

## Upcoming Falk Lecture to feature Frank Gonzalez

By Kelly Lenox

The 2014 Hans L. Falk Memorial Lecture Nov. 18 at NIEHS will feature Frank Gonzalez, Ph.D., head of the National Cancer Institute (NCI) Center for Cancer Research Laboratory of Metabolism. Hosted by Masahiko Negishi, Ph.D., head of the NIEHS Pharmacogenetics Group, Gonzalez will share insights from his research on cytochrome P450 and xenobiotic receptors in drug metabolism and chemical carcinogenesis.

After completing his Ph.D. at the University of Wisconsin in Madison, [Gonzalez](https://ccr.cancer.gov/frank-j-gonzalez) (<https://ccr.cancer.gov/frank-j-gonzalez>) worked as a staff fellow at the National Institute of Child Health and Human Development, prior to joining NCI. Gonzalez holds a number of awards and honorary degrees, including the Rawls Palmer Progress in Medicine Award from the American Society for Clinical Pharmacology, and the John J. Abel Award and the Bernard B. Brodie Award in Drug Metabolism from the American Society of Pharmacology and Experimental Therapeutics.

He is the co-inventor on 16 patents and, according to Negishi, has published 792 peer-reviewed studies in journals such as Nature, Science, and Cell Metabolism.

### Metabolism, metabolomics, and cancer

Gonzalez and his team at NCI study drug and carcinogen metabolism and mechanisms of chemical carcinogenesis, primarily using mouse models. They also study metabolic diseases such as obesity, insulin resistance, and fatty liver disease, all of which are risk factors for cancer and increase mortality in cancer patients. Recent studies have uncovered a novel nuclear receptor-driven pathway by which the gut microbiota influence these metabolic diseases, which has led to new insights into potential clinical interventions for these disorders.

“Frank is a true leader who has opened new directions for the research of xenobiotic metabolism and toxicity, from biochemical characterization of enzymes, to molecular cloning of complementary DNA and genes, to utilizing mouse models and metabolomics,” said Negishi.

The lecture series is named for Hans Falk, Ph.D., who joined NIEHS in 1967 and made important contributions to the emerging field of environmental health science during his tenure as the Institute's first scientific director. Initiated by scientists and friends of Falk, the annual memorial lecture series features noted guest speakers who have made significant contributions to environmental health science research, among them several Nobel Prize winners.



*Studies by Gonzalez and his team have revealed that cytochromes P450 mediate the toxicity and carcinogenicity of chemicals and thus have a role in cancer susceptibility. Cytochromes P450 are involved in metabolism of most therapeutically-used drugs, toxicants, and carcinogens. (Photo courtesy of NCI)*

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