TAG Therapeutics announces publication in Nature Aging providing further evidence for efficacy of the TELOBLOCK approach

Vienna, Austria June 30, 2026 – TAG Therapeutics GmbH, a preclinical-stage biotechnology company dedicated to the development of precision medicine approaches for telomere pathologies and aging-related diseases, today announced the publication of research data, generated by a team of scientists coordinated by TAG's scientific co-founder, Fabrizio d'Adda di Fagagna. The results published in Nature Aging, provide further evidence for the potential of TAG's Teloblock technology to effectively address the molecular causes of telomere-related diseases and aging.

With increasing life expectancy, the prevalence of age-related diseases and lifespan burdened with the progressive decline of physiological functions is also increasing. The same process that occurs in physiological aging can manifest itself early and devastatingly in rare genetic diseases called Telomere Biology Disorders. These diseases (e.g. Short Telomere Syndrome, which is the most common pre-mature aging syndrome) are caused by defects in the maintenance of telomeres — the structures that protect the ends of chromosomes and safeguard the integrity of DNA. Critically short telomeres — whether caused by advanced age or impaired telomere-maintenance pathways — trigger an alarm signal that leads to cellular senescence. This cascade of events causes chronic inflammation, stem cell exhaustion, impaired tissue repair, and most often lead to bone-marrow failure, fibrotic diseases (e.g., pulmonary fibrosis), and impaired hematopoiesis and immunity.

The authors of the study today published in Nature Aging chose a fundamentally different approach to counteract cellular senescence and hematopoietic dysfunction resulting from telomere shortening. Instead of trying to restore or lengthen telomeres, the researchers at IFOM, the AIRC Institute of Molecular Oncology in Milan and National Research Council (CNR) in Pavia (Italy), intervene at a key upstream step in the process by interrupting the alarm signaling cascade and thereby preventing its detrimental downstream consequences.

In order to do this, the researchers used the same approach which is currently employed by TAG Therapeutics as a therapeutic platform for the development of treatments against various age-related diseases, primarily Idiopathic Pulmonary Fibrosis (IPF). The Teloblock technology is based on antisense oligonucleotides (ASOs), specifically designed to selectively block the initiating signal, the so-called telomeric DNA Damage Response (tDDR) triggered by eroded telomeres, without interfering with normal cellular functions. This approach has already proven to work effectively in numerous disease models, including idiopathic pulmonary fibrosis (IPF). In the present study, the authors demonstrate that ASO treatment restores the ability of impaired or aged blood stem cells to produce new hematopoietic cells and effectively support the immune system, both in naturally aged animals, in a mouse model of telomere disease, as well as ex vivo with human hematopoietic stem cells from elderly donors.

"This study shows that it is possible to intervene at a specific molecular mechanism related to physiological aging to boost the bone marrow to produce more blood cells and improve immune responses both in a genetically determined rare telomere biology disease, and in physiological aging. Combined with data from our other studies, we conclude that the beneficial effects of blocking the tDDR are relevant beyond the hematopoietic system and as a cumulative effect we see decreased frailty and significantly increased lifespan in aged animals," says Fabrizio d'Adda di Fagagna, scientific co-founder of TAG Therapeutics and Director of the research program Response to DNA damage and cellular senescence at CNR and IFOM.

"These recently published data focusing on hematopoietic dysfunction, further substantiate the therapeutic potential of Teloblock for a wide spectrum of human diseases, going far beyond hematologic disorders", commented Dr. Eszter Nagy, CEO of TAG Therapeutics. "Telomere shortening is a fundamental driver of multiple human pathologies leading to various age-related diseases, such as lung fibrosis, the first clinical target of TAG Therapeutics. Strategies that selectively prevent its harmful downstream effects—while preserving normal physiological functions—hold strong potential for disease-modifying and even curative therapies across numerous age-related conditions."

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ABOUT TAG THERAPEUTICS

TAG Therapeutics GmbH (www.tag-therapeutics.com), is a preclinical-stage biotechnology company dedicated to the development of precision medicine approaches for telomere pathologies and aging-related diseases. TAG's platform technology Teloblock is based on an antisense oligonucleotide (ASO) targeting the RNA produced at shortened or damaged telomeres. Teloblock inhibits specifically the DNA Damage Response at the telomeres and counteracts the downstream pathological processes that lead to cellular senescence and inflammation. The Teloblock technology has broad applicability to a wide range of human diseases that are associated with aging, telomere shortening and loss of integrity, such as idiopathic pulmonary fibrosis (IPF), chronic kidney disease, certain types of cancer and Alzheimer's Disease.

Headquartered in Vienna, Austria, the company is supported by CEBINA (Central European Biotech Incubator and Accelerator, www.cebina.eu), a Vienna-based incubator that drives the translation of scientific innovation into healthcare solutions through an ecosystem designed to enable capital-efficient, accelerated development of biotech ventures.

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