years of early-stage collaboration between Nanoform and AstraZeneca and a successfully completed technology evaluation partnership including STARMAP which has resulted in clinical candidate feasibility studies. STARMAP is well aligned with AstraZeneca's ambitious sustainability goals.

STARMAP Online has been created as a direct request from Nanoform's current and future partners who seek to maintain the level of confidence STARMAP offers, while integrating it into their own in-house molecule-selection processes. STARMAP Online creates the opportunity for clients to perform large numbers of in-silico CESS experiments from their desktop. This approach further supports Nanoform's green ambition by ensuring that Nanoform progresses the molecules with the greatest probability of success.

STARMAP Online offers

Security and safety - the interface has been developed in alignment with ISO27001:2017 standards.

Client submissions are confidential and seen only by clients (not by Nanoform), allowing molecules to be screened without sharing structures. Outputs are presented directly to the client via the system.

Scalability and agility: The ability to manage thousands of molecules in a single submission to support the selection of candidates from molecule libraries is possible.

Novel insights: STARMAP Online holds a database of some 20,000 pre-analyzed, public-domain disclosed drugs and candidates. Clients can request thematic evaluations and understand the power of CESS in different therapeutic areas, target classes, and disease areas.

'External collaboration is fundamental to advancing medicines into the hands of patients that need them. By combining Nanoforms AI based STARMAP approach and in-house nanotechnology expertise we can help to accelerate AstraZeneca's medicine development goals and support more patient- and planet-centric medicine development initiatives' said Christian Jones, Chief Commercial Officer of Nanoform.

Contact:

Christian Jones Email: Christian.jones@nanoform.com Tel: +44 7804 474 77 41

About Nanoform

Nanoform is an innovative nanoparticle medicine enabling company. Nanoform works together with pharma and biotech partners globally to provide hope for patients in developing new and improved medicines utilizing Nanoform's platform technologies. The company focuses on reducing clinical attrition and on enhancing drug molecules' performance through its nanoforming technologies and formulation services. Nanoform's capabilities include GMP manufacturing, and its services span the small to large molecule development space with a focus on solving key issues in drug solubility and bioavailability and on enabling novel drug delivery applications. Nanoform's shares are listed on the Premier-segment of Nasdaq First North Growth Market in Helsinki (ticker: NANOFH) and Stockholm (ticker: NANOFS). Certified Adviser: Danske Bank A/S, Finland Branch, +358 40 744 1900.

Forward-Looking Statements

This press release contains forward-looking statements, including, without limitation, statements regarding Nanoform's strategy, business plans and focus. The words may,' 'will,' 'could,' 'would,' 'should,' 'expect,' 'plan,' 'anticipate,' 'intend,' believe,' 'estimate,' 'predict,' 'project,' 'potential,' 'continue,' 'target' and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Any forward-looking statements in this press release are based on management's current expectations and beliefs and are subject to a number of risks, uncertainties and important factors that may cause actual events or results to differ materially from those expressed or implied by any forward-looking statements contained in this press release, including, without limitation, any related to Nanoform's business, operations, **clinical trials** , supply chain, strategy, goals and anticipated timelines, competition from other companies, and other risks described in the Report of the Board of Directors and Financial Statements for the year ended December 31, 2022 as well as our other past disclosures. Nanoform cautions you not to place undue reliance on any forward-looking statements, which speak only as of the date they are made. Nanoform disclaims any obligation to publicly update or revise any such statements to reflect any change in expectations or in events, conditions or circumstances on which any such statements may be based, or that may affect the likelihood that actual results will differ from those set forth in the forward-looking statements. Any forward-looking statements contained in this press release represent Nanoform's views only as of the date hereof and should not be relied upon as representing its views as of any subsequent date.

[Editorial queries for this story should be sent to newswire@enpublishing.co.uk]

Electronic News Publishing Ltd.

Document ENPNEW0020231024ejao000hd

Massachusetts General Hospital Researchers and Prevencio Announce AI-driven HART(R) CVE Blood Test Accuracy for Patients with Coronary Chronic Total Occlusion

839 words
24 October 2023
09:07
Business Wire
BWR
English

HART CVE test data presentation at the 2023 Transcatheter Cardiovascular Therapeutics (TCT) scientific meeting

KIRKLAND, Wash.--(BUSINESS WIRE)--October 24, 2023--

Prevencio, Inc., the AI-Powered Cardiac Blood Test Company, today announces the presentation of patient data demonstrating that its Artificial Intelligence (AI)-driven HART(R) CVE blood test is highly accurate for risk assessment in patients with total blockage of a heart artery, also known as coronary Chronic Total Occlusion (CTO).

Researchers from Massachusetts General Hospital (MGH) tested 241 patients with chronic total occlusion of at least one coronary (heart) artery for the risk of a major adverse cardiac event, including non-fatal myocardial infarction, stroke, and cardiovascular death through four years follow up. Using HART CVE risk scores, the high-risk patients were more than 12 times more likely to experience a myocardial infarction, stroke, or cardiovascular death as compared to low-risk patients.

Approximately 25% of patients with obstructive heart disease have Chronic Total Occlusion or total blockage of a coronary heart artery. Invasive management with coronary intervention, such as coronary stents, is most often dictated by symptoms, which is rather subjective.

"Surprisingly accurate risk stratification models to predict risk and longer-term clinical outcomes in coronary Chronic Total Occlusion patients prior to invasive treatment has not been studied," said James L. Januzzi, MD, a practicing cardiologist at MGH, Professor of Medicine at Harvard Medical School, Director of Biomarker Trials at the Baim Institute for Clinical Research, and Principal Investigator in development, validation, and ongoing testing of the HART tests. "HART CVE demonstrated robust accuracy for determining risk in these Chronic Total Occlusion patients. Having an objective, accurate, inexpensive, and accessible blood test, such as HART CVE, to judge the risk for non-fatal myocardial infarction, stroke and cardiovascular death may inform differences in need for intensity of medication, follow up frequency, and thresholds for conducting more expensive, invasive, and potentially more risky procedures, such as coronary stents."

"The Chronic Total Occlusion patient population adds to a broad range of patients, including those suffering from diabetes, chronic kidney disease, hypertension, obesity, coronary heart disease, heart failure, aortic disease, and peripheral artery disease, which HART CVE has demonstrated accuracy for cardiac risk assessment," stated Rhonda Rhyne, Prevencio's President and Chief Executive Officer. "With the rapid rise in cardiovascular disease, better tools to recognize risk and intervene proactively are needed, and we are pleased to offer HART tests for patient care and **clinical trials**."

Prevencio's two lead tests, HART CVE and HART CADhs, are currently available for patients and **clinical trials**. HART CVE determines a patient's one-to-four-year risk for a heart attack, stroke, or cardiovascular death, while HART CADhs assesses whether a patient has obstruction of the heart arteries and is at imminent risk of a heart attack.

For additional information, visit Prevencio, Inc.

About Prevencio HART Tests:

Powered by AI, Prevencio is revolutionizing blood tests for cardiovascular disease and custom diagnostics. Employing this novel approach, the company has developed seven blood tests that significantly improve diagnoses for a variety of heart and blood vessel-related complications.

Our three lead tests include:

1. HART CVE(R) -- 1-year risk of heart attack, stroke, or cardiac death
2. HART CADhs(R) -- obstructive coronary artery disease diagnosis
3. HART KD(R) -- Kawasaki disease diagnosis

HART test results have been peer-reviewed published 33 times, including at leading cardiovascular meetings--(European Society of Cardiology Congress; American College of Cardiology Scientific Sessions; American Heart Association Scientific Sessions; American Diabetes Association Scientific Sessions; Pediatric Academic Societies International Sessions; International Spinal Cord Society Scientific Sessions; ASTRO Scientific Sessions; Transcatheter Cardiovascular Therapeutics Sessions; and International Kawasaki Disease Symposium) and in top-tier journals--(Journal of American College of Cardiology; American Journal of Cardiology; Clinical Cardiology; Open Heart; Biomarkers in Medicine; Journal of American Heart Association; European Journal of Preventive Cardiology; and International Journal of Cardiology).

About Prevencio, Inc.:

Prevencio's value proposition is "Power of AI to Prevent the Preventable" -- That is, preventing unnecessary procedures, related side effects, and expense, as well as improving patient outcomes and **clinical trials** through more accurate blood tests for cardiovascular disease conditions. Prevencio utilizes Machine Learning (Artificial Intelligence) + Multi-Proteomic Biomarkers + Proprietary Algorithms to deliver cardiovascular diagnostic & prognostic tests that are significantly more accurate than standard-of-care stress tests, genetic risk scores and coronary artery calcium. The company is headquartered in Kirkland, Washington. For additional information, visit Prevencio, Inc.

Forward-Looking (Safe Harbor) Statement:

Except for historical and factual information contained herein, this press release contains forward-looking statements, the accuracy of which is necessarily subject to various uncertainties of development-stage companies. The Company does not undertake to update disclosures contained in this press release.

View source version on businesswire.com: https://www.businesswire.com/news/home/20231024769637/en/[https://www.businesswire.com/news/home/20231024769637/en/]

CONTACT:

Christiaan Boer, cboer@cplusc.com; 206-557-4309

SOURCE: Prevencio, Inc.

(END)

Business Wire, Inc.

Document BWR0000020231024ejao000a3

Latest on Korean Startups

Nvidia invests in Korean generative AI startup Twelve Labs

934 words
24 October 2023
The Korea Economic Daily Global Edition
ECODEN
English

Nvidia Corp., a global chip designer, made its first investment in a South Korean generative artificial intelligence startup as Big Tech companies Google and Microsoft Corp. rushed to provide capital to newly established firms with competitive technology in the sector for future growth.

Nvidia recently participated in a pre-Series A round of South Korean generative AI startup Twelve Labs, which aimed to raise 13 billion won ($9.7 million), according to information technology industry sources in Seoul on Tuesday. Samsung Next, the corporate venture capital unit of the world's top memory chipmaker Samsung Electronics Co., and Korea Investment Partners, a local venture capitalist, joined the round.

Twelve Labs secured 16 billion won in a seed round last December.[https://www.kedglobal.com/artificial-intelligence/newsView/ked202212060019]

Nvidia had been supporting South Korean startups by providing technology education and consulting. But the Silicon Valley-based company was known to have not made any direct investments in any generative AI startups in the country until now.

"Nvidia is gearing up for investments in Korean startups with a schedule for an event with one of them next month," said an industry source in Seoul.

