

CURRICULUM VITAE

Zuzana Drobná, Ph.D.
(Maiden name: Štefanková)

Department of Nutrition
CB# 7461, 2003 MHRC
University of North Carolina
Chapel Hill, NC 27599-7461
Tel: (919) 843-2719
E-mail: drobnazu@med.unc.edu
Fax: (919) 843-0776

EDUCATION

1993-97 Ph.D. in Biochemistry

Laboratory of Protein Chemistry, Institute of Heart Research, Slovak Academy of Sciences, Bratislava, Slovakia.

Ph.D. Thesis: "The influence of xenobiotics on transport activity of P-glycoprotein in multidrug resistant cell line"; defended in May 1997.

1987-92 M.S. with Honors

Department of Biochemistry and Biotechnology, Faculty of Chemical and Food Technology, Slovak University of Technology, Bratislava, Slovakia.

Graduation Research: Xenobiotics and Oxidative Stress.

Master Thesis: "The effect of xenobiotics on synthesis and activity of lysosomal enzymes in vitro conditions"; defended in May, 1992.

PROFESSIONAL EXPERIENCE

May 2007 – Present Research Assistant Professor

Department of Nutrition, University of North Carolina at Chapel Hill, NC.

The main focus of the research is to examine the effects of specific nutrients and food components on the distribution and metabolism of iAs in human cells. This includes the investigation of epigenetic events associated with the process of carcinogenesis in descendant after prenatal exposure to arsenic. The nutrient-carcinogen interactions in the prevention of cancer outcomes are identified. Results of this study are intended to be implemented in intervention studies or in clinical settings.

April 2006 – May 2007 Research Associate

Department of Nutrition, University of North Carolina at Chapel Hill, NC.

Conducted research of membrane transport systems in arsenic metabolites trafficking and influence on arsenic metabolism by primary human hepatocytes and genetically modified cell cultures. Study of linkage between genetic polymorphism and susceptibility to toxic and cancer promoting effects in individuals exposed to arsenic.

Jan 2001-March 2006 Postdoctoral Fellow

Department of Pediatrics and Department of Nutrition, University of North Carolina at Chapel Hill, NC.

Investigated metabolism, mode of action, and biomarkers of biological effects of arsenic in primary human hepatocytes and genetically modified cell cultures.

1997-2007 Junior Research Scientist

Laboratory of Protein Chemistry, Institute for Heart Research, Slovak Academy of Sciences, Bratislava, Slovakia.

Focused on the investigation of cross-resistance phenomena in multidrug resistant model to MDR-related drugs (chemotherapeutics) on the basis of their physical-chemical properties; effect of custom synthesized xanthine derivatives on reversal of the multidrug resistance.

1993-1996 Postgraduate Student

Laboratory of Protein Chemistry, Institute for Heart Research, Slovak Academy of Sciences, Bratislava, Slovakia.

Studied molecular mechanism of multidrug resistance associated with overexpression of membrane transporter, P-glycoprotein, in cells resistant to vincristine.

1992-1993 Postgraduate Training

Department of Biochemistry and Microbiology, Faculty of Chemical and Food Technology, Slovak University of Technology, Bratislava, Slovak Republic.

The role of antioxidants in the prevention of drug-induced oxidative stress; Examination of the molecular mechanisms.

TRAINING, COURSES

- **August 15, 2008** - "Effective College Teaching: A Workshop for Faculty New at UNC" organized by UNC Center for Faculty Excellence
- **January 2008** - Flow Cytometry, Department of Microbiology and Immunology, Lineberger Comprehensive Cancer Center, UNC Chapel Hill
- **August 31, 2007** - Center for Teaching and Learning's professional development programs, UNC at Chapel Hill; Course Title: International Teachers Transitioning to the American Classroom
- **June 2007** - Functional Genomic Core Facility Apprenticeship (the Carolina Roadmap program) – Microarray experiment and data analysis of the experiment, Functional Genomic Core Facility and Center for Bioinformatics, University of North Carolina at Chapel Hill
- **Fall 2006** - Introductory and Advanced sessions in Vector NTI, UNC Center for Bioinformatics, University of North Carolina at Chapel Hill, NC
- **February 2006** - NCBI Mini-Course, UNC Chapel Hill Health Sciences Library, Chapel Hill, NC
- **October 2005** - Duke Molecular Biology Workshops - Current Molecular Biology Techniques, Duke University Medical Center, Durham, NC
- **March 2005** - Introduction to Molecular Cloning, A Workshop by KT Biotechnology, Duke University, Durham, NC

- **May - October 1996** – PCR and Flow Cytometry training during postgraduate studies; Max-Delbrück Center for Molecular Medicine, Berlin, Germany
- **January-March 1995** – Training in preparation of spontaneously beating rat cardiomyocyte cultures and immunoblot analysis; Max-Delbrück Center at the Institute of Molecular Cardiology, Berlin, Germany
- **September 1994** - Third Central European Summer School of Immunology, Košice, Slovak Republic. Organized by Basel Institute of Immunology, Switzerland

SPECIFIC SKILLS

- Teaching experience, advisor and consultant for graduate, undergraduate students and technical staff.
- Extensive experience with preparation and purification of RNA and DNA from cell cultures, animal tissues, and human body fluids.
- DNA sequencing techniques, genotyping and identification of polymorphs in human samples.
- Determination of the methylation status of DNA using CpG-island microarrays.
- Evaluation of gene expression using cDNA microarrays.
- Implementation of the mouse transplacental model for investigation of the process for arsenic carcinogenesis.
- DNA and RNA quality assessment, *in vitro* reverse transcription (from T7-promoter), oligo-labeling and purification.
- Hands-on expertise in cloning techniques (preparation of bacterial and mammalian constructs, site-directed mutation of specific genes, transformation of bacteria, recombinant protein and plasmid purification).
- Extensive experience with engineering of cellular models with modified gene expression using transfection, transduction, nucleofection, and retroviral delivery systems.
- Design and construction of gene specific siRNA and shRNA, cloning and expression of shRNA in mammalian cells, analysis of target genes on mRNA and protein level.
- Development and optimization of conventional and real-time RT-PCR.
- Expertise in immunoblot analysis, immunoprecipitation, and ELISA to detect oncoproteins (c-jun, c-fos) and proteins of signaling transduction pathways (SAPK/JNK1,2; p38; ERK1,2; ERK5, Akt).
- Analysis of transcription factors (AP-1 and NF- χ B) using EMSA assay.
- Extensive expertise and experience to prepare and maintain a broad range of cell cultures (primary cells, retroviral packaging cells, normal and transformed/malignant cell lines).
- Determination of the activity (influx and efflux) of transport systems using radiolabeled drugs or fluorescent dyes (FACScan analysis).
- Analysis of intracellular reductants (GSH, Trx).

