

## **Ilona Petrikovics**

Associate Professor of Chemistry  
Sam Houston State University  
Department of Chemistry  
College of Arts and Sciences

### **Degrees Earned**

Ph.D. in Medicinal Biology, (minors: Chemotherapy and Microbiology), University Medical School, Debrecen, Hungary, Europe, 1985

Ph.D. in Organic Chemistry, (minor: Biochemistry), L. Kossuth University of Arts and Sciences, Debrecen, Hungary, Europe, 1982

M.S. in General Chemistry, L. Kossuth University of Arts and Sciences, Debrecen, Hungary, Europe, 1979

### **Work or Professional Experiences**

(2007-Present) Associate Professor of Chemistry. SHSU Huntsville, TX. *Field: Enzyme mechanism in drug antagonism; Enzyme and drug delivery systems; Chemical warfare agent antagonism.*

(2006-2007) Battelle Contractor, (on sabbatical leave) U.S. Army Medical Research Institute of Chemical Defense, Aberdeen, MD. *Field: Cyanide research*

(2004-2006) Research Fellow, Auburn University, College of Veterinary Medicine, Department of Anatomy, Physiology and Pharmacology, Clin. Pharm. Lab., Auburn, AL. *Field: Clinical Pharmacology (pharmacokinetics) studies with drugs and metabolites; Analytical method developments.*

(2004-2005) Associate Research Scientist, Texas A&M University, Department of Biochemistry-Biophysics College Station, TX. *Field: Enzyme immobilization and nanotechnology applications for detection, decontamination, and antagonism of chemical warfare agents.*

(2003-2004) Research Analytical Chemist, Clinical Pharmacology and Anal. Chem. Laboratory, Texas A&M University, Department of Veterinary Physiology and Pharmacology, TX. *Field: Clinical Pharmacology studies. Analytical detection method development for drugs and metabolites in body fluids and tissues; Drug stability studies.*

(2002-2003) National Research Council Senior Fellow, U.S. Army Medical Research Institute of Chemical Defense, Aberdeen, MD. *Field: Analytical and toxicity (toxicokinetics) studies with chemical warfare agents.*

(1992 - 2002) Assistant Research Scientist, Texas A&M University, Department of Medical Pharmacology and Toxicology, TX. *Field: Toxicology - Drug toxicity and antagonism; Drug delivery systems (Liposomes, Enzyme carrier polymers, Cyclodextrines, Nanoencapsulation technology).*

(1990 - 1992) Research Associate, Texas A&M University, Department of Medical Pharmacology & Toxicology, TX. *Field: Toxicology - Mechanism of drug antagonism, enzyme mechanism and toxicokinetics in carrier red blood cells. (Noxious gases, Pesticides).*

- (1988 - 1990) Laboratory Head, Biogal Pharmaceutical Company Debrecen, Hungary. *Field: Drug development; Trans-dermal drug delivery systems; Pharmacokinetics.*
- (1985 - 1988) Research Fellow, Research Group of Antibiotics of the Hungarian Academy of Sciences, Debrecen, Hungary. *Field: Synthesis and structural elucidation of novel beta-lactam antibiotics.*
- (1982 - 1985) Research Associate, Dept. of Chemotherapy, University Medical School, Debrecen, Hungary. *Field: Kinetic studies on microbial beta-lactamases; Beta-lactamase resistance.*
- (1979 - 1981) Research Associate, Research Group of Antibiotics of the Hungarian Academy of Sciences, L. Kossuth Univ. of Arts and Sciences, Organic Chemistry, Debrecen, Hungary. *Field: Synthesis and structural elucidation of penicillin and cephalosporin antibiotics.*

