

CURRICULUM VITAE

Kirwin Marcello Providence, Ph.D.

Professional contact information:

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Date & Place of Birth: December 22, 1971, Trinidad W.I.

Citizenship: United States

EDUCATION

- 1994 Bachelor of Science in Biology, Siena College, Loudonville, New York.
- 1998 Master of Science, Microbiology and Molecular Genetics; Albany Medical College, Albany New York.
- 2001 Master of Science, Cell Biology; Albany Medical College, Albany New York.
- 2002 Ph.D. Cell Biology and Cancer Research; Albany Medical College, Albany New York. (PI: Paul J. Higgins, Ph.D.)

POSTDOCTORAL TRAINING

- 2002-2004 Albany Medical College, Albany New York.
(PI: Livingston Van De Water, Ph.D.)

TEACHING EXPERIENCE

- 1998-2002 Teacher Assistant. Albany Medical College. Teaching focus: Medical students. Topic: Membrane permeability.
- 2002-2004 Instructor/Research Assistant. Department of Clinical Microbiology Albany Medical Hospital. Teaching focus: Undergraduates. Topic: Microbiology & Molecular biology.
- 2004-Present Assistant Professor (Microbiology). Ithaca College, Ithaca NY.

UNDERGRADUATE STUDENT MENTORSHIP EXPERIENCE

210 Research in Biology (variable credit course)

- Ashley Battista, Fall 2006
- Ashley Battista, Spring 2006
- Sarah Garcia, Spring 2007
- Aaron Shambley, Spring 2008

302 Research in Biology (3 credit course)

- Agnessa Dreyster, Fall 2005
- Laura Pietrosanti, Fall 2006
- Andrew Mullen, Fall 2006
- Ashley Battista, Spring 2007
- Melissa Wern, Spring 2007
- Eleanor Clancy-Thompson, Fall 2007
- Sarah Garcia, Fall 2007
- Sarah Kessler, Fall 2007
- Kayla Baughman, Spring 2008
- Ann Jacob, Spring 2008
- Brandilyne Husenitza, Spring 2009

400 Research in Biology (variable credit course)

- Andrew Mullen, Spring 2007
 - Ashley Battista, Fall 2007
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291 Research in Biochemistry (variable credit course)

- Elvis Shehi , Fall 2005
 - Martin Tomov, Fall 2005
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30000 Independent Study (variable credit course)

- Andrew Mullen, Fall 2007
- Andrew Mullen, Spring 2008
- Sarah Garcia, Spring 2008

Summer Research

- Ammare Ghumman International Pharmacy student, Summer 2008

ACADEMIC & PROFESSIONAL HONORS

- 1999 Dean's Certificate for Excellence in Research, Albany Medical College.
- 1999 "Most Outstanding Research" award. Fifteenth annual Clinical Virology Symposium.
- 1999-2002 NIH-NRSA Predoctoral Fellowship Research Training Grant.
- 2002 Dean's Certificate for Excellence in Research, Albany Medical College.
- 2002-2004 NIH-NRSA Postdoctoral Fellowship Research Training Grant.

ABSTRACTS, POSTERS, & INVITED SEMINARS

Providence, K.M. and Kessler S. Desmid adhesion mechanisms: A prelude to eukaryotic biofilm formation. The 2007 Annual Symposium in Plant Biology. University of Massachusetts Amherst.

Providence, K.M., Battista A., and Mullen A. Gram-positive and Gram-negative bacteria utilize distinct mechanisms to inhibit epithelial cell motility and proper healing of skin cells wounds. Sigma Xi undergraduate conference, Cornell University, 2006.

Providence, K.M. and Van De Water, L. Effect of alpha9-beta1 activation on IL-8 mediated PMN migration. 44th Annual meeting (2004); The American Society for Cell Biology.

Providence, K.M. "The Extracellular Matrix and Gene Expression: Regulators of Cellular Motility" (Seminar given to the Biology Dept. Hamilton College. Clinton, NY. 2003).

Providence, K.M., Van De Water, L. Plasma Fibronectin Regulation of Neutrophil Migration: Traffic signal in a re-construction zone. Seminar series, Albany Medical College. 2003.

Providence, K.M. PAI-1 Gene Regulation in Epidermal Wound Healing. (Seminar given for "Science Research Course" at Saratoga Springs High School. 2000).

Providence, K.M., McElhone, A.L., Krapin, P.A., Hanley, E.M., Venezia, R.A., Stellrecht, K.A. Correlation between Hepatitis C virus (HCV) genotypes, HCV viral loads and liver pathology in HIV negative and HIV positive patients. Clinical Virology Symposium, 1999.