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

- Full member of the Society of Toxicology
- Genetics and Environmental Mutagenesis Society
- Member of the UNC-Chapel Hill Clinical Nutrition Research Center

- Associated Member of the Center of Environmental Health and Susceptibility at UNC-Chapel Hill

AWARDS

- **2009-2010 Pilot and Feasibility Grants Award**, Clinical Nutrition Research Center, UNC at Chapel Hill.
- **2009-2010 Pilot Project Award**, Center for Environmental Health and Susceptibility, UNC at Chapel Hill
- **2009 NRI Stimulus Grant**, UNC Nutrition Research Institute, Kannapolis, NC
- The Award of **Outstanding Presentation** of the poster “The role of membrane transporters in the metabolism of arsenic by human hepatocytes”; Metabolism, Biomarkers, and Health Effects Poster Specialty Session of the 2nd International Congress – Arsenic in the environment: Arsenic from nature to humans, Valencia, 21-23 May, 2008, Spain.
- **2007 Recipient of Marilyn Gentry Fellowship in Nutrition and Cancer** (American Institute for Cancer Research/World Cancer Research Fund).
- Recipient of the **2007 BEST POSTDOCTORAL PUBLICATION AWARD**, Society of Toxicology.
- **2003 Pilot Project Award**, Center for Environmental Health and Susceptibility, UNC at Chapel Hill
- **2001-2005 Postdoctoral Fellowship** (UNC at Chapel Hill, NC).

TEACHING ACTIVITIES

Spring semester 2009/2010, 2010/2011

Assistant Instructor for **NUTR 400: Introduction to Medical Nutrition**, Department of Nutrition, UNC Chapel Hill, NC.

Spring semesters 2008/ 2009, 2009/ 2010, and 2010/2011

Teaching Instructor/Assistant for **NUTR 885 Doctoral Seminar**, Department of Nutrition, UNC Chapel Hill, NC (15 students).

Fall semester 1992-1993

Teaching Instructor/Assistant for **Laboratory Practice in Biology**, Department of Biochemistry and Microbiology, Faculty of Chemical and Food Technology, Slovak University of Technology, Bratislava, Slovakia (25 students).

DOCTORAL/POSTDOCTORAL TRAINEES, SUPERVISED

Mentor for Ph.D. Student

Ivana Kupsáková (2000 – 2005) – Mentoring and training (leukemia and acquired multidrug resistance; reversal of P-glycoprotein mediated resistance in mouse leukemia cells); *Institute for Heart Research, SAS, Bratislava, Slovakia.*

Postdoctoral Fellow Contact

Des Kashyap, PhD (2007 – 2008) - Consultation and training (cloning techniques, techniques in molecular biology, engineering the cellular models, maintaining cell cultures, biochemical analysis); *Department of Nutrition, UNC-Chapel Hill.*

Advisor for Doctoral Student

Samantha Attard, PhD student in Nutritional Biochemistry (2010-)- Laboratory rotation (Spring Semester, 2011); Establishment of genetically modified cell line; cloning techniques, molecular biology techniques, cell culture maintenance, biochemical and analytical analysis; *Department of Nutrition, UNC-Chapel Hill.*

MASTER STUDENT SUPERVISED

Verne Tsang (2009 – 2011; Master Student) – Advisor assistant for Master Thesis, consultation and training (transplacental model for arsenic carcinogenesis, epigenetics of nutrient-carcinogen interactions); *Nutritional Biochemistry, Dept. of Nutrition, UNC-Chapel Hill.*

LABORATORY ROTATIONS AND VISITING STUDENTS

Olivia Dong (2010-2011; SPH student) - Laboratory Assistant; Consultation and training (genotyping analysis and evaluation, qPCR technique, immunoblot analysis); *Department of Nutrition, UNC-Chapel Hill.*

Vanesa Cross (2010-2011; undergraduate student) - Consultation and training (genotyping analysis and evaluation, qPCR technique, immunoblot analysis); *Department of Nutrition, UNC-Chapel Hill.*

Jenna Currier (Spring Semester 2009-present; graduate student) - Consultation and training during “Spring BBSP Rotation” (maintaining normal and genetically modified cell cultures, arsenic metabolism); *Biological and Biomedical Science Program, UNC-Chapel Hill.*

Christina Lamb (Winter Semester 2009; graduate student) - Consultation and training during “Winter BBSP Rotation” (maintaining cell cultures, immunoblot analysis, flow cytometry); *Biological and Biomedical Science Program, UNC-Chapel Hill.*

Celia Maria Quinones (December 2008; graduate student) - Consultation and training (RNA and DNA isolation and purification from human blood, PCR technique, DNA sequencing); *Department of Toxicology, CINVESTAV, Mexico City, Mexico.*

Laurie Bennie (2008 – 2009; master student) – Laboratory Assistant; Consultation and training (mouse transplacental model for arsenic carcinogenesis, dissection and collection of animal tissues, DNA and RNA isolation and purification, qPCR technique, immunoblot analysis); *Department of Nutrition, UNC-Chapel Hill.*

Eun-ju Lee (2008; graduate student) - Consultation and training (qPCR, immunoblot analysis); *Department of Chemistry, UNC-Chapel Hill.*

Erik Karlsson (2008; graduate student) - Consultation and training (signaling pathway, transcription factors); *Department of Nutrition, UNC-Chapel Hill.*

Carolina Soriano Tarraga (September - December 2007; graduate student) - Consultation and training (RNA preparation, PCR technique, immunoblot analysis, flow cytometry, cellular transport systems, apoptosis); *Department of Genetics and Microbiology, Universidad Autonoma de Barcelona.*

Alejandro R. Molinelli (2005 – 2007; graduate student) - Consultations (cellular transport systems); *Curriculum in Toxicology, UNC-Chapel Hill, Dr. Madden Lab, U.S. EPA Human Studies Facility.*

Dave S. Paul (2004 – 2007; graduate student) - Consultations and training (signaling pathway, cloning techniques); *Department of Nutrition, UNC-Chapel Hill.*

Tracy Marion (December 2007; graduate student) - Consultations and training (cellular transport in human and animal species hepatocytes through MRP2); *Curriculum in Toxicology, School of Pharmacy, UNC-Chapel Hill.*

Olga L. Valenzuela (June 2006; graduate student) - Consultations and training (RNA and DNA preparation, PCR technique, DNA sequencing); *Department of Toxicology, CINVESTAV, Mexico City, Mexico.*

