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Inspire Biotherapeutics Launches with Pre-seed Investment to Target Monogenic and Acquired Lung Diseases with Proprietary AAVenger Gene Therapy Platform.

- The AAVenger platform has demonstrated superior lung tropism and transduction efficiency of cells in the upper and lower respiratory tract of the lung, rapid and sustained expression of therapeutic transgenes, and is amenable to repeat dosing.
- Inspire's Business Founders – C3i Center Inc, Octane Medical Group of Companies, and Ontario Institute for Regenerative Medicine – are providing investment, corporate development, and commercialization strategy.

TORONTO (BUSINESS WIRE) —Inspire Biotherapeutics Inc. (“Inspire”), an emerging biotech company with a mission to create life-saving gene therapies for monogenic and acquired diseases of the lung, is poised to move its novel lung tropic AAV gene therapy into clinical validation.

The AAVenger platform has demonstrated transduction and long-term expression in lung tissue without impact on other tissue types in disease-relevant animal models. The platform can be applied to treat cystic fibrosis, interstitial lung disease, pulmonary fibrosis, and other monogenic lung diseases.

Inspire's scientific founders – Dr. Bernard Thébaud, chief medical officer, – a neonatologist and cell therapy pioneer in neonates - and Dr. Sarah Wootton, chief scientific officer, – a vectorologist with extensive AAV experience – say they are pursuing initiation of a first-in-human clinical trial for a lethal neonatal lung disease with short time to data readout and success of therapy.

“Identifying vectors that can effectively deliver and express therapeutic transgenes in the lung has been a major challenge in realizing a curative gene therapy for genetic lung diseases,” says Thébaud, “The AAVenger platform has demonstrated quick and sustained expression and is amenable to repeated dosing in lung tissue.”

“Inspire’s AAVenger technology is tackling critical unmet need in diseases of the lung,” says Sandra Donaldson, chief executive officer for Inspire. “Our lead indication is currently fatal in neonates – we are compelled to get this across the finish line! A near-term clinical trial in this fragile population will validate Inspire’s AAVenger platform.”

The company launch is supported by three business founders – C3i Center Inc., Octane Medical Group of Companies, and the Ontario Institute for Regenerative Medicine – with deep expertise in company creation, translational teams, and regenerative medicine commercialization.

Inspire will be attending the Alliance for Regenerative Medicine’s Cell & Gene Meeting on the Mediterranean April 12-14, 2023, in Barcelona to engage investors and partners in a first-in-human clinical trial in a lethal neonatal lung disease model with short time to data readout and success of therapy.

About Inspire

Inspire’s mission is to create life-saving gene therapies for monogenic and acquired diseases of the lung. Inspire has developed a lung tropic AAV gene therapy platform that has demonstrated transduction and long-term expression in lung tissue without impact on other tissue types in disease-relevant animal models. Inspire is currently pursuing initiation of a First-in-Human clinical trial for a lethal neonatal lung disease with short time to data readout and success of therapy. The platform can apply to cystic fibrosis, interstitial lung disease, pulmonary fibrosis, and other monogenic lung diseases. <https://www.inspirebiotx.com/>

About C3i Center Inc.

C3i Center Inc. is a leading CDMO offering turnkey services in the development and commercialization of cell and gene therapies, including CRO, biomarker development immune monitoring services to the pharmaceutical and biotechnology industry. In addition, C3i supports Canadian innovations through both cash and in-kind contributions. Founded in 2016, it is based in Montréal, Québec with a satellite office in the MaRS Discovery District in Toronto, Ontario. C3i Laboratories Inc. is based in Laval, Québec. <http://centrec3i.com>

About Octane Medical Group of Companies

Octane transforms healthcare with advanced bioprocesses, biomaterials and bioreactors that drive next-generation products in regenerative medicine. One of Octane’s lead technologies, Cocoon™, is a patient-scale cell therapy system that forms the core of a series of versatile cell and tissue therapy production systems. Unlike other bioreactor systems, this platform integrates multiple steps, including upstream and downstream processing. From cell source isolation and cell expansion, through to cell collection, cell washing and final product formation – all in a closed, single-use disposable cassette. <https://octaneco.com/>

About Ontario Institute for Regenerative Medicine

The Ontario Institute for Regenerative Medicine (OIRM) is a non-profit stem cell institute dedicated to transforming discoveries into clinical trials and cures. Through our commitment to collaboration and partnerships, we leverage our resources to fund and support promising

advances. OIRM is a passionate champion for investigators and their patients as we build a healthier future for Ontario, Canada, and the world. <https://oirm.ca>

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