

## Turning Rash Into Relief: How HT-001 Is Changing Cancer Care

The George Washington University



Epithelial Growth Factor Receptor (EGFR) inhibitors, such as Erlotinib (Tarceva®), have transformed the treatment landscape for lung, colorectal, and head and neck cancers. However, many patients suffer from severe dermatological side effects, particularly papulopustular eruptions (PPEs), including acneiform rashes, which affect up to 90% of those treated. These side effects often lead to treatment interruptions, diminishing patients' quality of life, and resulting in the discontinuation of lifesaving therapies.

In 2014 at The George Washington University (GW), Drs. William B. Weglicki and Lu Tong Mak were studying the potential for aprepitant (a drug traditionally used for nausea) to prevent cardiac side effects from EGFR inhibitors, when they serendipitously discovered that aprepitant reversed skin lesions. This basic research was supported by a grant from the National Institutes of Health. The inventors worked with the GW Technology Commercialization Office (TCO) to patent their discovery, later winning a prize at TCO's 2019 Innovation Competition. Shortly after the competition, TCO licensed the invention to Hoth Therapeutics, Inc., a biopharmaceutical company dedicated to developing next-generation therapies.

Hoth Therapeutics sponsored additional preclinical studies by Dr. Weglicki's team to validate the findings. The company then advanced the development of a topical formulation of aprepitant, HT-001. Since HT-001 is a new formulation of an

already approved drug, the Food and Drug Administration permitted it to proceed directly to a Phase 2a trial which began in 2024. The first patient in the trial experienced rapid symptom resolution within just one week of administering HT-1001. Due to the swift resolution of lesions and the alleviation of discomfort, the patient was able to discontinue HT-001 treatment after just seven days. Over the following three weeks, no new lesions developed, underscoring the potential of HT-001 to overcome the debilitating side effects associated with EGFR inhibitor therapy. This first patient was treated at the GW University Hospital, one of multiple academic hospitals and cancer centers participating in the clinical trial.

This story exemplifies how government-supported university research can lead to unexpected breakthroughs that evolve into innovative products improving patient outcomes. HT-001 has the potential to transform cancer care by enhancing patient adherence to EGFR inhibitor therapies, improving health outcomes, and reducing healthcare costs. These outcomes showcase the societal benefits that arise from government funded research and academic-industry partnerships.

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