

John F. Vickrey, Ph.D.

P.O. Box 981

Valley Mills, TX 76689

Cell phone: (254) 749-7214

jfvickr@hotmail.com

Teaching Experience

2006-2018	McLennan Community College, Waco, TX	Adjunct Instructor
2004-2006	University of Texas-RGV, Edinburg, TX	Visiting Assist. Professor

Professional Education

2000-2004	Wayne State University, Detroit, MI	Structural Biology
1995-2000	Wayne State University, Detroit, MI	Enzymology
1993-1995	Université Pierre et Marie Curie, Paris, France	Biochemistry
1986-1992	University North Texas, Denton, TX	Ph.D. Molecular Biology
1979-1981	Texas A&M U, College Station, TX	B.S. General Biology

Awards/Fellowships

1993	National Science Foundation	Post-doctoral Fellowship
1989-1992	University North Texas	B.C. Raupe Scholarship

Publications

Ravikiran S. Yedidi, Gheorghe Proteasa, Philip D. Martin, Zhigang Liu, **John F. Vickrey**, Iulia A. Kovari, Ladislau C. Kovari. (2014) A multi-drug resistant HIV-1 protease is resistant to the dimerization inhibitory activity of TLF-PafF. *J Mol Graphics and Modeling* 53:105-111.

Yedidi RS, Proteasa G, Martinez JL, **Vickrey JF**, Martin PD, Wawrzak Z, Liu Z, Kavari IA, Kovari LC. (2011) Contribution of the 80s loop of HIV-1 protease to the multidrug-resistance mechanism: crystallographic study of MDR769 HIV-1 protease variants. *Acta Cryst D67*: 524-532.

Martin P, **Vickrey JF**, Proteasa G, Jimenez YJ, Wawrzak Z, Winters MA, Merigan TC, Kovari LC. (2005) "Wide Open" 1.3 Å Structure of a Multi-drug Resistant HIV-1 Protease as a Drug Target. *Structure* 13(12):1887-95

Logsdon BC, **Vickrey JF**, Martin P, Proteasa G, Koepke JI, Terlecky SR, Wawrzak Z, Winters MA, Merigan TC, Kovari LC. (2004) Crystal Structures of a Multidrug-Resistant Human Immunodeficiency Virus Type 1 Protease Reveal an Expanded Active-Site Cavity. *J. Virology* 78(6) 3123-3132

Vickrey JF, Logsdon BC, Proteasa G, Palmer S, Winters MA, Merigan TC and Kovari LC. (2003) HIV-1 Protease Variants From 100-Fold Drug-Resistant Clinical Isolates: Expression, Purification and Crystallization. *Protein Expr Purif* 28:165-172

Vickrey JF, Hervé G and Evans DR. (2002) *Pseudomonas aeruginosa* aspartate transcarbamoylase: characterization of its catalytic and regulatory properties. J Biol Chem 277(27):24490-24498

Purcarea C, Martin P, **Vickrey JF**, Guy HI, Edwards BFP and Evans DR. (2002) Cloning, Expression and preliminary x-ray analysis of the dihydroorotase from the hyperthermophilic eubacterium *Aquifex aeolicus*. Acta Crystallogr D Biol Crystallogr. 58(Pt 1): 154-156

Hewagama A, Guy HI, **Vickrey JF** and Evans DR. (1999) Functional linkage between the glutaminase and synthetase domains of carbamoyl-phosphate synthetase. Role of serine 44 in carbamoyl-phosphate synthetase-aspartate carbamoyltransferase-dihydroorotase. J Biol Chem 274(40): 28240-28245

Schurr MJ, **Vickrey JF**, Kumar AP, Campbell AL, Cunin R, Benjamin RC, Shanley MS, O'Donovan GA. (1995) Aspartate transcarbamoylase genes of *Pseudomonas putida*: Requirement for an inactive dihydroorotase for assembly into the dodecameric holoenzyme. J Bacteriol 177(7): 1751-1759

Presentations/Abstracts

Vickrey J, Martin P, Proteasa G, Kovari L, Martinez J, Wawrzak Z, Winters M, Merigan T. The Multi-drug resistant HIV-1 Protease Represents a Novel Drug Target. University of Texas-Pan American, Edinburg, Texas, Wayne State University, Detroit, MI, Northwestern University, Evanston, IL, Stanford University, Stanford, CA. ACS, Edinburg, TX, November 2004.

Martinez JL, Macarthur R, **Vickrey JF**, Martin P, Proteasa G, Kondapalli K, Jimenez Y, Wawrzak D, Winters M, Merigan T, Kovari L. The Multi-drug Resistant HIV-1 Protease Represents a Novel Drug Target. ASM, ICAA meeting, Washington, D.C., October 2004

Kovari LC, **Vickrey JF**, Martin P, Proteasa G, Hales E, Kondapalli K, Jimenez Y, Martinez J, MacArthur R, Wawrzak Z, Winters MA and Merigan TC. "Wide Open" 1.3 Å Structure of the Multi-drug Resistant HIV-1 Protease Represents a Novel Drug Target. The Seventeenth Meeting of Groups Studying the Structures of AIDS-Related Systems and Their Application to Targeted Drug Design, June 19 – 20, 2004, Barcelona, Spain

The multidrug-resistant HIV-1 protease with an expanded active site cavity and open flaps represents a novel drug target for the design of inhibitors against the resistant virus. Kovari, L. C., **Vickrey, J. F.**, Proteasa, G., Martin, P., Spaller, M.R., Wawrzak, Z., Winters, M.A. and Merigan, T. C. 2003. Fourth HIV Drug Resistance Program Symposium: Antiviral Drug Resistance, December 7-10, 2003, Chantilly, Virginia.

