

# Nova Mentis Expands Psilocybin Research Program Targets Obesity and Diabetes

VANCOUVER, BC, Sept. 7, 2021 /CNW/ - **Nova Mentis Life Science Corp.** (CSE: NOVA) (FSE: HN3Q) (OTCQB: NMLSF) ("**NOVA**" or the "**Company**"), a biotechnology company and global leader in first-in-class psilocybin-based therapeutics and complementary diagnostics for neuroinflammatory disorders, is pleased to announce that it is expanding its psilocybin research and development program to target obesity and diabetes.

NOVA recently finished three successful preclinical psilocybin treatments of rats with symptoms of autism spectrum disorder (ASD). Besides amelioration of anxiety and cognition issues in the ASD rats, as compared to controls, without significant psychedelic side effects, NOVA's collaborative partners uncovered additional significant findings regarding inflammatory cytokines and chemokines, including their response to certain psilocybin dosing. These exciting unsuspected findings strongly suggest that NOVA's proprietary psilocybin formulation has potential application to treatment of obesity, as well as diabetes related to obesity – "diabesity."

Scientific studies have shown that there is a role for serotonin receptors such as 5-HT<sub>2C</sub> in the regulation of body weight and food intake. Mice without this receptor displayed an obese phenotype and epilepsy. 5HT<sub>2C</sub> receptors, regulate nerve excitability, are also implicated in ASD and react to psilocybin <sup>(1)</sup>. Significantly, the US Food and Drug Administration (FDA) has approved the serotonin (5-hydroxytryptamine, 5-HT) 5-HT<sub>2C</sub> receptor agonist lorcaserin for the treatment of obesity which represents a new therapeutic drug class available to the clinic. Targeting serotonin receptors with agonists such as psilocybin opens the door for a new class of therapy for diabesity.

"I am particularly excited that the ASD rat model that NOVA has tested in the laboratory of Dr. Viviana Trezza in Rome, Italy, has revealed inflammatory receptor technology that can be utilized in studying the potential role of psilocybin in control of obesity and diabetes," stated Dr. Marvin S. Hausman MD, Chairman of NOVA's Scientific Advisory Board. "NOVA's technology has shown that its proprietary compound, psilocybin, can influence levels of inflammatory chemokines/cytokines that transmit physiologic messages with the potential to influence responses within the serotonergic system. A diagnostic mRNA genetic inflammatory panel is being developed with the assistance of [Thermo Fisher Scientific](#) and this panel will be studied in ASD individuals in an upcoming IRB approved observational clinical study."

There is a global presence of diabesity in almost epidemic proportions <sup>(2,3)</sup>. Current options include bariatric surgery and medical management including pharmacologic agents, but there remains no consensus approach as to how to control diabesity. Long term management appears to require varying combinations of anti-diabetic and anti-obesity medications. Current majority opinions of companies in the psychedelic field are to focus on use of a psychedelic compound as part of psychotherapy, so-called drug-enhanced psychotherapy. NOVA's recent finding of psilocybin's effect on specific inflammatory cytokine clinical biomarkers opens the door to a potentially novel approach to control diabesity.

"These exciting findings may be extremely promising in the treatment of diabesity. Because inflammation plays an important role within the adipocyte and other organs, attenuating the inflammatory response, leading to decreased dysfunction, may significantly impact the short and long-term complications seen in those living with obesity and diabetes," stated Dr. Stephen A. Glazer MD, NOVA's Chief Science Officer.

#### References:

1. Fletcher PJ et al. Characterizing the effects of 5-HT<sub>2C</sub> receptor ligands on motor activity and feeding behaviour in 5-HT<sub>2C</sub> receptor knockout mice. *Neuropharm* 2009; 57: 259-267.
2. World Health Organization. 2015 Obesity and overweight. Geneva: World Health Organization. <http://www.who.int/mediacentre/factsheets/fs311/en/>.
3. Ogden CL et al. Prevalence of childhood and adult obesity in the United States, 2011-2012. *JAMA*. 2014; 311:806-14.

## **About Nova Mentis Life Science Corp.**

Nova Mentis Life Science Corp. is a Canadian-based biotechnology company and global leader in developing diagnostics and psilocybin-based therapeutics for neuroinflammatory disorders. The goal is to diagnose and treat debilitating chronic conditions that have unmet medical needs, such as autism spectrum disorder (ASD) and Fragile X Syndrome (FXS).

### **On Behalf of the Board**

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