

T Cells Detect and Destroy Cancer



Kai Wucherpfennig

Professor and Co-chair, Cancer Immunology & AIDS Professor, Neurology

CURRENT RESEARCH

Novel therapeutics that naturally destroy cancer

Our bodies are engineered to have a sophisticated built-in system for protecting us from disease and fighting infection. Specialized immune cells, called T cells, have the ability to detect and destroy abnormal cells in the body thereby preventing illness. Therefore, by studying the abilities of T cells and enhancing their detection capabilities, researchers have the opportunity to develop treatments for many diseases, in particular cancer. Dr. Kai Wucherpfennig, of Harvard Medical School, studies how to use T cells to our advantage in order to develop novel approaches for immunotherapy of cancer. To accomplish this goal, he and his team use cutting-edge technologies for the discovery of genes that impair the function of T cells. Such an approach may one day offer therapies to cancer patients that are effective and don't have as many harmful side effects.

Dr. Wucherpfennig's innovative approach to medicine employs the natural defense system that our bodies are endowed with. Immune cells work collaboratively, can find diseased cells anywhere in the body, and can provide protection for long periods of time. Through the identification of key regulators of T cell function within tumors, Dr. Wucherpfennig's research gives hope to cancer researchers, patients, and their families. Dr. Wucherpfennig explains that developing therapies for cancer, "is an important medical problem and needs discovery." His research, if successful, will prove to offer a safe and effective treatment for patients with cancer that uses pre-existing tools the body already has. As one of the most important and challenging areas of biomedical research, the treatment of cancer is an important research question that Dr. Wucherpfennig remains at...

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AFFILIATION



Harvard University

EDUCATION

- Postdoc in Molecular Immunology 1995, Harvard College
- Postdoc in Immunology 1990, Brigham and Women's Hospital, Harvard Medical School
- M.D., Ph.D. in Medicine 1987, University of Goettingen, Germany

AWARDS

- Transformative RO1, NIH Director's Transformative Research Award Program, 2012
- Elected as Fellow, 2009
- Elected as Member of Henry Kunkel Society, 2007
- Elected as Member, 2006

RESEARCH AREAS

Life Science, Genomics / Congenital, Immunology / Inflammatory, Oncology / Cancer

FUNDING REQUEST

Your contributions will support the continued research of Dr. Kai Wucherpfennig, of Harvard Medical School as he studies how to make use of our natural immune defenses for safe and effective treatment of cancer. Donations will support the necessary \$400-500K required to support personnel, cutting-edge technologies and translational research in preparation of clinical trials. In choosing to donate, you will help develop new treatments for cancer.