Wei Li (2002; graduate student) - Consultations and training (oxidative stress analysis); *Department of Nutrition, UNC-Chapel Hill.*

Fidaa Shaheen (Fall 2002; undergraduate student) - Laboratory Assistant; Consultation and training (glucose uptake in cultured adipocytes); *Department of Nutrition, UNC-Chapel Hill.*

MEMBER OF MASTER'S COMMITTEES

1. **Verne Tsang** (Nutritional Biochemistry, Nutrient-Carcinogen Interactions in Arsenic Transplacental Carcinogenesis, May 2011)

RESEARCH SUPPORTS

Active Research Support

1. **R01 ES015326-01A2** **Styblo (PI)** **08/07/08 - 05/31/13**
NIH/NIEHS

Environmental Arsenic and Diabetes Mellitus

This is a translational research project that examines diabetogenic effects of arsenic in cultured cells, laboratory mice, and in humans. The goals of this project are to identify mechanisms by which exposures to arsenic induce diabetes and to characterize genetic polymorphisms that are associated with increased risk of diabetes for individuals exposed to arsenic in drinking water.

Role: Investigator

2. **(No number)** **Drobna (PI)** **04/01/09 – 03/31/11**
Clinical Nutrition Research Center, UNC-Chapel Hill

Epigenetics of Nutrient-Carcinogen Interactions: The Role of Folate in Transplacental Carcinogenesis Associated with Exposure to Arsenic

This pilot project uses mouse model for transplacental arsenic carcinogenesis to examine effects of folate supplementation on epigenetic events that may determine the susceptibility of adult offspring to cancer.

Role: Principal Investigator

3. **1-R01-ES015326-01A2** **Styblo (PI)** **09/01/09 – 08/31/11**
Metabolism and Toxicity of Arsenic in the Human Liver

This project will identify molecular and cellular mechanisms that regulate the metabolism of arsenic in human hepatocytes.

Role: Investigator

4. 3 R01 ES015326-02S1 Styblo (PI) 11/01/09 – 10/31/11

ARRA Administrative Supplement (1R01ES015326-01A2)

NIH

Environmental Arsenic and Diabetes Mellitus

The proposed Administrative Supplement expands the scope of the population study by including analyses of genetic polymorphisms and essential nutrients that have only recently been shown to modify the profiles for methylated arsenicals in urine of individuals chronically exposed to iAs.

Role: Co-Investigator

5. 1-R01-ES019315-01 Fry (PI) 09/20/10 – 05/31/15

NIEHS

In utero exposure to arsenic, links to epigenetic alterations and disease

This project will investigate the hypothesis that prenatal exposure to arsenic alters inflammatory response signaling and that this modulation influences birth outcomes. Results from this research will identify biological pathways and pathogenic mechanisms that may associate prenatal arsenic exposure with both short and long-term health effects in humans.

Role: Investigator

Completed Research Support

Marilyn Gentry Fellowship Program in Nutrition and Cancer Drobná (PI)

12/01/07-11/30/10

AICR/WCRF

The Role of Nutrition in Modulation of Metabolism and Cancer Promoting Effects of Arsenic

This project examines the role of nutrients and food components in modulation of the metabolism and effects of arsenic in cells from tissues which undergo malignant transformation in humans chronically exposed to inorganic arsenic.

Role: Principal Investigator

(No number)

Drobná (PI)

10/01/09 – 09/30/10

ARRA Stimulus Grant from NIH

Nutrition Obesity Research Center, UNC-Chapel Hill

Epigenetics of Nutrient-Carcinogen Interactions: The Role of Folate in Transplacental Carcinogenesis Associated with Exposure to Arsenic

This is an expansion of original application (NORC) where 4 times more robust CpG-island microarray will be used to identify genes modified by arsenite exposure and/or prenatal folate intake. The expanded project will also include the examination of the global post-transcriptional modifications of histones in fetal livers after exposure to arsenite.

Role: Principal Investigator

(No number) Drobna (PI) 04/01/09 – 03/31/10
Center for Environmental Health and Susceptibility, UNC-Chapel Hill
Epigenetics of Nutrient-Carcinogen Interactions: The Role of Choline in Transplacental Carcinogenesis Associated with Exposure to Arsenic
This pilot project examines the effects of choline supplementation on epigenetic events in mouse fetal livers during the *in utero* exposure to arsenic.
Role: Principal Investigator

(No number) Drobna (PI) 03/01/09 - 05/31/09
NRI Stimulus Grant
Choline as a Modifier of the Epigenetic Effects of In Utero Exposure to Arsenic
This project examined the effects of dietary choline on DNA methylation and gene expression in male fetal livers after *in utero* exposure to inorganic arsenic.
Role: Principal Investigator

832735 Styblo (PI) 02/18/06 - 02/31/09
US EPA/STAR
Biomarkers of Health Risks Associated with Environmental Exposure to Arsenic
This project examined relationships between the genotypes for arsenic (+3 oxidation state) methyltransferase and metabolic and clinical biomarkers of toxic and cancer-promoting effects associated with exposure to inorganic arsenic from drinking water.
Role: Collaborator

(No number) Drobna (PI) 12/01/03 – 11/30/04
Center for Environmental Health and Susceptibility, UNC-Chapel Hill
The Role of Metabolism in the Modulation of Toxic and Cancer Promoting Effects of Arsenic in Human Urinary Bladder.
The goal of this project was to establish genetically modified human bladder epithelial cell lines with altered capacity to methylate inorganic arsenic and to use these cell lines to study the role of enzymatic methylation in the modulation of toxic and cancer promoting effects of this metalloid.
Role: Principal Investigator

R01 10845-01A2 Styblo (PI) 04/01/03 – 03/31/08
NIH/NIEHS
Metabolism and Toxicity of Arsenic in Human Liver
This project examined the interindividual variations in the metabolism and toxicity of arsenic in primary human hepatocytes and hepatic tissues. The mechanisms underlying these variations were studied.
Role: Postdoctoral Research Associate

R01 ES09941-01A Styblo (PI) 09/01/00 -08/31/03
NIH/NIEHS
Arsenic, Oxidative Stress and Transcriptional Control
This project examined arsenic-induced oxidative stress and expression of oxidative stress sensitive transcriptional factors in human cells and animal tissues.

Role: Postdoctoral Fellow

Pending Research Support

1. **1R01CA155027-01-A1**

Drobna (PI)

NIH

Carcinogen-Nutrient Interactions in Transplacental Arsenic Carcinogenesis

This project will examine the links between dietary intake of the methyl group donors, choline and folate, As-induced aberrant DNA methylation in mouse fetuses, and development of cancer in adult offspring.

