



## **SENISCA awarded Innovate UK grant to develop oligonucleotide therapeutics for the treatment of idiopathic pulmonary fibrosis (IPF).**

Exeter, UK – 20th April 2023: SENISCA, a biotechnology company developing RNA based therapeutics to reverse cellular senescence and target the diseases of ageing, today announces that it has been awarded a £571,350 grant from Innovate UK, the UK's innovation agency, towards the development of oligonucleotide therapeutics for the treatment of idiopathic pulmonary fibrosis (IPF).

Built on 15 years of pioneering research, SENISCA's proprietary technology is harnessing RNA biology to rejuvenate aged 'senescent' cells. Senescent cells behave differently to young, healthy cells in a number of ways, such as ceasing growth or secreting pro-inflammatory chemicals. Senescent cells, with a pro-inflammatory profile and disrupted function, are emerging as causal factors for multiple age-related diseases, including IPF.

IPF is the most common and aggressive form of interstitial lung disease characterised by chronic, progressive fibrosis associated with decline in lung function, progressive respiratory failure, and high mortality. The only currently available treatment options for IPF are palliative and only mildly slow disease progression in a subset of patients. Both the incidence and prevalence of IPF are rising sharply and are predicted to continue to do so, leading to increased pressure on healthcare systems around the world.

SENISCA is developing novel advanced biologic therapies utilising oligonucleotides, short strands of DNA or RNA, engineered by SENISCA to reverse senescence in IPF-specific tissues. SENISCA is developing novel advanced biologic therapies utilising oligonucleotides, short strands of DNA or RNA, engineered by SENISCA to reverse senescence in IPF-specific tissues. Early, compelling preclinical data generated by SENISCA have shown that these proprietary senotherapeutic oligonucleotides have beneficial impact on IPF biomarkers.

The Innovate UK grant will enable SENISCA to rapidly progress preclinical work towards IND filing.

**Professor Lorna Harries, SENISCA's Chief Scientific Officer said:** "Our technology has real disruptive potential for the treatment of the diseases of ageing. This is an exciting research project that will build on the previous work carried out by SENISCA that led to the identification of a new

and druggable set of target genes which enable significant senescence reversal effect in primary human cell models.”

Kirsty Semple, SENISCA's CEO said: “Our ambition is to be the world-leader in the development and use of senotherapeutic oligonucleotides to treat complex disease. This project has the potential to lead to an innovative avenue of investigation for novel IPF therapeutics, capable, for the first time, to attenuate the IPF disease mechanism and potentially to reverse the condition rather than mitigating symptoms only. We are grateful to Innovate UK for their support and look forward to reporting our progress to address this unmet medical need.”

**ENDS**

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### **About SENISCA**

SENISCA is an RNA therapeutics spinout from the University of Exeter, founded in 2020. The company is developing proprietary technology intended to ‘turn back’ the ageing clock in old cells. SENISCA has identified a key component of the cellular ageing response, which can be targeted in the context of multiple pharmacological and aesthetic indications.

The Company develops oligonucleotide and small molecule interventions to manipulate cellular ageing in the context of age-related disease and ageing aesthetics and is building a portfolio of novel interventions which can be mined and commercialised through partnership or co-development models and tailored to meet clinical need.

SENISCA currently has multiple candidate oligonucleotides and small molecules that target its novel mechanism and has completed evaluations of cellular rejuvenation in human primary cell models across 9 different cell types. The company has started ex vivo research and expects to move towards a pre-IND package in 2024.

SENISCA's initial target indications are: Idiopathic Pulmonary Fibrosis, Osteoarthritis, and Age-related Macular Degeneration all of which currently have no cure and for which treatments are only palliative, with varying success rates. These diseases are driven by senescence, are amenable to a local route of administration, and have very high unmet clinical need. Targeting these specific diseases will streamline progress towards the clinic by avoiding potential pitfalls of systemic delivery.

## About Innovate UK

Innovate UK drives productivity and economic growth by supporting businesses to develop and realise the potential of new ideas.

We connect businesses to the partners, customers and investors that can help them turn ideas into commercially successful products and services and business growth.

We fund business and research collaborations to accelerate innovation and drive business investment into R & D. Our support is available to businesses across all economic sectors, value chains and UK regions.

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