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EDUCATION:

University of Kentucky - Lexington, KY, Ph.D. in Toxicology
Expected Graduation: May 2009

Masaryk University - Brno, Czech Republic, M.S. in Ecotoxicology
Graduated: May 2003

AWARDS AND HONORS:

3/08 Burroughs Welcome Fund Travel Award to 2008 Society of Toxicology Meeting in Seattle, WA

8/05-12/06 University of Kentucky Superfund Basic Research Program Interdisciplinary Training Grant

5/03 Awarded first place for the best thesis within the Department of Ecotoxicology, Masaryk University, Brno, Czech Republic

EXPERIENCE:

8/04-present Enrolled in Ph.D. program at University of Kentucky Graduate Center for Toxicology, College of Medicine, University of Kentucky, Lexington, KY
Major Professor: Dr. Bernhard Hennig

0/03-8/04 Research Scholar at Animal and Food Science, College of Agriculture, University of Kentucky, Lexington, KY
Major Professor: Dr. Bernhard Hennig

10/01-6/03 Laboratory Technician at Veterinary Research Institute, Brno, Czech Republic
Major Professor: Dr. Miroslav Machala

PUBLICATIONS:

REFEREED ARTICLES:

Majkova Z, Oesterling E, Toborek M, Hennig B: Impact of Nutrition on PCB Toxicity. *Environ Toxicol Pharmacol*. 2008;25(2):192-196.

Arzuaga X, Reiterer G, **Majkova Z**, Kilgore MW, Toborek M, Hennig B: PCB and PPAR α interactions in vascular endothelial cells: Possible implications to inflammation and atherosclerosis. *Cardiovasc Toxicol*. 2007;7(4):264-72.

Umannova L, Zatloukalova J, Machala M, Kremer P, **Majkova Z**, Hennig B, Kozubik A, Vondracek J: Tumor necrosis factor- α modulates effects of aryl hydrocarbon receptor ligands on cell proliferation and expression of cytochrome P450 enzymes in rat liver "stem-like" cells. *Toxicol Sci*. 2007;99(1):79-89.

Hennig B, Reiterer G, **Majkova Z**, Oesterling E, Meerarani P, Toborek M: Modification of environmental toxicity by nutrients: implications in atherosclerosis. *Cardiovasc Toxicol*, 2005;5(2):153-60.

Machala M, Blaha L, Lehmler H, Pliskova M, **Majkova Z**, Kapplova P, Sovadinova I, Vondracek J, Malmberg T, Robertson LW: Toxicity of hydroxylated and quinoid PCB metabolites: Inhibition of gap junctional intercellular communication and

activation of aryl hydrocarbon and estrogen receptors in hepatic and mammary cells. *Chem Res Toxicol*, 2004;17(3):340-7.

ARTICLES (submitted):

Lim EJ, Majkova Z, Xu S, Bachas L, Arzuaga X, Smart EJ, Tseng MT, Toborek M, Hennig B: Coplanar polychlorinated biphenyl-induced CYP1A1 is regulated through caveolae signaling in vascular endothelial cells. *Chem Biol Interact*.

ABSTRACTS:

- Majkova Z**, Choi YJ, Smart EJ, Toborek M, Hennig B: Caveolin-1 mediates up-regulation of pro-inflammatory cytokines by 3,4,3',4'-tetrachlorobiphenyl (PCB77). The Fifth PCB Workshop; May 18 - 22, 2008; Iowa City, IA
- Majkova Z**, Lim EJ, Smart EJ, Tseng MT, Toborek M, Hennig B: Endothelial cell caveolae are involved in activation of aryl hydrocarbon receptor pathway by coplanar polychlorinated biphenyls. 47th Annual Society of Toxicology Meeting; March 16-20, 2008; Seattle, WA
- Majkova Z**, Lim EJ, Xu S, Bachas L, Smart EJ, Tseng MT, Toborek M, Hennig B: Caveolae mediate pro-inflammatory properties of coplanar polychlorinated biphenyls. 20th Annual Superfund Basic Research Program Meeting; December 3-5, 2007; Durham, NC
- Hennig B, Arzuaga X, **Majkova Z**, Smart E, and Toborek M: Endothelial Cell Dysfunction: Environmental Contaminants and Nutritional Implications. *Atherosclerosis*, 2006; 7(3): 444.
- Arzuaga X, Reiterer G, **Majkova Z**, Kilgore M, Toborek M, Hennig B: Synthetic PPAR α Agonists Protect Against PCB77-Induced Vascular Endothelial Cell Activation. 19th Annual Superfund Basic Research Program Meeting; December 11-12, 2006; La Jolla, CA
- Majkova Z**, Arzuaga X, Smart EJ, Toborek M, Hennig B: Caveolin-1 Knockout Mice are Protected from Endothelial Activation by Coplanar Polychlorinated Biphenyls (PCBs). 19th Annual Superfund Basic Research Program Meeting; December 11-12, 2006; La Jolla, CA
- Oesterling E, Arzuaga X, **Majkova Z**, Lim EJ, Reiterer G, Toborek M, Hennig B: PCB-Induced Endothelial Cell Dysfunction: Implications in Atherosclerosis. Central and Eastern European Conference on Environment and Health; October 22-25, 2006; Bratislava, Slovakia
- Majkova Z**, Lim EJ, Smart EJ, Toborek M, Hennig B: Role of Caveolin-1 in PCB-induced Vascular Endothelial Cell Activation. The Gill Heart Institute Cardiovascular Research Day; October 13, 2006; Lexington, KY
- Vondracek, J, Umannova, L, Krcmar, P, Neca J, Hennig B, **Majkova Z**, Machala M, Kozubik A: Interactions of fatty acids, lipid mediators, and PCBs in liver epithelial cells. The Fourth PCB Workshop; September 6-10, 2006; Zakopane, Poland
- Majkova Z**, Lim EJ, Smart EJ, Toborek M, Hennig B: Role of Caveolin-1 in PCB-induced Vascular Endothelial Cell Activation. The Fourth PCB Workshop; September 6-10, 2006; Zakopane, Poland