Role: Principal Investigator

SERVICES

Reviewer for Peer-Reviewed Journals:

- Toxicology and Applied Pharmacology
- Environmental Health and Perspectives
- Chemical Research in Toxicology
- Bioinorganic Chemistry and Applications
- Food and Chemical Toxicology
- Toxicology
- Journal of Zhejiang University
- Cancer Cell International

Reviewer for NIH grants:

- Academic Research Enhancement Award (R15), 2007 - Skeletal Muscle and Developmental Physiology
- IAR for Special Emphasis Panel/Scientific Review Group 2009/10 ZRG1 OBT-A (58) R; RFA OD-09-003 Challenge Grants Panel 6; part of American Recovery and Reinvestment Act of 2009

Service provided to Amaxa Biosystems (Köln, Germany):

- Developing and optimization of the protocol for primary human hepatocytes nucleofection

PUBLICATIONS AND PRESENTATIONS

Articles in Peer-Reviewed Journals:

1. Smeester, L., Rager, J., Bailey, A.K., Guan, X., Smith, N., Garcia-Vargas, G., Del Razo, L.M., Drobna, Z., Kelkar, H., Styblo, M., Fry, R.C. (2011) Epigenetic Changes in Individuals with Arsenicosis. *Chem Res Toxicol* (accepted).
2. **Drobna, Z.**, Walton, F.S., Harmon, A.W., Thomas, D.J., Styblo, M. (2010) Interspecies differences in metabolism of Arsenic by Cultured Primary Hepatocytes. *Toxicol. Appl. Pharmacol.* 245(1); 47-56; PMID: PMC2862857.

3. **Drobná, Z.**, Walton, F.S., Paul, D.S., Xing, W., Thomas, D.J., Styblo, M. (2010) Metabolism of arsenic in human liver: The role of membrane transporters. *Arch. Toxicol.* 84: 3-16; PMID: PMC2862857.
4. Kojima, C., Ramirez, D.C., Tokar, E.J., Himeno, S., **Drobná, Z.**, Styblo, M., Mason, R.P., Waalkes, M.P. (2009) Requirement of Arsenic Biomethylation for Oxidative DNA Damage. *J. Natl. Cancer Inst.* 101: 1670-1681; PMID: PMC2794302.
5. **Drobná, Z.**, Narenmandula, H., Kubachka, K.M., Maeda's group, Edwards, B., Herbin-Davis, K., Styblo, M., Le, X.C., Creed, J.T., Maeda, N., Hughes, M.F., Thomas, D.J. (2009) Disruption of the arsenic (+3 oxidation state) methyltransferase gene in the mouse alters the phenotype for methylation of arsenic and affects distribution and retention of orally administered arsenate. *Chem. Res. Toxicol.* 22: 1713-1720; PMID: PMC2763928.
6. Valenzuela, O.L., **Drobná, Z.**, Hernandez-Castellanos, E., Sanchez-Peña, L.C., García-Vargas, G.G., Borja-Aburto, V.H., Styblo, M., Del Razo, L.M. (2009) Association of AS3MT polymorphisms and the risk of premalignant arsenic skin lesions. *Toxicol. Appl. Pharmacol.* 239: 200-207; PMID: 19538983.
7. Hester, S.D., **Drobná, Z.**, Andrews, D.M.K., Liu, J., Waalkes, M.P., Thomas, D.J., Styblo, M. (2009) Expression of AS3MT alters transcriptional profiles in human urothelial cells exposed to arsenite. *Human & Experimental Toxicology* 28: 49-61; PMID: 19411561.
8. Hernandez-Zavala, A., Valenzuela, O.L., Matousek, T., **Drobná, Z.**, Dedina, J., Thomas, D.J., Del Razo, L.M., Styblo, M. (2008) Speciation of arsenic in exfoliated urinary bladder epithelial cells from individuals exposed to arsenic in drinking water. *Environ. Health Perspect.* 116: 1656-1660; PMID: PMC2599759.
9. Matousek, T., Hernandez-Zavala, A., Svoboda, M., Langerova, L., Adair, B.M., **Drobná, Z.**, Thomas, D.J., Styblo, M., Dedina, J. (2008) Oxidation state specific generation of arsines from methylated arsenicals based on L-cysteine treatment in buffered media for speciation analysis by hydride generation – automated cryotrapping – gas chromatography – atomic absorption spectrometry with the multiatomizer. *Spectrochimica Acta Part B* 63: 396-406.; PMID: PMC2408738.
10. Hernandez-Zavala, A., Matousek, T., **Drobná, Z.**, Paul, D., Walton, F.S., Adair, B., Dedina, J., Thomas, D.J., Styblo, M. (2008) Speciation analysis of arsenic in biological matrices by automated hydride generation-cryotrapping-atomic absorption spectrometry with multiple microflame quartz tube atomizer (multiatomizer). *J. Anal. At. Spectrom.* 23: 342-351; PMID: PMC2493051.
11. Thomas, D.J., Li, J., Waters, S.B., Xing, W., Adair, B.M., **Drobná, Z.**, Devesa, V., and Styblo, M. (2007). Arsenic (+3 oxidation state) methyltransferase and the methylation of arsenicals. *Exp. Biol. Med.* 232: 3-13; PMID: PMC2408740.
12. **Drobná, Z.**, Xing, W., Thomas, D.J., and Styblo, M. (2006). shRNA silencing of AS3MT expression minimizes arsenic methylation capacity of HepG2 cells. *Chem. Res. Toxicol.* 19: 894-898; PMID: PMC2329798.
13. Adair, B.M., Waters, S.B., Devesa, V., **Drobná, Z.**, Styblo, M., Thomas, D.J. (2005) Commonalities in metabolism of arsenicals. *Environ. Chem.* 2: 1-6.