### **Ongoing External Funding:**

- 1). **Catalytic Bio-Scavengers with Broad Specificity Against OP Nerve Agents.**  
NIH Funding, 5 UG1 NS058035-02. Principal Investigator: Wild, James, R. (TAMU) 10/01/06 – 09/30/11, \$1,710,206.  
Sub-Award with TAMU-SHSU (2007-Present), Principal Investigator at SHSU: Ilona Petrikovics, \$464,348/5years. Sub-Award#: 570376. Year4: \$89,109.
- 2). **Investigation of Sulfur Donors for Cyanide Antagonism.**  
A two-year STAS Program with the U.S. Army Medical Research Institute of Chemical Defense, (USAMRICD), APG Maryland. Founding amount to SHSU for Year1 (September 1, 2008 – Aug. 31, 2009): \$191,712 and for Year2 (September 1, 2010-Aug. 31, 2010): \$208,305. (Ongoing research project, renewable every two years). Principal investigator at SHSU: Ilona Petrikovics, Project Leader at USAMRICD: Dr. Gary Rockwood, (410-436-5109).  
Program sponsored by the U.S. Army Research Office (ARO), Research Triangle Park, NC., through Battelle Scientific Research Institute, Chapel Hill, NC, (919-933-7256), Contract Number: W911 NF-07-D-001. Sponsoring Agency Report Number: TCN 08284.

### **Peer-Review Publications**

#### **Articles**

Petrikovics, I., Baskin, S.I., Beigel, K.M., Schapiro, B.J., Rockwood, G.A., Yin, R., Qin, D., Budai, M., and Szilasi M. Nanocaptured Rhodanese in Cyanide Antagonism. *Nanotoxicology* (under revising)

Petrikovics, I., Budai, M., Childress, J., Rockwood, G.A., Baskin, S.I., Szilasi, M. Characterization of Liposomal Vesicles Encapsulating Rhodanese for Cyanide Antagonism. *Journal of Drug Delivery*, Vol. 16(6), 2009.

Budai, M., Chapela, P., Budai, L., Wales, M.E., Petrikovics, I., Zimmer, A., Gróf, A., Klebovich, I., Szilasi M. Liposomal oxytetracycline and doxycycline: studies on enhancement of encapsulation efficiency. *Drug Discov. Ther.* Vol. 3, 13-17, 2009.

Budai, M. Chapela, P. Gróf, P., Klebovich, I. Zimmer, A., Wales, M.E., Wild, J.R., Petrikovics, I., Szilasi, M. Physico-chemical characterization of stealth liposomes encapsulating an organophosphate hydrolyzing enzyme. *J. Liposome Res.* Vol. 2, 1-6, 2009.

Petrikovics, I., Wales, M.E., Jaszberenyi, J.C., Budai, M., Baskin, S.I., Szilasi, M., Logue, B.A., Chapela, P. and Wild, J. R. Enzyme-based intravascular defense against organophosphorus neurotoxins: Synergism of dentritic-enzyme complexes with 2-PAM and atropine. *Nanotoxicology*, Vol. 1, 85-92, 2007.

Baskin, S.I., Petrikovics, I., Platoff, G.E., Rockwood, G.A. and Logue, B.A. Spectrophotometric Analysis of the Cyanide Metabolite 2-Aminothiazoline-4-Carboxylic Acid (ATCA). *Toxicological Methods and Mechanism*, Vol. 16, 339-345, 2006.

Arsenault, W.G., Boothe, D.M, Gordon, S.G., Miller M.W., Chalkley, J.R. and Petrikovics I. Pharmacokinetics of carvedilol after intravenous and oral administration in conscious healthy dogs. *American Journal of Veterinary Research*, Vol. 66, 2172-2176, 2005.

Logue, B.A., Kirschten, N.P., Petrikovics, I., Moser, M.A., Rockwood, G.A. and Baskin, S.I. Determination of the cyanide metabolite 2-aminothiazoline-4-carboxylic acid in urine and plasma by gas chromatography-mass spectrometry. *Journal of Chromatography*, Vol. 819, 237-244, 2005.

Petrikovics, I., Papahadjapoulos, D., Hong, K., Cheng, T-C., Baskin, S.I., Jiang, J., Jaszberenyi, J.C., Szilasi, M., McGuinn, W.D., and Way, J.L. Comparing Prophylactic and Therapeutic Protection Against the Lethal Effects of Paraoxon. *Toxicological Sciences*, Vol. 77, 258-262, 2004.

Petrikovics, I., Cheng, T-C., Papahadjapoulos, D., Hong, K., Yin, R., DeFrank, J.J., Jiang, J., Song, Z. H., McGuinn, W.D., Sylvester, D., Pei, L., Madec, J., Tamulinas, C., Jaszberenyi, J.C., Barcza, T. and Way, J.L. Long Circulating Liposomes Encapsulating Organophosphorus Acid Anhydrolase in Diisopropylfluorophosphate Antagonism. *Toxicological Sciences*, 57, 16-21, 2000.

