



PRESS RELEASE

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The Wistar Institute Recruits Christopher McGinnis

McGinnis studies cancer microenvironment complexity to create metastasis-targeted cancer therapeutics

PHILADELPHIA — (THURSDAY, JULY 30, 2026) — [The Wistar Institute](https://www.wistar.org), a world leader in cancer, immunology, and infectious disease research, announces the appointment of **Christopher McGinnis, Ph.D.**, as assistant professor in the Vaccine & Immunotherapy Center (VIC). McGinnis is a computational biologist and cancer immunologist who integrates immunology expertise and single-cell genomics to inform his research into how tumors interact with the immune system in the context of metastasis. He wants to understand the complex ways that tumors promote disease progression by co-opting the tumor microenvironment (TME)—the surrounding, dynamic and diverse molecular and cellular neighborhood in which tumors reside to survive, spread or resist treatment.

Early in McGinnis's career he made sense of this complexity by creating novel single-cell genomics technologies that enable fundamentally new types of questions to be answered at single-cell resolution. These tools allow him to better understand how cells differentiate, respond to other nearby cells, and how all these dynamics inform cell states and interactions.

"I was amazed at how tumors hijack the body to spread. Metastasis is a cascading, systemic process that occurs over long periods of time, in different places, organizing distinct microenvironments," said McGinnis. "Treatments that block metastasis by targeting the TME do not exist, and platforms designed to find these types of drugs have not been described, but that's my aim."

Before graduate school, McGinnis was a research associate in Lee Hood's lab at the Institute for Systems Biology in Seattle where he honed his ability in single-cell genomics during a period when the field was rapidly advancing. Then, as a graduate student in Zev Gartner's lab at the University of California at San Francisco, McGinnis created DoubletFinder, an algorithm that



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identifies cell doublets – cases where two cells are mistakenly analyzed as one – so researchers can distinguish technical artifacts from real cells.

McGinnis' second Ph.D. project was to scale up single-cell genomics technology to analyze multiple biological samples together in one experiment. He created MULTI-seq, which tags cells with sticky DNA barcodes that denote the source of each cell. By using lipid-linked DNA barcodes that attach to cell membranes, MULTI-seq lets researchers combine large numbers of samples into one assay, reducing costs and making it possible to study gene expression, cell lineages, time points, drug responses, and other interesting biological variables all at once.

As a postdoctoral fellow in Ansu Satpathy's lab at Stanford, McGinnis then focused his tools on open questions in the field of cancer metastasis, first by systematically profiling how the lung metastatic TME evolves over time during breast cancer using MULTI-seq. These efforts yielded potential therapeutic avenues for TME-targeted anti-metastatic therapies, which he pursued using a novel platform he developed for performing single-cell genomics-coupled drug screens in the lung metastatic niche.

At Wistar, McGinnis will build on his background in genomics, immunology, and cancer biology to systematically analyze how the body changes over time during metastasis in diverse types of cancer such as breast cancer, melanoma, and osteosarcoma. These efforts will yield new basic biological insights into how tumors spread and, importantly, identify targets for anti-metastatic immunotherapy development.

"Dr. Chris McGinnis' research interrogating the TME is at the forefront of the interdisciplinary fields of computational biology and cancer immunology. He develops and uses innovative computational and machine learning tools, employing his systems biology background to identify cellular factors that drive tumor metastasis," said [David Weiner](#), Ph.D., executive vice president, director of the Vaccine & Immunotherapy Center and W.W. Smith Charitable Trust Distinguished Professor in Cancer Research. "His studies shed light on how cells in the TME interact with advancing cancers to provide new, more granular insight at the cellular level regarding factors associated with the steps in metastatic transition. This insight can directly lead to developing novel approaches for detecting, treating or preventing devastating metastatic disease."

McGinnis received a B.A. in Biology, Molecular Biology and Biochemistry from Wesleyan University in Middletown, Connecticut. He obtained a Ph.D. from the University of California,



San Francisco in the lab of Zev Gartner, Ph.D., and completed a postdoctoral fellowship at Stanford University in the lab of Ansuman Satpathy, M.D., Ph.D.

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