



GREENSTAR
BIOSCIENCES

GREENSTAR BIOSCIENCES ANNOUNCES FILING OF FOURTH PROVISIONAL PATENT APPLICATION

Fourth provisional patent application strengthens IP portfolio of therapeutics for the treatment of mild traumatic brain injuries (mTBI) with PTSD or PTSD alone.

August 5, 2020 Vancouver, British Columbia - GreenStar Biosciences Corp. ("**GreenStar**" or the "**Company**") (CSE: GSTR) (OTC Pink: GTSIF) is pleased to announce that its wholly-owned subsidiary, Eleusian Biosciences Corporation ("**Eleusian**"), has filed a new provisional patent application, adding to the overall existing intellectual property portfolio of the Company. This application further expands the portfolio of proprietary psychedelic therapeutics available to GreenStar and strengthens the intellectual property ("**IP**") portfolio for treatment of neuropsychiatric disorders with psychedelic compounds.

The new provisional patent application entitled "Methods and Compositions for Treating Post Traumatic Stress Disorder or Mild Traumatic Brain Injury with Post Traumatic Stress Disorder" includes methods and kits for alleviating unwanted memories and emotions lined with post-traumatic stress disorder ("**PTSD**") or mild traumatic brain injury ("**mTBI**") with PTSD. Individuals in need are administered a psilocybe-derived agent and N-acetylcysteine ("**NAC**") in combination with memory-odor imprint pairing. Memory-odor imprint pairing involves eliciting a Pavlovian reaction to an odor by exposure to the odor immediately or shortly after a trauma or electively any time thereafter during memory of the trauma, followed by multiple odor-memory pairing sessions. Elimination of the ability to smell the odor is expected to suppress or eradicate the Pavlovian reaction and therefore also alleviate or eradicate the unwanted negative memories and emotions associated with the trauma.

A novel nasal mist transducer can be used to deliver these agents. The transducer is encompassed under a prior provisional patent application filed by Eleusian in April 2020. The nasal mist transducer provides a simple, efficient and rapid means of delivering one or more pharmaceutical ingredients (such as a psilocybe-derived agent, NAC and an odor used in odor-memory pairing). The fine mist particles enter the nasal cavity vestibule at close proximity to the olfactory bulb where the deep and superficial veins drain directly to the circulatory system of the brain. Such delivery provides for fast absorption with almost instantaneous drug penetration of the blood-brain barrier. The result is superior access of active pharmaceutical ingredients to the brain and enhanced clinical and physiological effects as compared to presently available nasal and non-nasal drug dispensing devices and formulations.

"We continue to build our IP portfolio and this fourth patent application further strengthens our overall IP position as we continue to develop our technologies and work with our collaboration partners at the Miller School of Medicine at the University of Miami," said Maghsoud Dariani, CSO of GreenStar. "We have taken a strategic approach with our development efforts to ensure all of our IP effectively works together as we develop an entire system for the treatment of mTBI and PTSD. Not only is the Company focused on treatments for mTBI and PTSD, but also developing novel, easy and effective delivery methods for such treatments to be effectively administered. Our latest patent application was developed specifically with the nasal mist transducer in mind. Together, this combination can represent a new and exciting level of treatment for affected persons."

“We are very pleased with the development efforts at Eleusian and how that has translated into several recent patent applications,” said Tom Baird, CEO of GreenStar. “As many researchers look to develop treatments using psychedelic medicine, the effective treatment must also include a fast, easy and effective delivery method to reach the target sites in the human brain. We believe the IP development initiatives could be ground-breaking for new treatments and delivery methods for treatment of mTBI and PTSD.”

According to the Centers of Disease Control and Prevention (the “CDCP”), traumatic brain injury (“TBI”) is a major cause of death and disability in the United States. According to the CDCP, the number of TBI-related emergency department visits, hospitalizations, and deaths increased by 53% from 2006 to 2014. TBI cases can range from mild to severe. Mild TBI is the most prevalent form of TBI and effects can include physical symptoms such as loss of consciousness, headache, nausea, fatigue, dizziness and others, sensory problems such as blurred vision, ringing in the ears and sensitivity to light and sound, and cognitive or mental symptoms such as memory problems, mood changes and feelings of depression. These issues not only affect individuals with TBI, but can also have lasting effects on families and communities. According to the U.S. Department of Veterans Affairs, National Center for PTSD, about 7-8% of the U.S. population will have PTSD at some point in their lives and about 8 million U.S. adults have PTSD during a given year. PTSD is a mental health condition that can affect anyone, with potentially long lasting effects. PTSD and TBI have similar symptoms and often coexist because brain injuries are often sustained in traumatic experiences and there is increasing evidence that mTBI can increase risk for PTSD.

About GreenStar

GreenStar is a growth-oriented technology & services company that provides real estate, financial, management, IP & branding support to businesses. The Company operates a growing portfolio of tenant partner companies focused on developing transformational medicines and applies refined strategies to help partner companies reach their full potential. Based in Vancouver, BC, GreenStar intends to facilitate growth through acquisitions and development of additional assets, products and technologies by leveraging its capital markets, branding and operational expertise.

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