T-Cell Research Garners Award for National Jewish Immunologist

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DENVER — Philippa Marrack, PhD, one of the world's leading immunologists, will be honored this week in Paris, France, with a L'ORÉAL - UNESCO For Women In Science (FWIS) award for her dedication and outstanding contribution to scientific progress. Dr. Marrack, a researcher with National Jewish Medical and Research Center and the Howard Hughes Medical Institute, has spent much of the past 35 years studying immune-system cells known as T cells. Among other achievements, Dr. Marrack and her longtime collaborator and husband, John Kappler, PhD, isolated the T-cell receptor, discovered superantigens, and revealed how potentially dangerous T cells are eliminated in the thymus.

Dr. Marrack is one of five distinguished women representing five regions of the world who receive this distinction. The five L'Oreal-UNESCO Laureates will each receive a grant of $100,000. The awards will presented to the Laureates at a ceremony in Paris on Thursday.

L'ORÉAL, the world's leading cosmetic company, and UNESCO, the United Nations Educational, Scientific and Cultural Organization dedicated to collaboration among nations, this year celebrates the sixth anniversary of the L'ORÉAL - UNESCO For Women In Science awards partnership, with a promise to continue to support the advancement of women in science.

"L'ORÉAL's commitment alongside UNESCO in the For Women In Science partnership is a concrete expression of our firm conviction that science is the source of all progress and that the contribution of women is vital to its future," said Lindsay Owen-Jones, Chairman and Chief Executive Officer, L'ORÉAL. "Rewarding distinguished women scientists is only a start. Their example, we hope, will inspire the younger generation, women still at university, to study life sciences and later pursue a scientific career. Their success will benefit all women. But the greatest beneficiary will be science itself." Mr. Owen-Jones joins Koichiro Matsuura, Director-General of UNESCO, in hosting the awards event each year in Paris.

The FWIS awards program is the only one of its kind that recognizes women for their achievement in the sciences. Each year, five top prizes and 15 fellowships are awarded, in as many as 20 countries.

Dr. Marrack was selected as this year's North American award recipient. She was chosen for her significant contribution in the area of T cell research - the family of cells that help the body fight off disease - and their effect on the immune system.

Dr. Marrack has spent most of her career studying the features of T cells and how they can trigger autoimmune diseases, such as rheumatoid arthritis. Her work on 'memory' T cells has been crucial in the understanding of how vaccines can be made to work more efficiently.

Dr. Marrack is also known for her discovery of 'super-antigens' in the early 1990s. These are toxins produced by certain micro-organisms, such as staphylococci, which stimulate very large numbers of T cells and provoke the violent symptoms associated with food poisoning or toxic shock syndrome.

A research investigator at the Howard Hughes Medical Institute, vice chair of the department of Immunology, and professor at National Jewish Medical and Research Center in Denver, Colorado, Dr. Marrack is former president of the American Association of Immunologists, and current president of the International Union of Immunological Societies. She is also a fellow of the United Kingdom's Royal Society, and received the American Association of Immunologists Lifetime Achievement Award in 2003.

FWIS awards are distributed in five regions around the globe: North America, Europe, Asia/Pacific, Africa and Latin America. The Laureates are selected by an international jury of their peers, led by 1999 Nobel Prize winner and jury

Vice-President, Prof. Günter Blobel.

Other distinguished honorees include:

Nancy Ip, Professor and neuroscientist at the Department of Biochemistry & Biotechnology, Research Institute, Hong Kong University of Science and Technology, China. Prof. Ip specializes in the biology of neurotrophic factors - proteins that promote development, growth and maintenance of neurons in the body's nervous system. Her studies have led to the identification of neurotrophic factors as potential pharmaceutical agents in the treatment of neurodegenerative disorders, such as Alzheimer's and Parkinson's diseases.

Jennifer Thomson, Professor in Molecular Biology at the University of Cape Town, South Africa. Prof. Thompson has devoted much of her research career to the development of genetically modified plants to improve agricultural productivity and food quality in developing countries. Her research group has developed an experimental variety of transgenic maize resistant to the Maize Streak Virus, a disease which has devastating effects on smallholder agriculture, in parts of Africa where maize is the staple food and livestock forage crop.

Christine Petit, Professor in Genetics and Sensory Physiology at Institute Pasteur, France. Prof. Petit is best known for her contribution to the understanding of the genetic basis of sensory disorders. Prof. Petit was the first researcher to properly address the way to identify the genes involved in hereditary deafness in humans, and to decipher their underlying cellular and molecular defective mechanisms. Her work on the sensory system also led her to identify genes responsible for Kallman syndrome, the only hereditary human disease causing a loss of olfaction.

Lucia Mendonça Previato, Professor in Biophysics and Parasitology, at the Biophysics Institute, Federal University of Rio de Janiero, Brazil. Prof. Previato's career has been devoted to the study of Trypanosoma cruzi, the protozoan parasite responsible for Chagas disease, a debilitating and often fatal condition. Her research group was the first to discover that the parasite scavenges a crucial molecule - sialic acid - directly from its host's surface cell and transfers it to receptor glycoproteins on the parasite's surface via a unique catalytic reaction. Sialic acid plays a key role in helping the parasite attach itself to the host and can also reduce the effectiveness of the host's immune response.

In addition to this year's L'ORÉAL-UNESCO For Women in Science Laureate awards, an international group of 15 young women (three for each of the five UNESCO regions) will be awarded fellowships valued at $20,000 each.

National Jewish Health is the leading respiratory hospital in the nation. Founded 120 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

Our team is available to arrange interviews, discuss events and story ideas.

William Allstetter
303.398.1002
allstetterw@njhealth.org

Adam Dormuth
303.398.1082
dormutha@njhealth.org