OREGON CLINICAL & TRANSLATIONAL RESEARCH INSTITUTE

Project Spotlight:

Comprehensive Diabetic Retinopathy Reading Platform Based on Optical Coherence Tomography

RESEARCH QUESTION/HEALTH CARE PROBLEM

Diabetic Retinopathy (DR) is already the leading cause of blindness in working age adults in the US, and the prevalence of diabetes is rising. Innovative DR screening models are needed to efficiently and accurately identify patients with clinically significant disease without overstressing the healthcare system. A key biomarker, called non-perfusion area (NPA), has been shown to correlate with DR staging and can be imaged using Optical Coherence Tomography Angiography (OCTA).

BIP-FUNDED SOLUTION

Leveraging BIP funding, Dr. Jia used deep learning methodology to develop a robust NPA detection algorithm and benchmarked the algorithm's performance against an established rule-based approach. These steps were critical to demonstrating the functionality of this screening model.

OUTCOMES

Dr. Jia presented these findings at the annual conference of the Association for Research in Vision and Ophthalmology. A non-exclusive license for this technology is currently being negotiated between OHSU, and a third party. Dr. Jia is exploring options for forming a startup company and applying for SBIR/STTR funding.

BIOMEDICAL INNOVATION PROGRAM (BIP)

The Biomedical Innovation Program at OHSU accelerates the delivery of healthcare technologies in order to improve human health. The program cultivates, evaluates and funds promising translational projects with the objective of moving innovative technologies to clinical application through commercialization.

CONTACT

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