AI MODEL FOR VIDEO CONTENT

Twelve Labs founded in 2021 develops hyperscale AI models that understand video content, an unexplored sector, while local major IT companies such as Naver Corp. and KT Corp. are focusing on text-based large language models (LLMs).[https://www.kedglobal.com/artificial-intelligence/newsView/ked202308240018]

The startup was in the spotlight as it won a technology contest by Microsoft with an AI model that understands video developed with a research team at the Korea Advanced Institute of Science and Technology, the country's top research-oriented university, beating competitors including Columbia University and Tencent Holdings Ltd.

Twelve Labs raised money from major investors such as the venture capital firm Index Ventures while tapping world-renowned AI scholar Fei-Fei Li, a professor at Stanford University, and Aidan Gomez, CEO and co-founder of Cohere, as advisors. Cohere is a competitor of OpenAI, the developer of the global-hit generative artificial intelligence chatbot ChatGPT.

The South Korean company's AI model understands various types of information in video such as conversation, objective behavior, text and logos.

With the technology, Twelve Labs was selected as one of the 50 most innovative companies developing generative AI applications and infrastructure across industries by CB Insights, a provider of market intelligence on venture capital firms and startups.[https://www.kedglobal.com/artificial-intelligence/newsView/ked202308110006] Insider, a US financial and business news provider formerly known as Business Insider, chose Twelve Labs as one of the most promising AI startups of 2023.

BIG TECH COMPANIES' CUT-THROAT COMPETITION

Big Tech companies are fiercely competing in the generative AI industry as those IT giants are feared to lose in the race if they lag behind any technologies in the sector such as LLMs, AI semiconductors, cloud and AI applications.

The global generative AI market was forecast to explode, growing to $1.3 trillion won over the next ten years from $40 billion in 2022, according to a report by Bloomberg Intelligence.

Nvidia founder and CEO Jensen Huang expected generative AI to create an impact similar to that of Apple Inc.'s iPhone, the pioneer of global smartphones.

"The generative AI era is upon us, the iPhone moment if you will," Huang said at SIGGRAPH, the world's premier computer graphics conference in August.

Nvidia founder and CEO Jensen Huang delivers a special address at SIGGRAPH on Aug. 8, 2023, in Los Angeles (Captured from Nvidia website)
[https://www.kedglobal.com/data/ked/image/2023/10/24/ked202310240037.700x.0.png]

Microsoft has already poured $10 billion into generative AI startups, while Amazon.com Inc. and Nvidia have spent $4 billion and $270 million in the sector, respectively, according to the US startup industry research firm PitchBook.

FIGHT WILL BE OVER IN NEXT ONE TO TWO YEARS

Those technology behemoths are injecting money into promising generative AI startups regardless of nationality or funding stage.

Nvidia participated in Series B rounds of Adept and Inflection AI Inc. in the US, as well as Series C rounds of Hugging Face Inc. and Cohere. Microsoft, which invested in Inflection AI, joined a Series B round of AI chip startup d-Matrix. Amazon.com, which participated in Hugging Face's funding round, agreed to spend up to $4 billion on Anthropic PBC, an LLM development startup, in September.

The generative AI market consists of three sectors – AI infrastructure, which includes LLMs and AI semiconductors, AI models, which understand languages and information, and applications, which utilize those models for consumers.

Global major technology companies are currently concentrating on the AI infrastructure while staying interested in other sectors.

"Those Big Tech firms have recently been trying to reinforce their weak areas such as LLM, AI chips, applications through investments," said an executive at a venture capital firm in Seoul. "Microsoft and Google are manufacturing AI chips, while Amazon decided to invest in Anthropic. That means the fight for the AI hegemony will be over in the next one to two years."

Corporate values of competitive generative AI startups, which can help major technology companies make up for their weaknesses, rocketed too much to attract investors, said another industry source in Seoul.

"It is almost impossible for venture capitalists to invest in generative AI startups founded by famous entrepreneurs or with strong name values," said the source. "We saw a similar investment pattern in the bio sector where the enterprise values of only the companies that passed **clinical trials** soared."

By See-Eun Lee and Jong-Woo Kim

see@hankyung.com

Jongwoo Cheon edited this article.

(Courtesy of Twelve Labs, a South Korean generative AI startup)[https://www.kedglobal.com/data/ked/image/2023/10/24/ked202310240036.700x.0.png]

KED Global News Network

Document ECODEN0020231024ejao0002v

AI Poised to Make Huge Impact in Healthcare

By Cassidy Cavanagh

1190 words
23 October 2023
Mergers & Acquisitions Online
MRAQO
English

Generative artificial intelligence, which takes machine learning and data analytics to the next level, has a huge potential impact on the healthcare industry at all levels – and this is generating a lot of investment and will lead to M&A activity in the sector.

“Administrative applications are getting a lot more attention now,” says VSS Principal Eric Kim. “The clinical side is longer-term.”

Even for the near-term administrative side, though, AI strictly speaking is still in its infancy and it’s premature to speak of M&A activity, adds Kim, a former Optum managing director.

“There is a lot of funding activity,” he says, to develop AI so that it can start supporting healthcare activities and increase value for PE investors.

Rackspace Technology, a cloud computing company, has a portfolio of companies working on AI applications. For Nand Sharma, a vice president who helps healthcare companies in their digital challenges, the most immediate application for the technology is to make the ecosystem – providers, payers, patients – more efficient in everything from scheduling appointments to paying bills.

“Right now, you can wait for months to get an appointment,” Sharma notes. AI technology will enable patients to navigate the system more efficiently, managing a patient’s profile and assembling historical data quickly. This will mean savings not only in dollar terms, but in time.

Longer term, AI can support clinical diagnosis, starting perhaps by helping analyze imaging like MRIs, Kim suggests. However, it will take longer both for doctors and patients to become comfortable with a greater role for AI in diagnosis.

“There’s often been a black-box nature to diagnosis,” he says. Datasets will have to become larger and clearer, and there will have a lot of explaining involved.

“Doctors’ hesitancy in adopting is understandable. It’s more high stakes, and that is appropriate.”

Rackspace Technology’s Sharma sees long-term potential. “Tomorrow, providers will be able to provide surgeries over long distance,” he says. “Simple diagnoses can be done without doctors.”

He also calls attention to the scope for AI to help with post-merger integration, an important factor in growing value once new technologies have been acquired.

In any case, the industry is seizing on the new technology for the possibilities it opens up. Healthcare as a sector is largely exempt from economic ups and downs.

NEXT WEEK:

Everything, Everywhere, All AI At Once

“People are always getting sick, people are always getting older,” says Adam Birnbaum, executive director and dealmaker at GP Bullhound, an investment banking boutique. “Healthcare is not subject to the vagaries of the broader economy.”

The healthcare sector accounts for roughly a fifth of U.S. GDP, Birnbaum says. “Across the board, investment continues strong,” he says.

Because it is often literally a matter of life and death, healthcare gets more government scrutiny. The Federal Trade Commission has made a point of examining hospital mergers, in particular, for geographical concentration that could limit patient accessibility. And because healthcare is so personal, it has numerous rules regarding privacy.

Birnbaum sees potential for AI applications in the pharmaceutical industry, as the technology can sift through mountains of potential treatments to identify the most promising ones, and then help identify and locate potential participants in **clinical trials** .

Drug companies that are looking for one in a thousand molecules to develop into Phase I trials will have help. “Using AI, they can be smarter about datasets,” he says. The average cost of commercializing a drug has risen to $2.2 billion as costs have doubled, Birnbaum says, and anything that can help reduce that cost would make it more accessible to patients.

This M&A veteran thinks artificial intelligence is something of a misnomer to describe how the technology can improve systems and processes. Generative AI will be able to identify new applications for existing drugs, revamp existing supply chains, and locate availability of needed treatments, among other functions, he says.

In the meantime, Birnbaum expects to see enormous savings in efficiency gains in back office and billing applications. The current rate of errors in payments alone contributes to “exorbitant” medical expenses, he says.

Payers have a simple principle, Sharma notes – “the maximum amount of result for the minimum amount of payment.” As Kim adds, AI has a role in helping payers better manage costs.

Managing data will become more effective, says Sharma, as it “gets cleaned up” through AI. New technologies will go deeper to identify targets and patients for **clinical trials** – and make them safer. “We want to have **clinical trials** , but we want them to be safe,” he says. A more data-driven approach will also lead to more accountability, he feels.

For now, it is the tech giants that are propelling AI uses in healthcare. Microsoft and its speech recognition subsidiary, Nuance Communications, have partnered with Epic to use generative AI tools for medical note-taking, freeing physicians from the onerous task of transcribing clinical notes. Amazon has introduced its AWS HealthScribe for a similar purpose.

See all of our coverage on artificial intelligence in M&A.

PE investors in the lower middle market nonetheless are looking for promising firms to add to their portfolios and increase valuations over a five to seven-year period. “I don’t see it being that different,” says VSS’s Kim of investing in healthcare technology. “We are looking for technology and tech-enabled services” in line with the VSS philosophy of providing flexible growth capital.

The goal, Kim explains, is often to get companies to the stage where big companies want to acquire them. AI is at such an early stage, that PE firms may wait to invest in them. Estimates of the compound annual growth rate for AI in healthcare by the end of the decade sometimes reach 40 percent or more.

The role of PEs, in short, remains the same. “Private equity helps companies become more advanced so they will sell at a higher value,” says Sharma. “There’s a huge play on the AI side.”

Some investments have already been made. Medical device maker Medtronic last year announced a $75 million investment in CathWorks, a privately-held Israeli company innovating in diagnosis and treatment of coronary artery disease.

Medtronic will begin immediately co-promoting CathWorks' FFRangio System, which uses AI in the U.S., Europe and Japan. In a separate agreement, Medtronic has an option to acquire the Israeli firm for $585 million through mid-2027 if certain milestones are met.

On the PE side, Blackford Capital in June announced its acquisition of PACIV, an industrial technology firm serving manufacturers in the life sciences and pharmaceutical sectors. Blackford plans to use PACIV as a platform for further investments as the technology firm uses an emergent form of artificial intelligence to streamline operations.

Sharma's company in June launched Foundry for Generative AI by Rackspace to accelerate adoption of the technology across industries. It draws on existing platforms like AWS, Google Cloud, and Microsoft Azure and applies their data to address specific uses.

Says Sharma, "The sky's the limit for the technology."

Middle Market Information LLC

Document MRAQO00020231023ejan00007

Canon Medical integrates sports, AI and diagnostics in new facility

1020 words
23 October 2023
09:06
MarketLine News and Comment
DTMNTR
English

Canon Medical's new diagnostic and sports centre in Sheffield is aimed in part at helping to expand the company's AI capabilities.

