

Olivia Hinthong

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EDUCATION

Ph.D., Microbiology, University of Illinois at Urbana-Champaign	Fall 2010
Certificate in Business Administration, University of Illinois at Urbana-Champaign	Spring 2010
M.S., Microbiology, University of Illinois at Urbana-Champaign	2006
B.S., Biology, minor in Chemistry, University of Illinois at Urbana-Champaign	2004

QUALIFICATIONS

- Over five years experience working with molecular-based viral and bacterial techniques
- Strong knowledge of eukaryotic cell systems and signaling
- Exceptional technical competence in eukaryotic cell culture, immunoassays, and cloning
- Experience with training and instruction of undergraduates in conceptual scientific understanding and laboratory techniques
- Adept at conveying complex information to non-expert audiences

RESEARCH INTERESTS

virus-host interactions • cellular protein trafficking • cellular signaling events • protein-protein interactions • molecular mechanisms of protein functioning • post-translational modifications

SKILLS

recombinant virus production • mammalian and bacterial cell culture • microscopy (confocal and fluorescence) • flow cytometry • electromobility shift assays • PCR mutagenesis • RT-PCR • ELISA • luciferase gene reporter assays • immunoprecipitation • western blotting • silver and coomassie staining • in-vitro kinase assays • transient transfection • cloning

Computer competency in both PC and Mac platforms:

Confocal image acquisition software: Leica SP2 and Zeiss LSM 510 confocal microscopes
NIH Image J • FCS Express 3 • FlowJo • BLAST • SignalP 3.0 • Adobe Illustrator and Photoshop • Microsoft Word, Excel, and Powerpoint • Apple Keynote • basic HTML and website design

PROFESSIONAL RESEARCH EXPERIENCE

INDUSTRY EXPERIENCE

Research Specialist, Kim Laboratories, Inc.

Champaign, IL (now in Rantoul, IL)

2003-2004, 2010

Kim Laboratories Inc. focuses on developing food safety technology that quickly and accurately detects bacterial or viral contamination and focuses on the production of monoclonal norovirus antibodies.

- Awarded Employee of the Year, 2004
- Undergraduate worker trusted to join the company at its inception, rejoined company after Ph.D.
- Extracted and purified LPS from candidate serotypes
- Performed oral and peritoneal inoculation of mice
- Maintained cell lines for hybridoma production

- Project manager for ASTM and AOAC disinfectant testing against various bacterial strains
- Attained knowledge regarding NIH small-business grant writing proposals
- Developed GLP compliance standards for laboratory

ACADEMIC RESEARCH EXPERIENCE

Graduate Research Assistant, Department of Microbiology
University of Illinois at Urbana-Champaign

2005 - 2010

My project focused on determining the molecular mechanism the vaccinia virus M2L protein uses to inhibit the activation of the eukaryotic transcription factor NF- κ B.

- Characterized the phenotype of the vaccinia virus M2L protein's ability to localize to the endoplasmic reticulum during infection
- Demonstrated the intracellular ER-localization, glycosylation, and extracellular secretion of protein
- Created recombinant viruses expressing wild-type and mutant constructs of the M2L protein
- Coordinated generation of a polyclonal antibody against the M2L protein
- Investigated ER-based signaling pathways such as the unfolded protein response and calcium dependent pathway
- Conceptualized and carried out experiments pertaining to the extracellular function of M2L
- Developed protocol for confocal microscopy of virally-infected samples
- Initiated studies using flow cytometry to access for calcium release in infected cells
- Acquired plasmids and other reagents important for project's progress
- Refined protocol for harvesting and titering viruses
- Presented research data at yearly departmental seminars and conferences

Other responsibilities:

- Validated various methods to optimize gel electromobility shift assays
- Developed website for annual Department of Microbiology conference (Fall 2006)
- Handled troubleshooting and communication of broken lab equipment to facilities operations
- Monitored biological waste flow and handled disposal of generated waste
- Served as projectionist for weekly departmental seminars for visiting faculty speakers
- Presented data at various conferences around the world
- Collaborated with a variety of researchers from exchanging DNA constructs, and other reagents supplying either our antibodies or helpful discussion related to projects
- Mentored various undergraduate students in the laboratory

Undergraduate student, Laboratory of Dr. James Weyhenmeyer
University of Illinois at Urbana-Champaign

2002-2004

Worked on the G-protein coupled receptor signaling pathway involved in inhibiting insulin-induced ERK-2 phosphorylation due to expression of the human angiotensin II type-2 receptor in CHO cells.

- Contributed to the project by performing western-blotting, liquid scintillation counting, DNA preparation, and cell culture.

PUBLICATIONS

1. **Hinthong, O.** and Shisler, J.L. (in press). Differential effects of glycosylation site mutations in the vaccinia virus M2 protein uncover ERK1/2-independent NF- κ B activation in MVA-infected cells.
2. **Hinthong, O.**, Jin, X.L., and Shisler, J.L. (2008). Characterization of wild-type and mutant vaccinia virus M2L proteins' abilities to localize to the endoplasmic reticulum and to inhibit NF- κ B activation during infection. *Virology*. 373(2):248-262.

- Gedey, R., Jin, X.L., **Hinthong, O.**, & Shisler, J.L. (2006). Poxviral regulation of the host NF-kappaB response: the vaccinia virus M2L protein inhibits induction of NF-kappaB activation via an ERK2 pathway in virus-infected human embryonic kidney cells. *Journal of Virology*, 80 (17): 8676-8685.
- Moore, S. A., Huang, N., **Hinthong, O.**, Andres, R. D., Grammatopoulos, T. N. & Weyhenmeyer, J.A. (2004). Human angiotensin II type-2 receptor inhibition of insulin-mediated ERK-2 activity via a G-protein coupled signaling pathway. *Molecular Brain Research*, 124, 62-69.