- Arzuaga X, Reiterer G, **Majkova Z**, Toborek M, Hennig B: PPAR α Agonists Protect Against PCB-Induced Vascular Endothelial Cell Activation. The Fourth PCB Workshop; September 6-10, 2006; Zakopane, Poland
- Hennig B, **Majkova Z**, Reiterer G, Oesterling E, Toborek M: Environmental Pollutants Induce Inflammatory Signaling: Implications in Atherosclerosis. Atherosclerosis, Thrombosis, and Vascular Biology; April 23-28, 2006; Washington, DC
- Arzuaga X, Reiterer G, **Majkova Z**, Kilgore M, Toborek M, and Hennig B: PPAR α activation disrupts PCB-induced proinflammatory signaling pathways in vascular endothelial cells. The Society of Toxicology Annual Meeting; March 5-9, 2006; San Diego, CA
- Majkova Z**, Arzuaga X, Lim EJ, Smart E, Toborek M, Hennig B: Caveolin-1 Plays a Role in PCB-induced Vascular Endothelial Cell Inflammation. 45th Annual Society of Toxicology Meeting; March 5-9, 2006; San Diego, CA
- Majkova Z**, Lim EJ, Sipka S, Smart EJ, Toborek M, Hennig B: Role of Caveolin in Proatherogenic Inflammation Caused by PCBs in Vascular Endothelial Cells. 18th Annual Superfund Basic Research Program Meeting; January 12-13, 2006; New York, NY
- Arzuaga X, Reiterer G, **Majkova Z**, Kilgore M, Toborek M, and Hennig B: 3,3',4,4'-tetrachlorobiphenyl disrupts PPAR signaling in vascular endothelial cells. The 25th International Symposium on Halogenated Environmental Organic Pollutants and Persistent Organic Pollutants - DIOXIN 2005; August 21-26, 2005; Toronto, Canada
- Hennig B, **Majkova Z**, Oesterling E, Arzuaga X, Reiterer G, and Toborek M: Proinflammatory Mechanisms Induced by PCBs: Implications in Vascular Diseases. The 25th International Symposium on Halogenated Environmental Organic Pollutants and Persistent Organic Pollutants (POPs) - DIOXIN 2005; August 21-26, 2005; Toronto, Canada
- Majkova Z**, Smart EJ, Daugherty A, Toborek M, Hennig B: PCB-Induced Inflammatory Response in Caveolin-1 Deficient Mice. 44th Annual Society of Toxicology Meeting; March 6-10, 2005; New Orleans, LA
- Majkova Z**, Ghosh DD, Smart EJ, Daugherty A, Toborek M, Hennig B: The Plasma Membrane Microdomains Caveolae are Involved in Toxicity of Polychlorinated Biphenyls. 17th Annual Superfund Basic Research Program Meeting; November 3-4, 2004; Seattle, WA
- Majkova Z**, Reiterer G, Ramadass P, Toborek M, Guo H, Hennig B: PPAR γ and PPAR α Reduce PCB-induced Inflammation in Endothelial Cells. The Superfund Basic Research Program Annual Meeting; November 3-4, 2004; Seattle, WA
- Oesterling E, **Majkova Z**, Reiterer G, Guo H, Toborek M, Hennig B: PCB-mediated Inflammatory Signaling: Implications in Atherosclerosis. The Central and Eastern European Environmental Health Conference: Health Sciences Solving Common International Problems; Oct 24-27, 2004; Prague, Czech Republic
- Majkova Z**, Reiterer G, Smart EJ, Everson W, Toborek M, Hennig B: Caveolae Signaling Regulates PCB-induced Vascular Endothelial Activation. The Third PCB Workshop; June 13-15, 2004; Urbana-Champaign, IL

Reiterer G, Guo H, **Majkova Z**, Ramadass P, Toborek M, Hennig B: PPAR γ and PPAR α reduce PCB-induced inflammation in endothelial cells. The Third PCB Workshop; June 13-15, 2004; Urbana-Champaign, IL

Majkova Z, Guo H, Reiterer G, Everson W, Smart E, Toborek M, Hennig B: Role of caveolin/annexin II signalling proatherogenic mechanisms of PCBs in vascular endothelial cells. FASEB J., 18: A870, 2004.

Machala M, Blaha L, Vondracek J, Kapplova P, Sovadinova I, Pliskova M, **Majkova Z**, Breinekova K, Lehmler H J, Robertson L W: Non-genotoxic effects of hydroxy-PCBs and PCB-quinones in liver and mammary in vitro models. The Second PCB Workshop; May 7-11, 2002; Brno, Czech Republic