Canon Medical is betting big on a new diagnostics and sports facility in Sheffield, UK. The medical equipment manufacturer has invested £14m ($17m) in what will serve as the new home of basketball teams the Sheffield Sharks and Hatters, as well as housing some of the company's top medical devices.

Canon claims the centre is the first of its kind, and sees the centre as a potential model for the future of sports health. For its part, it hopes to recoup the investment through gathering diagnostic data to train its medical AI, currently in development in Scotland.

Medical Device Network attended the launch and toured the medical facility, which is home to many Canon products including its Aquilion Prime SP CT scanner, Apilo i800 ultrasound machine and its Vantage Galan 3T high-powered MRI machine.

The suite clearly slants towards sports medicine, which is unsurprising given the setting. Diagnostics centre operator LivingCare estimates that, once up and running, the centre will be able to process around 5,000 patients a month, of which around 20% will be professional sportspeople.

The remainder of patients will come from LivingCare's set of private patients, as well as the National Health Service (NHS) through public-private partnership. Despite claims that the centre will ease the backlog of NHS patients in Sheffield, the cost of this service to the public body is unclear. Investment Monitor has reported that the NHS spends around a quarter of its budget on private providers.

The benefits of integrating sports and diagnostics are twofold. For teams, players can be off the court and into a medical facility in under an hour after being injured. This means that teams and players can know what is wrong sooner, allowing for the creation of customised recovery regimens. The facility also has the capacity for minor surgery, allowing more serious injuries to be dealt with without having to go elsewhere.

AI diagnosticsFrom Canon's point of view, the real benefit is data for its AI diagnostics tool. Though the project is still in its infancy, Canon hopes to go beyond simply diagnosing patients. Managing Director of Canon Medical Mark Hitchman told press at the event that he wanted data that could "not just diagnose, because that's starting to emerge already, but do it safely. Or one step further, dare we think about predicting disease from other biomarkers in five, ten years? We dare."

AI's increasing use in the medical industry has been the cause for both celebration and concern. As its capacity to diagnose increases, it could cut costs and free up doctors to see more patients, which is vital given the limited resources many hospitals face, particularly in the UK. However, initial waves of optimism around AI in drug development have been stifled somewhat after many AI-designed drugs failed to pass **clinical trials**.

Canon is taking a moderated approach, choosing to hold off on bringing its product to market until it is sure of long-term accuracy. The company is developing a governance model that compares AI with another baseline AI and also separately with a doctor in real-time to ensure that accuracy does not drift, which is possible when AI 'learns' from other AI models.

When asked about market readiness, Hitchman said: "It's like when you're building a unique building. You never know when the ribbon cutting will be." After a brief pause, he elaborated: "Two years. I don't think we'll ever really replace doctors, [but] I think we'll help them be more efficient and reduce error rates a lot."

This approach is likely to pay off for Canon, particularly given the quality of data it will be able to gather from elite sportspeople, giving a valuable insight into how the human body operates when pushed to its limits. Hitchman's honesty is refreshing in a world where many have bought into the AI hype without considering the vital importance of safety and accuracy.

Carbon neutral?The facility also claims to be carbon neutral, though this is achieved in part through the purchase of carbon credits, provided by C02balance. C02balance is a founding member of the International Carbon Reduction and Offset Alliance, a trade body for voluntary carbon offset providers and is accredited by the Gold Standard, an organisation founded by the WWF.

The voluntary carbon credit market has been criticised for predominantly operating based on counterfactual carbon reductions. The amount of carbon offset is often calculated assuming that, for instance, patches of forest purchased by carbon credit providers would have been cut down were they not bought by the company. A Guardian investigation early this year found that over 90% of rainforest carbon offsets offered by the largest certifier were worthless.

Gold Standard holds itself to rigorous standards and has recently been found to have strong methodology in an independent review. However, the standard uses suppressed demand in its calculation of carbon credits, meaning that companies such as CO2balance are able to claim carbon reductions that do not currently exist.

One project that Canon Medical bought from reduces carbon by repairing boreholes in Uganda, allowing citizens access to clean, fresh water. This reduces carbon output by preventing people from needing to boil water to purify it for drinking. However, Medical Device Network has found that only 16.8% of the 45,000 people affected by the project currently boil water for purification purposes. While almost all of the remainder have said that they would if they had the fuel, making this calculation based on suppressed demand allows CO2balance to assume savings of 60,000 tons of greenhouse gas emissions per year. This is equivalent to the 2021 net emissions of 40,000 Ugandans, per Our World in Data.

In conversations with Canon Medical and Medical Device Network, CO2balance stressed its commitment to methodology, noting the "rigour and process that we put our projects through".

70822A1F-B59C-4B84-9A1B-DBB64F7853F0

Progressive Digital Media Ltd

Document DTMNTR0020231024ejan00014

Artificial Intelligence; Shandong University Reports Findings in Artificial Intelligence (Clinical Study of Artificial Intelligence in Imaging Diagnosis of False Positive Lesions of Pulmonary Nodules)

585 words
23 October 2023
Journal of Engineering
JOENG
2024
English

2023 OCT 23 (VerticalNews) -- By a News Reporter-Staff News Editor at Journal of Engineering -- New research on Artificial Intelligence is the subject of a report. According to news reporting from Shandong, People's Republic of China, by VerticalNews journalists, research stated, "To determine the accuracy of diagnosis of pulmonary nodules using artificial intelligence method. Observational study. Place and Duration of the Study: Department of Thoracic Surgery, Jinan Central Hospital, Jinan, China, from January 2020 to May 2021."

The news correspondents obtained a quote from the research from Shandong University, "An analysis of clinical characteristics exhibited by 32 patients initially diagnosed with malignant tumours through imaging (LDCT) and artificial intelligence (AI), was reclassified as having benign lesions following surgical intervention. Quantitative parameters were assessed, including CT mean value, kurtosis, skewness, solid ratio, and the ratio of length to short diameter, within a cohort of 32 benign patients juxtaposed with 58 patients diagnosed with lung cancer during the same time frame. The AI-derived parameters were subjected to Mann-Whitney U non-parametric test. A total of 32 benign pulmonary lesions were evaluated that were initially misdiagnosed as malignant prior to surgery. These lesions displayed an average length of (18.56 (+-) 12.16) mm, with the majority characterised as solid (68.8%). Notably, a substantial proportion of these lesions exhibited imaging features akin to malignant growths. The AI-derived quantitative parameters of the 32 benign cases and the 58 malignant cases revealed statistical significance in average CT value and solid ratio. However, statistical significance was not established for kurtosis, skewness, or the ratio of length to short diameter. The area under the Receiver Operating Characteristic (ROC) curve for average CT value and solid ratio stood at 0.71 and 0.705, respectively. Among the cases initially misdiagnosed as malignant yet subsequently identified as benign, a notable number of these instances were solid nodules, often resembling malignant lesions in imaging characteristics. There was moderate discriminatory capacity for average CT value and solid ratio, rendering them valuable tools for distinguishing between benign and malignant lesions within this particular cohort. This underscores their high diagnostic significance."

According to the news reporters, the research concluded: "Artificial intelligence, Benign lesions of lung, Lung cancer, Quantitative parameters, Postoperative."

This research has been peer-reviewed.

For more information on this research see: Clinical Study of Artificial Intelligence in Imaging Diagnosis of False Positive Lesions of Pulmonary Nodules. Journal of College of Physicians And Surgeons Pakistan, 2023;33(10):1087-1092. Journal of College of Physicians And Surgeons Pakistan can be contacted at: Coll Physicians & Surgeons Pakistan, Seventh Central St, Defence Housing Authority, Karachi, 75500, Pakistan.

Our news journalists report that additional information may be obtained by contacting Jiaheng Wei, Dept. of Thoracic Surgery, School of Medicine, Cheeloo College of Medicine, Shandong University, Jinan, Shandong, People's Republic of China. Additional authors for this research include He Sun, Junfu Wang, Zhanyue Pang and Liangming Zhu.

Publisher contact information for the Journal of College of Physicians And Surgeons Pakistan is: Coll Physicians & Surgeons Pakistan, Seventh Central St, Defence Housing Authority, Karachi, 75500, Pakistan.

Keywords for this news article include: Asia, Shandong, Machine Learning, Clinical Research, Health and Medicine, Emerging Technologies, Artificial Intelligence, Diagnostics and Screening, People's Republic of China, **Clinical Trials** and Studies.

NewsRX, LLC

Document JOENG00020231023ejan002vr

Artificial Intelligence; Public Assistance - Paris Hospitals (AP-HP) Reports Findings in Artificial Intelligence (Can Chatbot artificial intelligence replace infectious disease physicians in the management of bloodstream infections? A prospective cohort study)

544 words
23 October 2023
Journal of Engineering
JOENG
1403
English

2023 OCT 23 (VerticalNews) -- By a News Reporter-Staff News Editor at Journal of Engineering -- New research on Artificial Intelligence is the subject of a report. According to news reporting out of Paris, France, by VerticalNews editors, research stated, "The development of chatbot artificial intelligences (AIs) have raised major questions about their use in healthcare. We assessed the quality and safety of the management suggested by ChatGPT-4 in real-life practice for patients with positive blood culture."

Our news journalists obtained a quote from the research from Public Assistance - Paris Hospitals (AP-HP), "On a four-week period in a tertiary care hospital, data from consecutive infectious diseases (ID) consultations for a first positive blood-culture were prospectively provided to ChatGPT-4. It was requested to propose a comprehensive management plan (suspected/confirmed diagnosis, work-up, antibiotic therapy, source control, follow-up). We compared the management plan suggested by ChatGPT-4 with the plan suggested by ID consultants, based on literature and guidelines. Comparisons were performed by two ID physicians not involved in the patient management. Forty-four cases with a first episode of positive blood-culture were included. ChatGPT-4 provided detailed and well-written responses in all cases. AI's diagnoses were identical to those of the consultant in 26 cases (59 %). Suggested diagnostic workups were satisfactory (i.e., no missing important diagnostic tests) in 35 (80%) cases, empirical antimicrobial therapies were adequate in 28 (64%) case, and harmful in one (2%) case. Source control plans were inadequate in four (9%) cases. Definitive antibiotic therapies were optimal in 16 patients (36%), and harmful in two (5 %). Overall, management plans were considered optimal in only one patient, as satisfactory in 17 (39%), and as harmful in seven patients (16%)."

According to the news editors, the research concluded: "The use of ChatGPT-4 without consultant input remains hazardous when seeking expert medical advice in."

This research has been peer-reviewed.