HONORS AND AWARDS

Deboer Fellowship Summer 2010
 University of Illinois at Urbana-Champaign
 Departmental fellowship support in virology.

James R. Beck Fellowship Fall 2008 & 2009
 University of Illinois at Urbana-Champaign
 Awarded to the most promising graduate student in their class, based on research accomplishments and potential in the field of microbiology. A committee selects the most deserving candidate.

Travel Award June 2008
 17th Annual International Poxvirus and Iridovirus Conference
 Received full funding for the poxvirus conference, including registration, travel and accommodation fees.

Teachers Ranked as Excellent by their Students Fall 2005 & 2007
 University of Illinois at Urbana-Champaign
 This campus-wide award is based on student evaluations during the course of the semester. Achieved criteria to be ranked within the top 30% of instructors during the semester based upon teaching effectiveness and quality of instruction.

CONFERENCE PRESENTATIONS

- “Understanding the molecular mechanism the ER-localized vaccinia virus M2L protein utilizes to inhibit NF-κB activation.” **Olivia Hinthong** and Joanna Shisler. **28th Annual American Society for Virology Meeting**. Vancouver, BC. July 11-15, 2009.
- “Understanding the molecular mechanism the ER-localized vaccinia virus M2L protein utilizes to inhibit NF-κB activation.” **Olivia Hinthong** and Joanna Shisler. **17th Annual International Poxvirus and Iridovirus Conference**. Grainau, Germany. June 7-12, 2008.
- “The Vaccinia Virus M2L Protein inhibits NF-κB and localizes to the Endoplasmic Reticulum.” **Olivia Hinthong** and Joanna Shisler. **26th Annual American Society for Virology Meeting**. Oregon State University, July 14-18, 2007.
- “Molecular Mechanisms the Vaccinia Virus M2L protein uses to Inhibit NF-κB.” **Olivia Hinthong**, Xiao-Lu Jin, Roderick Gedey, and Joanna Shisler. **SEB Summer Research Conference on Poxviruses**. Indian Wells, CA. June 3-8, 2006.

TEACHING EXPERIENCE

Teaching Assistant, MCB 300 and 301 Spring and Fall 2010
 University of Illinois at Urbana-Champaign
 This introductory course focuses on microbial concepts and techniques.

- Graded worksheets, lab reports, and homework assignments

Teaching Assistant, MCB 250 - Molecular Genetics University of Illinois at Urbana-Champaign

Fall 2005 & 2007

This course focused on genetic variation, gene organization, gene expression, and gene regulation in a variety of organisms.

- Independently instructed molecular biology concepts to over 180 students
- Taught in a meaningful manner, relating biology concepts to current events
- Provided unbiased feedback to foster student progress
- Designed and prepared interactive Powerpoint presentations to reinforce lecture material, used “Jeopardy!” style game to review for exams
- Provided supplementary help/practice through office hours and one-on-one meetings
- Ranked as one of the “List of Teachers Ranked as Excellent By Their Students”

TUTORING EXPERIENCE

Tutor, Irwin Academic Center
University of Illinois at Urbana-Champaign

Oct 2008-Dec 2010

- Tutored all tracks of molecular and cellular biology to student-athletes

MENTORING EXPERIENCE

Trained and mentored various undergraduate students in experimental techniques and primary literature readings in a laboratory setting.

Matthew Welzenbach, Undergraduate Student
Calvin Wang, Undergraduate Student
Brian Wang, Undergraduate Student

Dec 2009-Dec 2010
Summer 2010
June 2009-May 2010

REFERENCES

Joanna Shisler, Ph.D., Associate Professor of Microbiology
University of Illinois at Urbana-Champaign
217-265-6450, jshisler@illinois.edu

Dr. Shisler has been my dissertation advisor. She can elaborate on my research capabilities and academic potential.

Myung L. Kim, Ph.D., CEO, Kim Laboratories, Inc.
Champaign, IL
217-337-6666, mkim@kimlaboratories.com

Dr. Kim is my boss at Kim Laboratories, Inc. and can address my research capabilities in a biotech setting.

Richard Tapping, Ph.D., Associate Professor of Microbiology
University of Illinois at Urbana-Champaign
217-244-7940, tapping@illinois.edu

Dr. Tapping has served as my committee chair during the course of my graduate career. He is able to comment on my research quality and scientific reasoning and knowledge.

Barbara Pilas, Ph.D., Director of Flow Cytometry Facility
Carver Biotechnology Center
University of Illinois at Urbana-Champaign
217-244-6743, pilas@illinois.edu

Dr. Pilas knows me from when I performed flow cytometry studies, and is able to comment on my technical ability and understanding in a shared use facility.

Annie L. White, Academic Counselor
217-265-4069, alwhite@illinois.edu
Irwin Academic Center, University of Illinois at Urbana-Champaign

Annie is the academic counselor at the Irwin Academic Center. She can comment on my tutoring ability and effectiveness.

Jack Ikeda, Ph.D., Lecturer and Course Coordinator
217-244-8732, jikeda@illinois.edu
University of Illinois at Urbana-Champaign

Dr. Ikeda is the instructor for the introductory microbiology courses for undergraduate students. He is able to comment on my contributions as his teaching assistant.