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Frankfurt am Main, March 14, 2013

The geneticist Professor Dr. Mary-Claire King receives the 2013 Paul Ehrlich and Ludwig Darmstaedter Prize

Her discovery of the genes for hereditary breast cancer has permanently changed thinking about the genetics of complex common diseases

FRANKFURT am MAIN. The €100,000 Paul Ehrlich and Ludwig Darmstaedter Prize goes this year to Mary-Claire King, American Cancer Society Professor in the Department of Genome Sciences and Medicine at the University of Washington in Seattle. Mary-Claire King is being awarded the prize for her outstanding research achievements in the field of human genetics. She is one of the world's leading geneticists in the area of cancer and forensic genetics. "Mary-Claire King was the first to demonstrate that there is a genetic predisposition for breast cancer. This proof has permanently changed thinking about the genetics of common complex diseases," wrote the Scientific Council of the Paul Ehrlich Foundation in explaining its decision. Professor King has also worked for decades in identifying the victims of human rights violations around the world. The Scientific Council continued: "She makes it clear that genetics can benefit humanity." The award ceremony will take place today, the 159th birthday of Paul Ehrlich, in the Paulskirche, Frankfurt. Awarded annually since 1952, the Prize is among the most highly respected international prizes awarded in the Federal Republic of Germany in the field of medicine.

Breast and ovarian cancers are inherited as an autosomal dominant trait in some families. King has shown that some of the mutations responsible are to be found in a gene that she called BRCA1, which stands for *breast cancer susceptibility gene 1*. Genes are therefore also involved in complex, multifactorial diseases, which may in addition be influenced by environmental and lifestyle factors. Since the discovery of BRCA1, BRCA2 and other breast cancer genes, programs for women suffering from these types of cancer have been established

everywhere. King's discoveries and her calculations for the risk of falling ill with breast or ovarian cancer have fundamentally changed the management of hereditary breast cancer.

The prizewinner has also identified other disease genes. The conditions they cause include inherited deafness, schizophrenia, autism, and systemic lupus erythematosus. Mary-Claire King is also highly respected for her humanitarian commitment. She uses genetic technologies to expose violations of human rights. Since 1984 she has been working with the grandmothers of Plaza de Mayo in Argentina. These grandmothers are demanding the return of their grandchildren to their biological families. The children were kidnapped by the military junta between 1976 and 1983, orphaned and given up for adoption to sympathizers of the junta. Mary-Claire King provides sound proof of the biological kinship of the children. She also works with the UN War Crimes Tribunal and has identified the victims of war, terror and torture in countries such as Cambodia, Guatemala, El Salvador, Rwanda, Ethiopia and Bosnia.

Short biography of Professor Dr. Mary-Claire King

Mary-Claire King was born near Chicago in 1946. She has a B.A. in mathematics and later completed her Ph.D. in genetics at the University of California at Berkeley. She was professor of genetics and epidemiology at Berkeley from 1976 to 1995. Since 1995 she has been the American Cancer Society Professor at the University of Washington in Seattle and since 1998 member of the Fred Hutchinson Cancer Research Center in Seattle. Mary-Claire King has been awarded thirteen honorary doctorates including honorary doctorates from Harvard, Yale, Columbia and Princeton. She is a member of the National Academy of Sciences of the USA, the American Academy of Arts and Sciences, and the French Academy of Sciences. Professor King has received numerous prizes all over the world. She is a consultant and member of various high-level bodies and committees, including the Advisory Board that advises the Director of the NIH.

The Paul Ehrlich and Ludwig Darmstaedter Prize

The Paul Ehrlich and Ludwig Darmstaedter Prize is traditionally awarded on Paul Ehrlich's birthday, March 14, in the Paulskirche, Frankfurt. It honors scientists who have made significant contributions in Paul Ehrlich's field of research, in particular immunology, cancer research, microbiology, and chemotherapy. The Prize, which has been awarded since 1952, is financed by the German Federal Ministry of Health, the Deutsche Bank Foundation in the Stifterverband für die Deutsche Wissenschaft e.V., the German association of research-based pharmaceutical company vfa e.V. and specially earmarked donations from companies. The prizewinner is selected by the Scientific Council of the Paul Ehrlich Foundation.

The Paul Ehrlich Foundation

The Paul Ehrlich Foundation is a legally dependent foundation of the Association of Friends and Sponsors of the Goethe University, Frankfurt. The Honorary Chairman of the Foundation, which was established by Hedwig Ehrlich in 1929, is the German Federal President, who also appoints the elected members of the Scientific Council and the Board of Trustees. The Chair of the

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Association of Friends and Sponsors of the Goethe University is at the same time the Chair of the Scientific Council of the Paul Ehrlich Foundation. The current Chair of both bodies is Professor Wilhelm Bender. The Chancellor of the Goethe University is an ex officio member of the Board of Trustees of the Paul Ehrlich Foundation.

Further information

You can obtain the full resume, selected publications, the list of publications and a photograph of the prizewinner from the Press Office of the Paul Ehrlich Foundation (c/o Dr. Hildegard Kaulen, phone: +49 06122/52718, email: Paul-Ehrlich-Stiftung@pvw.uni-frankfurt.de) and at www.paul-ehrlich-stiftung.de.