

## **PETER WEDLUND, Ph.D.**

Associate Professor  
Pharmaceutical Sciences

### **Research Interests**

Dr. Wedlund's primary research interest is the study of how genetic factors affect the elimination response and toxicity of drugs. The laboratory utilizes the polymerase chain reaction (PCR) and restriction fragment length polymorphisms (RFLP's) along with analytical methods (HPLC and GC) to understand how differences at the DNA level effect drug elimination and response. The clinical research attempts to assess the relevance of genetic variability on therapy and therapeutic outcomes. The laboratory is supported in part by the Center for Pharmacogenetic Studies and Testing which phenotypes and genotypes samples obtained from the pharmaceutical industry. Current projects include: "Genetic variation in the CYP2D6 enzyme in psychiatric patients," "Mechanism(s) responsible for extremes in warfarin therapy," "The role of the CYP2D6 enzyme variation in renal disorders," and "Assessing the relevance of CYP2D6 genetic variation in the elderly." The purpose of the research is to define the importance and relevance of genetic variation in patient therapy and on patient costs and to integrate genetic testing into clinical practice when it provides an obvious therapeutic benefit.



### **Selected Research Publications/Presentations**

Britto MR and Wedlund PJ. Cytochrome P-450 in the brain: Potential evolutionary and therapeutic relevance of localization of drug metabolizing enzymes. *Drug Metabol Disp*, 20:446-450, 1992.

Hallack HO, Wedlund PJ, Modi MW, Patel IH, Lewis GL, Woodruff B and Trowbridge AA. High clearance of (S)-warfarin in a warfarin-resistant subject. *Br J Clin Pharmacol*, 35:327-330, 1993.

Chen S, Chou HW, Blouin RA, Mao ZP, Humphries LL, Meek CQ, Martin WL, Hays LR, Neill JR and Wedlund PJ. The cytochrome P450-2D6 (CYP2D6) enzyme polymorphism: Screening costs and influence on clinical outcomes in psychiatry. *Clin. Pharmacol. Ther.* 60:522-534, 1996.

Chen S, Kumar S, Barrett JS and Wedlund PJ. Genetic bias in clinical trials cytochrome P450-2D6 (CYP2D6) genotype in random versus selected healthy subject populations. *Br. J. Clin. Pharmacol.* (submitted 1997).

Wedlund PJ and Wilkinson GR. In vivo and in vitro measurement of CYP2C19 activity. *Methods in Enzymology* 272:105-114, 1996.

Chen S, Kumar S, Chou W-H, Barrett JS and Wedlund PJ. A genetic bias in clinical trials? Cytochrome P450-2D6 (CYP2D6) genotype in random versus selected healthy subject populations. *Br.J.Clin.Pharmacol.* (in press), 1997.