

DR. CARL H. JUNE, FOUNDER OF CANCER CAR T CELL THERAPY, WINNER OF THE IV EDITION OF 'ABARCA PRIZE'

- **The innovative CAR-T cell therapy developed by Dr. Carl H. June is currently applied in haematologic malignancies, and has opened the door to clinical research in many other cancer types and non-oncologic diseases**
- **In 2017, the FDA approved the world's first treatment with CAR-T cells, in what is one of the most important medical advances of our time, and which has overcome many barriers of traditional therapies**
- **Dr. June is a leading American immunologist who discovered how to engineer T cells to effectively recognize and destroy tumor cells**
- **The official award ceremony, which can also be followed via streaming, will take place on October 29 and will be attended by Javier Padilla Bernáldez, Secretary of State for Health of the Government of Spain**

Madrid, October 3, 2024.- Carl H. June, MD, the Richard W. Vague Professor in Immunotherapy in the Perelman School of Medicine at the University of Pennsylvania, and director of the Parker Institute for Cancer Immunotherapy at this important institution, is the **winner of the IV Edition of the "ABARCA PRIZE"**, the Doctor Juan Abarca International Award for Medical Sciences, for his research and pioneering development of a revolutionary strategy to treat blood cancers, based on cell engineering. It is known as CAR-T (Chimeric Antigen Receptor) cell therapy and is an example of what's popularly known as immunotherapy treatment because it uses the body's own immune system to fight cancer.

In addition to this scientific finding of global relevance, his research continues to translate into other important clinical areas, as scientists are now working to apply this treatment to other solid neoplasms, autoimmune pathologies (such as lupus) and many other non-oncological diseases. The development of CAR T cell therapy is **one of the most relevant medical-scientific advances of our time, comparable to the discovery of antibiotics, chemotherapy, or genetic research.**

June, who began his research on the study of the CD28 molecule in the 80s as the main T-cell control switch, is considered the pioneer and father of CAR-T therapy. He led the development of the first CAR T cell therapy, approved by the FDA (*Food and Drug Administration*) in 2017, and known by the generic name of tisagenlecleucel (trade name *Kymriah*, of Novartis).

Six different CAR T cell therapies are now approved in the United States to treat various forms of blood cancers, including certain lymphomas, leukemias and myelomas. In the pediatric setting, Acute Lymphocytic Leukemia (ALL) is the most common type of leukemia and 60% of those affected are under 20 years of age. In the case of adults, the leukemia in 30% of cases is Chronic Lymphocytic Leukemia (CLL). It generally affects people over 65 years of age, a relevant aspect given the trend of increasing life expectancy and ageing of the population.

Nowadays, 85% of paediatric patients receiving CAR-T immunotherapy treatment respond to treatment, a figure that reaches 50 to 70% in the case of adults.

The 2024 ABARCA PRIZE laureate is a graduate of the U.S. Naval Academy and the Baylor College of Medicine who began his career at Bethesda Naval Hospital before establishing his laboratory at the University of Pennsylvania in 1999.

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Special motivation of Dr. June

Dr. June himself has stated that the main motivation to discover new ways to fight cancer and was the diagnosis that his first wife, Cynthia, suffered in 1995 from ovarian cancer, from which she died in 2001.

In the decades since June began his research with CAR-T cells, the field has grown exponentially with close to a thousand trials underway around the world. June's lab continues to drive innovation in personalized cell- and gene-based therapies, developing new strategies to make CAR T-cell therapy more effective for all blood cancers, for solid tumors, and even for diseases other than cancer. He has also made fundamental contributions to HIV research, developing the first method to multiply T cells outside the body and demonstrating that the cells could be safely reinfused into the patient, improving their immune function.

June has published more than 500 manuscripts and has received numerous prestigious awards for his scientific achievements.

The jury of 'ABARCA PRIZE'

The international jury of this award is made up of external and independent members appointed by Fundación de Investigación HM Hospitales (FiHM), taking into account both their experience of accredited academic and professional prestige, as well as their international relevance for their contribution to science.

In this fourth edition of 'ABARCA PRIZE', the jury was chaired by Professor Silvia Priori, cardiologist and researcher at the Department of Molecular Medicine of the University of Pavia, as well as at the ICS Maugeri Hospital, and included among its members the winners of the two previous editions of the award, Professors Douglas Melton and Philippe J. Sansonetti; the Spanish palaeontologist Juan Luis Arsuaga, director of the UCM-Carlos III Health Institute Joint Centre for Human Evolution and Behaviour and co-director of the Sierra de Atapuerca sites; Professor Pura Muñoz-Cánoves, a graduate in Pharmacy and PhD

in Biological Sciences and Altos Labs researcher at the San Diego Institute of Science (USA); Dr. Sandra Myrna Díaz, CONICET Senior Researcher at the Multidisciplinary Institute of Plant Biology (IMBIV), recognized with the Nobel Peace Prize in 2007 with the Intergovernmental Group of Experts on Climate Change and the Princess of Asturias Award for Scientific and Technological Research (2019); and Professor Federico de Montalvo, Doctor of Law and president of the Spanish Bioethics Committee from 2019 to 2022.

About 'ABARCA PRIZE'

The Doctor Juan Abarca International Award for Medical Sciences, "ABARCA PRIZE", was born in 2021 with the purpose of highlighting the impact of medical-scientific advances and innovations to international society. This

award is granted to a personality in the field of research and science from anywhere in the world, whose work has made a significant contribution to the improvement of the health of people and populations.

'ABARCA PRIZE' is inspired by the foundations of the permanent commitment to the progress and health of people, intrinsic values of the figure of Dr. Juan Abarca throughout his professional career.

For more information:

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