LIFE SCIENCE PRODUCT DEVELOPMENT (BIOTECHNOLOGY)

2002-2004 Project manager of sponsored research contract between Albany Medical College and Living Microsystems (LMS).
LMS is a biotechnology company whose goal is to develop new proprietary technology for the analysis of maternal blood to screen and diagnose prenatal genetic abnormalities. Further information on company can be found at “www.livingmicrosystems.com”.

PROFESSIONAL AFFILIATIONS

American Society for Microbiology
American Society for Cell Biology
American Society of Plant Biologists

PUBLICATIONS

Book Chapter

Editor invitation to submit a chapter to “**Methods In Molecular Medicine**”.

Chapter: A Quantifiable *in vitro* Model to Assess the Effect of PAI-1 Gene Targeting on Epithelial Cell motility.

Authors: **Providence, K.M.**, Staiano-Coico L, Higgins, P.J.

Year: 2003

Journal Articles

Providence, Kirwin; Irimia, Daniel; Garcia, Sarah*; Wern, Melissa*; Toner, Mehmet; Van De Water, Livingston. “Beta-1 integrins regulate IL-8 mediated neutrophil chemotaxis and recruitment into healing wounds”. ACCEPTED to the journal of *Wound Repair and Regeneration*; Spring 2009.

Providence KM, Higgins SP, Mullen A*, Battista A*, Samarakoon R, Higgins CE, Wilkins-Port CE and Higgins PJ. SERPINE1 (PAI-1) is Deposited into Keratinocyte Migration “Trails” and Required for Optimal Monolayer Wound Repair. Archives of Dermatological Research. 2008.

Providence KM, Higgins PJ. "PAI-1 Expression is Required for Epithelial Cell Migration in Two Distinct Phases of *in vitro* Wound Repair". J Cell Physiol. 2004 Aug;200(2):297-308.

David S. Domozych, Rachael Roberts*, Carey Danyow*, Rebecca Flitter*, Brennan Smith*, and **Kirwin Providence**. PLASMOLYSIS, HECHTIAN STRAND FORMATION AND

LOCALIZED MEMBRANE-WALL ADHESIONS IN THE DESMID, *CLOSTERIUM ACEROSUM* (CHLOROPHYTA). Journal of Phycology. 2003 Volume 39 Pages 1-18

Nelson KK, Ranganathan AC, Mansouri J, Rodriguez AM, **Providence KM**, Rutter JL, Pumiglia K, Bennett JA, Melendez JA. Elevated sod2 activity augments matrix metalloproteinase expression: evidence for the involvement of endogenous hydrogen peroxide in regulating metastasis. Clin Cancer Res. 2003 Jan;9(1):424-32.

Providence KM, White LA, Tang J, Gonclaves J, Staiano-Coico L, Higgins PJ. Epithelial monolayer wounding stimulates binding of USF-1 to an E-box motif in the plasminogen activator inhibitor type 1 gene. J Cell Sci. 2002 Oct 1;115(Pt 19):3767-77.

Kutz SM, **Providence KM**, Higgins PJ. Antisense targeting of c-fos transcripts inhibits serum- and TGF-beta 1-stimulated PAI-1 gene expression and directed motility in renal epithelial cells. Cell Motil Cytoskeleton. 2001 Mar;48(3):163-74.

Li F, Goncalves J, Faughnan K, Steiner MG, Pagan-Charry I, Esposito D, Chin B, **Providence KM**, Higgins PJ, Staiano-Coico L. Targeted inhibition of wound-induced PAI-1 expression alters migration and differentiation in human epidermal keratinocytes. Exp Cell Res. 2000 Aug 1;258(2):245-53.

Providence KM, Kutz SM, Staiano-Coico L, Higgins PJ. PAI-1 gene expression is regionally induced in wounded epithelial cell monolayers and required for injury repair. J Cell Physiol. 2000 Feb;182(2):269-80.

Providence KM, Kutz SM, Higgins PJ. Perturbation of the actin cytoskeleton induces PAI-1 gene expression in cultured epithelial cells independent of substrate anchorage. Cell Motil Cytoskeleton. 1999;42(3):218-29.

Higgins PJ, Ryan MP, **Providence KM**. Induced expression of p52(PAI-1) in normal rat kidney cells by the microfilament-disrupting agent cytochalasin D. J Cell Physiol. 1994 Apr;159(1):187-95.

* Denotes undergraduate students.

IHACA COLLEGE COMMITTEE SERVICE

1. Budget & Operations committee; 2005-present.
2. Institutional Animal Care & use committee (IACUC); 2006-present.
3. Tri-beta and biology club advisor; 2006-present.
4. Policies & Procedures committee 2006-2008
5. Non-tenure faculty search committee; 2006, 2007, and 2008.
6. Biohazard committee co-chair; 2006-present.
7. Department curriculum committee; 2007-present.
8. Premedical Sciences Advisory Committee; 2008-present.

OTHER SERVICE

1. Sigma Xi Undergraduate & Graduate Poster Conference Judge; Cornell University 2006