

ASH honors Bruce R. Blazar, M.D., and Carl H. June, M.D., with 2012 Ernest Beutler Lecture and Prize

August 27th, 2012

The Ernest Beutler Lecture and Prize, named for the late Ernest Beutler, MD, a past president of ASH and physician-scientist for more than 50 years, is a two-part lectureship that recognizes major translational advances related to a single topic. This award honors two individuals, one who has enabled advances in basic science and another for achievements in clinical science or translational research.

Drs. Blazar and June will present their lecture, "T-Cell Infusions: A New Tool for Transfusion Medicine That Has Come of Age," on Monday, December 10, at 1:30 p.m. at the 54th ASH Annual Meeting and Exposition in Atlanta. During the session, they will discuss the use of adoptive T-cell therapy as an emerging form of transfusion therapy that has potential to establish tolerance to hematopoietic or solid organs allografts, treat autoimmunity, and promote immunity to cancer and chronic infection.

Dr. Blazar is the Regent's Professor of Pediatrics, Chief of the Pediatric BMT Program, and Andersen Chair in Transplantation Immunology at the University of Minnesota (UMN) and is internationally recognized as one of the foremost physician-scientists in the field of BMT. He also serves as Associate Vice President of the Academic Health Center and Founding Director of both the Clinical and Translational Science Institute and the Center for Translational Medicine at the UMN.

Dr. Blazar has made seminal contributions in dissecting the mechanisms underlying graft-versus-host-disease (GVHD), a major complication of BMT, that have been instrumental in advancing the field. His studies have resulted in pivotal trials, bringing novel pharmaceutical agents, proteins, and cell therapies to the clinic.

Specifically, Dr. Blazar was the first to examine the effects of rapamycin, an immunosuppressant drug used to prevent rejection after organ transplantation, and demonstrated that the drug could inhibit and treat GVHD in preclinical BMT animal models.

groundbreaking work, Dr. Blazar's preclinical GVHD studies led to the clinical testing of non-mitogenic anti-CD3 monoclonal antibody to target GVHD-causing T cells, demonstration that interleukin-10 (IL-10) protein could inhibit GVHD lethality, and keratinocyte growth factor to prevent tissue injury in rodents and humans after allogeneic hematopoietic cell transplantation. More recently, Dr. Blazar has published the first report of a novel population of regulatory T-cells, known as Tregs, that can be expanded *ex vivo* and used to prevent and eliminate GVHD.

Dr. Blazar has served in a variety of leadership roles within the Society, most recently as co-chair of the 2012 ASH Annual Meeting Scientific Program, and has also served on the editorial board of the Society's journal *Blood* and as chair of the Scientific Committee on Transplantation Biology. Aside from his involvement within ASH, Dr. Blazar has worked closely with the National Institutes of Health (NIH), having served as chair of the NIH Cancer Immunopathology and Immunotherapy Study Section, co-chair of the National Heart, Lung, and Blood Institute's Panel for Strategic Planning for Cellular Therapies, Board of Scientific Counselors for the National Cancer Institute, and a member of the Food and Drug Administration Biological Response Modifiers Advisory Committee. He is also an elected member of the American Society of Clinical Investigation and the Association of American Physicians.

Over the course of his career Dr. Blazar has received many honors and awards, including an NIH Merit Award, the American Society of Blood and Marrow Transplantation's E. Donnall Thomas Lecture, and as a Fellow of the American Association for the Advancement of Science. He serves as Principal Investigator of numerous NIH R01 grants, including the prestigious NIH Clinical and Translational Science Award, and has 14 visiting professorships and lectureships from various prestigious institutions and organizations in the United States and United Kingdom.

Dr. June, the Richard W. Vague Professor in Immunotherapy in the department of Pathology and Laboratory Medicine in the Perelman School of Medicine at the University of Pennsylvania and the director of Translational Research in Penn's Abramson Cancer Center, has not only contributed to advances in the understanding of immune cell biology, but has also opened new avenues for the immunologic treatment of cancer. Although trained as a clinician, he has spent a majority of his career in the laboratory, focusing his research on using immunotherapy (using the body's own immune system to help fight disease) as a cure for cancer. He has conducted several successful clinical trials of adoptive immunotherapy in which an individual's white blood cells are coupled with a naturally produced growth factor to enhance their cancer-fighting capacity that have successfully demonstrated adoptive immunotherapy's therapeutic potential for cancer.

One of Dr. June's greatest achievements came in 2011 when he and his colleagues successfully used gene therapy to create "serial killer" T cells that successfully attacked leukemic tumor cells in three patients with chronic lymphocytic leukemia (CLL). The researchers named these genetically enhanced T cells "serial killers," because for every modified T cell infused into the patients' blood, at least 1,000 tumor cells were killed. In the trial, 20 years in the making, two patients with CLL achieved full remission and one achieved partial remission after receiving the genetically engineered immune cells. Results from this landmark study are considered to be some of the greatest breakthroughs in leukemia research in recent years.

In his lab, Dr. June is continuing his adoptive immunotherapy research in blood cancers and is working with other scientists and clinicians at University of Pennsylvania to develop protocols for expanding his work in solid tumor cancers, including breast, pancreatic, and lung. Recent studies, done in collaboration with Stephan Grupp at the University of Pennsylvania, indicate that this approach also has promise for refractory pediatric pre-B-cell acute leukemia.

As a long-time member of the Society, Dr. June has served as chair of the Scientific Committee on Lymphocyte Biology, among other volunteer roles. Beyond his involvement with ASH, Dr. June has served in various leadership capacities for several other hematology/oncology organizations, most notably as past president of the Clinical Immunology Society and chair of the Clinical and Regulatory Affairs and Genetic Vaccines Committees at the American Society of Gene and Cell Therapy. Dr. June is also the recipient of many prestigious honors within the medical field, including the Leukemia & Lymphoma Society Lifetime Achievement Award, the Department of the Navy's Office of Naval Research's Robert Dexter Conrad Award for Scientific Achievement (the Navy's highest award for scientific achievement), the *U.S. Medicine* Frank Brown Berry Prize, and the Bristol-Myers Squibb Freedom to Discover Award.

"Drs. Blazar and June are great examples of the power of translational research, as their work has clearly demonstrated how research conducted at the laboratory bench can translate into treatment strategies that significantly improve clinical practice," said ASH President Armand Keating, MD, of Princess Margaret Hospital in Toronto. "Because of the work of these pioneers in modern hematology, today's patients are undergoing safer bone marrow transplants and hematologists are now using patients' own immune cells to fight cancer – a treatment option that was seen only in the lab a few years ago and now is on the way to curing patients."

Provided by American Society of Hematology

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