

Immunologists Kappler, Marrack Elected to Institute of Medicine

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DENVER —



National Jewish Health Immunologists John Kappler, PhD, and Philippa Marrack, PhD, have been elected to the prestigious and highly selective Institute of Medicine. Election to the Institute of Medicine is considered one of the highest honors in the fields of health and medicine, and recognizes individuals who have demonstrated outstanding professional achievement and commitment to service.

Drs. Kappler and Marrack have worked together as a husband-and-wife team for more than 30 years, focusing primarily on the T cell, an immune system cell that recognizes foreign substances in the body and orchestrates the adaptive immune response.

The Institute of Medicine is unique for its structure as both an honorific membership organization and an advisory organization. It is recognized as a national resource for independent, scientifically informed analysis and recommendation on human health issues. With their election, members make a commitment to volunteer significant time as member of Institute committees, which engage in a broad range of studies on health policy issues. Drs. Kappler and Marrack were among 70 new members announced on Monday.

In the early 1980s, Drs. Kappler and Marrack isolated the T-cell receptor, the crucial element that recognizes foreign substances in the body. In 1987, they discovered how T cells that target the body's own tissues are identified and destroyed in the thymus. If not removed from the body, these cells can cause destructive autoimmune diseases, such as diabetes and lupus. In 1990, they discovered superantigens, extremely virulent toxins that cause an overwhelming and disastrous immune response, such as occurs in toxic shock syndrome.

In recent years, they have focused on understanding memory cells, the T cells that help jumpstart an immune response the second time the immune system encounters a pathogen, and how additives to vaccines, called adjuvants, enhance the development of memory T cells. They also study how T cells bind to and recognize antigens in autoimmunity and allergy. These and other discoveries have made them two of the most influential immunologists in the world.

Both Drs. Kappler and Marrack are members of the U.S. National Academy of Sciences and are investigators with the prestigious Howard Hughes Medical Institute. Together, they have won the British Royal Society's Wellcome Foundation Prize and The Paul Ehrlich and Ludwig Darmstadter Prize from the Paul Ehrlich Foundation in Germany. Drs. Kappler and Marrack also received the prestigious Louisa Gross Horwitz Prize from Columbia University.

Dr. Marrack is former president of the American Association of Immunologists, and the International Union of Immunological Societies. She received the American Association of Immunologists Lifetime Achievement Award in 2003. She has served on various panels and boards for the American Cancer Society, the National Institutes of Health, and the Burroughs Wellcome Fund. Dr. Kappler has also served on several committees for the American Association of Immunologists and the National Institutes of Health.

In addition to their scientific accomplishments, throughout their careers, they have contributed to the education of new generations of research scientists and physicians through fellowships in their laboratories and teaching immunology courses to graduate and medical students.

National Jewish Health is the leading respiratory hospital in the nation. Founded 123 years ago as a nonprofit hospital, National Jewish Health today is the only facility in the world dedicated exclusively to groundbreaking medical research and treatment of patients with respiratory, cardiac, immune and related disorders. Patients and families come to National Jewish Health from around the world to receive cutting-edge, comprehensive, coordinated care. To learn more, visit the media resources page.

Media Contacts

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