14. **Drobná, Z.**, Waters, S.B., Devesa, V., Harmon, A.W., Thomas, D.J., Stýblo, M. (2005) Metabolism and toxicity of As in human urothelial cells expressing rat arsenic (+3 oxidation state) methyltransferase. *Toxicol. Appl. Pharmacol.* 207: 147-159; PMID: PMC2366102.
15. Li, J., Waters, S.B., **Drobná, Z.**, Devesa, V., Stýblo, M., Thomas, D.J. (2005) Arsenic (+3 oxidation state) methyltransferase and the inorganic arsenic methylation phenotype. *Toxicol. Appl. Pharmacol.* 204: 164-169; PMID: 15808521.
16. **Drobná, Z.**, Waters, S.B., Walton, F.S., LeCluyse, E.L., Thomas, D.J., Stýblo, M. (2004) Interindividual variation in the metabolism of arsenic in cultured primary human hepatocytes. *Toxicol. Appl. Pharmacol.* 201: 166-177; PMID: 15541756.
17. Devesa, V., Del Razo, L.M., Adair, B., **Drobná, Z.**, Waters, S.B., Hughes, M.F., Stýblo, M., Thomas, D.J. (2004) Comprehensive analysis of arsenic metabolites by pH-specific hydride generation atomic absorption spectrometry. *J. Anal. At. Spectrom.* 19: 1460 – 1467.
18. Walton F.S., Harmon A.W., Paul D.S., **Drobná Z.**, Patel Y.M., Stýblo M. (2004) Inhibition of insulin-dependent glucose uptake by trivalent arsenicals: Possible mechanism of arsenic-induced diabetes. *Toxicol. Appl. Pharmacol.* 198: 424-433; PMID: 15276423.
19. Kupsáková I., Rybár A., Dočolomanský P., **Drobná Z.**, Stein U., Walther W., Barančík M., Breier A. (2004) Reversal of P-glycoprotein mediated vincristine resistance of L1210/VCR cells by analogues of pentoxifylline. A QSAR study. *Eur. J. Pharm. Sci.* 2-3: 283-293; PMID: 14757500.
20. Fiala R., Sulová Z., El-Saggan A.H., Uhrík B., Liptaj T., Dovinová I., Hanušovská E., **Drobná Z.**, Barančík M., Breier A. (2003) P-glycoprotein-mediated multidrug resistance phenotype of L1210/VCR cells is associated with decreases of oligo- and/or polysaccharide contents. *Biochim. Biophys. Acta* 1639: 213-224; PMID: 14636953.
21. **Drobná Z.**, Jaspers I., Thomas D.J., Stýblo M. (2003) Differential activation of AP-1 in human bladder epithelial cells by inorganic and methylated arsenicals. *FASEB J.* 17: 67-69; PMID: 12475910.
22. Stýblo M., **Drobná Z.**, Jaspers I., Lin S., Thomas D.J. (2002) The role of biomethylation in toxicity and carcinogenicity of arsenic. A research update. *Environ. Health Perspect.* 110 (Suppl.5): 767-771; PMID: PMC1241242
23. **Drobná Z.**, Stein U., Walther W., Barančík M., Breier A. (2002) Pentoxifylline influence on transport activity of P-glycoprotein and decrease of *mdr1* gene expression in mouse leucemic cells L1210/VCR resistant to vincristine. *Gen. Physiol. Biophys.* 21: 103-109; PMID: 12168720.
24. Horáková K., Šovčíková A., Semanová Z., Srová D., Bušányová K., **Drobná Z.**, Ferenčík M. (2001) Detection of drug-induced, superoxide-mediated cell damage and its prevention by antioxidants. *Free Radical Biology and Medicine* 30: 650-664; PMID: 11295363.
25. Boháčová V., Kvačkajová J., Barančík M., **Drobná Z.**, Breier A. (2000) Glutathione S-transferase does not play a role in multidrug resistance of L1210/VCR cell line. *Physiol. Res.* 49: 447-453; PMID: 11072805.

26. Breier A., **Drobná Z.**, Dočolomanský P., Barančík M. (2000) Cytotoxic activity of several unrelated drugs on L1210 mouse leukemic cell sublines with P-glycoprotein (PGP) mediated multidrug resistance (MDR) phenotype. A QSAR study. *Neoplasma* 47: 100-106; PMID: 10985475.
27. Breier A., **Drobná Z.**, Barančík M. (1998) Direct interaction between verapamil and doxorubicin causes the lack of reversal effect of verapamil on P-glycoprotein mediated resistance to doxorubicin in vitro using L1210/VCR cells. *Neoplasma* 45: 248-253; PMID: 9890669.
28. Breier A., **Drobná Z.**, Boháčová V., Barančík M. (1998) Resistance of L1210 mouse leukemic cell line characterized by overexpression of ATP dependent drug transporter to several drugs. *Chem. Papers* 52: 418-419.
29. Slezák J., Schulze W., **Štefanková Z.**, Okruhlicová L., Danihel L., Wallukat G. (1996) Localization of alpha 1, 2, 3-subunit isoforms of Na,K-ATPase in cultured neonatal and adult rat myocardium: The immunofluorescence and immunocytochemical study. *Mol. Cell Biochem.* 163-164: 39-45; PMID: 8974038.
30. **Štefanková Z.**, Barančík M., Breier A. (1996) Overcoming of P-glycoprotein mediated vincristine resistance of L1210/VCR mouse leukemic cells could be induced by pentoxifylline but not by theophylline and caffeine. *Neoplasma* 43: 11-15; PMID: 8843953.
31. Barančík M., **Štefanková Z.**, Breier A. (1995) Effect of phorbol myristate acetate (PMA) on P-glycoprotein mediated vincristine resistance of L1210 cells. *Gen. Physiol. Biophys.* 14: 171-175; PMID: 8846884.
32. Breier A., **Štefanková Z.**, Barančík M., Tribulová N. (1994) Time dependence of [3H]-vincristine accumulation by L1210 mouse leukemic cells. Effect of P-glycoprotein overexpression. *Gen. Physiol. Biophys.* 13: 287-298; PMID: 7890145.
33. Breier A., Barančík M., **Štefanková Z.**, Uhrík B., Tribulová N. (1994) Effect of pentoxifylline on P-glycoprotein mediated vincristine resistance of L1210 mouse leukemic cell line. *Neoplasma* 41: 297-303; PMID: 7854500.

Chapters in Books:

1. **Drobná, Z.**, Stýblo, M., Thomas, D.J. (2009) An overview of arsenic metabolism and toxicity. In: *Current Protocols in Toxicology*, 42:4.31.1-4.31.6 (doi:10.1002/0471140856.tx0431s42).
2. **Drobná, Z.**, Stýblo, M., Thomas, D.J. (2009) In vitro assays of inorganic arsenic methylation. In: *Current Protocols in Toxicology*, 42:4.32.1-4.32.10 (doi: 10.1002/0471140856.tx0432s42).
3. Hernández-Zavala, A., **Drobná, Z.**, Stýblo, M., Thomas, D.J. (2009) Analysis of arsenical metabolites in biological samples. In: *Current Protocols in Toxicology*, 42:4.33.1-4.33.17 (doi: 10.1002/0471140856.tx0433s42).
4. **Drobná, Z.**, Stýblo, M., Thomas, D.J.: Purification of arsenic (+3 oxidation state) methyltransferase from rat liver cytosol. In: *Current Protocols in Toxicology*, 42:4.34.1-.34.13 (doi:10.1002/0471140856.tx0434s42).

