Cancer Genetics Pioneers Mary-Claire King and Janet Rowley Receive 2010 Pearl Meister Greengard Prize

- Adapted from Rockefeller University Press Release

ASHG President-Elect (2012) **Mary-Claire King, PhD**, and Past President (1993) **Janet Davison Rowley, MD**, have been named as the recipients of the 2010 Pearl Meister Greengard Prize awarded by The Rockefeller University for their roles as pioneering cancer geneticists. Created to recognize the accomplishments of outstanding female scientists who have made extraordinary contributions to biomedical science, the $100,000 prize was presented to Drs. King and Rowley in a ceremony at the university on November 16, 2010.

“Janet Rowley and Mary-Claire King have each made vital contributions to our understanding of cancer as a genetic disease,” said Rockefeller University President Paul Nurse. “Their work has advanced the science of genetics and improved medicine for the benefit of humanity.”

Mary-Claire King, American Cancer Society Professor of Medicine and Genome Sciences at the University of Washington in Seattle, studies the genetics of complex, common human conditions. Her primary areas of interest are breast and ovarian cancer and genetic influences on major mental illness, especially schizophrenia. King’s research approach applies human genetics and genomics to the identification and characterization of critical genes in informative families and populations. King was the first scientist to show that breast cancer is inherited in some families as the result of mutations in the gene that she named BRCA1. This discovery and her subsequent research on the genetics of schizophrenia and of hearing loss have transformed the understanding of complex disease inheritance. King is also recognized as a pioneer in the development of DNA sequencing for human rights investigations. She has carried out identification of victims of human rights violations for the United Nations War Crimes Tribunal and served as consultant to the Commission on the Disappearance of Persons of the Republic of Argentina.

King received her Ph.D. in genetics from the University of California, Berkeley, in 1972. After completing a postdoc in cancer genetics at University of California, San Francisco, she returned to UC Berkeley in 1976 as professor of genetics and epidemiology. She accepted her current position as American Cancer Society Professor of Genetics and Medicine at the University of Washington, Seattle, in 1995. King is a member of the National Academy of Sciences, the American Academy of Arts and Sciences, and the Institute of Medicine. She is the recipient of numerous honors, including the American Society of Clinical Oncology Basic Science Award, the American Cancer Society Medal of Honor for Clinical Research, the Weizmann Institute Award for Women and Science, and the Gruber Prize in Genetics.

Janet Davison Rowley, Blum-Riese Distinguished Service Professor of Medicine, Molecular Genetics and Cell Biology and Human Genetics at the University of Chicago, is regarded as a major champion of the modern cancer cytogenetics movement that helped open the field of molecular oncology. In 1972, Rowley discovered two recurring chromosome translocations involved in human cancer – the 8;21 translocation in acute myelogenous leukemia (AML...
and the 9;22 translocation, which results in the Philadelphia chromosome seen in chronic myelogenous leukemia (CML). Rowley’s work provided evidence that genetic abnormalities are a critical factor in cancer and revolutionized cancer research and treatment. The success of the targeted cancer drug Gleevec, based on her discovery of the chromosome translocation in CML, is a notable outcome of Rowley’s seminal findings.

Rowley earned her B.S. in 1946 and her M.D. in 1948 from the University of Chicago. In 1962, after a year as a research trainee in England, Rowley returned to the University of Chicago, as a research associate in the department of medicine. She became an associate professor in 1969, and a full professor in 1977. In 1984, Rowley was named the Blum-Riese Distinguished Service Professor. She has been the recipient of numerous awards including the Albert Lasker Clinical Research Award, the National Medal of Science, the Gruber Prize in Genetics, the Presidential Medal of Freedom, the Jessie Stevenson Kovalenko Award from the National Academy of Sciences and the Award for Lifetime Achievement in Cancer Research from the American Association for Cancer Research.