



Nova Mentis Establishes Serotonin Research Centre

New Partnership with FourthWall Testing

VANCOUVER, BC, March 31, 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 establishing a serotonin research centre in partnership with FourthWall Testing, in Winter Garden, Florida.

NOVA's neuroinflammatory research program is based on identifying biomarkers that can be used to confirm the therapeutic efficacy of its proprietary psilocybin-based drug portfolio.

NOVA intends to launch a longitudinal data bank to support large-scale studies of the microbiome, its relationship to serotonin activity and behavioral metrics as they relate to autism spectrum disorder (ASD). An initial focal point will be an observational study of individuals diagnosed with ASD and fragile X syndrome (FXS).

The Company recently announced that its proprietary psilocybin drug was able to modulate anxiety-like behaviour in a valproic acid (VPA) rat autism model. This experiment was performed in collaboration with the laboratory of Dr. Viviana Trezza, Roma Tre University, Rome, Italy.

"It is NOVA's intent to identify specific microbes that may contribute to the development of ASD," stated Marvin S. Hausman MD, Chairman of NOVA's Scientific Advisory Board. "What is also most interesting is that 95 per cent of the body's serotonin is produced by intestinal cells as well as bacteria in the human gut; only 5 per cent is produced in the brain. Serotonin is a key hormone that enables brain cells and other nervous system cells to communicate with each other. Our newly-launched serotonin research centre, as well as our research partnerships with [Microbiome Insights](#) and [Thermo Fisher Scientific](#), provides us with the ability to discover potential biologic activities that lead to development of ASD and gives us a needed handle to assess treatment response of autistic children."

The gut-brain axis is becoming a major discussion topic at neuroscience meetings and recent publications have shown that the trillions of bacteria in the gut could have a profound effect on the brain^{1,2}. Studies in mice suggest that an infection in pregnancy can stimulate immune cells to produce molecules that travel to the fetus's brain and provoke autism-like behaviour³.

There is communication between the enteric (bowel/gut) nervous system ([ENS](#)) and the brain. Dysfunction of the ENS is associated with swallowing problems, excess saliva, mild diarrhea, bowel obstructions and [inflammatory bowel disease \(IBD\)](#). [ASD](#) and [Parkinson's disease \(PD\)](#) are two neurological disorders with signs of ENS involvement, as both are associated with gastrointestinal (gut) symptoms early in the disease course.

Increasing our understanding of ENS involvement in these intestinal and neuroinflammatory conditions could lead to early detection, suggest possible intervention and be a biologic marker for

successful treatment response.

The NOVA research centre will be able to determine quantitative amounts of serotonin in fecal, blood and urine samples. Samples from the recently-completed VPA rat ASD study in the laboratory of Dr. Trezza are being shipped to the research centre. Fecal samples were collected from pregnant rats before and after VPA exposure as well as from the autistic offspring before and after psilocybin treatment. The research objective is to develop an analytic deep learning computer program that can analyze the data and identify specific developmental subsets of ASD that can be potentially treated with psilocybin therapy.

"Amassing a large volume of shotgun sequencing data, along with data on a neurotransmitter thought to be involved in the etiology of a poorly-understood disease like ASD will enable us to develop new methods for understanding the relationship between the microbiota community, serotonin levels and disease severity," said Dr. Kyle H. Ambert, who is the Director of Data Science at Nike, Inc. and a member of NOVA's Scientific Advisory Board.

The serotonin research centre also intends to analyze fecal, urine and blood samples from ASD and FXS individuals in the United States and Canada. An Institutional Review Board (IRB) approved clinical study has been launched by NOVA. A listing on [ClinicalTrials.gov](https://clinicaltrials.gov) and formal start of recruitment in the U.S. will begin in the coming days.

NOVA's research objective is to shed light on the mechanisms underlying the developmental disorder called ASD. Measuring serotonin levels alongside other biomarkers may also allow families of autistic individuals to assess disease progression and monitor response to therapeutic intervention.

Further, the Company announces that it terminated the agreement dated December 6, 2017 (the "Agreement") whereby the Company acquired shares (based on certain milestones achieved) in Just Kush Enterprises Ltd ("Just Kush"), as announced on December 7, 2017.

The Company and Just Kush have agreed to terminate the Agreement as it contained several material provisions which are now impossible to perform due to a change in the respective statutory regime. Specifically, the Agreement contained milestones which must be met in order for substantial consideration to flow between certain of the parties and certain other obligations to cease, and these milestones were based upon grants of licensing under the Access to Cannabis for Medical Purposes Regime which was revoked and replaced by the Cannabis Act and Cannabis Regulations before said licenses were granted.

Pursuant to the termination agreement, purchase proceeds and advances paid by the Company pursuant to the terms of the Agreement will be returned or repaid to the Company at a later date pursuant to a loan agreement and the Company shall return all shares in the capital stock of Just Kush to the original shareholders. Just Kush has returned for cancellation 1,250,000 shares of the Company. The Company has also entered into a loan repayment agreement with Just Kush for certain funds advanced by the company under the build-out loan plan.

1. Neurogastroenterol Motil 2011 Mar;23(3):255-64. Reduced anxiety-like behavior and central neurochemical change in germ-free mice
[K M Neufeld](#) , [N Kang](#), [J Bienenstock](#), [J A Foster](#)
2. [The microbiome-gut-brain axis: from bowel to behavior.](#) Cryan JF, O'Mahony SM. Neurogastroenterol Motil. 2011 Mar;23(3):187-92. doi: 10.1111/j.1365-2982.2010.01664.x.
3. How gut microbes could drive brain disorders. Nature Briefing. 08February2021

About FourthWall Testing

A subsidiary of Epitome Risk Solutions, FourthWall Testing is a private lab led by industry experts with more than 70 years of combined experience in drug research and development, as well as risk management services for the entertainment and sporting industries.

For more information, please visit: <https://www.epitomerisk.com/fourthwall-testing/>

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.

On Behalf of the Board

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For further information: For further information on the Company, please visit <https://www.novamentis.ca> or email info@novamentis.ca.

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