In a UW Medicine cancer immunotherapy lab, research scientist Nick Drovetto puts a rack of samples into a liquid nitrogen tank.

A Phase 1 patient trial of the novel, and therapy candidate, alpha-TEA, for advanced HER2 positive breast cancer is underway. Veana Therapeutics, Inc. and UW Medicine will collaborate on the dosing of the Phase I trial, which is an alpha-TEA lysine salt in combination with the monoclonal antibody, trastuzumab, and standard therapies. 

In HER2 positive breast cancer, the tumor cells produce a higher-than-usual level of the HER2 protein that drives cancer growth and spread.

Alpha-TEA (lysine salt) is a first-class, small molecule that destabilates the energy powerhouses of these proliferating cancer cells. It is an analog of alpha-tocopherol that has been chemically modified to be toxic to tumor cells at doses that are not harmful to normal cells.

By upsetting a cancer cell's mitochondria, it sets off an alarm signal. As they self-destruct, the fragments that come from those tears can attract and destroy other cancer cells.

In this way, alpha-TEA reduces cancer growth by stimulating the body's immune response against the tumor. Trastuzumab is a targeted therapy that attaches to HER2 receptors on the surface of cancer cells. This blocks the signals that tell the cells to grow and might tag the cell for the body's immune system to get rid of it. The hope is that adding alpha-TEA to trastuzumab therapy will work better against HER2 positive breast cancer than trastuzumab alone in cases that have become resistant to usual treatment.

The US Food and Drug Administration, or FDA, has granted the orphan drug designation to alpha-TEA and trastuzumab in 2018.

This Phase I trial will be looking for side effects and the best dosage.

The oral medication will be given to Stage IV HER2+ breast cancer patients who have been treated with trastuzumab monotherapy or combination trastuzumab and pertuzumab therapy. The participants will be patients with currently progressive disease that is refractory to prior treatment and that has failed at least two prior treatments, including chemotherapy, hormone therapy and trastuzumab. 

The Phase I patient trial of the novel, oral therapy candidate, alpha-TEA, for advanced HER2 positive breast cancer is underway at UW Medicine.

This study will, secondarily, evaluate other immunological aspects of the body's disease defense system: changes in memory T cells, frequency of HER2-specific effector and regulatory T cells, and the function of Natural Killer cells. As an exploratory objective, the study will assess the status of immune cells that destroy cancer cells, T follicular helper (Tfh) cells and T regulatory (Treg) cells. 

For immediate release

Veana and UW Medicine are evaluating a combination of alpha-TEA and trastuzumab for advanced HER2 positive breast cancer

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UW Medicine: Leila Gray, 206.475.9809, leilag@uw.edu

https://depts.washington.edu/tumorvac/protocol-146-alpha-tea

August 26, 2020

For immediate release

Novel breast cancer therapy candidate enters clinical study

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For details about UW Medicine, please visit http://uwmedicine.org/about

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For more information on this study contact:

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