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**ZenBio, Inc Awarded a Phase I SBIR Grant to Develop Extracellular Vesicles and Exosomes to Treat Age-related Tendinopathy**

**RESEARCH TRIANGLE PARK, NC** - ZenBio, Inc. announced that it has been awarded a Phase I SBIR grant to develop novel stem cell-based therapeutics to treat tendinopathy that occurs with aging. The award from the National Institute on Aging will fund the further development of ZenBio's technology to specifically tune exosomes secreted from adult stem cells to preferentially treat age-related disorders, such as tendinopathy.

Tendon injuries are extremely common for people over the age of 60, affecting 50% of this demographic and up to 80% of those over 80 years old. Compounding these problems is the significant decrease in the body's ability to heal chronic tendon injury with age, leading to significant reduction in quality-of-life and loss of mobility. Current non-surgical treatments, such as platelet-rich-plasma or single growth factor injections have shown mixed clinical results, and the direct injection of adult stem cells has shown little evidence of providing clinical benefit through engraftment, retention and tenogenic differentiation. However, it has become evident that stem cells secrete factors that can improve tendon healing and reduce chronic inflammation related to tendinopathy. These factors, or extracellular vesicles and exosomes, can be readily isolated from the stem cell growth medium. "We are taking advantage of the healing potential of adult stem cells by isolating secreted exosomes which contain a mixture of pro-healing factors tuned specifically for tendon injuries", stated Ben Buehrer, Ph.D., ZenBio's Vice President and Co-Principal Investigator of this program. Dr. John Ludlow, Co-PI and Executive Director of Regenerative Medicine at ZenBio added, "We have found that we can make small changes in the stem cell growth conditions and, in turn, improve the healing properties of their secreted exosomes." ZenBio has developed a method to generate large numbers of exosomes using an adult stem cell bioreactor where the environment can be manipulated to fine-tune the composition of secreted vesicles and exosomes toward specific therapeutic properties. This potential therapeutic has the unique advantage of harnessing the power of stem cells without the complexity and liability of a living cell therapy.

**About ZenBio, Inc.**

**ZenBio, Inc.**, a privately held biotechnology company, is a leading provider of research tools for the study of human metabolic disease and other disorders. Founded in 1995, the company performs contract research for major pharmaceutical, personal-care and biotechnology companies around the world. ZenBio provides human primary tenocytes, tendon derived stem cells, exosomes and exosome isolation services, and other contract research services to the biomedical research community. ZenBio also develops and commercializes research tools, and it leverages its expertise in this field as a contract research organization.

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