Petrikovics, I., Hong, K., Papahadjapoulos, D., Yuzapavik, P., Jiang, J., Yin, R., Cheng, T-C., DeFrank, J.J., McGuinn, W.D., Sylvester, D. and Way, J.L. *In vitro* Studies on Sterically Stabilized Liposomes (SL) as Enzyme Carriers in Organophosphorus (OP) Antagonism. *Drug Delivery*, Vol. 7, Issue 2: 83-89, 2000.

Petrikovics, I., Hong, K., Omburo, G., Hu, Q., Pei, L., McGuinn, W.D., Sylvester, D., Tamulinas, C., Papahadjapoulos, D., Jaszberenyi, J.C. and Way, J.L. Antagonism of Paraoxon Intoxication by Recombinant Phosphotriesterase Encapsulated within Sterically Stabilized Liposomes. *Toxicology and Applied Pharmacology*, Vol.156, 56-63, 1999.

Petrikovics, I., Cannon, E.P., McGuinn, W.D., Pei, L. and Way, J.L. Cyanide Antagonism with Organic Thiosulfonates and Carrier Red Blood Cells Containing Rhodanese. *Fundamental and Applied Toxicology*, Vol. 24, 1-8, 1995.

Pei, L., Petrikovics, I. and Way, J.L. Antagonism of the Lethal Effect of Paraoxon by Carrier Erythrocytes Containing Organophosphorous Acid Anhydrase. *Fundamental and Applied Toxicology*, Vol. 28, 209-214,1995.

Petrikovics, I., McGuinn, W.D., Cannon, E.P., Pei, L. and Way, J.L. Encapsulation of Rhodanese and Organic Thiosulfonates by Mouse Erythrocytes. *Fundamental and Applied Toxicology*, Vol. 23, 70-75, 1994.

Pei, L., Omburo, G., McGuinn, W.D., Petrikovics, I., Dave, K., Raushel, F.M., Wild, J.R, DeLoach, J. and Way, J.L. Encapsulation of Phosphotriesterase within Murine Erythrocytes. *Toxicology and Applied Pharmacology*, Vol. 124, 296-301, 1994.

McGuinn, W.D., Baxter, L., Pei, L., Petrikovics, I., Cannon, E.P., and Way, J.L. Antagonism of the Lethal Effects of Cyanide by a Synthetic Water Soluble Cobalt (III) Porphyrin Compound. *Fundamental and Applied Toxicology*, Vol. 23, 76-80, 1994.

Cannon, E.P., Leung, P., Hawkins, A-Zitzer., Petrikovics, I., Deloach, J. and Way, J.L. Antagonism of Cyanide Intoxication with Murine Carrier Erythrocytes Containing Bovine Rhodanese and Sodium Thiosulfate. *Journal of Toxicology and Environmental Health*, Vol. 41, 267-274, 1994.

Pei, L., McGuinn, W.D., Omburo, G., Hawkins, A-Zitzer., Petrikovics, I., Cannon, E.P. and Way, J.L. Spectrophotometric Determination of Paraoxonase within Mouse Carrier Erythrocytes. *Biochemistry and Applied Biotechnology*, Vol. 23, 35-41, 1994.

McGuinn, W.D., Cannon, E.P., Chui, C.K., Pei, L., Petrikovics, I., and Way, J.L. The Encapsulation of Squid Diisopropylphosphorofluoridate-Hydrolyzing Enzyme within Mouse Erythrocytes. *Fundamental and Applied Toxicology*, Vol. 21, 38-43, 1993.

Pei, L., McGuinn, W.D., Petrikovics, I., Cannon, E.P. and Way, J.L. Determination of Organophorous Acid Anhydrase in Blood. *Toxicology Methods*. Vol. 3, Issue 4: 261-267, 1993.

Petrikovics, I., Jaszberenyi, J.C., Hernadi, F., Sztaricskai, F., Bogнар, R., Batta, Gy. and Benesch, L. Synthesis and Bioactivity of beta-Lactamase Inhibitory Iodopenicillanic Acid Derivatives. *Acta Chim. Acad. Sci. Hung.*, Vol. 128, Issue 1:41-52, 1991.

