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Acucela Awarded NIH/SBIR Grant for Environmental Retinal Toxicology Program

SEATTLE – June 11, 2007 Acucela Inc. today announced that it has been awarded a six-month, \$100,000 Phase I Small Business Innovation Research (SBIR) grant from the National Institutes of Environmental Health Sciences (NIEHS), which is part of the National Institutes of Health (NIH). These competitive grants are designed to help small businesses develop and commercialize innovative technologies.

The average person in the U.S. contains detectable levels of more than 100 industrial compounds, pollutants, and chemicals, but predicting the risk of this exposure, especially to eye toxicity, is challenging. This exposure to environmental toxins plays an important role in aging and oxidation processes, which are key risk factors of macular degeneration, a process that eventually leads to blindness. Importantly, however, there are currently no accepted or practical tests for measuring the retinal toxicity of compounds directly. *In vivo* assessments of retinal toxicity, when performed, require large numbers of animals, are time-consuming and expensive, and do not provide data on toxicity progression. Thus, there is a significant need to improve and refine the testing process. Using this funding, Acucela will develop, validate, and commercialize Ocuscreen™, Acucela's proprietary retinal culture screening system, as a next-generation, practical *in vitro* system for evaluating the health effects of environmental toxicants. Successful development and commercialization of next-generation, low-cost, high-performance technology for predicting compound toxicity would help assess safe levels of exposure—thereby reducing national healthcare costs and producing safer working/living environments, as well as reducing the need for animal testing in this field.

Dr. Ryo Kubota, CEO, commented, "We are very pleased and honored to receive this SBIR grant. This funding will generate new business opportunities for Acucela in testing environmental toxins, and provides further validation of our OcuScreen™ technology platform."

About OcuScreen™

Acucela's proprietary OcuScreen™ technology utilizes primary retinal cell cultures to discover novel therapeutic compounds for the treatment of dry macular degeneration. Acucela is expanding the scope of its OcuScreen™ technology to discover therapeutic agents for glaucoma and the potential retinal toxicity of compounds.

About SBIR

SBIR is a highly competitive program that encourages small business to explore their technological potential and provides the incentive to profit from its commercialization. By reserving a specific percentage of federal R&D funds for small business, SBIR protects the small business and enables it to compete on the same level as larger businesses. SBIR funds the critical startup and development stages and it encourages the commercialization of the technology, product, or service.

About Acucela

Acucela is a biotechnology company that discovers and develops treatments for blinding eye diseases. The company's novel approaches have significant therapeutic potential to treat retinal diseases such as Age-related Macular Degeneration (AMD), Stargardt's disease, and glaucoma,

which significantly affects the sight of 50 million people worldwide. The Seattle-based company was founded in 2002. For more information, please visit <http://www.acucela.com>.

Acucela Forward-Looking Statement

This press release contains "forward-looking statements" as that term is defined in the Private Securities Litigation Reform Act of 1995. These statements involve risks and uncertainties, which may cause results to differ materially from those set forth in the statements. The forward-looking statements include statements regarding product development. No forward-looking statement can be guaranteed, and actual results may differ materially from those projected. Acucela undertakes no obligation to publicly update any forward-looking statement, whether as a result of new information, future events, or otherwise.

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