"Chemical Perspectives on Human Cancer," Symposium 199 (Area 8) Medicinal Chemistry
Pacifichem 2000, December 16-20, 2000

Co-Organizers:

P.D. Josephy, University of Guelph, Guelph, Ontario
L.A. Peterson, University of Minnesota, Minneapolis, MN
K. Wakabayashi, National Cancer Center Research Institute, Tokyo, Japan

Session 1. Carcinogens and Mutagens: Formation, Exposure, and Bioactivation
Chair: K. Wakabayashi, National Cancer Center Research Institute, Tokyo, Japan

S.S. Hecht, Minneapolis, MN	Human carcinogen uptake and metabolism: Relation to cancer risk
K. Wakabayashi, Tokyo, Japan,	Identification of mutagens/carcinogens in cooked food and river water
E.G. Snyderwine, Bethesda, MD	Metabolic activation and carcinogenesis of arylamines
W.R. Kusamran, Bangkok, Thailand	Carcinogenic heterocyclic amines in cooked Thai foods, mutagens in drinking water, and chemopreventive potentials of some Thai vegetables
J.D. Groopman, Baltimore, MD	Aflatoxin specific biomarkers for cancer epidemiology and prevention

Session 2. Carcinogenesis and mutagenesis: New bioassays and *in vitro* assays
Chair: P.D. Josephy, University of Guelph, Guelph, Ontario

E.M. Gillam, Queensland, Australia	Examining tissue-specific bioactivation in vitro: Cytochrome P450 1B1 and other extrahepatic forms in the metabolism of carcinogens
P.D. Josephy, Guelph, Ontario	Bacterial mutagenicity assays with recombinant human enzymes: a new tool for studying the biochemistry of carcinogen bioactivation
R.C. Moschel, Frederick, MD	Site specific mutagenesis by O^6-substituted guanines in E. coli and human cells
M. Moriya, Stonybrook, NY	Mutagenesis by DNA adducts in human cells.
T. Nohmi, Tokyo, Japan	Molecular analysis of in vivo mutations by transgenic mice gpt-delta

Session 3: DNA Adducts: Their Chemical and Biophysical Properties
Chair: Lisa Peterson, University of Minnesota, Minneapolis, MN

R.M. Santella, New York, NY	Carcinogen-DNA adducts in humans: markers of exposure and risk
K. Makino, Kyoto, Japan	DNA damage by nitric oxide
I. Yoshizawa, Hokkaido, Japan	Characterization of estrogen-derived DNA damage
N.E. Geacintov, New York, NY	Structure and function of site-specific PAH diol epoxide-oligonucleotide adducts
F.P. Guengerich, Nashville, TN	Polymerase interactions with carcinogen-adducted DNA

Session 4: DNA Adducts: The Biochemical Consequences of their Formation
Chair: John Essigmann, Massachusetts Institute of Technology

J.M. Essigmann, Cambridge, MA	DNA adducts and mutations: why do mutational spectra look the way they do?
L.A. Loeb, Seattle, WA	From DNA adducts to cancer
L.D. Samson, Boston, MA	Cellular responses to alkylating agents
H. Kasai, Kitakyushu, Japan	Roles of 8-hydroxyguanine and 2-hydroxyadenine in mutagenesis and carcinogenesis
E. Ohtsuka, Hokkaido, Japan	Mutagenesis of photo-damaged DNA