Leung, P., Cannon, E.P., Petrikovics, I. and Way, J.L. *In Vivo* Studies on Rhodanese Encapsulation in Mouse Carrier Erythrocytes. *Toxicology and Applied Pharmacology*, Vol. 110, 268-274, 1991.

Jaszberenyi, J.C., Pitlik, J., Kollar, K., Petrikovics, I., Erdodine-Kover, K., and Batta, Gy. Synthesis and 1,3-Dipolar Cycloadditions of 2-Methylenecephalosporins. *Acta Chim. Acad. Sci. Hung.*, Vol. 126, 81-97, 1989.

Hernadi, F., Petrikovics, I., Jaszberenyi, J.C., Frommer-Filep, M.. Inhibition of beta-Lactamases by Halopenicillanic Acid Derivatives. *International Journal of Experimental Clinical Chemotherapy*, Vol. 2, Issue 4: 209-214, 1989.

Hernadi, F., Jaszberenyi, J.C. and Petrikovics, I. Complex Analysis Methods for Study of beta-Lactamase Inhibitors. *American Clinical Products, Review*, Vol. 5, 18-27, 1986.

Hernadi, F., Jaszberenyi, J.C. and Petrikovics, I. Complex Biological Analysis Methods for Study of beta-Lactamase Inhibitors. *American Biotechnology Lab.*, Vol. 3, 0-20, 1985.

Kiss, L., Gal, Zs., Tothmartinez, B.L. and Petrikovics, I. Use of Chromatofocusing for Separation of beta-Lactamases. *Journal of Chromatography*, Vol. 262, 379-384, 1983.

Jaszberenyi, J.C., Petrikovics, I., Gunda, E.T. and Hosztafi, S. On the Mannich-reaction of Cephalosporin Sulphoxides and Sulphones. *Acta Chim. Acad. Sci. Hung.*, Vol. 110, 81-84, 1982.

Jaszberenyi, J.C., Dinya, Z. Punyiczki, M., Kover, E.K., Schag, J. and Petrikovics, I. Synthesis and beta-Lactamase Inhibitory Properties of Derivatives of beta-Lactam Antibiotics. *Biol. Natural Products*, Vol. 3, 78-81, 1981.

## **Book Chapters**

Baskin, S.I., Petrikovics, I., Kurche, J.S., Nicholson, J.D., Logue, B.A., Maliner, B.I. and Rockwood, G.A. Insights on Cyanide Toxicity and Methods of Treatment. In: *Pharmacological Perspectives of*

Toxic Chemicals and Their Antidotes, pp 105-146. Eds. Flora, S.J.S., Romano, J.A., Baskin, S.I. and Sekhar, K. Narosa Publishing House, New Delhi, India, 2004.

Cheng, T-C., Harvey, S.P., DeFrank, J.J., Petrikovics, I. and Rastogi, V.P. Bacterial Ezymes – Potential Applications for Personnel/Casualty Decontamination Against G,V, and HD Chemical Agents. In: Pharmacological Perspectives of Toxic Chemicals and Their Antidotes, pp 87-95 . Eds. Flora, S.J.S., Romano, J.A., Baskin, S.I. and Sekhar, K. Narosa Publishing House, New Delhi, India, 2004.

Way, J.L., Pei, L., Petrikovics, I., McGuinn, D.W., Tamulinas, C., Hu, Q-Z., Cannon, E.P. and Hawkins, A-Zitzer. Organophosphorus Antagonism by Resealed Recombinant Paraoxonase. In: Erythrocytes as Drug Carriers in Medicine. Eds. Sprandel and Way, pp. 89-91, Plenum Press, New York, 1996.

Petrikovics, I., McGuinn, W.D., Cannon, E.P., Pei, L., Pu, L., Chen, A. and Way, J.L. (1993). Carrier Red Blood Cells in Cyanide Antagonism. in.: Resealed Carrier Red Blood Cells As Bioreactors. (Eds. Way and Deloach). Adv. Biosc. 92: 125-129. Pergamon Press, Oxford, U.K.

Pei, L., McGuinn, W.D., Petrikovics, I., Pu, L. and Way, J.L. (1993). Hydrolysis of Paraoxon by Paraoxonase Encapsulated within Carrier Murine Erythrocytes. in.: Resealed Carrier Red Blood Cells As Bioreactors. (Eds. Way and Deloach). Adv. Biosci. 92:131-135. Pergamon Press, Oxford, U.K.

