



VANDERBILT

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Biosketch

B. S. University of Illinois, Urbana 1970
Ph. D. (Biochemistry) Vanderbilt University 1973

Postdoctoral Scholar University of Michigan 1973-1975

Assistant Professor of Biochemistry Vanderbilt University 1975-1979

Associate Professor of Biochemistry Vanderbilt University 1980-1983

Professor of Biochemistry Vanderbilt University 1983-present (Tadashi Inagami Chair)

Director, Vanderbilt University Center in Molecular Toxicology 1980-2011

Associate Editor, Deputy Editor, & Interim Editor-in-Chief *Journal of Biological Chemistry*, 2006-2022

Chair, International Advisory Committee, International Conference on Cytochrome P450, 1997-present

Key Publications

"Cellular Retinoid-Binding Proteins Transfer Retinoids to Human Cytochrome P450 27C1 for Desaturation" (2021) *J. Biol. Chem.* 297, 101142

"Processive Kinetics in the 3-Step Lanosterol 14 α -Demethylation Reaction Catalyzed by Human Cytochrome P450 51A1" (2023) *J. Biol. Chem.* 299, 104841

"Drug Metabolism: A Half-Century Plus of Progress, Continuing Needs, and New Opportunities" (2023) *Drug Metab. Dispos.* 51, 99-104

"Understanding the Metabolism of Drugs, Steroids, and Carcinogens"

- Mechanisms of activation and detoxication of chemical carcinogens and toxicants; characterization of enzymes involved in these processes
- Cytochrome P450 (P450) enzymes are the major catalysts involved in the metabolism of drugs, steroids, and carcinogens
- A major focus is catalytic mechanisms of these oxidations
- Another focus is on the kinetics of individual steps in catalysis by these and other enzymes
- One interest is the annotation of functions of enzymes, particularly in the P450 superfamily
- Major approaches involve enzymology, optical spectroscopy, kinetics, chromatography, isotopic labeling, and mass spectrometry.

