



Cybin Announces Publication of Sponsored Feasibility Study Validating Kernel's Flow1 Neuroimaging Technology Measuring Psychedelic Effects on the Brain

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TORONTO--(BUSINESS WIRE)-- [Cybin Inc.](#) (NEO:CYBN) (NYSE American:CYBN) ("**Cybin**" or the "**Company**"), a clinical-stage biopharmaceutical company committed to revolutionizing mental healthcare by developing new and innovative psychedelic-based treatment options, commends Kernel, a leader in non-invasive neuroimaging, on their publication titled "[Measuring acute effects of subanesthetic ketamine on cerebrovascular hemodynamics in humans using TD-fNIRS](#)" in the journal *Scientific Reports* from the Nature Portfolio of Journals. The publication highlights the results of the Cybin-sponsored Flow1 feasibility study demonstrating the capabilities of the Flow1 system to capture and analyze brain changes resulting from the administration of a psychoactive substance. The feasibility study is the largest functional near-infrared spectroscopy ("fNIRS") study to measure the acute effect of a psychedelic and is the first ever fNIRS neuroimaging study evaluating ketamine in humans.

In this single-blind, placebo-controlled study, employing a non-randomized design, the Flow1 system, built with time-domain functional near-infrared spectroscopy (TD-fNIRS) was utilized to measure acute brain dynamics following intramuscular subanesthetic ketamine (0.75 mg/kg) and placebo (saline) administration in a clinical setting. The study, conducted at a traditional psychiatry office with 15 healthy participants (8 females, 7 males; average age 32.4 ± 7.5 years), showcased the seamless integration of Flow1 into everyday clinical settings, highlighting its user-friendly nature for neuroimaging in real-world environments.

Flow1 recorded that ketamine administration induced an altered state of consciousness and systemic physiological changes, such as an increase in pulse rate. Additionally, the data showed a brain-wide reduction in the fractional amplitude of low frequency fluctuations, coupled with a decrease in global brain connectivity within the prefrontal region.

"This study represents a significant milestone in the field of neuroimaging, demonstrating the remarkable ease and capabilities of Flow1 to explore the physiological effects of psychedelics like ketamine in natural settings," commented Ryan Field, CEO of Kernel. "It was great to partner with Cybin on this work because of their commitment to pushing the boundaries to solve challenging problems. This collaboration paves the way for large-scale clinical studies using our Flow technology, which enables the quantification of psychedelics' impact on the brain."

"The feasibility study is truly groundbreaking as it supports Kernel's ability to measure functional brain activity in real time, using a wearable, convenient device. The study results also suggest that a combination of metrics may be predictive of subjective mystical experiences during psychedelic treatment," said Doug Drysdale, Chief Executive Officer of Cybin. "We are excited about the potential for this technology in expanding our understanding of the mechanisms and effects of psychedelic-based therapeutics on the brain and applications to research and clinical trials, which is essential to Cybin's goal of developing differentiated therapeutics for people with mental health conditions."

About Cybin

Cybin is a clinical-stage biopharmaceutical company on a mission to create safe and effective psychedelic-based therapeutics to address the large unmet need for new and innovative treatment options for people who suffer from mental health conditions.

Cybin's goal of revolutionizing mental healthcare is supported by a network of world-class partners and internationally recognized scientists aimed at progressing proprietary drug discovery platforms, innovative drug delivery systems, and novel formulation approaches and treatment regimens. The Company is currently developing CYB003, a proprietary deuterated psilocybin analog for the treatment of major depressive disorder and CYB004, a proprietary deuterated DMT molecule for generalized anxiety disorder and has a research pipeline of investigational psychedelic-based compounds.

Headquartered in Canada and founded in 2019, Cybin is operational in Canada, the United States, the United Kingdom, the Netherlands and Ireland. For company updates and to learn more about Cybin, visit www.cybin.com or follow the team on Twitter, LinkedIn, YouTube and Instagram.

