

## ROBERT BLOUIN, PharmD

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### Research Interests

Dr. Blouin's primary areas of research involve the study of the effect that diseases of physiologic states have on the pharmacokinetics and drug metabolism of drugs and xenobiotics. Research in these problem areas utilizes clinical pharmacology, animal models, tissue culture, and molecular biology tools. Some examples of Dr. Blouin's specific areas of research include the study of mechanism(s) involved in the regulation and expression of the cytochrome P450 enzymes. Studies also include molecular mechanism(s) by which trauma and the acute phase response alter the pharmacokinetics and drug metabolism of drugs and xenobiotics and the study of the effect of obesity on the disposition of xenobiotics.



### Selected Research Publications/Presentations

Israel BC, **Blouin RA**, McIntyre W, Shedlofsky SI. Effects of interferon-alpha monotherapy on hepatic drug metabolism in cancer patients. *Br J Clin Pharmacol*, 36:229-235, 1993.

**Blouin RA**, Chaudhary I, Bandyopadhyay AM, Robertson LW, Gemzik B, Parkinson A. Cytochrome P450 2B enzyme induction defect following phenobarbital treatment in the fa/fa rat: Molecular characterization. *Arch Biochem Biophys*, 303:313-320, 1993.

Toler SM, Young B, McClain C, Young B, Shedlofsky SI, Bandyopadhyay AM, **Blouin RA**. The effect of head trauma on the regulation and expression of hepatic CYP2C11 and CYP3A in Fisher-344 rats. *Drug Metab Dispos*, 21:1064-1069, 1993.

Shedlofsky SI, Israel BC, McClain CJ, Hill DB, **Blouin RA**. Endotoxin administration to humans inhibits hepatic cytochrome P450-mediated drug metabolism. *J Clin Invest*, 94:2209-2214, 1994.

Zannikos PN, Bandyopadhyay AM, Robertson LW, **Blouin RA**. Expression of the CYP3A and CYP2C11 enzymes in a nutritionally obese rodent model: Response to phenobarbital. *Int J Obesity* 18:369-374, 1994.

Roe AL, **Blouin RA**, Howard G. In vivo phenobarbital treatment increases protein binding to a putative AP-1 site in the CYP2B2 promoter. *Biochem Biophys Res Comm*. 228:110-114, 1996.

Shedlofsky SI, Israel BC, Tosheva R, **Blouin RA**. Endotoxin depresses hepatic cytochrome P450-mediated drug metabolism in women. *Br J Clin Pharmacol* 43:627-632, 1997.

Roe AL, Howard G, Hou Q, Howard G, Shedlofsky SI, **Blouin RA**. The effect of high dose endotoxin on CYP3A expression. *Pharm Res* 15:1603-1608, 1998.

Roe AL, Howard G, **Blouin RA**. Characterization of nuclear protein binding (AP-1, GR, and STAT) in the genetically obese (fa/fa) Zucker rat. *Life Sciences* 63:1339-1346, 1998.

Roe AL, Howard G, **Blouin RA**, Snawder JE. Characterization of cytochrome P450 and glutathione S-transferase activity and expression in male and female ob/ob mice. *Int J Obesity* (accepted).

Watson AM, Warren G, Howard G, Shedlofsky SI, **Blouin RA**. Activities of conjugating and antioxidant enzymes following endotoxin exposure. *J Biochem Toxicol* (accepted).

Warren GW, Poloyac SM, Gary DS, Mattson MP, **Blouin RA**. Hepatic cytochrome P450 expression in the TNF-receptor (p55/p75) knockout mice following endotoxin administration. *J Pharmacol Exp Ther* (accepted).