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BullFrog AI and Lieber Institute for Brain Development Reveal New Insights into Bipolar Disorder Pathways and Potential Drug Targets

Discussions underway for drug target discovery deals with potential pharma partners

GAITHERSBURG, Md., July 25, 2024 (GLOBE NEWSWIRE) -- BullFrog AI Holdings, Inc. (NASDAQ: BFRG; BFRGW) ("BullFrog AI" or the "Company"), a leader in AI-driven drug discovery, announced significant advancements in its ongoing collaboration with the Lieber Institute for Brain Development (LIBD). Building on the progress detailed in our May 16, 2024 release, our research has now pinpointed specific molecular pathways associated with bipolar disorder (BD), enabling the identification of new candidate drug targets.

Our latest analysis, focusing on functional enrichment across various brain regions associated with bipolar disorder, identified significant enrichment in six out of 68 clusters from the LIBD brain dataset. This means that six specific groups of genes or proteins, which are highly relevant to at least some cases with BD, were found among the many brain data clusters analyzed. This is significant because it narrows down gene networks most involved in BD, allowing for more targeted research.

One notable example, in the Dentate Gyrus, a region critical for memory and cognitive function, two substantially enriched clusters were discovered. This suggests a strong involvement of this area in BD pathology. Additionally, the Dorsolateral Prefrontal Cortex (DLPFC), which is crucial for executive functions like decision-making and problem-solving, revealed one specific cluster associated with BD. This precise identification within the DLPFC highlights a key area for understanding and potentially treating BD.

These findings highlight the potential dysregulation of pro-inflammatory pathways and include the identification of a number of novel pathways significant to the pathophysiology of BD. Our advanced AI-driven analysis not only deepens the understanding of BD but also identifies several putative drivers of the condition. These discoveries pave the way for developing targeted therapeutics aimed at these specific molecular mechanisms, offering hope for more effective and personalized treatments for patients suffering from BD.

Continued Collaboration and Future Directions:

“This collaboration continues to demonstrate the power of AI in unlocking the complexities of neuropsychiatric disorders,” said Vin Singh, CEO of BullFrog AI. “Our proprietary bfLEAP™ platform and causal AI strategy, combined with LIBD’s extensive brain data, is driving forward our mission to develop precise and effective treatments. We are now focusing on

validating these findings in wet lab settings and engaging with pharmaceutical partners to advance these discoveries."

Daniel R. Weinberger, M.D., Director and CEO of LIBD, added, "The insights gained from this collaboration are potentially instrumental in our understanding of bipolar disorder and its treatment. We are enthusiastic about the potential impact these findings could have on developing new targeted therapies that significantly improve patient outcomes."

About the Lieber Institute for Brain Development (LIBD):

The Lieber Institute for Brain Development is dedicated to translating the understanding of genetic and molecular mechanisms of schizophrenia and related brain disorders into clinical advancements. The LIBD brain repository, with over 4,300 human brains, is the world's largest collection for the study of neuropsychiatric disorders.

About BullFrog AI:

BullFrog AI leverages Artificial Intelligence and machine learning to advance drug discovery and development. Through collaborations with leading research institutions, BullFrog AI uses causal AI in combination with its proprietary bfLEAP™ platform to analyze complex biological data, aiming to streamline therapeutics development and reduce failure rates in clinical trials.

For more information, visit BullFrog AI at www.bullfrogai.com.

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.

Contact:

Investors
Dave Gentry
RedChip Companies, Inc.
BFRG@redchip.com
1-407-644-4256

SOURCE: BullFrog AI Holdings, Inc.

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