Way, J.L, Baxter, L., McGuinn, W.D., Hawkins, A-Zitzer and Petrikovics, I. Occupational Hazards and Ocular Toxicity. In: Ophthalmic Toxicology. Ed.: Georges C.Y. Chiou. pp. 291-305, Raven Press, Ltd., New York, 1992.

Way, J.L., Cannon, E.P., Leung, P., Hawkins, A-Zitzer, Pei, L. and Petrikovics, I. Antagonism of the Lethal Effects of Cyanide with Resealed Murine Carrier Erythrocytes Containing Rhodanese and Thiosulfate. In: The Use of Resealed Erythrocytes as Carriers and Bioreactors, Ed.: M. Magnani and J.R. Deloach, pp. 159-163, Plenum Press, New York, 1992.

## **Proceedings**

Petrikovics, I., Cheng, T-C., Papahadjapoulos, D., Hong, K., Yin, R., DeFrank, J.J., Jiang, J., McGuinn, W.D., Pei, L., Szilasi, M., Jaszberenyi, J.C., Barcza, T. and Way, J.L. Diisopropylfluorophosphate (DFP) Antagonism by Recombinant Organophosphorus Acid Anhydrolase (OPAA) Encapsulated within Sterically Stabilized Liposomes (SL). Proceeding on Chemical and Biological Medical Treatment Symposia (CMBTS III). Spiez, Switzerland, Europe. 48, 2002.

Cannon, E.P., Hawkins, A., McGuinn, W.D., Petrikovics, I., Leung, P. and Way, J.L. Antagonism of the Lethal Effects of Cyanide with Rhodanese Containing Murine Carrier Erythrocytes. Proc. West. Pharmacol. Soc. 35:187-190, 1992.

Hernadi, F., Jaszberenyi, J.C., Petrikovics, I. Beta-Lactamase Inhibitors. Dubrovnik Congress, Chemother. 5(2):161-162, 1983.

Jaszberenyi, J.C., Bogнар, R., Hernadi, F., Petrikovics, I., Benesch, L., Kover, E.K., Batta, Gy. Beta-Lactamase Inhibitory Penicillanic Acid Derivatives. Synthesis, Stereochemistry, Bioactivity. Proc. Int. Congr. Chemother., 41:38-51, 1983.

Hernadi, F., Jaszberenyi, J.C., Benesch, L., Czink, I., Petrikovics, I., Filep, F.M. and Schmidt, T. Synthesis and Study of Iodopenicillanic Acid Derivatives in a Complex Model System. Proc. Int. Congr. Chemother., 55: 52-89, 1983.

Jaszberenyi, J.C., Punyiczki, M., Petrikovics, I. Enzyme-Inhibitor Interactions: Beta-Lactamase enzymes. *Sejtosztudas Farmakol.*, 10:75-92, 1981.

### **Peer-Review Presentations/Posters**

Petrikovics, I., Kuzmicheva, G., Budai, M., Childress, J., Hogue, J., Johnson, T. Rhodanese Encapsulation for Cyanide Antagonism. 48<sup>th</sup> Annual Meeting of Society of Toxicology, 2009, March, Baltimore, MD. (Chemicals and Biological Weapons, Poster #: 2308/EA 65).

Jackson, R., Yu, J., Petrikovics, I. A New Rapid Analytical Method for the Cyanide Metabolite, ATCA, Determination by Molecular Imprinted Polymer Stir Bar Sorption Extraction and Electro-spray Ionization Tandem Mass Spectrometry. 48<sup>th</sup> Annual Meeting of Society of Toxicology, 2009, March, Baltimore, MD. (Biomarkers and Biomonitoring Section, Poster #: 2286/EA 37).

Zottola, M.A., Logue, B.A., Petrikovics, I., Peterson, R.T., Baskin, S.I., Beigel, K.M., Doherty, M.R., Hopkins, A., Rockwood, G.A. Cyanide Diagnostics and Efficacy Testing of Next Generation Cyanide Antidotes. 3<sup>rd</sup> Annual CounterAct Workshop April 13-16, 2009. Washington, D.C.