For more information on this research see: Can Chatbot artificial intelligence replace infectious disease physicians in the management of bloodstream infections? A prospective cohort study. Clinical Infectious Diseases, 2023. Clinical Infectious Diseases can be contacted at: Oxford Univ Press Inc, Journals Dept, 2001 Evans Rd, Cary, NC 27513, USA. (Oxford University Press - www.oup.com/[http://www.oup.com/]; Clinical Infectious Diseases - cid.oxfordjournals.org)

Our news journalists report that additional information may be obtained by contacting Giulia Micheli, Paris Centre University Hospital, Infectious Diseases Stewardship team, Public Assistance - Paris Hospitals (AP-HP), Paris, France. Additional authors for this research include Alexis Maillard, Leila Lefevre, Celine Guyonnet, Claire Poyart, Etienne Canoui, Martin Belan and Caroline Charlier.

Publisher contact information for the journal Clinical Infectious Diseases is: Oxford Univ Press Inc, Journals Dept, 2001 Evans Rd, Cary, NC 27513, USA.

Keywords for this news article include: Paris, France, Europe, Sepsis, Septicemia, Machine Learning, Clinical Research, Drugs and Therapies, Health and Medicine, Bloodstream Infection, Emerging Technologies, Artificial Intelligence, **Clinical Trials** and Studies, Blood Diseases and Conditions, Infectious Diseases and Conditions.

NewsRX, LLC

Document JOENG00020231023ejan002if

Drugs and Therapies - Personalized Medicine; Research from Uttar Pradesh Broadens Understanding of Personalized Medicine (Molecular oncology and the role of **artificial intelligence** in advancing cancer treatment)

442 words
23 October 2023
Clinical Trials Week
CTRW
4493
English

2023 OCT 23 (NewsRx) -- By a News Reporter-Staff News Editor at **Clinical Trials** Week -- Research findings on personalized medicine are discussed in a new report. According to news reporting from Uttar Pradesh, India, by NewsRx journalists, research stated, "Artificial intelligence (AI) holds significant promise for advancing molecular oncology and improving personalized cancer care."

The news journalists obtained a quote from the research from Department of Medical Oncology: "This review highlights the numerous benefits of AI integration in various aspects of molecular oncology, from data analysis and interpretation to streamlining clinical trial matching. AI systems can aid clinical decision-making by rapidly analyzing complex molecular data, such as next-generation sequencing results, and suggesting treatment options based on the patient's tumor profile. Furthermore, AI can facilitate collaboration among healthcare professionals, monitor treatment response, and serve as a valuable educational resource for oncologists. The incorporation of AI in electronic health records and pharmacogenomics can lead to improved clinical workflows and more personalized therapeutic approaches. In addition, AI can enhance precision oncology research by assisting in the identification of novel molecular targets and uncovering new therapeutic strategies."

According to the news reporters, the research concluded: "As AI technology continues to evolve, its role in molecular oncology is expected to expand, leading to better patient outcomes, and more personalized care. Nevertheless, ethical considerations and patient privacy remain crucial aspects that need to be addressed to ensure the responsible and effective use of AI in the field of molecular oncology."

For more information on this research see: Molecular oncology and the role of artificial intelligence in advancing cancer treatment. International Journal of Molecular and Immuno Oncology, 2023,8. The publisher for International Journal of Molecular and Immuno Oncology is Scientific Scholar.

A free version of this journal article is available at https://doi.org/10.25259/ijmio_17_2023[https://doi.org/10.25259/ijmio_17_2023].

Our news editors report that additional information may be obtained by contacting Akhil Kapoor, Department of Medical Oncology, Mahamana Pandit Madan Mohan Malaviya Cancer Centre and Homi Bhabha Cancer Hospital, Varanasi, Uttar Pradesh, India. Additional authors for this research include Ankita Rungta Kapoor, Amit Kumar, Anuj Gupta, Bipinesh Sansar, Pooja Gupta, Shashikant Patne, Zachariah Chowdhury, Ipsita Dhal, Bal Krishna Mishra.

Keywords for this news article include: Department of Medical Oncology, Uttar Pradesh, India, Asia, Cancer, Oncology, Machine Learning, Drugs and Therapies, Health and Medicine, Personalized Therapy, Emerging Technologies, Personalized Medicine, Artificial Intelligence.

NewsRX, LLC

Document CTRW000020231023ejan0006y

Artificial Intelligence; Studies from Johns Hopkins University Yield New Data on Artificial Intelligence (Risk Factors for Nondiagnostic Imaging in a Real-World Deployment of Artificial Intelligence Diabetic Retinal Examinations in an Integrated Health care System: ...)

593 words
23 October 2023
Clinical Trials Week
CTRW
5399
English

2023 OCT 23 (NewsRx) -- By a News Reporter-Staff News Editor at **Clinical Trials** Week -- A new study on artificial intelligence is now available. According to news reporting from Baltimore, Maryland, by NewsRx journalists, research stated, "In the pivotal clinical trial that led to Food and Drug Administration De Novo approval of the first fully autonomous artificial intelligence (AI) diabetic retinal disease diagnostic system, a reflexive dilation protocol was used. Using real-world deployment data before implementation of reflexive dilation, we identified factors associated with nondiagnostic results."

Our news journalists obtained a quote from the research from Johns Hopkins University: "These factors allow a novel predictive dilation workflow, where patients most likely to benefit from pharmacologic dilation are dilated a priori to maximize efficiency and patient satisfaction. Retrospective review of patients who were assessed with autonomous AI at Johns Hopkins Medicine (8/2020 to 5/2021). We constructed a multivariable logistic regression model for nondiagnostic results to compare characteristics of patients with and without diagnostic results, using adjusted odds ratio (aOR). P < .05 was considered statistically significant. Of 241 patients (59% female; median age = 59), 123 (51%) had nondiagnostic results. In multivariable analysis, type 1 diabetes (T1D, aOR = 5.82, 95% confidence interval [CI]: 1.45-23.40, P = .01), smoking (aOR = 2.86, 95% CI: 1.36-5.99, P = .005), and age (every 10-year increase, aOR = 2.12, 95% CI: 1.62-2.77, P < .001) were associated with nondiagnostic results. Following feature elimination, a predictive model was created using T1D, smoking, age, race, sex, and hypertension as inputs. The model showed an area under the receiver-operator characteristics curve of 0.76 in five-fold cross-validation."

According to the news reporters, the research concluded: "We used factors associated with nondiagnostic results to design a novel, predictive dilation workflow, where patients most likely to benefit from pharmacologic dilation are dilated a priori. This new workflow has the potential to be more efficient than reflexive dilation, thus maximizing the number of at-risk patients receiving their diabetic retinal examinations."

For more information on this research see: Risk Factors for Nondiagnostic Imaging in a Real-World Deployment of Artificial Intelligence Diabetic Retinal Examinations in an Integrated Health care System: Maximizing Workflow Efficiency Through Predictive Dilation. Journal of Diabetes Science and Technology, 2023. The publisher for Journal of Diabetes Science and Technology is SAGE Publications.

A free version of this journal article is available at https://doi.org/10.1177/19322968231201654[https://doi.org/10.1177/19322968231201654].

Our news editors report that additional information may be obtained by contacting Benjamin L. Shou, School of Medicine, Johns Hopkins University, Baltimore, MD, United States. Additional authors for this research include Kesavan Venkatesh, Chang Chen, Ronel Ghidey, Jae Hyoung Lee, Jiangxia Wang, Roomasa Channa, Risa M. Wolf, Michael D. Abramoff, T. Y. Alvin Liu.

ORCID is an identifier for authors and includes bibliographic information. The following is ORCID information for the authors of this research: Benjamin L. Shou (orcid.org/0000-0003-2825-3301), Jae Hyoung Lee (orcid.org/0000-0002-6303-086X), Michael D. Abramoff (orcid.org/0000-0002-3490-0037).

Keywords for this news article include: Johns Hopkins University, Baltimore, Maryland, United States, North and Central America, Machine Learning, Health and Medicine, Risk and Prevention, Emerging Technologies, Artificial Intelligence.

NewsRX, LLC

Document CTRW000020231023ejan00094

Artificial Intelligence; University of Iowa Researchers Report on Findings in Artificial Intelligence (Autonomous artificial intelligence increases real-world specialist clinic productivity in a cluster-randomized trial)

395 words
23 October 2023
Clinical Trials Week
CTRW
6281
English

2023 OCT 23 (NewsRx) -- By a News Reporter-Staff News Editor at **Clinical Trials** Week -- A new study on artificial intelligence is now available. According to news reporting out of the University of Iowa by NewsRx editors, research stated, "Autonomous artificial intelligence (AI) promises to increase healthcare productivity, but real-world evidence is lacking."

Funders for this research include The Project Was Supported By Orbis International And The Global Vision Foundation..

Our news journalists obtained a quote from the research from University of Iowa: "We developed a clinic productivity model to generate testable hypotheses and study design for a preregistered cluster-randomized clinical trial, in which we tested the hypothesis that a previously validated US FDA-authorized AI for diabetic eye exams increases clinic productivity (number of completed care encounters per hour per specialist physician) among patients with diabetes. Here we report that 105 clinic days are cluster randomized to either intervention (using AI diagnosis; 51 days; 494 patients) or control (not using AI diagnosis; 54 days; 499 patients). The prespecified primary endpoint is met: AI leads to 40% higher productivity (1.59 encounters/hour, 95% confidence interval [CI]: 1.37-1.80) than control (1.14 encounters/hour, 95% CI: 1.02-1.25), $p < 0.00$; the secondary endpoint (productivity in all patients) is also met. Autonomous AI increases healthcare system productivity, which could potentially increase access and reduce health disparities."

According to the news reporters, the research concluded: "ClinicalTrials.gov NCT05182580."

For more information on this research see: Autonomous artificial intelligence increases real-world specialist clinic productivity in a cluster-randomized trial. npj Digital Medicine, 2023,6(1):1-8. (npj Digital Medicine - http://www.nature.com/npjdigitalmed/[http://www.nature.com/npjdigitalmed/]). The publisher for npj Digital Medicine is Nature Portfolio.

A free version of this journal article is available at https://doi.org/10.1038/s41746-023-00931-7[https://doi.org/10.1038/s41746-023-00931-7].

Our news editors report that additional information may be obtained by contacting Michael D. Abramoff, University of Iowa.

Keywords for this news article include: University of Iowa, Machine Learning, Clinical Research, Health and Medicine, Emerging Technologies, Artificial Intelligence, **Clinical Trials** and Studies.

NewsRX, LLC

Document CTRW000020231023ejan000a3

Artificial Intelligence; Researcher at Nottingham University Hospitals NHS Trust Has Published New Study Findings on Artificial Intelligence (Artificial intelligence assisted endoscopic ultrasound for detection of pancreatic space occupying lesion: A systematic review ...)

