MAZANKOWSKI
ALBERTA HEART INSTITUTE

John M. Seubert

Associate Professor

Office / Clinic Information:
Address: 2-020M Katz Group Centre for
Pharmacy & Health Research
University of Alberta
11361 – 87 Ave.
Edmonton, AB, T6G 2E1

Phone: 780-492-0007
E-mail: jseubert@ualberta.ca

Professional Overview:

Postdoctoral Students, Graduate Students:

- Edie Pituskin

Scientific Focus:

Postdoctoral Students, Graduate Students:

- Dr. Fenghua Yang (PDF)
- Dr. Victor Samokhvalov (Research Associate)
- Haitham El-Sikhry (PhD candidate)
- Nasser Alsaleh (PhD candidate)
- Rawabi Qadhi (MSc student)
- Ketul Chaudary (PhD – graduated April 2012)
- Sri Nagarjun Batchu (PhD – graduated Nov 2011)
- Mohamed Abukhashim (MSc – graduated Aug 2011)

Industry Relationships:

Boehringer-Ingelheim, USA (2007)
Quest Pharma Tech Inc. (2008)

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Scientific Focus:

Current Research Interests:

Research in our lab is focused on investigating the cellular role of cytochrome P450-dervied metabolites of arachidonic acid (epoxyeicosatrienoic acids – EETs) in maintaining cellular and tissue homeostasis and reducing injury. Specifically, our overall objective is to advance our understanding of the EET-pathway targeting the mitochondria, with the ultimate goal of identifying a novel therapeutic strategy to prevent and/or treat IR injury and subsequent development of heart failure and reduce cardiac dysfunction.

(Selected Publications, Trainees names are underlined)

1. Batchu SN, Lee SB, Samokhvalov V, Chaudhary KR, El-Sikhry H, Weldon SM, **Seubert JM**. Novel soluble epoxide hydrolase inhibitor protects mitochondrial function following stress. *Can J Physiol Pharmacol.* (2012) Jun;90(6):811-23. Epub 2012 May 24.
2. Batchu SN, Chaudhary KR, El-Sikhry H, Yang W, Light PE, Oudit GY, **Seubert JM.** Role of PI3Kα and sarcolemmal ATP-sensitive potassium channels in epoxyeicosatrienoic acid mediated cardioprotection. *J Mol Cell Cardiol*. 2012 Jul;53(1):43-52.
3. Chaudhary KR, El-Sikhry HE, **Seubert JM.** Mitochondria and the aging heart. *J. Geriatric Cardiology*. (2011) Sept; 8(3):159-167.
4. Abukhashim M, Wiebe GJ, **Seubert JM**. Regulation of forskolin-induced cAMP production by cytochrome P450 epoxygenase metabolites of arachidonic acid in HEK293 cells. *Cell Biol Toxicol.* (2011) Oct;27(5):321-32.
5. Batchu SN, Lee SB, Qadhi R, Chaudhary KR, Kodela R, Falck JR, **Seubert JM.** Cardioprotective Effect of a Dual Acting Epoxyeicosatrienoic Acid Analog Toward Ischemia Reperfusion Injury. *British Journal of Pharmacology*. (2011) Feb;162(4):897-907.
6. El-Sikhry HE, Miller GG, Madiyalakan MR, **Seubert JM.** Sonodynamic and Photodynamic Mechanisms of Action of the Novel Hypocrellin Sonosensitizer, SL017: Mitochondrial Cell Death is Attenuated by 11, 12-Epoxyeicosatrienoic Acid. *Investigational New Drugs*. (2011) Dec;29(6):1328-36.
7. Chaudhary KR, Abukhashim M, Hwang SH, Hammock BD, **Seubert JM.** Pharmacological inhibition of soluble epoxide hydrolase and ischemia reperfusion injury. *J.Cardiovascular Pharmacology* (2010) Jan;55(1):67-73.
8. Chaudhary KR, Batchu SN, **Seubert JM.** CYP and the Heart. Invited Review. *IUBMB Life.* (2009) Oct;61(10):954-60.
9. Chaudhary K, Batchu SR, Graves JP, Das D, Suresh M, Zeldin DC, **Seubert JM.** Role of B-type natriuretic peptide in Epoxyeicosatrienoic acid mediated cardioprotection. (2009) *Cardiovasc Res.* Jul 15;83(2):362-70.
10. Katragadda D, Batchu SN, Cho WJ, Chaudhary KR, Falck JR, **Seubert JM.** Epoxyeicosatrienoic Acids Limit Damage to Mitochondrial Function Following Stress in Cardiac Cells. (2009) *J Mol Cell Cardiol.* Jun;46(6):867-75

11. Zhang Y, El-Sikhry H, Chaudhary KR, Batchu SN, Shayeganpour A, Jukar TO, Bradbury JA, Graves JP, DeGraff LM, Myers P, Rouse DC, Foley J, Nyska A, Zeldin DC, **Seubert JM.** Overexpression of CYP2J2 Provides Protection against Doxorubicin Induced Cardiotoxicity. (2009) *Am J Physiol Heart Circ Physiol.* Jul;297(1):H37-46
12. Batchu SN, Law E, Brocks DR, Falck JR, **Seubert JM.** (2009) Epoxyeicosatrienoic Acid Prevents Postischemic Electrocardiogram Abnormalities In An Isolated Heart Model. *J Mol Cell Cardiol.* Jan;46(1):67-74.