Grimsley, J. K., Novikov, B., Melinda E. Wales, M.E., Petrikovics, I., Reeves, T., Cerasoli D., and Wild, J.R. Intravascular Enzyme-Based Therapies for a Wide Spectrum of Chemical Warfare Neurotoxic Agents. 3<sup>rd</sup> Annual CounterAct Workshop April 13-16, 2009. Washington, D.C.

Jicsinszky, L., Petró, M., Horváth, Gy., Way, J.L., Szejtli, J., Petrikovics, I. Cyclodextrin Conjugates: Dreams and Reality. 14<sup>th</sup> International Cyclodextrins Symposium (invited), Kyoto, Japan, May 8-11, 2008.

Petrikovics, I., Budai, M., Grof, P., Beigel, K.M., Zimmer, A., Childress, J., Rockwood, G.A., Klebovich, I., Baskin, S.I. Optimizing Lipid Composition of Stealth Liposomes Encapsulating Rhodanese for Cyanide Antagonism. Bioscience Meeting, 2008, June 1-6, Baltimore, MD.

Budai, M., Chapela, P., Grimsley, J., Novikov, B.N., Gróf, P., Klebovich, I., Zimmer, A., Szilasi, M., Wales, M.E., Wild, J.R., Petrikovics, I. Optimal Liposomal Composition Determination and Physicochemical Characterization of Stealth Liposomes (SL) Encapsulating Organophosphorous Hydrolase (OPH). 3<sup>rd</sup> International Paraoxonase Meeting, LA, Sept 2008.

Rockwood, G.A., Zottola, M.A., Petrikovics, I., Logue, B.A., Beigel, K.M., Peterson, R.T., Baskin, S.I. Efficacy Testing of Next Generation Cyanide Antidotes and Development and Evaluation of Improved Cyanide Diagnostic Strategies. CounterAct Annual Program Review. Washington, D.C. April 2008.

Kern, R., Novikov, B., Grimsley, J., Wales, M.E., Petrikovics, I., Reeves, T., Cerasoli, D., and Wild, J.R. Intravascular Enzyme-Based Therapies for a Wide Spectrum of Chemical Warfare Neurotoxic Agents. CounterAct Annual Program Review. Washington, D.C. April 2008.

Budai, M., Chapela, P., Wales, M.E., Klebovich, I., Petrikovics, I. Liposomal Enzyme Encapsulation and Stability Studies with Liposomes. (In Hungarian: Enzimek liposzómába zárása és stabilitásának vizsgálata). Pharmacokinetics and Drug Metabolism Symposium, April 2-4, Galyatető, Hungary.

Petrikovics, I., Budai, M., Beigel, K.M., Scharpiro, B.J., Gróf, P., Zimmer, A., Childress, J., Rockwood, G.A. and Baskin, S.I. Sterically Stabilized Liposomes Encapsulating Rhodanese for Cyanide Antagonism. 47<sup>th</sup> Annual Meeting of Society of Toxicology, Seattle, WA, March 16-20, 2008. (Poster#: 240).

Petrikovics, I., Wild, J.R., Budai, M., Gróf, P., Zimmer, A., Klebovich, I., Chapela P. and Wales, M.E. Physico-chemical characterization of stealth liposomes encapsulating a hydrolyzing

enzyme employed in organophosphorus antagonism. 47<sup>th</sup> Annual Meeting of Society of Toxicology, Seattle, WA, March 16-20, 2008. (Poster#: 512)

Rockwood, G.A., Petrikovics, I., M.A. Zottola, Logue, B.A., Beigel, K.M., Schapiro, B.J. and Baskin, S.I. Efficacy Testing of Next Generation Cyanide Antidotes and Development and Evaluation of Improved Cyanide Diagnostic Strategies. NIH CounterAct Poster, Washington DC, April, 2007.

Grimsley, J., Kern, R., Wales, M.E., Petrikovics, I., Cerasoli, D. and Wild, J.R. Development of an Enzyme-Based, Intravascular Defense Against Neurotoxic Chemical Warfare Agents. NIH CounterAct Poster, Washington DC, April, 2007.

Jicsinszky, L., Petrikovics, I., Petró, M., Horváth, Gy., Szejtli, J., Way, J.L. Enhanced mean residence time of drugs by conjugation with cyclodextrins. Annual Meeting of the Carbohydrate Group of the Hungarian Academy of Sciences (in English) Mátrafüred, Hungary, Europe. May 23-25, 2007.