630 words
23 October 2023
Clinical Trials Week
CTRW
1570
English

2023 OCT 23 (NewsRx) -- By a News Reporter-Staff News Editor at **Clinical Trials** Week -- Investigators publish new report on artificial intelligence. According to news originating from Nottingham, United Kingdom, by NewsRx correspondents, research stated, "Diagnosing pancreatic lesions, including chronic pancreatitis, autoimmune pancreatitis, and pancreatic cancer, poses a challenge and, as a result, is time-consuming. To tackle this issue, artificial intelligence (AI) has been increasingly utilized over the years."

Our news correspondents obtained a quote from the research from Nottingham University Hospitals NHS Trust: "AI can analyze large data sets with heightened accuracy, reduce inter-observer variability, and can standardize the interpretation of radiologic and histopathologic lesions. Therefore, this study aims to review the use of AI in the detection and differentiation of pancreatic space-occupying lesions and to compare AI-assisted endoscopic ultrasound (EUS) with conventional EUS in terms of their detection capabilities. Literature searches were conducted through PubMed/Medline, SCOPUS, and Embase to identify studies eligible for inclusion. Original articles, including observational studies, randomized control trials, systematic reviews, meta-analyses, and case series specifically focused on AI-assisted EUS in adults, were included. Data were extracted and pooled, and a meta-analysis was conducted using Meta-xl. For results exhibiting significant heterogeneity, a random-effects model was employed; otherwise, a fixed-effects model was utilized. A total of 21 studies were included in the review with 4 studies pooled for a meta-analysis. A pooled accuracy of 93.6% (CI 90.4-96.8%) was found using the random-effects model on four studies that showed significant heterogeneity (P<0.05) in the Cochrane's Q test. Further, a pooled sensitivity of 93.9% (CI 92.4-95.3%) was found using a fixed-effects model on seven studies that showed no significant heterogeneity in the Cochrane's Q test. When it came to pooled specificity, a fixed-effects model was utilized in six studies that showed no significant heterogeneity in the Cochrane's Q test and determined as 93.1% (CI 90.7-95.4%). The pooled positive predictive value which was done using the random-effects model on six studies that showed significant heterogeneity was 91.6% (CI 87.3-95.8%). The pooled negative predictive value which was done using the random-effects model on six studies that showed significant heterogeneity was 93.6% (CI 90.4-96.8%)."

According to the news reporters, the research concluded: "AI-assisted EUS shows a high degree of accuracy in the detection and differentiation of pancreatic space-occupying lesions over conventional EUS. Its application may promote prompt and accurate diagnosis of pancreatic pathologies."

For more information on this research see: Artificial intelligence assisted endoscopic ultrasound for detection of pancreatic space occupying lesion: A systematic review and meta-analysis. International Journal of Surgery, 2023. The publisher for International Journal of Surgery is Ovid Technologies (Wolters Kluwer Health).

A free version of this journal article is available at https://doi.org/10.1097/js9.0000000000000717[https://doi.org/10.1097/js9.0000000000000717].

Our news editors report that more information may be obtained by contacting Arkadeep Dhali, Nottingham University Hospitals NHS Trust, Nottingham, NG7 2UH, United Kingdom. Additional authors for this research include Vincent Kipkorir, Bahadar S. Srichawla, Harendra Kumar, Roger B. Rathna, Ibsen Ongidi, Talha Chaudhry, Gisore Morara, Khulud Nurani, Doreen Cheruto, Jyotirmoy Biswas, Leonard R. Chieng, Gopal Krishna Dhali.

Keywords for this news article include: Nottingham University Hospitals NHS Trust, Nottingham, United Kingdom, Europe, Pancreas, Gastroenterology, Machine Learning, Health and Medicine, Emerging Technologies, Artificial Intelligence.

NewsRX, LLC

Document CTRW000020231023ejan00078

Clinical Trial Research; Reports Summarize Clinical Trial Research Study Results from University Hospital Hamburg Eppendorf (Diagnostic Accuracy of a Large Language Model In Rheumatology: Comparison of Physician and Chatgpt-4)

502 words
23 October 2023
Clinical Trials Week
CTRW
3973
English

2023 OCT 23 (NewsRx) -- By a News Reporter-Staff News Editor at **Clinical Trials** Week -- Current study results on Clinical Trial Research have been published. According to news originating from Hamburg, Germany, by NewsRx correspondents, research stated, "Pre-clinical studies suggest that large language models (i.e., ChatGPT) could be used in the diagnostic process to distinguish inflammatory rheumatic (IRD) from other diseases. We therefore aimed to assess the diagnostic accuracy of ChatGPT-4 in comparison to rheumatologists."

Financial support for this research came from Projekt DEAL.

Our news journalists obtained a quote from the research from University Hospital Hamburg Eppendorf, "For the analysis, the data set of Graf et al. (2022) was used. Previous patient assessments were analyzed using ChatGPT-4 and compared to rheumatologists' assessments. ChatGPT-4 listed the correct diagnosis comparable often to rheumatologists as the top diagnosis 35% vs 39% (p = 0.30); as well as among the top 3 diagnoses, 60% vs 55%, (p = 0.38). In IRD-positive cases, ChatGPT-4 provided the top diagnosis in 71% vs 62% in the rheumatologists' analysis. Correct diagnosis was among the top 3 in 86% (ChatGPT-4) vs 74% (rheumatologists). In non-IRD cases, ChatGPT-4 provided the correct top diagnosis in 15% vs 27% in the rheumatologists' analysis. Correct diagnosis was among the top 3 in non-IRD cases in 46% of the ChatGPT-4 group vs 45% in the rheumatologists group. If only the first suggestion for diagnosis was considered, ChatGPT-4 correctly classified 58% of cases as IRD compared to 56% of the rheumatologists (p = 0.52). ChatGPT-4 showed a slightly higher accuracy for the top 3 overall diagnoses compared to rheumatologist's assessment. ChatGPT-4 was able to provide the correct differential diagnosis in a relevant number of cases and achieved better sensitivity to detect IRDs than rheumatologist, at the cost of lower specificity."

According to the news editors, the research concluded: "The pilot results highlight the potential of this new technology as a triage tool for the diagnosis of IRD."

This research has been peer-reviewed.

For more information on this research see: Diagnostic Accuracy of a Large Language Model In Rheumatology: Comparison of Physician and Chatgpt-4. Rheumatology International, 2023. Rheumatology International can be contacted at: Springer Heidelberg, Tiergartenstrasse 17, D-69121 Heidelberg, Germany. (Springer - www.springer.com[http://www.springer.com]; Rheumatology International - www.springerlink.com/content/0172-8172/[http://www.springerlink.com/content/0172-8172/])

The news correspondents report that additional information may be obtained from Martin Krusche, University Hospital Hamburg Eppendorf Uke, Div Rheumatol & Syst Inflammatory Dis, Hamburg, Germany. Additional authors for this research include Nikolas Ruffer, Johnna Callhoff and Johannes Knitza.

Keywords for this news article include: Hamburg, Germany, Europe, Clinical Trial Research, Health and Medicine, Rheumatology, University Hospital Hamburg Eppendorf.

NewsRX, LLC

Document CTRW000020231023ejan0005s

Artificial Intelligence; University of Birmingham Researcher Has Provided New Study Findings on Artificial Intelligence (Exploring the effectiveness of artificial intelligence, machine learning and deep learning in trauma triage: A systematic review and meta-analysis)

600 words
23 October 2023
Clinical Trials Week
CTRW
6235
English

2023 OCT 23 (NewsRx) -- By a News Reporter-Staff News Editor at **Clinical Trials** Week -- Investigators publish new report on artificial intelligence. According to news reporting originating from Birmingham, United Kingdom, by NewsRx correspondents, research stated, "The development of artificial intelligence (AI), machine learning (ML) and deep learning (DL) has advanced rapidly in the medical field, notably in trauma medicine. We aimed to systematically appraise the efficacy of AI, ML and DL models for predicting outcomes in trauma triage compared to conventional triage tools."

Our news correspondents obtained a quote from the research from University of Birmingham: "We searched PubMed, MEDLINE, ProQuest, Embase and reference lists for studies published from 1 January 2010 to 9 June 2022. We included studies which analysed the use of AI, ML and DL models for trauma triage in human subjects. Reviews and AI/ML/DL models used for other purposes such as teaching, or diagnosis were excluded. Data was extracted on AI/ML/DL model type, comparison tools, primary outcomes and secondary outcomes. We performed meta-analysis on studies reporting our main outcomes of mortality, hospitalisation and critical care admission. One hundred and fourteen studies were identified in our search, of which 14 studies were included in the systematic review and 10 were included in the meta-analysis. All studies performed external validation. The best-performing AI/ML/DL models outperformed conventional trauma triage tools for all outcomes in all studies except two. For mortality, the mean area under the receiver operating characteristic (AUROC) score difference between AI/ML/DL models and conventional trauma triage was 0.09, 95% CI (0.02, 0.15), favouring AI/ML/DL models (p = 0.008). The mean AUROC score difference for hospitalisation was 0.11, 95% CI (0.10, 0.13), favouring AI/ML/DL models (p = 0.0001). For critical care admission, the mean AUROC score difference was 0.09, 95% CI (0.08, 0.10) favouring AI/ML/DL models (p = 0.00001)."

According to the news reporters, the research concluded: "This review demonstrates that the predictive ability of AI/ML/DL models is significantly better than conventional trauma triage tools for outcomes of mortality, hospitalisation and critical care admission. However, further research and in particular randomised controlled trials are required to evaluate the clinical and economic impacts of using AI/ML/DL models in trauma medicine."

For more information on this research see: Exploring the effectiveness of artificial intelligence, machine learning and deep learning in trauma triage: A systematic review and meta-analysis. DIGITAL HEALTH, 2023,9. (DIGITAL HEALTH - http://dhj.sagepub.com/[http://dhj.sagepub.com/]). The publisher for DIGITAL HEALTH is SAGE Publications.

A free version of this journal article is available at https://doi.org/10.1177/20552076231205736[https://doi.org/10.1177/20552076231205736].

Our news editors report that more information may be obtained by contacting Oluwasemilore Adebayo, Institute of Inflammation and Ageing, College of Medical and Dental Sciences, University of Birmingham, Edgbaston, Birmingham, United Kingdom. Additional authors for this research include Zunira Areeba Bhuiyan, Zubair Ahmed.

ORCID is an identifier for authors and includes bibliographic information. The following is ORCID information for the author of this research: Oluwasemilore Adebayo (orcid.org/0000-0003-0659-6864).

