Press Release

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Keio University

September 16, 2022
Keio University

Announcement of The Keio Medical Science Prize 2022

Keio University, Japan's oldest private university located in Tokyo, annually awards The Keio Medical Science Prize to recognize researchers who have made an outstanding contribution to the fields of medicine or the life sciences. It is the only prize of its kind awarded by a Japanese university, and 8 laureates of this prize have later won the Nobel Prize. The 27th Keio Medical Science Prize is awarded to **Carl H. June, M.D.** from the University of Pennsylvania Perelman School of Medicine and **Yoshihiro Kawaoka, D.V.M., Ph.D.** from the National Center for Global Health and Medicine Research Institute.

1. Laureates

Carl H. June, M.D.

Richard W. Vague Professor in Immunotherapy
Director, Center for Cellular Immunotherapies
Director, Parker Institute for Cancer Immunotherapy

University of Pennsylvania Perelman School of Medicine

"Development of CAR-T Cell Therapy as a Novel Immunotherapeutic Strategy"

Yoshihiro Kawaoka, D.V.M., Ph.D.

Director, Research Center for Global Viral Diseases,
National Center for Global Health and Medicine Research Institute

Project Professor, The Institute of Medical Science, The University of Tokyo

"Understanding Viral Pathogenicity for the Control of Pandemic Infectious Diseases"

2. Award Events

The award ceremony and commemorative lectures are scheduled as below. Media outlets are welcome to attend, and we would greatly appreciate any coverage you can provide.

Award Ceremony and Commemorative Lectures

Date & Time:	Monday, November 28, 2022, 14:00-17:30
Venue:	Kitasato Memorial Hall, Keio University School of Medicine, Shinanomachi Campus, Tokyo, Japan
Admission:	Open to the public and streaming online. The number of participants allowed on site will be limited according to the infection prevention measures.
Language:	English (Simultaneous translation available)

For more information, please visit the Keio Medical Science Prize website:
https://www.ms-fund.keio.ac.jp/en/prize/

The Keio Medical Science Prize 2022 Laureate

"Development of CAR-T Cell Therapy as a Novel Immunotherapeutic Strategy"

Carl H. June, M.D.
Richard W. Vague Professor in Immunotherapy
Director, Center for Cellular Immunotherapies
Director, Parker Institute for Cancer Immunotherapy
University of Pennsylvania Perelman School of Medicine

Dr. Carl June has pioneered the clinical application of CAR-T cell therapy, a new class of personalized immunotherapy for cancer and infectious diseases. CAR-T cell therapy uses genetically engineered T cells to produce chimeric antigen receptors (CARs). Dr. June has elucidated the role of the co-stimulatory molecule CD28 in T cell proliferation and, by expressing the CAR in combination with co-stimulatory molecules, has advanced CAR-T cell therapy to a practical level for antigen-specific and potent cytotoxic activity. CAR-T cell therapy has demonstrated breakthrough efficacy in the treatment of refractory acute leukemia, which does not respond to conventional therapies. CAR-T cell therapy has been approved in many countries worldwide and has become an established treatment method in clinical practice. Dr. June's achievements in laying the foundation for further development of new therapeutic strategies through the clinical development of CAR-T cell therapy make him deserving of the Keio Medical Science Prize 2022.

Education

1975	B.S.(Biology)	United States Naval Academy, Annapolis, Maryland, USA
1979	M.D.(Medicine)	Baylor College of Medicine, Houston, Texas
1985	Postdoctoral Fellow (Oncology/Immunology)	Fred Hutchinson Cancer Research Center, Washington

Positions

1978-1979	Research Fellow, World Health Organization Immunology Research and Training Center, Geneva, Switzerland
1979-1980	Internship: Basic Medicine, National Naval Medical Center, Bethesda, Maryland, USA
1980-1982	Teaching Fellow, Department of Medicine, Uniformed Services, University of the Health Sciences, Bethesda, Maryland
1980-1982	Residency: Internal Medicine, National Naval Medical Center, Bethesda, Maryland
1982-1983	Instructor, Department of Medicine, Uniformed Services University
1982-1983	Chief Resident: Internal Medicine, National Naval Medical Center, Bethesda, Maryland
1983-1985	Fellow in Oncology, University of Washington and Fred Hutchinson Cancer Research Center, Seattle, Washington
1986-1990	Assistant Professor, Department of Medicine, Uniformed Services
1990-1995	Associate Professor, Department of Medicine, Uniformed Services
1995-1999	Professor, Department of Medicine, Uniformed Services University of the Health Sciences
1999-2001	Professor of Molecular and Cellular Engineering, University of Pennsylvania School of Medicine
2001-present	Professor of Pathology and Laboratory Medicine, University of Pennsylvania School of Medicine
2004-present	Professor of Medicine, University of Pennsylvania School of Medicine
2015-present	Director, Center for Cellular Immunotherapies at the University of Pennsylvania
2016-present	Director, Parker Institute for Cancer Immunotherapy at the University of Pennsylvania