Jicsinszky, L., Petrikovics, I., Petró, M., Horváth, Gy., Szejtli, J., and Way, J.L. Improved drug delivery by conjugation with cyclodextrins. 14 European Carbohydrate Symposium (OP-50) Lübeck, Germany. Sept 2-7, 2007.

Budai, M., Gróf, P., Zimmer, A., Wales, M.E., Wild, J.R., Klebovich, I., Chapela, P., Petrikovics, I., Szilasi, M. Liposome Encapsulated Organophosphorous Hydrolase Enzyme as Antidotal Package Against Organophosphorous Intoxication. Annual Pharmaceutical Meeting "From the Molecules to the Therapeutic Drugs", Szeged, Hungary, Europe, November, 2007.

Petrikovics, I., Wales, M.E., Wild, J.R., Jaszberenyi, J.C., Budai, M., Barcza, T., Baskin, S.I. and Szilasi, M. Polyoxazoline – Based Nanocapsule as an Enzyme Carrier for Organophosphorus Hydrolyzing Enzymes in Organophosphorus Antagonism. 2<sup>nd</sup> International Nanotoxicology Meeting, Italy, Europe, April, 2007.

Petrikovics, I., Beigel, K.M., Rockwood, G.A. and Baskin, S.I. Investigation of new sulfur donors for cyanide antagonism. 46<sup>th</sup> SOT Meeting, Charlotte, NC, March 25-29, 2007.

Petrikovics, I., Cheng, T-C., Rastogi, V.K., Yin, R., Baskin, S.I., Jaszberenyi, J.C., Barcza, T., Szilasi, M. and Way, J.L. Potential applications of bacterial paraoxonases (OPH) for developing new therapeutic agents and personnel/casualty decontamination composites against organophosphorus (OP) nerve agents. 2<sup>nd</sup> International Conference on Praoxonases. Hajduszoboszlo, Hungary, Sept 7-10, 2006. Section: PON in Toxicology, P20, page 84.

Logue, B.A., Pieper, B.J., Petrikovics, I., Moser, M.A., Baskin, S.I. and Rockwood G.A. (2004). Determination of Cyanide Metabolite, 2-aminothiazoline-4-carboxylic acid, in Urine by Gas Chromatography and Mass Spectrometry. 227th National Meeting of the American Chemical Society: Division of Analytical Chemistry, Anaheim, CA, March 28-April 1; Abstract 100. Also presented at Bioscience Review 2004, Hunt Valley, MD, May 17-21.

Petrikovics, I., Baskin, S.I., Logue, B.A., Wales, M.E., Wild, J.R., Boothe, D., Yin, R., Szilasi, M., Hong, K., Way, J.L. (2004). Recombinant organophosphorus hydrolase (OPH, paraoxonase) as an active therapeutic agent derived from nanotechnology. First International Conference on Paraoxonase: Basic and Clinical Directions of Current Research. April 2004, University of Michigan, Michigan, USA.

Baskin, S.I., Logue, B.A., Petrikovics, I., and Platoff, G.E. (2003). The Role of the Cyanide Metabolite, 2-aminothiazoline-4-carboxylic acid, (ATCA) in the Detection of Cyanide Toxicity. 6th Annual Army Force Health Protection (FHP) Conference in August 2003 by the U.S. Army Center for Health Promotion and Preventive Medicine CHPPM. Aug. 2003, Albuquerque, NM.

Baskin, S.I., Logue, B.A., Petrikovics, I. and G.E. Platoff. (2003). The Role of the Cyanide Metabolite, 2-amino-thiazoline-4-carboxylic acid (ATCA) in the Detection of Cyanide Toxicity. American Society of Toxicology, 42th Annual Meeting, Salt Lake City, Utah, March; *The Toxicologist*, Vol. 72/S1, Page 164.

