

# **GEORGE DIGENIS, Ph.D.**

Professor  
Pharmaceutical Sciences

## **Research Interests**

Dr. Digenis conducts research in a broad range of fields. He is active in the field of drug design, principally in the area of active site directed enzyme inhibitors. Human leukocyte elastase inhibitors synthesized in his laboratory are currently being tested for the treatment of emphysema and wound healing. He is also active in the area of drug delivery. Systems are being developed to deliver drugs orally, for drugs absorbed in specific sites of the gastrointestinal tract, and vaginally, for drugs having spermicidal and anti-HIV activity. Another major area of research is external gamma scintigraphy. This is a noninvasive technique that uses radioisotopes to image the location of a pharmaceutical dosage form in the body. The in vivo performance of oral, nasal, ocular, rectal and vaginal dosage forms have been evaluated by his group.



## **Research Publications/Presentations**

Digenis, George A., Banks, William R., Kato, Masasuki, Rencher, William F., and Agha, Bushra J., "Peptidyl Carbamates as Human Leukocyte Elastase Inhibitors: Design and Synthesis of Desmosine-Like Tetrapeptidyl Carbamate Inhibitors," *J. Enzyme Inhibition*, Vol. 7, pp 275-301, (1993).

Noskova, Dagmar, Mohammadi, Fatemeh, Savidge, Sandra J., Digenis, George A., "Mechanistic Study of HLE Inhibition Using Dual Labeled Macromolecular Inhibitor," *J. Enzyme Inhibition*, Vol. 7, pp 303-309, (1993).

Rypacek, Frantisek, Banks, William R., Noskova, Dagmar, and Digenis, George A., "Synthetic Macromolecular Inhibitors of Human Leukocyte Elastase. 1. Synthesis of Peptidyl Carbamates Bound to Water-Soluble Polymers: Poly- $\alpha,\beta$ -[N-(2-hydroxyethyl)-D,L-aspartamide] and Poly- $\alpha$ -[N5-(2-hydroxyethyl)-L-glutamine]," *J. Medicinal Chemistry*, 37, pp 1850-1856 (1994).

Digenis, George A., Gold, Thomas B., Shah, Vinod P., "Cross-Linking of Gelatin Capsules and Its Relevance to Their In Vitro-In Vivo Performance," *J. Pharm. Sciences*, 83, 7:915-921 (1994).

Buice, Robert G., Jr., Gold, Thomas B., Lodder, Robert A., Digenis, George A., "Determination of Moisture in Intact Gelatin Capsules by Near-Infrared Spectrophotometry," *Pharm. Res.*, 12, 1:161-163, 1995.