

# Bright Minds Biosciences Provides Scientific Update on its Novel 5-HT<sub>2A</sub> Psychedelic Program for the Treatment of Mental Diseases

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– Hundreds of *de novo* patentable psychedelic-based compounds created through discovery program –  
– Company plans to announce lead molecule in first quarter of 2022 –

Vancouver, BC – November 30, 2021 – Bright Minds Biosciences (“Bright Minds,” “BMB” or the “Company”) (Nasdaq: DRUG) (CSE: DRUG), a biotechnology company focused on developing novel drugs for the targeted treatment of neuropsychiatric disorders, epilepsy, and pain, today provided a scientific update on the advancement of its novel 5-HT<sub>2A</sub> psychedelic program for the treatment of mental diseases.

“Our 5-HT<sub>2A</sub> psychedelic drug discovery program is showing clear signs of success,” stated Dr. Alan Kozikowski, Ph.D., Chief Scientific Officer and Co-founder of Bright Minds. “To date, we have synthesized hundreds of *de novo*, novel compounds in our discovery program and are currently optimizing a select handful of the most encouraging molecules to take into late preclinical development. We are currently on track to announce our lead molecule in this program in the first quarter of 2022.”

To select compounds with the best pharmacological profile to advance in clinical trials, Bright Minds uses intelligent drug design, advanced molecular modeling, together with scientifically rigorous evaluation in preclinical models, including 5-HT<sub>2</sub> receptor pharmacology, rodent head twitch assays, and ADME/PK studies. This data-driven decision process de-risks Bright Minds’ proprietary compounds and maximizes the chance of success in clinical trials.

“Relative to the first-generation psychedelic drug class such as psilocybin,” Dr. Kozikowski continued, “we are looking to engineer novel compounds that possess single-digit nanomolar potency at the 2A receptor, with comparable or significant selectivity over the 2C receptor, and *de minimis* activity at the 2B receptor, if any. Effectively, we aim to bring a more potent and safer investigational drug forward, with a significantly shorter ‘trip time,’ and that is exactly what we have found with these compounds. Importantly, all these molecules are New Chemical Entities, or NCEs, that will enjoy 20+ years of patent protection.”

Ian McDonald, Bright Minds’ Chief Executive Officer and Co-founder, stated, “Bright Minds has, what we believe to be, the largest and most advanced psychedelic drug discovery program in history. The resultant portfolio of compounds we have generated from these research efforts has a range of distinct profiles and broad applicability across a host of known diseases, including depression and PTSD. Through our scientific approach to psychedelic medications, we are committed to developing treatments for devastating illnesses and potentially bettering the lives of hundreds of millions of patients. The need has never been more urgent, and we see a significant commercial opportunity for Bright Minds.”

Bright Minds’ novel psychedelic compounds comprise a variety of different chemical scaffolds, and not just those comparable to psilocybin. This differentiated strategy enables a tailored approach to generating diverse pharmacological profiles and empowers Bright Minds to create customized solutions to a variety of medical diseases with high unmet need.

## About Mental Disease

In the U.S., 1 in 4 adults experience some form of mental disease, including depression, anxiety, and post-traumatic stress disorder (PTSD), while 1 in 24 has a serious mental disease, and 1 in 12 has **substance use disorder**, with **comorbidities** being common. Depression is the single largest contributor to global disability and leads to 800,000 **suicide deaths per year**. Major depressive disorder impacts 300 million people worldwide, and 100 million of these are **resistant to current treatments**. Treatment resistant depression causes higher mortality than treatable depression and medical costs are **2 to 3 times greater**. One in 11 people will be diagnosed with **PTSD** during their lifetime. Drugs to treat mental diseases globally were worth \$37 billion in 2020, and the market is projected to grow to \$59 billion by **2031**. Serotonin (5-HT) is one of the most important neurotransmitters influencing mental health and is a target for **next-generation pharmacological treatments**.

## About Bright Minds

Bright Minds is focused on developing novel transformative treatments for neuropsychiatric disorders, epilepsy, and pain. Bright Minds has a portfolio of next-generation serotonin agonists designed to target neurocircuit abnormalities that are responsible for difficult to treat disorders such as resistant epilepsy, treatment resistant depression, PTSD, and pain. The Company leverages its world-class scientific and drug development expertise to bring forward the next generation of safe and efficacious drugs. Bright Minds' drugs have been designed to potentially retain the powerful therapeutic aspects of psychedelic and other serotonergic compounds, while minimizing the side effects, thereby creating superior drugs to first-generation compounds, such as psilocybin.

## Forward-Looking Information and Additional Cautionary Language

This news release contains statements and information that, to the extent that they are not historical fact, may constitute "forward-looking information" within the meaning of applicable securities legislation. Forward-looking information may include financial and other projections, as well as statements regarding future plans, objectives or economic performance, or the assumption underlying any of the foregoing. This news release uses words such as "may," "would," "could," "likely," "expect," "anticipate," "believe," "intend," "plan," "forecast," "project," "estimate," "outlook," and other similar expressions to identify forward-looking information. The forward-looking statements and information in this news release include information relating to the Company's progress towards first-in-human trials and the advancement of the Company's drug candidates. Forward-looking information involves significant risks, assumptions, uncertainties and other factors that may cause actual future results or anticipated events to differ materially from those expressed or implied in any forward-looking statements and accordingly, should not be read as guarantees of future performance or results. Assumptions used to develop the forward-looking information in this news release includes the assumption that the development and testing of the Company's drug candidates, operations, market, marketing plans and strategies, competitive conditions, future developments, and proprietary protections continue as projected.

Actual results, performance or achievement could differ materially from that expressed in, or implied by, any forward-looking information in this news release and, accordingly, readers should not place undue reliance on any such forward-looking information. Further, any forward-looking statement speaks only as of the date on which such statement is made. New factors emerge from time to time, and it is not possible for management to predict all of such factors and to assess in advance the impact of each such factor on the Company's business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. The Company does not undertake any obligations to update any forward-looking information to reflect information, events, results, circumstances or otherwise after the date hereof or to reflect the occurrence of unanticipated events, except as required by law.

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**We'll keep you posted on developments.**

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