

## **JAN PYREK, Ph.D.**

Associate Professor  
Pharmaceutical Sciences

### **Research Interests**

As exemplified by the following projects and representative publications, Dr. Pyrek's laboratory is involved in different aspects of chemistry and biochemistry of steroids and natural products:

1. Mass Spectrometry as tool for detection, structure identification and quantitation.
2. Cholesterol oxidation products as unique markers of lipid oxidation.
3. Search for and identification of novel bile acids in the bile of selected mammals: metabolism and physiology of cholesterol and bile acid.
4. Acidic steroids in human pregnancy: steroidal acids as probable catabolites of progesterone.



### **Research Publications Presentations**

Pyrek, J. St., "Mass Spectrometry in the Chemistry of Natural Products" in Recent Advances in Phytochemistry, H.A. Stafford, Editor pp. 175-249, Pergamon Press (1991).

Snyder, J.C., Guo, Z., Thacker, R., Goodman, J.P., and Pyrek, J.St "2,3-Dihydrofarnesoic acid, a unique terpene from trichomes of *Lycopersicon hirsutum*, repels spider mites." *J. Chem Ecol.*, 19, 2981-2990 (1993).

Radomska, A., Little, J., Pyrek, J.St., Drake, P.R., Igari, Y., Fournel-Gigleux, S., Magdolau, J., Burchell, B., Elbein, A.D., Siest, G. and Lester, R., "A Novel UDP-GLC-Specific Glucosyltransferase Catalyzing the Biosynthesis of 6-0-Glucosides of Bile Acids in Human Liver Microsomes," *J. Biol. Chem.*, 268, 15127-15135 (1993).

Lee, S.P., Lester, R., and Pyrek, J.St., "Vulpecholic Acid (1a, 3a, 7a-Trihydroxyl-5-cholan-24-oic Acid): A Novel Bile Acid from a Marsupial *Trichosurus vulpecula* (Lesson)," *J. Lipid Res.*, 28, 19-31 (1987).

Pyrek, J.St., et al, "Hepatic Formation of Vulpecholic Acid (1a, 3a, 7a-trihydroxy-5b-cholan-24-oic Acid) from Chenodeoxycholic Acid in a Marsupial, *Trichosurus vulpecula* (Lesson)," *J. Lipid Res.*, 32, 1417-1428 (1991).

Pyrek, J. St., "Constituents of Human Meconium, Detection of Pregnen-21-oic Acid," *Steroids*, 49, 313-333 (1987).