5. **Drobna, Z.**, Stýblo, M., Thomas, D.J.: Manipulation of Expression of Arsenic (+3 Oxidation State) Methyltransferase in Cultured Cells. In: *Current Protocols in Toxicology*, 43:4.35.1-4.35.24 (doi: 10.1002/0471140856.tx0435s43).
6. **Drobna, Z.**, Jaspers, I., Stýblo, M. (2003) Metabolism of arsenic and gene transcription regulation: mechanism of AP-1 activation by methylated trivalent arsenicals. In: *Arsenic Exposure and Health Effects V, Mode of Action*, Chapter 20, pp. 267-281.

Solicited Reviews in Peer-Reviewed Journals:

1. Thomas, D.J., Li, J., Waters, S.B., Xing, W., Adair, B.M., **Drobna, Z.**, Devesa, V., Stýblo, M., (2007) Arsenic (+3 oxidation state) methyltransferase and methylation of arsenicals. *Exp. Biol. Med.* 232:3-13.
2. Adair, B., Waters, S.B., Devesa, V., **Drobna, Z.**, Stýblo, M., Thomas, D.J. (2005) Commonalities in metabolism of arsenicals. *Environ. Chem.* 2: 161-166.

Proceeding Articles:

1. Paul, SD, Devesa, V, Hernandez, AZ, Blakely, MA, Walton, FS, **Drobna, Z.**, Thomas, DJ, Stýblo, M. (2008) Environmental arsenic as a disruptor of insulin signaling. In: *Metal Ions in Biology and Medicine 10*: Collery, P., Maynard, I., Theopanides, T., Khasanova, L., Collery, T. (eds.), John Libbey, Eurotext, Paris, pp. 1-7. Publication of the Proceeding of the 10th International Symposium on, May 19-22, 2008, Corsica, France.
2. Stýblo M., Waters S.B., **Drobna Z.**, Lin S., Walton F.S., Jaspers I., Patel Y.M., Del Razo L.M., Thomas D.J. (2003) Production and biological significance of methylated trivalent arsenicals. In: *BITREL 2002*. Proceedings of International Symposium on Bio-Trace Elements 2002, 10/28-11/2, Tokyo, Japan, pp. 96-100.
3. **Drobna Z.**, Jaspers I., Stýblo M. (2003) Metabolism of arsenic and gene transcription regulation: Mechanism of AP-1 activation by methylated trivalent arsenicals. In: *Arsenic Exposure and Health Effects V*, Chappell WR, Abernathy CO, Calderon RL, Thomas DJ (eds). Elsevier, pp. 267-282.

Posters, Platform Presentations, Abstracts:

1. Loomis, D., Del Razo, L.M., Garcia-Vargas, G., **Drobna, Z.**, Stýblo, M. Association of diabetes with arsenic exposure, arsenic metabolites and AS3MT polymorphism. Oral Presentation, September 13 -16, 2011, The International Society for Environmental Epidemiology, Barcelona, Spain.
2. Attard, S., Douillet, C., Walton, F., **Drobna, Z.**, Currier, J., Stýblo, M. Examining the diabetogenic effect of trivalent arsenicals in C2C12 myotubes. Poster presentation, March 6-10, 2011, SOT, Washington, D.C., MD.
3. **Drobna, Z.**, Del Razo, L.M., Garcia-Vargas, G., Loomis, D., Stýblo, M. GST-T1 and GST-M1 genotypes modulate the metabolism and diabetogenic effects of inorganic arsenic. Poster presentation, March 6-10, 2011, SOT, Washington, D.C., MD.

4. Tsang, V., Fry, R.C., Niculescu, M.D., Saunders, J., Waalkes, M., Styblo, M., **Drobna, Z.**, The effect of prenatal folate supplementation on DNA methylation and gene expression in male CD1 mouse fetuses exposed in utero to arsenic. Poster presentation, March 6-10, 2011, SOT, Washington, D.C., MD.
5. Currier, J., Saunders, J., **Drobna, Z.**, Styblo, M. Detection and stability of methylated trivalent arsenic metabolites in mouse liver homogenates. Poster presentation, March 6-10, 2011, SOT, Washington, D.C., MD.
6. Smeester, L., Rager, J., Zhang, L., Smith, N., Garcia-Vargas, G., Del Razo, L.M., **Drobna, Z.**, Schroth, G., Styblo, M., Fry, R. Environmental epigenomics: Altered genomic DNA methylation patterns in individuals with arsenicosis. Poster presentation, March 6-10, 2011, SOT, Washington, D.C., MD.
7. Ding, L., Saunders, J., **Drobna, Z.**, Thomas, D.J., Styblo, M. Methylation of arsenic by recombinant human AS3MT/287M and AS3MT/287T polymorphs. Poster presentation, March 6-10, 2011, SOT, Washington, D.C., MD.
8. Loomis, D., Del Razo, L.M., Garcia-Vargas, G., **Drobna, Z.**, Styblo, M. AS3MT/M287T polymorphism is a risk factor for diabetes associated with chronic exposure to inorganic arsenic. Poster presentation, March 6-10, 2011, SOT, Washington, D.C., MD.
9. Loomis, D., Del Razo, L.M., Garcia-Vargas, G., **Drobna, Z.**, Styblo, M. Dimethylarsinite in urine is a predictor of risk of diabetes associated with chronic exposure to inorganic arsenic. Oral presentation, December 15-20, 2010, The International Chemical Congress of Pacific Basin Societies, Honolulu, Hawaii.
10. Tsang, V., Styblo, M., Fry, R.C., Niculescu, M.D., **Drobna, Z.** The effect of prenatal folate supplementation on DNA methylation and gene expression in male mouse fetuses exposed in utero to arsenic. Poster presentation, UNC Center for Environmental Health and Susceptibility, Symposium on Interdisciplinary Environmental Health Research, November 18, 2010, UNC-Chapel Hill, NC.
11. Del Razo, L.M., Garcia-Vargas, G., Drobna, Z., Hernandez-Castellanos, E., Sanchez Pena, L.C., Loomis, D., Styblo, M. Prevalencia de diabetes en regiones de Mexico expuestas a arsenic inorganic. Oral presentation, November 7-12, 2010, XXVIII Congreso Nacional de Bioquimica, Tuxtla Gutierrez, Chiapas, Mexico.
12. Tsang, V., Styblo, M., Fry, R.C., Niculescu, M.D., **Drobna, Z.** The effect of prenatal folate supplementation on DNA methylation status in mouse fetuses exposed in utero to arsenic. Poster presentation, The Annual AICR Research Conference on Food, Nutrition, Physical Activity, and Cancer, October 21 – 22, 2010, Washington, D.C., MD.
13. **Drobna, Z.**, Niculescu, M.D., Fry, R.C., Pogribny, I., Waalkes, M.P., Zeisel, S.H., Styblo, M. Epigenetic alterations in fetal mouse livers after in utero exposure to arsenic. Poster presentation, March 7-11, 2010, SOT, Salt Lake City, Utah.
14. Currier, J., Saunders, J., **Drobna, Z.**, Styblo, M. Stability of methylated trivalent metabolites of inorganic arsenic in cellular environment. Poster presentation, March 7-11, 2010, SOT, Salt Lake City, Utah.

