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BullFrog AI and Lieber Institute for Brain Development Collaboration Identifies Novel Drug Targets for Neuropsychiatric Disorders

GAITHERSBURG, Md., May 16, 2024 (GLOBE NEWSWIRE) -- BullFrog AI Holdings, Inc. (NASDAQ: BFRG; BFRGW) ("BullFrog AI" or the "Company"), a technology-enabled drug discovery company using artificial intelligence (AI) and machine learning to enable the successful discovery and development of pharmaceuticals and biologics, today announced significant advancements in its collaboration with the Lieber Institute for Brain Development (LIBD), including the identification of potential drug targets for multiple neuropsychiatric conditions.

BullFrog AI and LIBD have made remarkable progress in identifying novel subgroups between and within neuropsychiatric disorders, including major depression, schizophrenia, and bipolar disorder. Utilizing a combination of ensemble machine learning, generative AI, and graph analytics, the team has successfully clustered patients by expression levels of gene isoforms across multiple brain regions. This innovative approach led to the identification of dozens of clusters of patients, each exhibiting differential enrichment of neuropsychiatric conditions, providing unprecedented insights into the biology of these disorders. These biological subtypes could ultimately lead to targeted therapeutics for a more precise treatment of psychiatric disorders.

For each identified cluster, key genes have been pinpointed that explain cluster membership. These genes present new potential drug targets by revealing unique molecular mechanisms and pathways associated with each cluster. To prioritize these genes for wet lab validation, BullFrog AI is now applying Causal AI, a crucial step for confirming the therapeutic potential of the identified targets.

“This collaboration continues to yield transformative insights into the biological underpinnings of neuropsychiatric disorders,” said Vin Singh, CEO of BullFrog AI. “The identification of these novel subgroups and key genes is a testament to the power of AI in advancing precision medicine. Importantly, our proprietary bfLEAP™ platform, combined with LIBD’s unparalleled brain data, is paving the way for the development of targeted and effective treatments, and we have initiated engagement with pharmaceutical companies with an objective of securing multiple strategic partnerships in the coming quarters.”

Daniel R. Weinberger, M.D., Director and CEO of LIBD, added, “Our partnership with BullFrog AI has unlocked new pathways for understanding the complexities of brain disorders. These findings not only advance our scientific knowledge but also open new avenues for developing targeted therapies that can improve patient outcomes. We are excited about the potential impact this collaboration holds for the future of neuropsychiatric

treatments.”

The collaboration between BullFrog AI and LIBD, announced in September 2023, leverages the bfLEAP™ platform to mine LIBD’s comprehensive brain data. This data includes transcriptomic, genomic, DNA methylation, cell-line, clinical, and imaging data from over 2,800 brain samples. Early results announced in January 2024 highlighted the ability to stratify brain expression data, revealing biological subtypes within psychiatric disorders.

The potential for new treatments for psychiatric disorders is vast and underserved. With increasing global awareness and demand for mental health solutions, this breakthrough presents a potential paradigm shift in treatment approaches. By identifying possible biological subtypes within disorders, BullFrog AI and LIBD are not only advancing scientific understanding, but also opening doors to novel therapeutic pathways and personalized treatment strategies.

The three-year agreement between the organizations granted BullFrog AI a period of exclusive access to LIBD’s brain data with the potential to commercialize products or services derived from the collaboration. The partnership represents a unique synergy between AI-driven analyses and world-class neuropsychiatric research data, setting a new standard in the pursuit of effective treatments for brain disorders.

About the Lieber Institute for Brain Development (LIBD)

The mission of the Lieber Institute for Brain Development and the Maltz Research Laboratories is to translate the understanding of basic genetic and molecular mechanisms of schizophrenia and related developmental brain disorders into clinical advances that change the lives of affected individuals. LIBD is an independent, not-for-profit 501(c)(3) organization and a Maryland tax-exempt medical research institute. The Lieber Institute’s brain repository of more than 4,000 human brains is the largest collection of postmortem brains for the study of neuropsychiatric disorders in the world.

About BullFrog AI

BullFrog AI is a technology-enabled drug development company using Artificial Intelligence and machine learning to enable the successful development of pharmaceuticals and biologics. Through its collaborations with leading research institutions, BullFrog AI is at the forefront of AI-driven drug development using its proprietary bfLEAP™ artificial intelligence platform to create and analyze networks of biological, clinical, and real-world data spanning from early discovery to late-stage clinical trials. BullFrog AI is deploying bfLEAP™ for use at several critical stages of development with the intention of streamlining data analytics in therapeutics development, decreasing the overall development costs by decreasing failure rates for new therapeutics.

For more information visit BullFrog AI at:

Website: https://bullfrogai.com

LinkedIn: https://www.linkedin.com/company/bullfrogai/

Safe Harbor Statement

This press release contains forward-looking statements. We base these forward-looking statements on our expectations and projections about future events, which we derive from the information currently available to us. Such forward-looking statements relate to future events or our future performance, including: our financial performance and projections; our growth in revenue and earnings; and our business prospects and opportunities. You can identify forward-looking statements by those that are not historical in nature, particularly those that use terminology such as "may," "should," "expects," "anticipates," "contemplates," "estimates," "believes," "plans," "projected," "predicts," "potential," or "hopes" or the negative of these or similar terms. In evaluating these forward-looking statements, you should consider various factors, including: our ability to change the direction of the Company; our ability to keep pace with new technology and changing market needs; and the competitive environment of our business. These and other factors may cause our actual results to differ materially from any forward-looking statement. Forward-looking statements are only predictions. The forward-looking events discussed in this press release and other statements made from time to time by us or our representatives, may not occur, and actual events and results may differ materially and are subject to risks, uncertainties, and assumptions about us. We are not obligated to publicly update or revise any forward-looking statement, whether as a result of uncertainties and assumptions, the forward-looking events discussed in this press release and other statements made from time to time by us or our representatives might not occur.

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