

Aimée Dudley receives \$123,338 from Washington Research Foundation to develop antifungal adjuvants at PNRI

Dudley and her team will test compounds demonstrating significant promise to improve treatments for potentially life-threatening infections

SEATTLE, WA, USA, March 4, 2021 /EINPresswire.com/ -- [Washington Research Foundation](#) (WRF) has

provided a grant of \$123,338 to enable

Aimée Dudley, Ph.D., to develop adjuvants to improve the effectiveness of existing drugs used in the treatment of serious fungal infections. Dudley, a senior investigator at the [Pacific Northwest Research Institute](#) (PNRI), received a \$50,000 grant from WRF in 2016 to carry out preliminary work on this project.



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Will Canestaro, Ph.D.

Globally, fungal infections impact more than 1 billion people each year and range from mild superficial infections in healthy people to systemic life-threatening infections in patients immunocompromised by factors including disease, chemotherapy and organ transplantation. Candida infections, for example, are a common cause of hospital-acquired septicemia and of death in extreme low birth weight infants. This problem is compounded because the number of antifungal drugs is small and fungal pathogens are becoming increasingly resistant to them.

Dudley and her colleagues discovered that a naturally occurring molecule, 2-phenylethanol (PE), and a set of structurally similar compounds increased the potency of several antifungal drugs against *Candida albicans*. The team also found that its PE-based adjuvants increased the efficacy of two specific drugs, fluconazole and voriconazole, against a wide range of fungal pathogens including *Aspergillus fumigatus* and *Cryptococcus neoformans* that can cause life-threatening infections for which there are limited treatment options.



The Dudley team's adjuvants have the potential to be developed into topical creams, oral rinses, inhaled aerosols, orally or intravenously administered drugs, medical device coatings and disinfecting agents.

“We have been following Aimée’s work for some time and are extremely excited about the promise of improving outcomes in patients struggling with treatment-resistant fungal infections,” said WRF managing director Will Canestaro, Ph.D. “This is an area of huge unmet clinical need, and Aimée and her colleagues are some of the best positioned researchers in the country to make a huge difference in the treatment of patients.”

The funding from WRF will advance efforts by Dudley and her colleagues at PNRI to translate their discoveries into therapeutics in several ways. First, it will support the purchase of equipment needed to test their adjuvants in vitro against a wider range of fungal pathogens, including many for which currentazole therapies are known to be ineffective. Second, it will support a collaboration with the laboratory of Wesley Van Voorhis, M.D., Ph.D., at the University of Washington to characterize the toxicity and pharmacokinetics of the adjuvant molecules. Finally, it will fund a collaboration with the University of California, Los Angeles laboratory of Scott Filler, M.D., to test antifungal adjuvant activity of these compounds in an in vivo mouse infection model.

“WRF has been a fantastic partner,” said Dudley. “They not only provided the necessary funding, but also leveraged their internal expertise and network of external advisors to help us shape the project and the team of collaborators to maximize the translational potential of our discoveries.”

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 \$112 million in grants to the state's research institutions to date.

WRF Capital, the Foundation’s venture investment arm, has funded 108 local startups since 1994. Returns from these investments support grant-making activities at WRF.

For additional information, please visit www.wrfseattle.org.

About Pacific Northwest Research Institute:

The Pacific Northwest Research Institute (PNRI) is an independent, nonprofit, biomedical research institute with a distinguished history of contributing scientific advances to improve human health. At PNRI, we believe that scientific research is key to solving some of the most difficult challenges that humanity faces. Our research uses innovative applications of genetics, genomics, mathematical methods, and evolutionary biology to address questions with important health and medical consequences. We particularly value research that addresses significant societal impacts.

For additional information, please visit www.pnri.org.

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