Keywords for this news article include: University of Birmingham, Birmingham, United Kingdom, Europe, Cyborgs, Machine Learning, Health and Medicine, Emerging Technologies, Critical Care Medicine, Artificial Intelligence.

NewsRX, LLC

Document CTRW000020231023ejan000a0

Clinical Research; Researcher's Work from Chitkara University Focuses on Clinical Research (Revolutionizing **clinical trials**: the role of **ai** in accelerating medical breakthroughs)

420 words
23 October 2023
Clinical Trials Week
CTRW
3467
English

2023 OCT 23 (NewsRx) -- By a News Reporter-Staff News Editor at **Clinical Trials** Week -- Research findings on clinical research are discussed in a new report. According to news reporting out of Punjab, India, by NewsRx editors, research stated, "**Clinical trials** are the essential assessment for safe, reliable, and effective drug development."

The news editors obtained a quote from the research from Chitkara University: "Data-related limitations, extensive manual efforts, remote patient monitoring, and the complexity of traditional **clinical trials** on patients drive the application of Artificial Intelligence (AI) in medical and healthcare organisations. For expeditious and streamlined **clinical trials**, a personalised AI solution is the best utilisation. AI provides broad utility options through structured, standardised, and digitally driven elements in medical research. The **clinical trials** are a time-consuming process with patient recruitment, enrollment, frequent monitoring, and medical adherence and retention. With an AI-powered tool, the automated data can be generated and managed for the trial lifecycle with all the records of the medical history of the patient as patient-centric AI. AI can intelligently interpret the data, feed downstream systems, and automatically fill out the required analysis report."

According to the news editors, the research concluded: "This article explains how AI has revolutionised innovative ways of collecting data, biosimulation, and early disease diagnosis for **clinical trials** and overcomes the challenges more precisely through cost and time reduction, improved efficiency, and improved drug development research with less need for rework. The future implications of AI to accelerate **clinical trials** are important in medical research because of its fast output and overall utility."

For more information on this research see: Revolutionizing **clinical trials**: the role of ai in accelerating medical breakthroughs. International Journal of Surgery, 2023. The publisher for International Journal of Surgery is Ovid Technologies (Wolters Kluwer Health).

A free version of this journal article is available at https://doi.org/10.1097/js9.0000000000000705[https://doi.org/10.1097/js9.0000000000000705].

Our news journalists report that additional information may be obtained by contacting Hitesh Chopra, Chitkara College of Pharmacy, Chitkara University, Rajpura, Punjab 140401, India. Additional authors for this research include Annu, Dong Kil Shin, Kavita Munjal, Priyanka, Kuldeep Dhama, Talha Bin Emran.

Keywords for this news article include: Chitkara University, Punjab, India, Asia, Clinical Research, Health and Medicine, **Clinical Trials** and Studies.

NewsRX, LLC

Document CTRW000020231023ejan0007n

Mayo Clinic; Mayo Clinic's AI innovation inspires hope in early detection of pancreatic cancer

818 words
23 October 2023
Clinical Trials Week
CTRW
2654
English

2023 OCT 23 (NewsRx) -- By a News Reporter-Staff News Editor at **Clinical Trials** Week -- ROCHESTER, Minn. - Estimated to become the second leading cause of cancer deaths in the U.S. by 2030, pancreatic cancer has a grim prognosis with nearly 70% of patients facing mortality within the first year of diagnosis. Unfortunately, 40% of small pancreatic cancers elude detection on CT scans until they've advanced to an incurable stage.

This creates a critical "last-mile" barrier for early detection efforts where, in most patients - including those high-risk subjects undergoing active screening - imaging detects the cancer at a stage when a cure is unlikely. This makes imaging the final frontier in the quest for early cancer detection.

In a recent breakthrough, Mayo Clinic Comprehensive Cancer Center researchers used the world's most extensive imaging dataset to build a versatile artificial intelligence (AI) model that has shown the potential for autonomous detection of pancreatic cancer on standard CTs when surgical intervention can still promise a cure.

"This is where the study emerges as a beacon of hope," says Ajit H. Goenka, M.D., a Mayo Clinic radiologist and principal investigator and corresponding author. "It addresses the last-mile challenge - detecting the cancer at a stage when the cancer is even beyond the scope of experts."

The group developed a highly accurate AI model, trained on the largest - more than 3,000 patients - and most diverse CT dataset, for fully automated cancer detection, including small and otherwise difficult-to-detect tumors. Published in Gastroenterology, the journal of the American Gastroenterological Association, the study not only builds on the group's recent work on radiomics-based early detection models but also underscores Mayo Clinic's standing as a beacon of innovation in AI healthcare solutions.

Most important, the model could detect visually imperceptible cancer from normal-appearing pancreases on prediagnostic CT images (i.e., those acquired at three to 36 months prior to clinical diagnosis) substantially early - a median of 438 days - before clinical diagnosis.

"These findings suggest that AI has the potential to detect hidden cancers in asymptomatic individuals, allowing for surgical treatment at a stage when a cure is still achievable," Dr. Goenka says.

Finally, the model remained reliable and accurate across diverse patient groups and variations in scanning equipment and imaging techniques. This resilience is crucial for the model's utility in a wide array of real-world medical scenarios.

Addressing a major concern in the AI healthcare landscape, the team also deconstructed the AI's decision-making process to ensure transparency, acknowledging that trust and quality control are essential for AI's broader clinical acceptance.

"We owe the progress to the ingenious efforts of the Framework for AI Software Technology, or FAST, team led by Panagiotis Korfiatis, Ph.D., complemented by our team of exceptionally bright research fellows and data science analysts," says Dr. Goenka. "They dedicated months to meticulous preparation for our initial submission and invested significant effort to astutely address the incisive queries of the panel of international reviewers."

"We're only at the beginning but stand ready to address the challenges of early cancer detection, leveraging the capabilities of AI and next-generation molecular imaging in conjunction with complementary biomarkers," he adds.

Mayo Clinic has already initiated the steps for clinical validation and the models are undergoing regulatory processes. With backing from the Mayo Clinic Comprehensive Cancer Center, the team is set to undertake benefactor-funded prospective screening trials. The insights from these trials will refine and bolster the practical effectiveness of their innovative approach.

Their cross-disciplinary endeavor involves co-author experts from Radiology (Garima Suman, M.D., Nandakumar Patnam Gopal Chetty, M.B.B.S., M.D., Kamaxi H. Trivedi, M.B.B.S., M.D., Aashna M. Karbhari, M.B.B.S., M.D., Sovanlal Mukherjee, Ph.D., Cole J. Cook, Ph.D., M.S., Jason R. Klug, Ph.D., Naveen Rajamohan, M.D., Hala A. Khasawneh, Joel G. Fletcher, M.D., Candice W. Bolan, M.D., and Kumar Sandrasegaran, M.B., Ch.B.), Surgery (Mark J. Truty, M.D., M.S.), and Gastroenterology (Shounak Majumder, M.D., Suresh T. Chari, M.D.).

Research reported in this news release was supported by the National Cancer Institute of the National Institutes of Health under award numbers: R01CA272628 and R01CA256969, as well as from the Centene Charitable Foundation, and the Champions for Hope Pancreatic Cancer Research Program of the Funk Zitiello Foundation. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

Keywords for this news article include: Oncology, Mayo Clinic, Cancer Detection, Gastroenterology, Pancreatic Cancer, Health and Medicine, Pancreatic Neoplasms, Diagnostics and Screening, Government Agencies Offices and Entities.

NewsRX, LLC

Document CTRW000020231023ejan00030

Ibex Medical Analytics; CorePlus Shows Success With Real-World Utilization of Ibex's AI Platform for Routine Cancer Diagnosis, Supporting Improved Patient Outcomes

606 words
23 October 2023
Clinical Trials Week
CTRW
1203
English

2023 OCT 23 (NewsRx) -- By a News Reporter-Staff News Editor at **Clinical Trials** Week -- Ibex Medical Analytics (Ibex), the leader in AI-powered cancer diagnostics, and CorePlus Servicios Clinicos y Patologicos, LLC (CorePlus), a high complexity CLIA-certified clinical and anatomic pathology laboratory, announced CorePlus has diagnosed over 10,000 cases using Galen(TM), Ibex's AI-powered cancer diagnostics platform. In a significant boost to patient outcomes, pathologists used AI-driven insights from Galen to correct the diagnosis of over 150 patients.

CorePlus was the first lab in North America to deploy an AI-powered pathology solution, implementing Ibex's Galen(TM) Prostate for before-sign-out quality control, and then expanded its capabilities to include Galen(TM) Breast in the diagnosis of breast biopsies. Following the successful rollout of both technologies, used to analyze more than 125,000 pathology slides, CorePlus has expanded deployment and its pathologists now use Galen during primary diagnosis, benefiting from AI-powered insights for triage, detection of cancer and other morphologic features, grading and reporting. Moreover, the expansion also drives efficiency gains as Galen helps to streamline lab processes and reporting.

"Ibex's robust AI platform has brought greater confidence to our pathologists, providing continuously accurate insights and enabling us to support referring urologists with more accurate and objective diagnostic reports," said Juan C. Santa Rosario, MD, Chief Medical Officer at CorePlus. "Our use of Ibex's technology in primary diagnosis enables our pathologists to operate more efficiently at a greater scale and helps us significantly reduce turnaround time to keep up with growing demand."

Galen supports CorePlus pathologists in the diagnosis of breast and prostate biopsies by helping them identify cancer, determine the cancer grading and subtype, and detect multiple other malignant and non-malignant morphological features. Galen also helps pathologists prioritize cases and rapidly access areas of interest, as well as automating tasks such as reporting and tumor measurement. Galen is the most widely deployed AI technology in pathology and is used as part of everyday clinical practice at laboratories, hospitals and health systems worldwide. Galen demonstrated outstanding outcomes across multiple clinical studies performed on various tissue types and diagnostic workflows1,2,3,4,5.

"Ibex is driving the future of cancer diagnosis, providing pathologists with the best tools to deliver accurate and timely diagnosis powered by AI," said Joseph Mossel, Co-Founder and CEO of Ibex Medical Analytics. "I am delighted to see CorePlus leading the way in adoption, demonstrating how patient outcomes can be improved through the implementation of AI for primary diagnosis. We remain focused on bringing our AI platform to labs around the world to help pathologists reach zero misdiagnoses in cancer, and CorePlus demonstrates how this is achievable."