Major Honors/Awards

2015	Paul Ehrlich and Ludwig Darmstaedter Prize (shared with J. Allison)
2016	Novartis Prize in Immunology (shared with Z. Eshhar and S. Rosenberg)
2017	Karnofsky Prize from the American Society of Clinical Oncology
2020	Lorraine Cross Sanford Health Award
2021	Dan David Prize from Tel Aviv University

Comment from Carl H. June, M.D.

On behalf of my team at the University of Pennsylvania, I am humbled to accept the Keio Medical Science Prize in recognition of the development of chimeric antigen receptor T cells for cancer therapy. I am grateful that studies of applications of this technology beyond cancer -- for chronic infections, organ transplantation and autoimmune diseases -- are now underway in clinical trials on a global basis to treat patients in need.

The Keio Medical Science Prize 2022 Laureate

"Understanding Viral Pathogenicity for the Control of Pandemic Infectious Diseases"

Yoshihiro Kawaoka, D.V.M., Ph.D.
Director, Research Center for Global Viral Diseases, National Center for Global Health and Medicine Research Institute
Project Professor, The Institute of Medical Science, The University of Tokyo

Dr. Yoshihiro Kawaoka has developed a revolutionary technology for the artificial synthesis of influenza viruses. By synthesizing influenza viruses on demand, he succeeded in clarifying their mechanisms of infection and propagation, as well as the acquisition of high virulence and drug resistance at the molecular and cellular levels. Furthermore, he has contributed to the development of new vaccines against novel influenza viruses through the artificial synthesis of viruses. He has also made extensive contributions to pandemic control against the new coronavirus (SARS-CoV2), including evaluation of the pathogenicity of various variants and their reactivity to drugs and the development of animal models of infection.

Education

1978	B.S., Hokkaido University, Japan (Veterinary Medicine)
1978	D.V.M., The Ministry of Agriculture and Fishery, Japan
1980	M.S., Hokkaido University, Japan (Microbiology)
1983	Ph.D., Hokkaido University, Japan (Microbiology)

Professional Appointments

1980-1983	Research Associate, Department of Veterinary Microbiology, Faculty of Agriculture, Tottori University, Japan
1983-1996	Postdoctoral Fellow, St. Jude Children's Research Hospital, Tennessee, USA
1996-1997	Member, St. Jude Children's Research Hospital, Tennessee, USA
1997-present	Professor, School of Veterinary Medicine, University of Wisconsin-Madison, Wisconsin, USA
1999-2005	Professor, Department of Microbiology and Immunology, The Institute of Medical Science, The University of Tokyo, Japan
2005-2021	Director, International Research Center for Infectious Diseases, The Institute of Medical Science, The University of Tokyo, Japan
2021-present	Project Professor, The Institute of Medical Science, The University of Tokyo
2021-present	Director, Research Center for Global Viral Diseases, National Center for Global Health and Medicine Research Institute

Major Honors/Awards

2006	Robert Koch Prize (with Peter Palese)
2011	Medal with Purple Ribbon
2013	Member of the United States National Academy of Sciences
2015	Carlos J. Finlay Prize for Microbiology
2016	Japan Academy Prize

Comment from Yoshihiro Kawaoka, D.V.M., Ph.D.

It is my honor to receive the Keio Medical Science Prize and follow in the footsteps of previous awardees whose world-class work I have admired. My selection for this award is humbling, and only made possible thanks to the relentless efforts of past and present members of my laboratories and my collaborators. I am also indebted to the funding agencies and their officers, the personnel at the business offices of my institutions, and my colleagues for their constant support. The COVID pandemic has, and continues to have, devastating effects on public health and economies globally. It is a stark reminder that infectious diseases will always be a threat. I hope to make a lasting contribution to society by working to reduce the burden caused by infectious diseases.

