Professor Gregory Weiss awarded UC Irvine Anti-Cancer Challenge funding

The funding will support Weiss and his lab’s research into molecules crucial to understanding cancer biology.

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Professor Weiss' lab seeks to understand how the molecules that make life possible work.

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Professor Gregory Weiss of the UC Irvine Department of Chemistry recently received funding in the amount of $40,000 from the UCI Anti-Cancer Challenge. The Weiss Lab studies the biochemistry of the molecules that make life function, and the new

funding will support research into molecules called enzymes that play a key role in the spread of cancer cells in the human body.

“I want to take this molecule apart and understand its inner workings. The details will allow us to devise new methods to treat this aspect of cancer susceptibility in the future,” said Weiss. “I also want to learn why members of some groups, including Asian American and Pacific Islanders (AAPI), are particularly susceptible to liver cancer due to changes or mutations to a key molecule in their cells.”

Weiss’ lab, which received funding from the Anti-Cancer Challenge in 2019 and 2022, will refine a nanometer-scale technology to directly observe cancer-driving enzymes as they catalyze chemical processes at the heart of cancer formation.

“This research aims to reveal targets for the development of drugs and diagnostics with novel mechanisms and capabilities,” said Weiss, who plans to work with colleagues in the UC Irvine Chao Family Comprehensive Cancer Center Cancer Control program to create a plan to connect with members of the AAPI community who are willing to be a part of the lab’s research.

“I’d like to acknowledge our collaborator, Professor Susan S. Taylor of UC San Diego who is an expert on the enzyme we’ll be studying, called Protein Kinase A,” Weiss added. “As a first-year graduate student, I saw her present an electrifying seminar on this molecule. I’ve spent my career looking forward to working with her on this protein, and thanks to this grant we will finally be able to solve this mystery and learn important insights into a mechanism used by tumors as a start towards blocking it.”

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