Added, Gilberto Ruiz Deja MD, FACS, Professor and Residency Program Director, Department of Urology, Centro Medico Episcopal San Lucas and Ponce Health Sciences University, "With Puerto Rican men presenting significantly higher prostate cancer rates than men living in the continental U.S., we must utilize the best technologies that offer the most accurate and precise information from the outset to ensure reliable patient outcomes. I feel more confident knowing that AI is being used routinely by our reference laboratory to augment their pathologists, helping me provide the best quality and most effective treatment to my patients."

Keywords for this news article include: Cancer, Oncology, Pathology, Technology, Health and Medicine, Ibex Medical Analytics, Diagnostics and Screening.

NewsRX, LLC

Document CTRW000020231023ejan0000u

Artificial Intelligence; Data on Artificial Intelligence Detailed by Researchers at University of Miguel Hernandez (Role of Artificial Intelligence In Colonoscopy Detection of Advanced Neoplasias a Randomized Trial)

588 words
23 October 2023
Journal of Robotics & Machine Learning
JRML
1333
English

2023 OCT 23 (VerticalNews) -- By a News Reporter-Staff News Editor at Journal of Robotics & Machine Learning -- Investigators publish new report on Artificial Intelligence. According to news reporting originating from Alicante, Spain, by VerticalNews correspondents, research stated, "The role of computer-aided detection in identifying advanced colorectal neoplasia is unknown. To evaluate the contribution of computer-aided detection to colonoscopic detection of advanced colorectal neoplasias as well as adenomas, serrated polyps, and nonpolypoid and right-sided lesions."

Financial support for this research came from Medtronic.

Our news editors obtained a quote from the research from the University of Miguel Hernandez, "Multicenter, parallel, randomized controlled trial. (ClinicalTrials.gov: NCT04673136) Setting: Spanish colorectal cancer screening program. 3213 persons with a positive fecal immunochemical test. Enrollees were randomly assigned to colonoscopy with or without computer-aided detection. Advanced colorectal neoplasia was defined as advanced adenoma and/or advanced serrated polyp. The 2 comparison groups showed no significant difference in advanced colorectal neoplasia detection rate (34.8% with intervention vs. 34.6% for controls; adjusted risk ratio [aRR], 1.01 [95% CI, 0.92 to 1.10]) or the mean number of advanced colorectal neoplasias detected per colonoscopy (0.54 [SD, 0.95] with intervention vs. 0.52 [SD, 0.95] for controls; adjusted rate ratio, 1.04 [99.9% CI, 0.88 to 1.22]). Adenoma detection rate also did not differ (64.2% with intervention vs. 62.0% for controls; aRR, 1.06 [99.9% CI, 0.91 to 1.23]). Computer-aided detection increased the mean number of nonpolypoid lesions (0.56 [SD, 1.25] vs. 0.47 [SD, 1.18] for controls; adjusted rate ratio, 1.19 [99.9% CI, 1.01 to 1.41]), proximal adenomas (0.94 [SD, 1.62] vs. 0.81 [SD, 1.52] for controls; adjusted rate ratio, 1.17 [99.9% CI, 1.03 to 1.33]), and lesions of 5 mm or smaller (polyps in general and adenomas and serrated lesions in particular) detected per colonoscopy. The high adenoma detection rate in the control group may limit the generalizability of the findings to endoscopists with low detection rates."

According to the news editors, the research concluded: "Computer-aided detection did not improve colonoscopic identification of advanced colorectal neoplasias."

This research has been peer-reviewed.

For more information on this research see: Role of Artificial Intelligence In Colonoscopy Detection of Advanced Neoplasias a Randomized Trial. Annals of Internal Medicine, 2023. Annals of Internal Medicine can be contacted at: Amer Coll Physicians, Independence Mall West 6TH And Race St, Philadelphia, PA 19106-1572, USA.

The news editors report that additional information may be obtained by contacting Rodrigo Jover, University of Miguel Hernandez, Dept. of Medical Clinics, Inst Invest Sanitaria & Biomed Alicante Isabial, Dept. of Gastroenterology, Hosp Gen Univ Dr Balmis, Serv Me, Alicante, Spain. Additional authors for this research include Carolina Mangas-Sanjuan, Noelia Sala-Miquel, Luisa de-Castro, Nereida Fernandez, Joaquin Cubiella, Sara Zarraquinos, Pilar Diez-Redondo, Henar Nunez-Rodriguez, Adolfo Suarez, Veronica Alvarez-Garcia, Maria Pellise, Oswaldo Ortiz and Pedro Zapater.

Keywords for this news article include: Alicante, Spain, Europe, Adenomas, Artificial Intelligence, Clinical Research, **Clinical Trials** and Studies, Colorectal Research, Computers, Emerging Technologies, Gastroenterology, Health and Medicine, Machine Learning, Neoplasia, Oncology, University of Miguel Hernandez.

NewsRX, LLC

Document JRML000020231023ejan00008

Press Release: Tevogen Bio Appoints IT Expert and Leader Mittul Mehta as Chief Information Officer and Head of Tevogen.ai Initiative

832 words
23 October 2023
16:36
Dow Jones Institutional News
DJDN
English

Tevogen Bio Appoints IT Expert and Leader Mittul Mehta as Chief Information Officer and Head of Tevogen.ai Initiative

WARREN, N.J.--(BUSINESS WIRE)--October 23, 2023--

Tevogen Bio Inc. ("Tevogen Bio") today announced the appointment of Mittul Mehta as Chief Information Officer (CIO) and Head of Tevogen.ai, the newly launched initiative focused on harnessing the potential of artificial intelligence (AI) for the enhancement of drug discovery, development, manufacturing, distribution, and patient access.

This press release features multimedia. View the full release here:
https://www.businesswire.com/news/home/20231023620520/en/[https://www.businesswire.com/news/home/20231023620520/en/]

Mittul Mehta, Chief Information Officer of Tevogen Bio and Head of Tevogen.ai (Photo: Business Wire)

With over 20 years of experience in information technology and almost a decade in senior management roles, Mr. Mehta brings with him a diversified background in IT. His expertise encompasses a wide range of responsibilities, from leading cross-functional teams to architecting solutions. Mr. Mehta most recently served as Senior Vice President, Global Head of Platforms Security, Mobility & Cloud Security at Jefferies LLC, where he played a pivotal role in enterprise strategy. He brings a wealth of experience across different industries and roles at companies that include Avanade Inc., Macy's Inc., MetLife Inc., and Microsoft Corporation. His achievements at these companies underscore his ability to align technology with business goals while building teams to navigate complex projects and changing priorities.

Mr. Mehta shared, "I am excited to join Tevogen Bio at such a pivotal time. The Tevogen.ai initiative presents an incredible opportunity to revolutionize patient outcomes by harnessing the power of AI, and I look forward to driving this vision."

"Mr. Mehta's significant experience in managing and mentoring teams is complemented by his strong partnerships with major technology providers. As Tevogen Bio expands its horizons with the Tevogen.ai initiative, we believe Mr. Mehta's strategic acumen and leadership skills will play a crucial role in helping Tevogen Bio harness the potential of AI for the future of healthcare," said Ryan Saadi, MD, MPH, CEO of Tevogen Bio.

About Tevogen Bio

Tevogen Bio is driven by a team of highly experienced industry leaders and distinguished scientists with drug development and global product launch experience. Tevogen's leadership believes that accessible personalized immunotherapies are the next frontier of medicine, and that disruptive business models are required to sustain medical innovation in the post-pandemic world.

Forward Looking Statements

This press release contains certain forward-looking statements relating to the Tevogen Bio and its business, including without limitation statements regarding the potential benefits of Mittul Mehta's appointment as the Chief Information Officer and Head of Tevogen.ai, Tevogen Bio's Tevogen.ai initiative, and the product candidates, products, markets, and expected future performance and market opportunities of Tevogen Bio. These statements are based on management's current expectations and beliefs as of the date of this release and are subject to several factors which involve known and unknown risks, delays, uncertainties, and other factors not under Tevogen Bio's control that may cause actual results, performance or achievements to be materially different from the results, performance or other expectations implied by these forward-looking statements. Forward-looking statements can sometimes be identified by terminology such as "may," "will," "should," "intend," "expect," "believe," "potential," and "possible," or their negatives or comparable terminology, as well as other words and expressions referencing future events, conditions, or circumstances. In any forward-looking statement in which Tevogen Bio expresses an expectation or belief as to future results, there can be no assurance that the statement or expectation or belief will be achieved. Various factors may cause differences between Tevogen Bio's expectations and actual results, including, among others: changes in the markets in which Tevogen Bio competes, including with respect to its competitive landscape, technology evolution, or regulatory changes; changes in domestic and global general economic conditions; the risk that Tevogen Bio may not be able to execute its growth strategies; Tevogen Bio's limited operating history; uncertainties inherent in the execution, cost, and completion of preclinical studies and **clinical trials**; risks related to regulatory review and approval and commercial development; risks associated with intellectual property protection; and other risks related to matters that could affect Tevogen Bio's future financial results, including the commercial potential, sales, and pricing of Tevogen Bio's products. Except as required by law, Tevogen Bio undertakes no obligation to update the forward-looking statements or any of the information in this release, or provide additional information, and expressly disclaims any and all liability and makes no representations or warranties in connection herewith or with respect to any omissions therefrom.

View source version on businesswire.com: https://www.businesswire.com/news/home/20231023620520/en/[https://www.businesswire.com/news/home/20231023620520/en/]

CONTACT: Tevogen Bio Communications

T: 1 877 TEVOGEN, Ext 701

Communications@Tevogen.com

(END) Dow Jones Newswires

October 23, 2023 16:36 ET (20:36 GMT)

Document DJDN000020231023ejan002qt

Technology

Healthcare Summit 2023: Big data, AI revolutionise the future of healthcare

Pahi Mehra

561 words
23 October 2023
TechCircle
MMVTCE
English

In our fast-paced world, big data and machine learning are game-changers, impacting healthcare and offering a promising future for AI in diagnostics and treatment. At the Healthcare Summit 2023 by VCCircle held on October 20 in Mumbai, industry leaders discussed trends related to new technologies in healthcare.

In a panel titled "The Cusp of Transformation — Moving Towards AI & Automation," Nikhil Shembekar, VP-Corporate IT at Sun Pharma, and Abhinav Kashyap, Head of Technology at GSK Pharmaceuticals, shared insights on how AI and data are reshaping the industry and where the big opportunities lie.

Kashyap emphasised the rapid evolution of technology and machine learning. He pointed out that while deep learning has dominated AI advancements over the past decade, the real transformation is now occurring in primitive AI. This shift is changing the game and offering India an opportunity akin to its rapid transformation in the telecom sector.

He explained, "The new-age technology doesn't demand structured data and can handle unstructured data. This facilitates the generation of more data using AI, training models, and leveraging AI and machine learning for various applications. The potential has significantly expanded in recent years, with the development of virtual assistants and co-pilots already in progress."

