



Revive Therapeutics Signs Exclusive Worldwide License Agreement For Medicinal Mushroom Ganoderma Lucidum To Treat Cancer

- Novel discovery and research originated from Universidad Central del Caribe and St. Jude Children's Research Hospital
- Medicinal mushroom compound with anticancer activities that have minimal effects on normal cells
- Showed superior potency against aggressive breast cancer with potential to treat aggressive malignancies such as triple negative and inflammatory breast cancers
- Advancing IND-enabling studies for FDA clinical trials

TORONTO, Aug. 17, 2021 (GLOBE NEWSWIRE) -- Revive Therapeutics Ltd. ("Revive" or the "Company") (OTCQB: RVVTF) (CSE: RVV) (FRANKFURT:31R), a specialty life sciences company focused on the research and development of therapeutics for medical needs and rare disorders, is pleased to announce that Revive has entered into an exclusive license agreement (the "Agreement") with Puerto Rico Science Technology and Research Trust ("PRSTRT"), representing Universidad Central del Caribe ("UCC") and St. Jude Children's Research Hospital ("St. Jude"), for the intellectual property ([International Patent Application No. PCT/US2020/017053/](#)) titled, Biologically Active Ganoderma Lucidum Compounds and Synthesis of Anticancer Derivatives; Ergosterol Peroxide Probes for Cellular Localization. Researchers at St. Jude and UCC have characterized medicinal mushroom Ganoderma lucidum compounds with anti-cancer activity, specifically significant activity against breast cancer, thus having the potential to treat the most aggressive types of breast cancers such as triple negative breast cancer and inflammatory breast cancer.

Michael Frank, CEO of the Company commented, "We are very excited about the new addition to our clinical-stage product pipeline as part of our long-term strategy of unlocking the therapeutic potential of medicinal mushrooms such as psilocybin and Ganoderma lucidum to treat mental health, substance abuse and aggressive cancers. Our intention is to build off from the research conducted at St. Jude Children's Research Hospital and UCC by advancing towards FDA IND-enabling studies to allow for human clinical studies."

Medicinal mushroom Ganoderma lucidum has been used in traditional Chinese medicine for more than two millennia. The Ganoderma lucidum extract ("GLE") has been linked to improved length and quality of life, and it does not interfere with conventional therapy. Indeed, commercially available GLE is used in the prevention and treatment of hypertension, cancer, and immunological disorders. Furthermore, research suggests that GLE selectively inhibits breast cancer viability, induces apoptosis, reduces invasion, regulates key signaling molecules, and reduces tumor size by approximately 50% in mice xenografts.

Despite the well-established therapeutic uses of GLE, the organic compounds responsible for its biological activity had not been identified. The chemical characterization of the compounds responsible for the biological activity of GLE is imperative to design and test derivatives with improved efficacy and safety profiles.

The licensed invention elucidated the chemical structure of the most abundant chemical constituents of GLE and determined their efficacy in different aggressive breast cancer models. Several natural compounds were identified and three showed significant anticancer activity (ergosterol, 5,6-dehydroergosterol, and ergosterol peroxide). In particular, one of these compounds, ergosterol peroxide, exerts selective effects on cancer cell viability, similar to the effects produced when using whole mushroom extract GLE, suggesting an ample therapeutic window. Ergosterol peroxide displays anti-proliferative effects through G1 phase cell cycle arrest, apoptosis induction via caspase 3/7 activation and PARP cleavage, decreases migration and invasion while inhibiting the expression of total AKT1, AKT2, BCL-XL, Cyclin D1 and c-Myc, induces ROS formation, and inhibits tumor growth in vivo. This technology further includes ergosterol peroxide chemical probes for in vitro anticancer evaluation, live cell studies, and proteomic profiling.

Peer reviewed papers related to the licensed intellectual property includes:

- Ling, Taotao, Walter H. Lang, Michelle M. Martinez-Montemayor, and Fatima Rivas. 2019. "Development of Ergosterol Peroxide Probes for Cellular Localisation Studies." *Organic & Biomolecular Chemistry* 17(21): 5223–29.
- Martinez-Montemayor, Michelle M. et al. 2019. "Identification of Biologically Active Ganoderma Lucidum Compounds and Synthesis of Improved Derivatives That Confer Anti-Cancer Activities in Vitro." *Frontiers in Pharmacology* 10: 115.

Under the terms of the Agreement, Revive gained exclusive worldwide development and commercial rights to intellectual property ([International Patent Application No. PCT/US2020/017053/](#)) titled, Biologically Active Ganoderma Lucidum Compounds and Synthesis of Anticancer Derivatives; Ergosterol Peroxide Probes for Cellular Localization.

Revive, PRSTRT and St. Jude agreed to terms consistent with industry standards, including future payments based on clinical trial and revenue milestones.

About Revive Therapeutics Ltd.

Revive is a life sciences company focused on the research and development of therapeutics for infectious diseases and rare

disorders, and it is prioritizing drug development efforts to take advantage of several regulatory incentives awarded by the FDA such as Orphan Drug, Fast Track, Breakthrough Therapy and Rare Pediatric Disease designations. Currently, the Company is exploring the use of Bucillamine for the potential treatment of infectious diseases, with an initial focus on severe influenza and COVID-19. With its recent acquisition of Psilocin Pharma Corp., Revive is advancing the development of Psilocybin-based therapeutics in various diseases and disorders. Revive's cannabinoid pharmaceutical portfolio focuses on rare inflammatory diseases and the company was granted FDA orphan drug status designation for the use of Cannabidiol (CBD) to treat autoimmune hepatitis (liver disease) and to treat ischemia and reperfusion injury from organ transplantation. For more information, visit www.ReviveThera.com.

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