

## Translational Imaging Innovations, Inc., Receives Small Business Innovation Research Direct-to-Phase II Award from US National Institutes of Health

*Mosaic Analytics* photoreceptor analysis software will provide a new class of diagnostic biomarkers for evaluating cellular therapies for eye disease.

HICKORY, NC – Translational Imaging Innovations (TII), Inc., a North Carolina-based company accelerating the development of diagnostic biomarkers of eye disease through its novel image management and analytics software has been awarded a Direct-to-Phase II Small Business Innovation Research (SBIR) award by the National Eye Institute of the National Institutes of Health.

The Phase II award will allow TII to develop the first diagnostic database of photoreceptor patterning in the human retina to create image-based cellular-level biomarkers of degenerative eye disease.

TII will develop and apply **Mosaic Analytics** to automatically analyze the retinal photoreceptor mosaic from Adaptive Optics images of 1800 subjects afflicted by degenerative eye disease. Clinical researchers in the Advanced Ocular Imaging Program (AOIP) of the Medical College of Wisconsin acquired the images over a decade of research into inherited retinal disease. Robert Cooper, Ph.D., Assistant Professor of Biomedical Engineering at Marquette University, developed **Mosaic Analytics** to address the image processing demands of the AOIP clinical research program while a doctoral student. TII is commercializing **Mosaic Analytics** as the first commercial software package for quantitative analysis of non-invasive images of the human photoreceptor mosaic.

This Direct-to-Phase II SBIR award is a collaboration between Translational Imaging Innovations and the Advanced Ocular Imaging Program. Eric Buckland, Ph.D., CEO of TII, and Joseph Carroll, Ph.D., Professor of Ophthalmology & Visual Sciences and Director of AOIP, are co-Principal Investigators on the project. “Adaptive optics imaging provides exquisitely beautiful images of the human retina,” notes Buckland. “It is critical to leverage the untapped medical information hidden within these images to advance diagnosis and accelerate the development of new therapies to treat blinding eye disease.” According to Dr. Carroll, “Adaptive optics imaging has emerged as a sensitive marker of the presence and viability of photoreceptors. However, there are no validated algorithms or objective quantitative measures based on adaptive optics images of the photoreceptor mosaic. A representative image database supported by quantitative metrics is necessary to screen patients for treatment and manage follow-up.”

“This program is the beginning of our mission to unleash the power of the eye and transform medicine,” says Buckland. “With our aging population, it is ever more important to translate innovative ocular research to improve patient care through effective collaborations and creative translational medicine. This effort is the first step in our initiative to leverage advanced imaging technologies to develop and validate a new class of biomarkers from images of the eye.”

### About Translational Imaging Innovations

Translational Imaging Innovations, Inc. is a North Carolina-based software company focused on enabling researchers to transfer image-based medical breakthroughs to the eye clinic faster, with less frustration, and at a lower cost. Learn more at [www.tiinnovations.com](http://www.tiinnovations.com). Follow us on Twitter @tiinnovations.

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