However, Kashyap also stressed the importance of practical, cost-effective technology solutions. Many startups are building complex layers around existing tech from companies like Microsoft and Google, which can drive up costs. India's focus on developing foundational technologies domestically aims to reduce expenses and increase access to technology.

Shembekar also highlighted their innovative approaches, saying, "We've integrated QR codes into our medicines for easy access to expiry dates and product information. This simple technology also facilitates patient engagement through videos and literature.

Additionally, we're leveraging AI and computer vision cameras to ensure product safety and regulatory compliance, addressing concerns such as impurities. In the realm of **clinical trials**, we've witnessed promising outcomes with AI implementation. While we briefly explored VR, we've primarily focused on QR codes and AI technologies for our advancements."

The healthcare industry is experiencing transformative changes in four key areas. First, drug development is accelerating. Second, care delivery and diagnosis are improving. Third, automation and AI are enhancing manufacturing productivity. Finally, there are opportunities in healthcare administration, particularly regarding providing clear information on facility offerings and providers.

But amidst these opportunities, what challenges and issues the industry currently confronting, and how can organisations make the most of existing solutions while awaiting further advancements?

To which Kashyap suggested, "There are opportunities to use technology to address ecosystem problems and invest in innovative solutions. I urge every organisation, no matter how small, to seek digital solutions for their ecosystem, including vendors, customers, and end-users. Additionally, there's a wealth of exciting innovation happening in the startup world in India. While startups face their own challenges, there are ample opportunities for larger organisations to engage with these startups and invest in promising ideas."

Shembekar added, "For Indian pharma companies, dealing with cost and compliance is paramount. Advancements in AI and digital technologies are being utilised by multiple Indian companies in the sector to enhance compliance and quality, reduce operational costs, and improve overall efficiency and productivity."

Click here to view story.[https://www.techcircle.in/2023/10/23/healthcare-summit-2023-big-data-ai-revolutionise-the-future-of-healthcare]

Click here to view image.[https://assets.techcircle.in/uploads/article-image/2023/10/images/33769-healthcare.jpg]

Mosaic Media Ventures Pvt. Ltd.

Document MMVTCE0020231023ejan00002

ConcertAI's TeraRecon Showcases New Clinical and AI Solutions Designed to Enhance Treatment Planning for Structural Heart Patients at TCT 2023

1194 words
23 October 2023
06:30
PR Newswire
PRN
English

ConcertAI's TeraRecon Showcases New Clinical and AI Solutions Designed to Enhance Treatment Planning for Structural Heart Patients at TCT 2023

PR Newswire

CAMBRIDGE, Mass., Oct. 23, 2023

-- NEW robust cardiovascular Advanced Visualization (AV) functionality through a dedicated Left Atrial Appendage (LAA) workflow, updated Transcatheter Mitral Valve Repair (TMVR) workflow, and various enhancements to streamline cardiac coronary imaging and pretreatment planning.

-- NEW Cardiology Suite(TM), powered with partners Us2.ai and Coreline Soft, aims to fully automate the analysis and interpretation of echocardiograms and chest CT exams to assess, monitor, and help inform treatment decisions for cardiac patients.

-- NEW strategic partnership to offer FEops HEARTguide(TM) Digital Twin solution for an elevated structural heart experience for LAA closure procedures.

-- LIVE physician-led presentations on advancing cardiac care utilizing Intuition 4.7, and FEops solutions.

CAMBRIDGE, Mass., Oct. 23, 2023 /PRNewswire/ -- ConcertAI's TeraRecon, a leader in advanced visualization and artificial intelligence (AI) for medical imaging, will showcase its latest innovations and cardiology solutions designed to strengthen clinical confidence, build efficiency throughout the care pathway, and improve cardiac care experiences at the Transcatheter Cardiovascular Therapeutics (TCT) annual meeting in San Francisco this week.

Innovation in the Intuition(TM) solution gives physicians the edge to deliver precise and timely diagnostic interpretations by semi-automating complex image post-processing through tailored advanced clinical workflows. Because it is designed to deliver clinical decision support throughout the enterprise, including radiology, cardiology, neurology, oncology, and vascular surgery, Intuition also enables cross-department consolidation and can eliminate redundant solutions.

The latest version of Intuition, 4.7, adds robust cardiovascular AV functionality through a dedicated Left Atrial Appendage (LAA) workflow, updated Transcatheter Mitral Valve Repair (TMVR) workflow, and various enhancements to streamline cardiac coronary imaging and pre-op planning. These tools provide interventionalists with enhanced visualizations, semi-automated measurements, flexible interaction capabilities, and interoperability designed to streamline procedural planning and eliminate the need for multiple AV solutions.

Cardiology Suite, powered with partners Us2.ai and Coreline Soft, aims to fully automate the analysis and interpretation of echocardiograms and chest CT exams to assess, monitor, and provide insights to help support clinicians in treatment decisions for cardiac patients. Through automated measurements and reports, these AI solutions can help reduce image interpretation times and improve workflows while maintaining accuracy and reducing variability between operators and devices.

Cardiology Suite applications on the Eureka Clinical AI platform are FDA and CE-cleared with additional regional clearances. For full availability of each algorithm, please reach out to TeraRecon. Learn more about the Eureka Clinical AI platform capabilities at www.terarecon.com/artificial-intelligence[http://www.terarecon.com/artificial-intelligence].

"We are excited to be kicking off the controlled release of FEops HEARTguide(TM) software in combination with our market leading AV software, Intuition, to enable physicians to better plan and, therefore, better treat patients with LAA closure devices," said Dan McSweeney, President of TeraRecon. "With the addition of FEops' advanced Digital Twin clinical AI solution, we are poised to provide clinicians with an unparalleled tool streamlining CT-based preoperative planning for structural heart interventions, leading to more informed decision-making."

FEops HEARTguide is a unique cloud-based procedure planning solution in the structural heart, based on Digital Twin technologies. With the LAA occlusion workflow, FEops HEARTguide enables U.S. physicians to virtually model different implant positions and sizes of FDA approved LAA devices, aiding physicians in the selection of the optimal size and position for a specific patient. Established clinical evidence from the randomized controlled PREDICT-LAA trial has shown that FEops' Digital Twin-based planning for LAA closure results in improved procedure efficiency and outcomes as compared to standard CT based planning.

Stop by booth #2241 on Tuesday, October 24, 2-4pm, or Wednesday, October 25, 2-4pm, to meet our newest collaborator and see their state-of-the-art FEops HEARTguide solution, the latest AI-powered device simulation to support preoperative planning procedures for LAA occlusion.

TeraRecon will also be hosting two physician-led presentations in booth #2241 during TCT 2023:

-- Tuesday, October 24, 12:30 PM - Dr. Serge C. Harb, MD, FACC will be presenting Cardiac CT in Planning Structural Interventions: A Case-based and Hands-on Approach.

-- Wednesday, October 25, 12:30 PM - Dr. Devi Nair, MD, FACC, FHRS will be presenting Novel Device Simulation for CT-based Preoperative Planning in LAA Closure.

Schedule a meeting or demo to learn more about these new technologies at #TCT23:

https://www.terarecon.com/tct-2023-meeting-request-0[https://www.terarecon.com/tct-2023-meeting-request-0]

About ConcertAI: ConcertAI is the leader in Real-World Evidence (RWE) and AI technology solutions for life sciences and health care. Our mission is to accelerate insights and outcomes for patients through leading real-world data, AI technologies, and scientific expertise in partnership with the leading biomedical innovators, health care providers, and medical societies. For more information, visit us at www.concertai.com[http://www.concertai.com]

About TeraRecon: Serving 1,900 clinical sites globally, TeraRecon, a ConcertAI company, is a Best in KLAS solution provider for AI-empowered radiology, oncology, cardiology, neurology, and vascular surgery. Awarded the 2020, 2021, and 2022 KLAS Category Leader for Advanced Visualization, TeraRecon solutions are independent of any one manufacturer's imaging equipment or PACS system, allowing a single, unified, and simplified clinical workflow that can improve efficiencies and deliver actionable physician-guided insights. For more information, visit us at

www.terarecon.com[http://www.terarecon.com]

About Us2.ai: Us2.ai uses machine learning to automate the fight against heart disease. The company's software tools improve clinical decision making and cardiovascular research for **clinical trials** using echocardiography, the safest and most common cardiac imaging modality. Us2.ai connects institutions and imaging labs around the world on a platform of ready to use automation tools for view classification, segmentation and federated learning across diverse, anonymous patient and disease cohorts. Us2.ai is a fast-growing startup backed by IHH Healthcare, Heal Partners, Sequoia India and EDBI.

About Coreline: Coreline Soft, born in Korea, focuses on Heart and Lung imaging, combining vast clinical knowledge and experiences from leading global medical institutions with its leading-edge deep learning technology. Coreline leads thoracic imaging AI by fully covering Lung Cancer screening, COPD quantification, and Coronary Artery Calcification scoring (all FDA-cleared and CE-marked) and showing the most AIF (Actionable Incidental Findings) without additional cost and radiation dose to the patients. www.corelinesoft.com[http://www.corelinesoft.com].

About FEops: Privately held FEops, headquartered in Gent, Belgium, is a digital health scale-up altering the course of heart disease by providing physicians with unique digital tools to treat the right patients with the right technology at the right time. FEops is supported by Valiance Advisors, Capricorn partners, PMV and the European Innovation Council (EIC). Connect with FEops at www.feops.com[http://www.feops.com] or on LinkedIn at www.linkedin.com/company/feops[http://www.linkedin.com/company/feops], or contact us via info@feops.com

PR Contact -- Nicole Katzin, nicole@galestrategies.com

View original content:https://www.prnewswire.com/news-releases/concertais-terarecon-showcases-new-clinical-and-ai-solutions-designed-to-enhance-treatment-planning-for-structural-heart-patients-at-tct-2023-301963730.html[https://www.prnewswire.com/news-releases/concertais-terarecon-showcases-new-clinical-and-ai-solutions-designed-to-enhance-treatment-planning-for-structural-heart-patients-at-tct-2023-301963730.html]

SOURCE ConcertAI

(END)

PR Newswire Association, Inc.

Document PRN0000020231023ejan00048

Search Summary

Text	hl=(ai or artificial intelligence or llm or chatgpt) and "clinical trials"
Date	In the last 5 years
Source	All Sources
Author	All Authors
Company	All Companies
Subject	All Subjects
Industry	All Industries
Region	All Regions
Language	English
Results Found	6,128
Timestamp	9 November 2023 10:15