

# THE JHU GAZETTE

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## Craig, Yau of SoM elected to National Academy of Sciences

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Nancy L. Craig, a professor of molecular biology and genetics, and King-Wai Yau, a professor of neuroscience and ophthalmology, both in Johns Hopkins University School of Medicine, are among 72 scientists nationwide newly elected to membership in the National Academy of Sciences, an honorary society that advises the government on scientific matters.

“Johns Hopkins is very proud that the academy has chosen to recognize Nancy and King-Wai,” said Stephen Desiderio, director of the Johns Hopkins Institute for Basic Biomedical Sciences. “Both have made seminal discoveries in their respective fields over the years, and their elections are well-deserved.”

A Howard Hughes Medical Institute investigator, Craig studies the molecular mechanisms by which so-called transposable elements move and how they can be exploited for genetic engineering. Composed of DNA sequences with no fixed address, these traveling salesmen of the genome are present in virtually all organisms and contribute to both genome structure and function. One important consequence of transposon insertion is that information encoded by the transposon becomes stably linked with its DNA target. About one half of the human genome is composed of DNA sequences related to transposable elements, which are emerging as potentially important predictors of human traits and diseases. Craig currently is focusing her research efforts on how several different transposons choose their new insertion sites.

Craig joined the Johns Hopkins faculty in 1991 and was previously a faculty member in the Department of Microbiology and Immunology at the University of California, San Francisco. She earned a bachelor’s degree in biology and chemistry from Bryn Mawr College and a doctorate in biochemistry from Cornell University.

Yau’s primary research interest lies in the flow of signals important in sight and smell. Among his discoveries are the critical roles played by key signaling molecules—calcium and cyclic GMP—in the process of converting light into electrical signals by the rod and cone photoreceptors in the retina, a process known as visual transduction. In addition to advancing the understanding of hereditary blinding diseases that affect rod and cone cells, Yau characterized the light-response behaviors of a newly discovered photoreceptor cell in the retina. These cells can react to light and affect circadian rhythms and other nonvisual aspects of the brain’s visual system. Yau also contributed to finding the cause of one form of congenital vision loss.

Yau, who joined the Johns Hopkins faculty in 1986, earned a bachelor’s degree in physics from Princeton University and a doctorate in neurobiology from Harvard University.

“Nancy’s and King-Wai’s election to the academy attests to the strength of the research enterprise at Johns Hopkins,” said Chi V. Dang, vice president for research. “We couldn’t be happier for them.”

The election of Craig and Yau, held during the 147th annual meeting of the academy in Washington, D.C., brings the total number of active members to 2,097.

The National Academy of Sciences is a private organization of scientists and engineers dedicated to the furtherance of science and its use for the general welfare. It was established in 1863 by a congressional act of incorporation signed by Abraham Lincoln that calls on the academy to serve as the official adviser to the federal government, upon request, in any matter of science or technology.

### *Related Web sites*

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