The multidrug-resistant HIV-1 protease with an expanded active site cavity and open flaps represents a novel drug target for the design of inhibitors against the resistant virus. Kovari, L. C., **Vickrey, J. F.**, Proteasa, G., Martin, P., Spaller, M.R., Wawrzak, Z., Winters, M. and

Merigan, T. C. 2003. International Conference on Aspartic Proteases and Inhibitors, November 14-16, 2003, Kyoto, Japan.

Active Site Expansion of HIV-1 Protease Correlates with Clinical Progression to Multi-Drug Resistance. **Vickrey JF**, Logsdon BC, Proteasa G, Winters MA, Merigan TC and Kovari LC. Department of Biochemistry and Molecular Biology, Wayne State University School of Medicine, Detroit, MI 48201; Stanford Medical Center, Stanford, CA 94305. The Sixteenth Meeting of Groups Studying the Structures of AIDS-Related Systems and Their Application to Targeted Drug Design, June 19 – 20, 2002, National Institutes of Health, Bethesda, MD

Different drug resistance mutations may lead to the loss of the same HIV protease-inhibitor contacts. Kovari LC, **Vickrey JF**, Lu T, Heller K, Smith A, Draghiei S, Merigan TC *, Department of Biochemistry and Molecular Biology, Wayne State University School of Medicine, Detroit, MI 48201; Stanford Medical Center, Stanford, CA 94305. Antiviral Therapy 6:48. 5th International Workshop on HIV Drug Resistance and Treatment Strategies, Scottsdale, AZ

The Relationship between the pseudo-Dihydroorotase Subunit of *Pseudomonas aeruginosa* Aspartate Transcarbamoylase and functional Dihydroorotases. **Vickrey JF**, Liu X, and Evans DR*, Department of Biochemistry and Molecular Biology, Wayne State University School of Medicine, Detroit, MI 48201. American Society for Biochemistry and Molecular Biology Conference. San Francisco, CA. May 16-20, 1999

Oral Presentation, 14th Aspartate Transcarbamoylase Workshop, Boston, MA. August 18-19, 1998

Phosphoribosyl-pyrophosphate Binding to Aspartate Transcarbamylase of *Pseudomonas aeruginosa*. Sahay N, **Vickrey JF** and Evans DR, Department of Biochemistry and Molecular Biology, Wayne State University School of Medicine, Detroit, MI 48201. XVII Midwest Enzyme Chemistry Conference. Loyola University, Chicago, IL. Oct 18, 1997

Oral Presentation, 13th Aspartate Transcarbamoylase Workshop, Paris, France. June 11-12, 1997

Regulation of *Pseudomonas aeruginosa* Aspartate Transcarbamylase. **Vickrey JF**, Hervé G, and Evans DR. Department of Biochemistry and Molecular Biology, Wayne State University School of Medicine, Detroit, MI 48201 and Université Pierre et Marie Curie, CNRS URA 1682B, Paris, France. 9thInternational/6thEuropean Joint Symposium on Purine & Pyrimidine Metabolism in Man. Gmunden, Austria. June 1-7, 1997

Cloning and Expression of *Pseudomonas aeruginosa* Aspartate Transcarbamylase. **Vickrey JF**, Hervé G, and Evans DR. Department of Biochemistry and Molecular Biology, Wayne State University School of Medicine, Detroit, MI 48201 and, Université Pierre et Marie Curie, CNRS

URA 1682B, 75006 Paris, France. American Society for Biochemistry and Molecular Biology Conference. New Orleans, LA. June 2-6, 1996

Acknowledgements

Science journals where my name appears in the acknowledgements

Purcarea C (2001) Aspartate transcarbamoylase from *Pyrococcus abyssi*. Methods in Enzymology 331:248-70 (Ed. M.W.W. Adams and R.M. Kelly), Academic Press, San Diego, CA.

Baron D, Leseney A-M, Chalaoux F-R, Riand J (1994) Conformational studies of an undecapeptide reproducing the consensus sequence around the cleavage site of the RXVRG endoprotease from *Xenopus laevis* Skin. Biopolymers 34:1419-1431

England P, Leconte C, Tauc P, Hervé G (1994) Apparent cooperativity for carbamoylphosphate in *Escherichia coli* aspartate transcarbamoylase only reflects cooperativity for aspartate. European Journal of Biochemistry 222: 775-780

Penverne B, Belkaid M, Hervé G (1994) In situ behavior of pyrimidine pathway enzymes in *Saccharomyces cerevisiae*. 4. The channeling of carbamylphosphate to aspartate transcarbamylase and its partition in the pyrimidine and arginine pathways. Archives of Biochemistry and Biophysics 309: 85-93

Purcarea C, Erauso G, Prieur D, Hervé G (1994) The catalytic and regulatory properties of aspartate transcarbamoylase from *Pyrococcus abyssi*, a new deep-sea hyperthermophilic archaeobacterium. Microbiology-UK 140: 1967-1975