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Renowned immunologist and oncologist Carl June receives \$1 million Sanford Lorraine Cross Award

Carl June, MD, professor in immunotherapy in the Perelman School of Medicine at the University of Pennsylvania, has received the nation's largest award in medicine given by a health system.

SIOUX FALLS, S.D., April 13, 2021 – Sanford Health, the largest provider of rural healthcare in the country, today announced Carl June, MD as the winner of the biennial [Sanford Lorraine Cross Award](#) which honors life-changing breakthroughs and innovations in medical science.

Sanford Health is the only health system in the country to award a \$1 million prize for achievements in the medical sciences. The winner was announced at a special ceremony in Sioux Falls, South Dakota.

“This was an amazing event and an extraordinary group of finalists, so it’s an honor and a thrill to be receiving this award,” said Carl June, MD, Richard W. Vague Professor in Immunotherapy in the Department of Pathology and Laboratory Medicine in Penn’s Perelman School of Medicine; Director, Center for Cellular Immunotherapies; and Director, Parker Institute for Cancer Immunotherapy at the University of Pennsylvania.

T cells are like the body’s security guards, recognizing harmful intruders and triggering an immune response. The 2021 winner of the Sanford Lorraine Cross Award, Dr. June, with colleagues Dr. Bruce Levine, the Barbara and Edward Netter Professor in Cancer Gene Therapy in Penn’s Perelman School of Medicine, Dr. James Riley, a Professor of Microbiology, and Dr. Michael Milone, an Assistant Professor of Pathology and Laboratory Medicine, were able to reprogram selected T cells to recognize and destroy leukemia cancer cells.

This therapy is now named KYMRIAH by Novartis and is FDA-approved to treat acute lymphoblastic leukemia (ALL).

In 2010, June and Levine treated their first patient – a retired 65-year-old corrections officer named Bill Ludwig. After just a few infusions, Ludwig fell severely ill and spent a week in the ICU. Then, on the third week after treatment, he would come to find out that his cancer had disappeared when he woke up and found the masses had disappeared.

A second patient, Emily Whitehead, had relapsed twice at the age of six with an extremely aggressive form of leukemia. Like Ludwig, Whitehead got severely ill as the therapy tried to rid her of her cancer. However, this time Dr. June recalled an arthritis drug (from his daughter's struggle with juvenile arthritis) that could manage her side effects.

The story of [Emily Whitehead](#) was featured in a 2012 article in the [New York Times](#) and covered in [Forbes](#), [PARENTS Magazine](#) and the PBS documentary "[Cancer: The Emperor of All Maladies](#)."

"Sanford Health's commitment to discovery has always been driven by our relentless focus on making a life-changing impact for our patients, people and the communities we serve," said Bill Gassen, president and CEO of Sanford Health.

"Today this continues as we honor Dr. June with the \$1 million Sanford Lorraine Cross Award in recognition of his life-saving discoveries and accomplishments. This is just one example of how we are working to transform the future by supporting change-makers in medicine and research. While one can only imagine what the next century holds for health care innovation, we are proud to be at the forefront of it."

Sanford Lorraine Cross Award

While traditional awards in the medical sciences focus on the significance of the contribution of a researcher or clinician, the Sanford Lorraine Cross Award celebrates the role that the award candidate has played in bringing a new emerging transformative medical innovation across the finish line to patients, and their efforts in overcoming challenges, forging collaborations, and ensuring a successful outcome.

"By recognizing an innovation now, we can further propel research and discovery to ensure a transformative impact will be felt as soon as possible," said David A. Pearce, president of innovation and research at Sanford Health.

"Innovation is not easy, but it is essential if we wish to maximize our impact for the patients and communities we serve," said Micah Aberson, executive vice president at Sanford Health. "The Sanford Lorraine Cross Award is made possible through the generosity of a special group of donors united by their passion for creating a better tomorrow, inspiring future generations of courageous innovators, and leaving a legacy of health and healing."

Finalists for the Sanford Lorraine Cross Award are determined through a rigorous selection process that uses machine learning to identify innovative areas of discovery and breakthrough science. The candidate selection is then focused on the areas with the most promising transformative potential for patients. An interdisciplinary [scientific advisory board](#) narrowed down the top areas of innovation. The individuals who have made the greatest contribution in these three areas are then identified as the finalists.

Two other finalists for this year's Sanford Lorraine Cross Award were honored at today's ceremony:

- Dr. Mark Denison of Vanderbilt University who has studied coronaviruses since the 1980s. In 2007, his lab discovered that coronaviruses have a protein that acts as a powerful proofreader during replication, meaning that the virus can self-correct errors in its RNA sequence; and

- Dr. Michael Welsh of the University of Iowa, a pulmonary physician who wanted to know how human airways work, particularly how salt ions move across the airway wall. This led him to study cystic fibrosis (CF), an inherited disease that causes lifelong vulnerability to destructive lung infections and an early death.

The award is named after the [Cross of Lorraine](#), a global symbol first chosen as emblematic for those who took action against disease in 1902 at the [International Tuberculosis Congress in Berlin](#). In recent history, Sanford Health has used it to symbolize profound innovation and progress in the medical sciences and also includes the image in its own institutional logo. The Sanford Lorraine Cross Award is supported in perpetuity through an endowment established by donors to the Sanford Health Foundation. Donors who invest \$1 million or more are honored as members of the Founders Circle, a distinguished group celebrated for its visionary generosity. These individuals are united by their passion for creating a better tomorrow, inspiring future generations of courageous innovators, and leaving a legacy of health and healing.

About Sanford Health

Sanford Health, one of the largest health systems in the United States, is dedicated to the integrated delivery of health care, genomic medicine, senior care and services, global clinics, research and affordable insurance. Headquartered in Sioux Falls, South Dakota, the organization includes 46 hospitals, 1,400 physicians and more than 200 Good Samaritan Society senior care locations in 26 states and 10 countries. Learn more about Sanford Health's transformative work to improve the human condition at sanfordhealth.org or [Sanford Health News](#).