About Kernel

Kernel has built a new class of functional neuroimaging technology that is scalable and easy to use, Kernel Flow. The Flow technology is a headset that maintains the data quality of research systems that have come before it, allowing Kernel to build robust brain-based biomarkers. These biomarkers enable a new field of precision neuromedicine, a transformative approach using brain data to inform mental and brain health. Similar to the way that genetic screening has revolutionized the understanding and

treatment of cancer, brain data will personalize and accelerate neuromedicine.

Cautionary Notes and Forward-Looking Statements

Certain statements in this news release relating to the Company are forward-looking statements and are prospective in nature. Forward-looking statements are not based on historical facts, but rather on current expectations and projections about future events and are therefore subject to risks and uncertainties which could cause actual results to differ materially from the future results expressed or implied by the forward-looking statements. These statements generally can be identified by the use of forward-looking words such as “may”, “should”, “could”, “intend”, “estimate”, “plan”, “anticipate”, “expect”, “believe” or “continue”, or the negative thereof or similar variations. Forward-looking statements in this news release include statements regarding the anticipated results and potential uses of Kernel’s Flow1 technology; the ability of Kernel Flow1 to potentially assist in and/or serve as a tool in respect of the identification and development of treatment regimens; and the Company’s plans to engineer proprietary drug discovery platforms, innovative drug delivery systems, novel formulation approaches and treatment regimens for mental health conditions.

These forward-looking statements are based on reasonable assumptions and estimates of management of the Company at the time such statements were made. Actual future results may differ materially as forward-looking statements involve known and unknown risks, uncertainties, and other factors which may cause the actual results, performance, or achievements of the Company to materially differ from any future results, performance, or achievements expressed or implied by such forward-looking statements. Such factors, among other things, include: implications of the spread of COVID-19 on the Company’s operations; fluctuations in general macroeconomic conditions; fluctuations in securities markets; expectations regarding the size of the psychedelics market; the ability of the Company to successfully achieve its business objectives; plans for growth; political, social and environmental uncertainties; employee relations; the presence of laws and regulations that may impose restrictions in the markets where the Company operates; and the risk factors set out in each of the Company’s management’s discussion and analysis for the year ended March 31, 2023, and the Company’s annual information form for the year ended March 31, 2023, which are available under the Company’s profile on www.sedar.com and with the U.S. Securities and Exchange Commission on EDGAR at www.sec.gov. Although the forward-looking statements contained in this news release are based upon what management of the Company believes, or believed at the time, to be reasonable assumptions, the Company cannot assure shareholders that actual results will be consistent with such forward-looking statements, as there may be other factors that cause results not to be as anticipated, estimated or intended. Readers should not place undue reliance on the forward-looking statements and information contained in this news release. The Company assumes no obligation to update the forward-looking statements of beliefs, opinions, projections, or other factors, should they change, except as required by law.

Cybin makes no medical, treatment or health benefit claims about Cybin’s proposed products. The U.S. Food and Drug Administration, Health Canada or other similar regulatory authorities have not evaluated claims regarding psilocybin, psychedelic tryptamine, tryptamine derivatives or other psychedelic compounds. The efficacy of such products has not been confirmed by approved research. There is no assurance that the use of psilocybin, psychedelic tryptamine, tryptamine derivatives or other psychedelic compounds can diagnose, treat, cure or prevent any disease or condition. Rigorous scientific research and clinical trials are needed. Cybin has not conducted clinical trials for the use of its proposed products. Any references to quality, consistency, efficacy and safety of potential products do not imply that Cybin verified such in clinical trials or that Cybin will complete such trials. If Cybin cannot obtain the approvals or research necessary to commercialize its business, it may have a material adverse effect on Cybin’s performance and operations.

Neither the Neo Exchange Inc. nor the NYSE American LLC stock exchange have approved or disapproved the contents of this news release and are not responsible for the adequacy and accuracy of the contents herein. 

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