PRESS RELEASE

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The Wistar Institute Announces Recruitment of Vincent Wu to Join Vaccine & Immunotherapy Center as Caspar Wistar Fellow

Interdisciplinary scientist brings expertise in molecular biology and bioinformatics to study HIV reservoir, where dormant virus hides

PHILADELPHIA — (Dec. 3, 2025) —The Wistar Institute, an international biomedical research leader in cancer, immunology, and infectious disease, is pleased to announce the recruitment of **Vincent Wu, Ph.D.**, to Wistar's Vaccine & Immunotherapy Center (VIC) as a Caspar Wistar Fellow.

Wu studied HIV-2 as an undergraduate and though still early in his career comes to Wistar with a decade of research in HIV biology—its life cycle and where it hides, and in immunology—understanding what is the body's immune response to HIV infection and how the HIV virus persists. As a postdoctoral fellow in the University of Pennsylvania lab of Dr. Michael Betts, Wu honed his skills at the lab bench conducting experiments using single cell profiling methods to better understand cell phenotypes during HIV infection. Then at the computer, he uses specialized computational tools and algorithms to process and interpret the raw data.

"These two camps, the molecular biology side and the bioinformatics side—wet lab and dry lab—speak very different languages and sometimes a lot is lost in translation when trying to convey findings or requests with each other," said Wu. "From my own hybrid experiences, I envision my lab to be akin to a 'Rosetta Stone' where we create a holistic, synergistic relationship between the two languages that enables us to generate wet lab data and then directly analyze it to draw conclusions and act upon the research findings."

One of the big scientific questions he wants to answer concerns the HIV reservoir.

"The reservoir is a very critical aspect of any possible cure strategy, but unfortunately, it's not a single, homogenous mixture of cells and there's no unique signature to them that we know of," said Wu. "What is the HIV reservoir composed of, what regulates it, and how does it dynamically change over time and upon different interventions? The methods for single cell profiling are so important because

we can more properly disentangle noise from signals and get a clearer picture of the reservoir and how it changes over time."

Another project in which he sees collaboration is "shock and kill" strategy. Here Wu targets HIV integrated DNA to wake up the viral reservoir so once-dormant HIV cells are visible to immune therapies.

"In collaboration with leaders in the field, we have had some exciting data with mRNA-LNP based, latency-reversal agent (LRA) strategies as a design that can induce the aforementioned shock. Developing this further would pair well with collaborations that include Wistar's Dr. Dan Claiborne and Dr. Amelia Escolano. We could shock using HIV DNA specific platforms that are delivered by mRNA-LNPs to wake up the reservoir and then use immunotherapies like Claiborne's CAR-T cells and Escolano's bNAbs."

"Dr. Wu's research integrates his approach to hands-on single cell biology with computational analysis for data interpretation. This combination of approaches places him at the cutting-edge of where the field is evolving," said **David Weiner, Ph.D.** Wistar executive vice president, director of the Vaccine & Immunotherapy Center, and W.W. Smith Charitable Trust Distinguished Professor in Cancer Research. "This is a key area in advancing cancer and immunology research, and Dr. Wu has significant interest from collaborators in his multiplexed single-cell profiling program. He advances our Center's interest in determining populations that are responding to immunization and engaging protective immunity for prevention as well as for immunotherapy. Dr. Wu's tools are of broad interest to members of Wistar's Center for Advanced Therapeutics and the HIV Cure and Viral Diseases Center as well as playing a major role working with researchers here in the VIC."

Wu is a member of the Caspar Wistar Fellows Program, which fast-tracks the most promising, early-career scientists to pursue creative, out-of-the box biomedical research for the benefit of humanity. He will receive support from the Institute to expand his laboratory and work toward building a mature research program.