Emily’s Entourage Grants $220k to Queen’s University Belfast to advance OmniSpirant’s Gene Therapy for Cystic Fibrosis

OmniSpirant’s innovative technology platform aims to deliver inhaled gene therapy directly to the lung to treat the underlying cause of cystic fibrosis (CF)

GALWAY, IRELAND, February 20, 2023 /EINPresswire.com/ -- Emily’s Entourage (EE), an innovative 501(c)3 foundation that accelerates research for new treatments and a cure for the final 10% of people with cystic fibrosis (CF), including those with nonsense mutations, today announced it has awarded $220,000 in funding to Lorraine Martin, PhD, of Queen’s University Belfast to support the development of a novel regenerative gene therapy platform technology that may provide a new treatment approach for people with CF, including individuals with nonsense mutations.

> “OmniSpirant is developing OS001, a first-in-class regenerative gene therapy for Cystic Fibrosis, and we have demonstrated promising results in preclinical disease models”
>
> *Gerry McCauley, Founder & CEO, OmniSpirant Therapeutics*

In addition to funding from EE, Cystic Fibrosis Trust, the UK's leading charity supporting people with cystic fibrosis, has provided a grant from their Venture and Innovation Award fund to support Professor Martin’s pioneering research. This co-funding model reflects EE’s focus on forming collaborative funding partnerships with other organizations to maximize its impact in areas that align with EE’s research priorities.

Professor Martin and her team at Queen’s will work collaboratively with OmniSpirant Therapeutics, an Irish biotechnology company to advance the development of the inhaled gene therapy platform.

“We are excited to progress the development of OS001 with EE funding in partnership with Queen’s University Belfast. We believe OS001 has the potential to restore leading levels of CFTR activity regardless of CF genotype. We are incredibly grateful for the support and scientific

expertise of Emily's Entourage and the Trust, which will allow OmniSpirant to advance this potentially game-changing therapeutic program in collaboration with Professor Martin", said Gerry McCauley, Founder, and Chief Executive Officer, OmniSpirant.

OmniSpirant's technology is based on its proprietary OmniSome platform technology, which utilises biological, non-viral nanoparticles called extracellular vesicles (EVs) that are produced from stem cells. Nonsense mutations of CF result in truncated and nonfunctional cystic fibrosis transmembrane conductance regulator (CFTR) protein. The gene therapy is engineered to transport and deliver a genetic, protein-making template for the full length CFTR protein, thus addressing CF at the genetic level.

Gerry McCauley, Founder & CEO, OmniSpirant Limited

Lorraine Martin, PhD, Professor, School of Pharmacy, Queen's University Belfast

"By addressing the underlying cause of CF, the gene therapy technology developed by OmniSpirant in collaboration with Professor Martin's lab has the potential to treat the majority of people with CF regardless of genetic mutation, including those with nonsense and rare mutations," said Chandra Ghose, PhD, EE's chief scientific officer. "This is a significant grant for EE. It is our first time co-funding a grant with Cystic Fibrosis Trust. In addition, it represents the diversification of our grant funding mechanisms, including for public/private partnerships, which are designed to accelerate therapeutic development for the final 10%."

Funding from EE and the Trust will allow Professor Martin's team at Queen's to conduct additional preclinical studies including functional gene transfer studies and safety studies – an important part of advancing the technology toward future clinical trials.

"We are thrilled to partner with Emily's Entourage for the first time through this collaborative grant," said Dr Lucy Allen, Director of Research and Healthcare Data, at Cystic Fibrosis Trust. "Developing treatment options for people with CF who cannot take CFTR modulators has recently been identified as the top priority for research by people with cystic fibrosis. It is exciting to jointly support this important work as this technology represents a way to reach people who do not benefit from currently available CF therapies." These two funding sources will significantly contribute to the advancement of biological non-viral therapies and will provide critical support for the development of gene therapy technologies for

nonsense mutations of CF.

“I am really delighted to receive this funding from Emily’s Entourage, and the additional support provided by Cystic Fibrosis Trust, as it will allow us to take the next steps to advance this novel technology,” said Professor Martin, who is based in the School of Pharmacy at Queen’s. “Using this funding, we will conduct further research with the goal of unlocking the extraordinary potential of nucleic acid-based therapeutics for nonsense mutations that cannot be treated with the therapeutics currently approved.”

About Emily’s Entourage:

Since 2011, Emily’s Entourage has awarded millions of dollars in research grants, launched a now-acquired CF gene therapy company, developed a patient registry and clinical trial matchmaking program to accelerate clinical trial recruitment, and led worldwide efforts to drive high-impact research and drug development.

About Cystic Fibrosis Trust:
Cystic Fibrosis Trust is the only UK-wide charity dedicated to uniting for a life unlimited for everyone affected by cystic fibrosis. The Trust provides confidential advice, support, and information on any aspect of cystic fibrosis, including help with financial support.

About OmniSpirant Therapeutics:
OmniSpirant is an Irish biotech founded in 2016 to develop first-in-class inhaled regenerative gene therapies. The OmniSome platform of products are currently being developed as first-in-class inhaled regenerative gene therapies for cystic fibrosis, and lung cancer via the Horizon Europe €12.8M INSPIRE consortium. The company also has plans to use this platform to develop treatments for other lung diseases including alpha-1 antitrypsin deficiency (AATD), acute respiratory distress syndrome (ARDS), and idiopathic pulmonary fibrosis (IPF).

About Queen’s University Belfast:
With a focus on chronic airways diseases, such as cystic fibrosis (CF) and chronic obstructive disease (COPD), Prof. Martin’s group seeks to understand the underlying mechanisms of disease which also includes the characterisation of novel cellular proteins and pathways. Programmes of work include the development of therapeutic strategies to combat airways dehydration, a key factor contributing to disease progression, as well as the characterisation of novel biomarkers to aid earlier diagnosis and disease management.

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