

Netramark Unveils AI Driven Insights For Major Depressive Disorder and Schizophrenia At ISCTM Conference

TORONTO, ON, March 5, 2025 – NetraMark Holdings Inc. (the “Company” or “NetraMark”) (CSE: AIAI) (OTCQB: AINMF) (Frankfurt: 8TV) a generative AI software leader in clinical trial analytics, presented two significant studies at the International Society for CNS Clinical Trials and Methodology (ISCTM) conference, showcasing the power of advanced machine learning in major depressive disorder (MDD) and schizophrenia clinical trials.

Mathematically Augmented Machine Learning Redefines MDD Clinical Trial Insights

NetraMark’s first presentation, “Novel Machine Learning Approach Outperforms Traditional Approaches in Major Depressive Disorder Clinical Trials”, demonstrated how NetraAI Sub-Insight Learning enhances patient stratification in MDD clinical trials over traditional methods.

NetraAI was designed to address the challenges of modeling clinical trial data, where traditional Machine Learning (ML), including deep learning, often falls short. Built to identify optimal patient cohorts for future trials, NetraAI enhances established ML methods by uncovering key variable combinations. In this presentation, NetraMark applied NetraAI to the CAN-BIND trial on escitalopram response, demonstrating its ability to significantly improve industry-standard ML models, the study revealed:

- NetraAI-driven **patient subpopulation analysis** led to a **28% increase in model accuracy** compared to traditional ML approaches.
- Sensitivity improved by **31%**, while specificity increased by **51%**, reducing false-positive rates.
- NetraAI successfully **identified key combinations of variables** that refine **inclusion/exclusion criteria** for more efficient trial design.
- This is made possible through NetraAI’s ability to discover which patients can be explained and those that cannot.

NetraAI identifies and explains key variable combinations, offering deeper insights into drug and placebo response. When **NetraAI-derived variables** were fed to traditional ML methods, the resulting performance was significantly enhanced, as shown in the table below.

Traditional Method	Accuracy of Traditional Method Alone (%)	Accuracy of Traditional Method using NetraAI derived variables (%)	Improvement (%)
Logistic Regression	54.29	77.14	+22.85
XGBoost	65.71	91.43	+25.72
Random Forest	62.86	82.86	+20.00
SVM	60.00	100.00	+40.00
Neural Network	60.00	77.14	+17.14

“This advancement validates NetraAI’s ability to learn about complex clinical trial patient populations in a way that modern ML methods cannot, and this can translate to significantly improving clinical trial outcomes,” said Dr. Joseph Geraci, Chief Technology Officer and Chief Scientific Officer of NetraMark




Advancing Schizophrenia Clinical Trials with AI-Driven Biomarker Discovery

NetraMark’s second presentation, “Predictive Biomarker Discovery in Schizophrenia Using Advanced Machine Learning to Decode Heterogeneity”, demonstrated NetraAI’s ability to learn from heterogeneous patient populations in schizophrenia trials. Using data from the CATIE schizophrenia trial, NetraAI identified clinically meaningful subpopulations that respond preferentially to olanzapine or perphenazine. Key findings include:

- Patients with **moderate to severe symptom burden** and **mild behavioral disturbances** responded better to **olanzapine**.
- Patients with **moderate negative symptoms, mild to moderate hallucinations, and paranoia** showed improved response to **perphenazine**.
- This innovative **Sub-Insight Learning approach** overcomes traditional ML limitations by **discovering high-effect size subpopulations** that replicate across datasets, enabling better **trial enrichment strategies**.

“These findings represent a significant step toward precision psychiatry, as it allows us to demonstrate that our technology can produce robust models that replicate. Further, these models reduce trial failures and increase treatment efficacy by seeking to identify the right patients for the right therapies,” said Dr. Joseph Geraci.

Transforming the Future of CNS Clinical Trials

NetraMark’s AI-driven methodologies have the potential to transform the landscape of **CNS clinical research** by:  **Enhancing patient stratification** for more targeted trials.  **Reducing placebo response** and trial failures.  **Accelerating drug development** by improving predictive modeling.

As the field moves toward precision medicine, NetraMark’s innovations offer pharmaceutical companies and researchers a powerful toolset to unlock deeper insights into psychiatric disorders and treatment responses.

About NetraAI

In contrast with other AI-based methods, NetraAI is uniquely engineered to include focus mechanisms that separate small datasets into explainable and unexplainable subsets. Unexplainable subsets are collections of patients that can lead to suboptimal overfit models and inaccurate insights due to poor correlations with the variables involved. The NetraAI uses the explainable subsets to derive insights and hypotheses (including factors that influence treatment and placebo responses, as well as adverse events) that can significantly increase the chances of a clinical trial success. Other AI methods lack these focus mechanisms and assign every patient to a class, even when this leads to "overfitting" which drowns out critical information that could have been used to improve a trial's chance of success.

About NetraMark

NetraMark is a company focused on being a leader in the development of Generative Artificial Intelligence (Gen AI)/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 activates traditional AI/ML methods. The result is that NetraMark can work with much smaller datasets and accurately segment diseases into different types, as well as accurately classify patients for sensitivity to drugs and/or efficacy of treatment.

For further details on the Company please see the Company's publicly available documents filed on the System for Electronic Document Analysis and Retrieval (SEDAR).

Forward-Looking Statements

This press release contains "forward-looking information" within the meaning of applicable Canadian securities legislation including statements regarding the potential improvements and success arising from NetraAI and its ability to improve patient outcomes, the identification of effective treatments, operational results and the design clinical trials, which are based upon NetraMark's current internal expectations, estimates, projections, assumptions and beliefs, and views of future events. Forward-looking information can be identified by the use of forward-looking terminology such as "expect", "likely", "may", "will", "should", "intend", "anticipate", "potential", "proposed", "estimate" and other similar words, including negative and grammatical variations thereof, or statements that certain events or conditions "may", "would" or "will" happen, or by discussions of strategy. Forward-looking information includes estimates, plans, expectations, opinions, forecasts, projections, targets, guidance, or other statements that are not statements of fact. The forward-looking statements are expectations only and are subject to known and unknown risks, uncertainties and other important factors that could cause actual results of the Company or industry results to differ materially from future results, performance or achievements. Any forward-looking information speaks only as of the date on which it is made, and, except as required by law, NetraMark does not undertake any obligation to update or revise any forward-looking information, whether as a result of new information, future events, or otherwise. New factors emerge from time to time, and it is not possible for NetraMark to predict all such factors.

When considering these forward-looking statements, readers should keep in mind the risk factors and other cautionary statements as set out in the materials we file with applicable Canadian securities regulatory authorities on SEDAR at www.sedarplus.ca including our Management's Discussion and Analysis for the year ended September 30, 2024. These risk factors and other factors could cause actual events or results to differ materially from those described in any forward-looking information.

The CSE does not accept responsibility for the adequacy or accuracy of this release.

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