

Project Spotlight:

Safe Application of CAR-T Cells for the Treatment of Solid Cancer

RESEARCH QUESTION/HEALTH CARE PROBLEM

The body's immune system can recognize cancer and fight cancer, but cancers deploy a number of tools to silence and evade immune-mediated destruction. Engineering the immune system's cancer-fighting T cells to more effectively find and destroy cancer is one of the most promising new approaches to treating advanced cancer.

BIP-FUNDED SOLUTION

Previous efforts to use engineered, chimeric antigen receptor (CAR) T cells to treat solid cancers have been halted because of an inability to prevent these cells from attacking and damaging healthy tissues surrounding the tumors. In this project, the team aims to modify existing technology to build a safer, more effective CAR T cell to treat metastatic solid cancer.

OUTCOMES

Safety studies, the primary focus of the BIP grant, were completed successfully in 2024. Results were presented at international conferences, including the 2024 annual meetings of *American Association for Cancer Research* and *Society for Immunotherapy of Cancer*. To support commercialization efforts, OHSU Technology Transfer filed a patent for the technology in June 2024, and Dr. Bartlett completed OCTRI BIP Corp training to evaluate its market potential. Dr. Eil and Dr. Bartlett have co-founded VertaBio, an OHSU startup company, and are raising money to fund experiments to support an investigational new drug application for their technology.

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.

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