The Keio Medical Science Prize

1. Background

In the fall of 1994, Dr. Mitsunada Sakaguchi, a 1940 alumnus of the School of Medicine, donated five billion yen to Keio University with the expressed desire that it be used to commend outstanding researchers, to encourage medical research and its creative progress at Keio through grants, and to promote worldwide medical advances. In keeping with Dr. Sakaguchi's commitment, Keio launched The Keio University Medical Science Fund on April 1, 1995. Dr. Sakaguchi made an additional donation of two billion yen in July 1999, bringing the fund to a total of seven billion yen.

2. Initiatives

- The Keio Medical Science Prize
- Grants for International Activities in Medicine and the Life Sciences
- Keio Medical Science Rising Star Award
- Research Grants for Medicine and the Life Sciences
- Sakaguchi Laboratory

3. Objective

The Keio Medical Science Prize gives recognition to the outstanding and creative achievements of researchers in the fields of medicine and the life sciences, in particular those contributing to scientific developments in medicine. It aims to promote worldwide advances in medicine and the life sciences, encourage the expansion of researcher networks throughout the world, and contribute to the well-being of humankind.

4. Prize

Laureates receive a certificate of merit, medal, and a monetary award of 10 million yen. The award events and the commemorative lectures are held at Keio University.

5. Nomination and Selection

The Keio Medical Science Prize is an international award, and each year academics and researchers from around the world are invited to nominate a candidate. Laureates are then selected through a rigorous review process by about ninety Japanese academics from both within and outside of Keio University.

Selection Committee 2022

Haruhiko Siomi:	Chairperson of the Committee Professor, Department of Molecular Biology, Keio University School of Medicine
Shizuo Akira:	Specially Appointed Professor, Immunology Frontier Research Center, Osaka University
Masayuki Amagai:	Vice-President, Keio University Professor, Department of Dermatology, Keio University School of Medicine
Makoto Arita:	Professor, Division of Physiological Chemistry and Metabolism, Keio University Faculty of Pharmacy
Kenya Honda:	Professor, Department of Microbiology and Immunology, Keio University School of Medicine
Yoshiaki Kubota:	Professor, Department of Anatomy, Keio University School of Medicine
Ryozo Nagai:	President, Jichi Medical University
Jin Nakahara:	Professor, Department of Internal Medicine (Neurology), Keio University School of Medicine
Tetsuo Noda:	Representative Director, Executive Director, and Institute Director, Japanese Foundation for Cancer Research
Takao Shimizu:	Representative Director, Microbial Chemistry Research Foundation Director, Institute of Microbial Chemistry Project Leader, National Center for Global Health and Medicine
Yoshiko Takahashi:	Professor, Graduate School of Science, Kyoto University
Keiji Tanaka:	Board Chairperson, Tokyo Metropolitan Institute of Medical Science
Masashi Yanagisawa:	Director, International Institute for Integrative Sleep Medicine (WPI-IIIS), University of Tsukuba

6. Nobel Prize Winners from the Keio Medical Science Prize Laureates

1996	Stanley B. Prusiner (The Nobel Prize in Physiology or Medicine 1997) Discovery of Prions and Prion Diseases
1999	Elizabeth Helen Blackburn (The Nobel Prize in Physiology or Medicine 2009) Telomeres and Telomerase
2002	Barry J. Marshall (The Nobel Prize in Physiology or Medicine 2005) Establishment of Diagnostic Techniques and Treatment for Helicobacter Pylori
2004	Roger Y. Tsien (The Nobel Prize in Chemistry 2008) Visualization and Control of Molecules within Living Cells
2006	Thomas A. Steitz (The Nobel Prize in Chemistry 2009) Structural Basis of Large Ribosomal Subunit Function and Drug Development
2010	Jules A. Hoffmann (The Nobel Prize in Physiology or Medicine 2011) Discovery of Insect-innate Immune System and Toll Receptors
2015	Yoshinori Ohsumi (The Nobel Prize in Physiology or Medicine 2016) Discoveries of Mechanisms for Autophagy
2016	Tasuku Honjo (The Nobel Prize in Physiology or Medicine 2018) Identification of PD-1 and Establishment of Cancer Immunotherapy Principle by PD-1 Blockade

Contact:

Office of the Keio University Medical Science Fund

TEL: +81-3-5363-3609 FAX: +81-3-5363-3215 k-msf@adst.keio.ac.jp https://www.ms-fund.keio.ac.jp/en/prize/

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Office of General Affairs, Keio University School of Medicine

TEL: +81-3-5363-3611 FAX: +81-3-5363-3612 med-koho@adst.keio.ac.jp https://www.med.keio.ac.jp/en/