15. Loomis, D., Del razo, L.M., Garcia-Vargas, G., **Drobná, Z.**, Styblo, M. Dimethylarsinite in urine is a predictor of risk of diabetes associated with chronic exposure to inorganic arsenic. Poster presentation, March 7-11, 2010, SOT, Salt Lake City, Utah.
16. **Drobná, Z.**, Niculescu, M.D., Fry, R.C., Pogribny, I., Waalkes, M.P., Zeisel, S.H., F., Paul, P., Styblo, M. Epigenetic alterations in fetal mouse livers after in utero exposure to arsenic. Poster presentation, PPTOXII: Role of Environmental Stressors in the Development of Origins of Disease, December 7-10, 2009, SOT, Miami, Florida.
17. **Drobná, Z.**, Niculescu, M., Fry, R., Pogribny, I., Bennie, L., Walton, F., Paul, P., Styblo, M. Epigenetic alterations in fetal mouse livers after in utero exposure to arsenic. Poster presentation, NIH Roadmap Epigenomics Program for Medical Research, Epigenetics and Epigenomics of Human Diseases, March 16 -17, 2009, NIH, Bethesda, Maryland.
18. **Drobná, Z.**, Tarraga, C.S., Walton, F., Bennie, L., Marcos, R., Styblo, M. 3'-OH-genistein in the treatment of acute promyelocytic leukemia. Poster presentation, Society of Toxicology, 48th Annual Meeting, March 15-19, 2009, Baltimore, Maryland.
19. Kojima, C., Tokar, E., Ramirez, D., **Drobná, Z.**, Styblo, M., Mason, R., Waalkes, M. Arsenic biomethylation is obligatory for oxidative DNA damage but not for malignant transformation. Poster presentation, Society of Toxicology, 48th Annual Meeting, March 15 -19, 2009, Baltimore, Maryland.
20. **Drobná, Z.**, Hernandez-Zavala, A., Walton, F., Thomas, D.J., Styblo, M. Nutritional Flavonoids modulate the metabolism of arsenic, a human carcinogen. Poster presentation, The Annual AICR Research Conference on Food, Nutrition, Physical Activity, and Cancer, November 6 – 7, 2008, Washington, D.C., MD.
21. **Drobná, Z.**, Walton, F.S., Styblo, M. The role of membrane transporters in the metabolism of arsenic by human hepatocytes. Poster presentation, Arsenic in the environment: Arsenic from nature to humans, 2nd International Congress, May 21-23, 2008, Valencia, Spain.
22. David, S.P., Devesa, V., Hernandez, A.Z., Blakely, M.A., Walton, F.S., **Drobná, Z.**, Thomas, D.J., Styblo, M. Environmental arsenic and diabetes mellitus. Oral presentation, Arsenic in the environment: Arsenic from nature to humans, 2nd International Congress, May 21-23, 2008, Valencia, Spain.
23. **Drobná, Z.**, Devesa, V., Thomas, D.J., Styblo, M. Metabolism of arsenic in human liver. Oral presentation, Arsenic in the environment: Arsenic from nature to humans, 2nd International Congress, May 21-23, 2008, Valencia, Spain.
24. Hernandez, A.Z., Valenzuela, O.L., Del Razo, L.M., Matousek, T., **Drobná, Z.**, Dedina, J., Thomas, D.J., Styblo, M. Speciation of arsenic in exfoliated bladder cells from residents of Zimapan, Mexico. Poster presentation, Arsenic in the environment: Arsenic from nature to humans, 2nd International Congress, May 21-23, 2008, Valencia, Spain.
25. David, S.P., Devesa, V., Hernandez, A.Z., Blakely, M.A., Walton, F.S., **Drobná, Z.**, Thomas, D.J., Styblo, M. Environmental arsenic as a disruptor of insulin signaling. Oral presentation, 10th International symposium on metal ions in biology and medicine, May 19-22, 2008, Corsica, France.

