Immune System vs. Cancer – Round 1

Experiencing the loss of his cousin and his best friend at the age of 11 – both to cancer – was life-altering for Dr. Alex Huang. Ultimately, these experiences fueled his decision to dedicate his life to pediatric oncology research.

In 2008, Dr. Huang was awarded funding as a St. Baldrick's Scholar. Through his research, he strives to understand the interaction between one's immune system – as the body's own defense – and a tumor. "If you have a tumor growing in your body, your immune system has failed you," he explains. His research gives particular focus to understanding the role of the immune system in sarcoma cancers, such as osteosarcoma and rhabdomyosarcoma.

Dr. Huang oversees a research lab which is utilizing revolutionary technology. A two-photon laser scanning microscope developed in the past decade has the capability to pick out and track designated cells. Using this novel technique, Dr. Huang and his team of researchers are able to observe, in real time, individual cells, including tumor cells and immune system cells, in a living body.

Of the handful of universities and labs that have access to this new technology, Dr. Huang's is one of the few concentrating on the study of cancer cells, as well as cells of the immune system.

"One of the ways that cancer cells survive is by hiding in places where the immune system can't find them, or by rendering immune cells ineffective," said Dr. Huang. He hopes to find ways to harness the power of the immune system as a weapon against cancer and essentially, "wake the sleeping soldiers in the fight against cancer," as he describes it to his patients and their families.

In addition to Dr. Huang's research as a Scholar, he also gives of his time to mentor St. Baldrick's Fellow, Stefanos Intzes. "Support from St. Baldrick's is critical," he said. "It's critical not just for me, but for the next generation of young medical professionals who are being trained in my lab; they need this support too. My job is to do what I can to inspire the next generation of physicians and scientists to carry on the fight for a cure in pediatric cancer."

Alex Huang, M.D., Ph.D., St. Baldrick's Scholar
Funded: 12/1/2008 - 11/30/2011
Case Western Reserve University
Cleveland, Ohio

Where the Money Goes

Scholars

The Scholar awards are to help develop the independent research of highly qualified individuals still early in their careers. Applicants must hold a faculty-level position at an academic or non-profit research institution or laboratory, and must have held such a position for no longer than five years at the time of application. Because grant funds are so scarce, it is difficult for these young investigators to compete with more established researchers. These awards keep new researchers focused on childhood cancer. Scholar awards are funded for three years, with an additional two years possible upon approved application.

New St. Baldrick's Scholars
(Funds committed in June 2009 for period of July 1, 2009 – June 30, 2012)

University of California, Los Angeles, Los Angeles, Calif.
- Noah Federman, M.D.

Emory University, Atlanta, Ga.
- Robert Craig Castellino, M.D.

University of Chicago, Chicago, Ill.
- Samuel Volchenboum, M.D.

The Feinstein Institute of Medical Research, New Hyde Park, N.Y. - Sarah Vaiselbuh, M.D.

Memorial Sloan Kettering Cancer Center, New York, N.Y. - Oren Becher, M.D.

Oregon Health and Science University, Portland, Ore. - Bill Chang, M.D.

Vanderbilt University Medical Center, Nashville, Tenn.
- Michael Engel, M.D.

Baylor College of Medicine, Houston, Texas
- Jason Yustein, M.D.

University of Texas, MD Anderson Cancer Center, Houston, Texas - Dean Lee, M.D.

University of Washington, Seattle, Wash.
- Tina Albertson, M.D.

First Year St. Baldrick's Scholars
(Funds committed in June 2008 for period of July 1, 2008 – June 30, 2011)

Childrens Hospital of Los Angeles, Los Angeles, Calif.
- Shahab Asgharzadeh, M.D.

The University of California, San Francisco, San Francisco, Calif. - Michelle Hermiston, M.D.

University of Colorado, Denver, Colo.
- Amy Keating, M.D.

Yale University, New Haven, Conn.
- Nina Kadan-Lottick, M.D.

Johns Hopkins University School of Medicine, Baltimore, Md. - Ido Paz-Priel, M.D.

Dana Farber Cancer Institute, Boston, Mass.
- Katherine Janeway, M.D.

University of Michigan, Ann Arbor, Mich.
- Sung Won Choi, M.D.

The Feinstein Institute for Medical Research, Manhasset, N.Y. - Jonathan Fish, M.D.

Case Western Reserve University, Cleveland, Ohio - Alex Huang, M.D., Ph.D.

University of Washington, Seattle, Wash.
- Jessica Pollard, M.D.

University of Wisconsin, Madison, Wis.
- Sinisa "Sunny" Dovat, M.D.