

Abzyme Awarded National Institutes of Health SBIR Grant for Developing Multi-specific Long-acting Antibodies for Treatment of Retinal Neovascular Diseases

Royersford, PA, March 01, 2024. Retinal neovascular diseases including neovascular age-related macular degeneration (AMD), diabetic macular edema and retinal vein occlusion are the most vision-threatening diseases among the developed world working-age population. Around 200 million people worldwide, and 20 million adults in the U.S are thought to be living with AMD. The risk of getting advanced AMD increases from 2% for those ages 50-59, to nearly 30% for those over the age of 75. Therapies targeting vascular endothelial growth factor (VEGF) delay the development of neovascularization in some, but not all patients, implicating additional factor(s) in retinal neovascular pathogenesis. In addition, the currently required frequent intraocular injection is a significant burden for both patients and physicians, and entails a small risk of endophthalmitis, uveitis, vitreous hemorrhage and other complications. Thus, there is much needed a retinal neovascular disease treatment that can be delivered less frequently and yet provides the same or better improvement in vision than current anti-VEGF therapies.

Abzyme Therapeutics LLC and its collaborators, Drs. Yoonjee Park of The University of Cincinnati and Bärbel Rohrer of The Medical University of South Carolina, have been awarded a \$1,657,994 Small Business Innovation Research (SBIR) Phase II Grant by the National Eye Institute (NEI). This project entitled “Multi-specific long-acting antibodies for the treatment of retinal neovascular diseases” is aimed at developing a potent and long-acting camelid-derived multi-specific antibody targeting both VEGF and extracellular MMP inducer (Emmperin/Basigin/CD147) to prevent intravitreal neovascularization. The phase II award is the continuation of a successful prior SBIR phase I research grant awarded by NIH/NEI.

The NIH SBIR program is a highly competitive program for small businesses that seek to commercialize innovative technologies with biomedical applications. The program helps small businesses participate in federal research and development, develop life-saving technologies and medicines, and create jobs.

“We are extremely pleased to be recognized with this highly competitive award from the NIH SBIR program” said Dr. Tran, CEO and co-founder of Abzyme. “This SBIR grant will provide us additional funding to develop a novel therapeutic that covers a broader spectrum of retinal neovascular disease patients and with less frequency of dosing”.

About Abzyme Therapeutics:

Abzyme Therapeutics is a biopharmaceutical company focused on developing and engineering modular antibodies with novel attributes for immunotherapy using proprietary antibody generation platforms. Abzyme’s modular antibody discovery platform incorporates a real-time screening ability to select for key properties, such as epitopic diversity, binding affinity, expressibility, solubility, developability, broad-reactivity and target-specificity. The platforms have been successfully applied to develop antibodies with defined attributes as well as to re-engineer existing antibodies to be conditionally active. Abzyme offers fee-for-services in antibody discovery and engineering, including conditionally active antibodies.

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