Shannon Oda receives $250,000 grant from Washington Research Foundation to develop technology for solid tumor therapies

Seattle Children's Research Institute principal investigator aims to expand potential targets for adoptive cell therapies using dual costimulatory receptors

SEATTLE, WA, USA, May 26, 2022 /EINPresswire.com/ -- Shannon Oda, Ph.D., a principal investigator in the Ben Towne Center for Childhood Cancer Research at Seattle Children's Research Institute and an assistant professor of pediatrics at the University of Washington, has received a $250,000 phase 2 technology commercialization grant from Washington Research Foundation (WRF) to engineer T cells with dual costimulatory receptors (DCRs) to improve cancer treatment outcomes. Oda received $50,000 from WRF in 2021 for early proof-of-concept work on this innovative strategy that could have a significant impact in improving adoptive cell therapies (ACTs) for solid tumors.

> We are seeing exciting results in our in vivo cell therapy studies, and evidence of our engineered T cells serving as a catalyst for an anticancer response from other immune cells."
>
> *Shannon Oda, Ph.D.*

ACTs utilizing engineered T cells have already proven effective in treating some blood cancers. However, they are much less effective against solid tumors, which make up around 90% of the nearly two million annual cancer diagnoses in the United States. There are several reasons for this. Solid tumors contain few "markers" that can be identified by immune cells that can effectively kill the tumor, making it difficult to target the tumor precisely. Additionally, the tumor creates a protective environment around it that suppresses these immune cells. To remedy this, Oda is engineering DCRs into T cells, which can simultaneously stimulate signaling in the T cells, as well as engage other immune cells to diversify the antitumor response and target multiple markers.

With partial support from WRF's 2021 grant, Oda demonstrated that the addition of DCRs can increase the immune response in both engineered T cells and the body's endogenous cell populations, resulting in increased survival in mouse models. Oda describes this as a "living drug" approach that should enable ACTs to be successful in treating a broader range of cancers.

“We are seeing exciting results in our in vivo cell therapy studies, and evidence of our engineered T cells serving as a catalyst for an anticancer response from other immune cells,” said Oda. “We look forward to continued collaboration with WRF to develop more effective and less toxic therapies for patients.”

The milestones that Oda reached with Washington Research Foundation’s earlier grant were key to this continued support, said Meher Antia, Ph.D., WRF’s director of grant programs.

“Dr. Oda’s work showed that there was great potential in the DCR approach, and our new grant is intended to continue some of the technical validation that is still needed to fully flesh out the promise of DCRs as a viable therapeutic option.”

Oda is conducting mechanistic studies of more than 75 compounds in mouse models to determine which show the greatest promise in treating tumors. This will provide a comprehensive data package to support future work that will be needed to bring this technology to human clinical trials and ultimately benefit patients.

About Washington Research Foundation:

Washington Research Foundation (WRF) supports research and scholarship in Washington state, with a focus on life sciences and enabling technologies.

WRF was founded in 1981 to assist universities and other nonprofit research institutions in Washington with the commercialization and licensing of their technologies. WRF is one of the foremost technology transfer and grant-making organizations in the nation, having earned more than $445 million in licensing revenue for the University of Washington and providing over $131 million in grants to the state's research institutions to date.

WRF Capital, a reserve pool of funds for investing in early-stage Washington state companies, has backed 117 local startups since 1996. Returns from these investments support the Foundation’s mission.

For additional information, please visit https://www.wrfseattle.org/.

Meher Antia, Ph.D.
Director, Grant Programs
+1 206-336-5600
email us here
Visit us on social media:
Twitter
LinkedIn