Petrikovics, I., Cheng, T-C., Yin, R., DeFrank, J.J., Qin, D., Way, R., Szilasi, M., Jaszberenyi, J.C. and Way, J.L. Nanotechnology and Recombinant Enzymes in Treating OP Intoxication. *Bioscience 2002. Medical Defense Review. Hunt Valley, MD.*

Petrikovics, I., Cheng, T-C., Yin, R., DeFrank, J.J., Qin, D., Way, R., McGuinn, W.D., Pei, L., Jiang, J., Stansell, L., Sealock, R.J., Jaszberenyi, J.C. and Way, J.L. Nanotechnology and Recombinant Enzymes -an Approach to Develop New Therapeutic Agents. *The Toxicologist*, 2002, 41 (1), American Society of Toxicology, 41<sup>th</sup> Annual Meeting, Nashville, TN, USA.

Petrikovics, I., Cheng, T-C., Yin, R., DeFrank, J.J., Jiang, J., and Way, J.L. Active Agent Derived from Biomedical Nanotechnology. *The 6<sup>th</sup> US - Japan Symposium on Drug Delivery Systems. December 16-21, 2001, Hawaii, USA.*

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### **Presentation on Regional Meetings by my Students (2007-2009)**

Stafford, K., Jackson, R., Simons, K., C.C. Yu, J. C.C., Petrikovics, I. Analytical Method Development for Determining the Biomarker, 2-Aminothiazoline-4-Carboxylic Acid (ATCA), in Mice Liver after Cyanide Exposure. *American Academy of Forensic Science*, Seattle, WA. March 7-11, 2010.

Stafford, K., Jackson, R., Yu, J.C.C, Petrikovics, I. Analytical Method Development for Determining the Biomarker, 2-Aminothiazoline-4-Carboxylic Acid (ATCA), in Mice Liver After Cyanide Exposure. *ACS 65th Southwest Regional Meeting*, El Paso, TX, November, 4-7, 2009.

Martin, S., Kuzmicheva, G., Stafford K., and Petrikovics, I. Determining the Optimal Condition for Rhodanese Incorporation into Liposomes. *ACS 65th Southwest Regional Meeting*, El Paso, TX, November, 4-7, 2009.

Childress, J. and Petrikovics, I. Determination of the Optimal Composition and Encapsulation Efficiency for Liposome Encapsulated Rhodanese. *11th Annual Meeting of Texas Academy of Science*, Corpus Christie, TX, March 6-8, 2008.

Chapela, P., Wales, M.E., Budai, M., Petrikovics, I. Optimal Liposomal Composition for the Encapsulation of Organophosphorous Hydrolase (OPH). *11th Annual Meeting of Texas Academy of Science*, Corpus Christie, TX, March 6-8, 2008.

Patricia Chapela, Ilona Petrikovics, Melinda Wales. Encapsulation of Organophosphate Hydrolase in Polylactic Acid Microspheres. *ACS Regional Meeting*, Little Rock, Arkansas, October, 2008.

J. Childress' M. Budai, G. A. Rockwood, S. I. Baskin, Petrikovics. Determining the Time Stability for Stealth Liposomes Encapsulating Rhodanese and Evaluating the *In Vitro* Efficacy of Co-Encapsulation of Rhodanese with a Sulfur Donor. *ACS Regional Meeting*, Little Rock, Arkansas, October, 2008.

Farrar, J., Chapela, P., Petrikovics, I. Activity and Stability of Encapsulated Acetylcholinesterase. *ACS Regional Meeting*, Little Rock, Arkansas, October, 2008.

James Spurlin III, Patricia Chapela, Ilona Petrikovics, Chi Chung Yu. Encapsulation Efficiency of Organophosphorous Hydrolase in Lecithin Liposomes as Determined by Capillary Electrophoresis, *ACS Regional Meeting*, Little Rock, Arkansas, October, 2008.

Donald A. Ramirez, Patricia Chapela, Ilona Petrikovics. Encapsulation of Piroxicam in Liposomes. *ACS Regional Meeting*, Little Rock, Arkansas, October, 2008.

Chapela, P., Budai, M. and Petrikovics, I. Liposomal Encapsulation of Tetracycline Derivatives. *ACS Southwestern Regional Meeting*, November 4-7, 2007. (Poster#: 50514)

**Other Competencies**

Full Member of the American Society of Toxicology (1992-2002), and (2007-Present)

**Professional Licensure and Certifications**

Risk Assessment Summer School, International Union of Toxicology, London, 1994.

Good Laboratory Practices Course Certificate, The Center for Professional Advancement, 1998.