

Robert Bradley receives \$250,000 from Washington Research Foundation to develop small molecules to boost immunotherapies

Proprietary technology being created through Fred Hutchinson Cancer Research Center and Memorial Sloan Kettering Cancer Center collaboration



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/EINPresswire.com/ -- <u>Robert Bradley</u>, Ph.D., has been awarded a \$250,000 technology commercialization grant to develop small molecules that have the potential to improve immunotherapies for a broad range of cancers. This is the largest award to date from a <u>\$750,000</u> <u>grant</u> Washington Research Foundation (WRF) gave to Fred Hutchinson Cancer Research Center

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(Fred Hutch) in February to accelerate life sciences research with significant potential for public benefit. Bradley and his team are collaborating with <u>Memorial</u> <u>Sloan Kettering Cancer Center</u> for this project.

In recent years, a cancer immunotherapy known as immune checkpoint blockade has shown remarkable success in treating previously intractable cancers. Immune checkpoint inhibitors work by removing the normal checks and balances on T cells that naturally exist to prevent an immune response from going into overdrive and

destroying healthy cells. Removing these so-called checkpoint inhibitors enables T cells to more vigorously attack tumors. However, immune checkpoint therapies do not always work for patients, and one reason is thought to be the lack of "neoantigens" on tumor cells, which mark the cells as a target for the immune system.

Bradley, the McIlwain Family Endowed Chair in Data Science and a professor in Fred Hutch's Public Health Sciences and Basic Sciences Divisions, has demonstrated a novel approach to force tumor cells to produce more neoantigens and therefore give a needed boost to immune checkpoint therapy. He showed that neoantigens can be induced by altering ribonucleic acid (RNA) splicing within cancer cells, and that the production of these neoantigens can make immune checkpoint blockade more effective. Since neoantigens are preferentially produced in cancer cells by the small molecules that Bradley is developing, healthy cells remain largely unaffected by the enhanced activation of T cells due to immune checkpoint blockade therapy.

"Immune checkpoint blockade essentially takes the brakes off the immune system and is very effective for some patients," said Bradley. "Unfortunately, it doesn't work for most because the treatment can become so effective that it also attacks healthy cells and causes intolerable side effects. Early data show that combining our technology with checkpoint inhibitors should safely and effectively target a whole host of cancers. It isn't limited to a single target."

The promise shown by Bradley's work for a novel, safe and effective therapy to improve outcomes for patients with untreatable or difficult-to-treat cancers was key to WRF's support of the project, said Meher Antia, Ph.D., WRF's director of grant programs.

WRF's funding will enable Bradley and his colleagues to further develop proprietary small molecules and demonstrate that their approach is safe and effective as they progress their research toward commercialization.

"We are confident that we will make significant progress in the next year. With that in mind, we are looking to establish commercial partnerships that will enable our technology to get to patients as soon as possible," said Bradley.

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 \$122 million in grants to the state's research institutions to date.

WRF Capital, the Foundation's venture investment arm, has backed 113 local startups since 1994. Returns from these investments support grant-making activities at WRF.

For additional information, please visit <u>www.wrfseattle.org</u>.

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