26. **Drobná, Z.**, Hernandez, A.Z., Walton, F.S., Thomas, D.J., Styblo, M. The role of flavonoids in modulation of the metabolism of arsenic. Poster presentation, Society of Toxicology, 47th Annual Meeting, March 16-20, 2008, Seattle, Washington.
27. Walton, F.S., **Drobná, Z.**, Styblo, M. The role of MRP2 and GLUT2 transporters in the metabolism of arsenite by primary human hepatocytes. Poster presentation, Society of Toxicology, 47th Annual Meeting, March 16-20, 2008, Seattle, Washington.
28. Valenzuela, O.L., **Drobná, Z.**, Garcia-Vargas, G.G., Borja-Aburto, V.H., Styblo, M., Del Razo, L.M. Relationship between arsenic-skin lesions and the Met287Thr polymorphism in AS3MT gene. Poster presentation, Society of Toxicology, 47th Annual Meeting, March 16-20, 2008, Seattle, Washington.
29. **Drobná, Z.**, Hernandez, A.Z., Devesa, V., Thomas, D.J., Styblo, M. The role of membrane transporters in the cellular metabolism of arsenic. Oral presentation, Society of Toxicology, 46th Annual Meeting, March 25-29, 2007, Charlotte, North Carolina.
30. Hernandez, A.Z., Matousek, T., **Drobná, Z.**, Valenzuela, O., Del Razo, L.M., Adair, B.M., Dedina, J., Thomas, D.J., Styblo, M. Speciation of arsenic in biological matrices by automated HG-AAS with multiple microflame quartz tube atomizer (multi-atomizer). Poster, Society of Toxicology, 46th Annual Meeting, March 25-29, 2007, Charlotte, North Carolina.
31. Xing, W., **Drobná, Z.**, Styblo, M., Adair, B.M., Thomas, D.J. Identifying critical cysteine residues in arsenic (+3 oxidation state) methyltransferase. Poster, Society of Toxicology, 46th Annual Meeting, March 25-29, 2007, Charlotte, North Carolina.
32. **Drobná, Z.**, Waters, S.B., Devesa, V., Xing, W., Harmon, A.W., Thomas, D.J., Styblo, M. The role of arsenic (+3 oxidation state) methyltransferase in arsenic metabolism. Oral presentation, The Central and Eastern European Conference on Health and the Environment, October 22-25, 2006, Bratislava, Slovakia.
33. **Drobná Z.**, Waters, S.B., Devesa, V., Harmon, A.W., Thomas, D.J., Styblo, M. (2005) Metabolism and Toxicity of Arsenic in Human Urinary Bladder Epithelial Cells Expressing Rat Arsenic (+3)-Methyltransferase. Center for environmental health and susceptibility (CEHS) Science Day, April 27, 2006, UNC – Lineberger Comprehensive Cancer Center Chapel Hill, NC.
34. **Drobná Z.**, Thomas D.J., Styblo M. (2006) shRNA-Mediated Silencing of AS3MT Expression Modulates the Capacity of HepG2 Cells to Methylate Inorganic Arsenic. Society of Toxicology, 45th Annual Meeting, March 5-9, 2006, San Diego, CA (on CD).
35. Hester S., **Drobná Z.**, Ducharme D., Waalkes M., Thomas D.J., Styblo M. (2006) Expression of AS3MT Alters Transcriptional Profiles in Human Urothelial Cells Exposed to Arsenite. Society of Toxicology, 45th Annual Meeting, March 5-9, 2006, San Diego, CA (on CD).
36. Walton F., **Drobná Z.**, Harmon A., Thomas D.J., Styblo M. (2006) Metabolism of arsenite in cultured primary hepatocytes from six mammalian species. Society of Toxicology, 45th Annual Meeting, March 5-9, 2006, San Diego, CA (on CD).
37. **Drobná Z.**, Waters, S.B., Devesa, V., Harmon, A.W., Thomas, D.J., Styblo, M. (2005) Metabolism and Toxicity of Arsenic in Human Urinary Bladder Epithelial Cells Expressing

Rat Arsenic (+3)-Methyltransferase. Society of Toxicology 44th Annual Meeting, New Orleans, LA, March 2005 (on CD).

38. **Drobná, Z.**, Waters, S.B., Walton, F.S., LeCluyse, E.L., Thomas, D.J., Stýblo, M. (2004) Interindividual variation in the metabolism of arsenic in human hepatocytes. Society of Toxicology 43rd Annual Meeting, Baltimore, MD, March 2004 (on CD).
39. **Drobná, Z.**, Waters, S.B., Walton, F.S., Devesa, V., Thomas, D.J., Stýblo, M. (2004) Characterization of human urinary bladder cell line urotsa transduced with rat As^{III}-methyltransferase. Society of Toxicology 43rd Annual Meeting, Baltimore, MD, March 2004 (on CD).
40. Waters, S.B., Devesa, V., **Drobná, Z.**, Stýblo, M., Thomas, D.J. (2004) Recombinant rat Cyt19, an arsenic methyltransferase, efficiently generates trimethylarsine oxide in the absence of glutathione. Toxicology 43rd Annual Meeting, Baltimore, MD, March 2004 (on CD).
41. Devesa, V., Del Razo, L.M., Waters, S.B., **Drobná, Z.**, Hughes, M.F., Stýblo, M., Thomas, D.J. (2004) Comprehensive analysis of biologically relevant arsenicals by pH-selective hydride generation-atomic absorption spectrometry. Toxicology 43rd Annual Meeting, Baltimore, MD, March 2004 (on CD).
42. **Drobná Z.**, Jaspers I., Stýblo M. (2003) Activation of ERK signaling pathway and AP-1 in UROtsa cells by inorganic and methylated trivalent arsenicals. Society of Toxicology 42nd Annual Meeting, Salt Lake City, UT, March 2003. *The Toxicologist*, Abstract Issue of Toxicol. Sci., vol. 72, , p. 269.
43. **Drobná, Z.**, Jaspers I., Thomas D.J. and Stýblo M. (2002) Activation of AP-1 in UROtsa cells by methylated trivalent arsenicals. *The Toxicologist*, Abstract Issue of Toxicol. Sciences, Society of Toxicology 41th Annual Meeting, Nashville, TN, March 2002, p.84.
44. Barančík M., **Drobná Z.**, Breier A. (1996) Effect of several drugs on P-glycoprotein - mediated resistance of mouse leukemic cell line L1210/VCR. *Chemical Letters* 90: 762.
45. **Drobná Z.**, Barančík M., Breier A. (1996) Selectivity of multidrug resistance phenotype of mouse leukemic cell line L1210/VCR against several cytostatics and chemosensitizers. *Chemical Letters* 90: 763-764.
46. **Štefanková Z.**, Barančík M., Breier A. (1994) Multidrug resistance (MDR) as a consequence of P-glycoprotein (P-GP) overexpression in L1210 mouse leukemia cell line. *Cell Biology International* 18: 395. 4th European Cell Biology, Prague, Czech Republic, June 26th – July 1st 1994.

Seminars:

1. *Epigenetics of nutrient-carcinogen interactions*. UNC Gillings School of Global Public Health, Researchers' Lunch with the Dean, June 2009.
2. *The role of nutrition in modulation of the metabolism and cancer promoting effects of arsenic*. UNC, Dept. of Nutrition, July 19, 2007 (Marylin Gentry Fellowship in Nutrition and Cancer Program; candidate).

3. *The role of membrane transporters in the cellular metabolism of arsenic.* Society of Toxicology, 46th Annual Meeting, March 25-29, 2007, Charlotte, North Carolina.
4. *The role of arsenic (+3 oxidation state) methyltransferase in arsenic metabolism.* The Central and Eastern European Conference on Health and the Environment, October 22-25, 2006, Bratislava, Slovakia.
5. *The role of methylation in modulation of acute toxicity of arsenicals in human cells.* US-EPA, Research Triangle Park, NC, May 24, 2005.
6. *The Role of Arsenic-Methyltransferase in the Modulation of Toxic and Cancer Promoting Effects in UROtsa Cells.* Institute of Heart Research, Slovak Academy of Sciences, Bratislava, Slovakia, June 15, 2004.
7. *AP-1 and ERK activation in human urothelial (UROtsa) cells by trivalent arsenicals.* The Center for Environmental Medicine and Lung Biology, UNC Chapel Hill, and the Human Research Division, US EPA, UNC Campus, October 2002.