Curriculum Vitae
CARMONY LEAH HARTWIG

Address
157 Lilly Ave
Salisbury, NC 28144
(757) 641-0554
clhbolin@gmail.com

Post-Graduate Experience
Biology Instructor, Rowan-Cabarrus Community College, Salisbury, NC, January – May 2012 (Spring Semester)

Visiting Scientist, Catawba College, Department of Biology, Salisbury, NC, February 2012-February 2013

Research Scientist/Training Consultant, American Type Culture Collection (ATCC) – Malaria Research and Reference Reagent Resource Center (MR4) Division, Manassas, VA, December 2011 (Short-term contract)

Senior Biologist, American Type Culture Collection (ATCC) – Malaria Research and Reference Reagent Resource Center (MR4) Division, Manassas, VA, February 2010-July 2011

Education
Old Dominion University, Ph.D., Biomedical Sciences, August 2009

Old Dominion University, M.S. Program, Biotechnology, 2001-2004

College of William and Mary, B.S., Biology, May 2001

Honors and Awards
American Society of Tropical Medicine and Hygiene, Committee of Molecular, Cellular and Immunoparasitology (ACMCIP) Scientific Award, ASTMH, November 2007
Virginia S. Bagley Merit Scholarship, Old Dominion University, 2006-2007
Virginia S. Bagley Merit Scholarship, Old Dominion University, 2003-2004
Honorable Mention Student Paper Competition, Virginia Academy of Sciences Annual meeting (Medical Sciences Section), University of Virginia, May 2003
Honorable Mention Student Presentation Competition, Biology Graduate Student Organization Annual Spring Symposium, Old Dominion University, March 2003

Research

Ethnopharmacological potential of the Namibian Combretaceae for antimalarial development, University of Namibia, collaboration with Dr. Erika Maass and Dr. Davis Mumbengegwi, 2009-present

Probing the antimalarial mechanism of action of 1,2,4-trioxolanes in *Plasmodium falciparum,* collaboration with Dr. Roland A. Cooper, Dominican University of California, and Dr. Adam R. Renslo, University of California, San Francisco, 2009-present

Development and standardization of fluorescence-based assays to determine antimalarial inhibition and phenotype response profiles of *Plasmodium falciparum* isolates in the MR4 collection*,* laboratory of Dr. Timothy T. Stedman, ATCC-MR4 Division, 2009-2011

Antimalarial effects of oxidized hydroxy-*cis* terpenone (OHCT) on cholesterol uptake and distribution in *Plasmodium falciparum*, collaboration with Dr. Ghislaine Mayer, Virginia Commonwealth University, 2009-2011

Lipid targets of the antimalarial trioxanes in *Plasmodium falciparum*, laboratory of Dr. Roland A. Cooper, Old Dominion University, 2004-2009

Thermoregulation and ecophysiology of the plant family Hydnoraceae, University of Namibia, research assistant in the laboratory of Dr. Erika Maass, February-April 2009

Development of a PCR-based assay for detection and characterization of a novel herpes-like virus, *PaV1*, in the Caribbean spiny lobster, *Panulirus argus*, laboratory of Dr. Robert E. Ratzlaff, Old Dominion University, 2002-2004

Digital measurement of the root growth response to long-term exposure to elevated atmospheric CO_2 in a Florida oak-scrub ecosystem, laboratory of Dr. Frank Day, Jr., Old Dominion University, 2001-2002

Teaching Experience

Instructor, Catawba Conservation Camp (C3), Catawba College, July 2012

Adjunct Instructor, General Biology I, Rowan-Cabarrus Community College, January - May 2011

Laboratory Teaching Assistant, Plant Physiology, University of Namibia, March 2009

Instructor/Teaching Assistant, Molecular and Immunological Techniques Laboratory Course, Old Dominion University, 2006-2007, 2007-2008

Administrative/ Supervisory Experience

Research Scientist/Training Consultant, American Type Culture Collection, December 2011

Manager/Instructor of Epifluorescent Microscopy Unit, Old Dominion University, 2005-2009

Manager, Malaria Research Laboratory, 2004-2009

Manager, Immunology Research Laboratory, 2002-2004

Software Advisor, Data Analysis using SAS/FoxPro for Root Growth, Old Dominion University, 2002

Extracurricular Workshops and Activities

Center for Teaching and Learning Summer Institute for Professional Development, Rowan-Cabarrus Community College (May-June 2012)

Biology Graduate Student Organization, Old Dominion University (member 2001-present; Vice President, 2004-2005)

Graduate Student Association, Old Dominion University (Founding Member, 2003)

Paper Presentations

Hartwig, C. L. and T. T. Stedman. Optimization and standardization of a fluorescence-based assay to determine antimalarial growth inhibition in *Plasmodium falciparum*. American Society of Tropical Medicine and Hygiene, Atlanta, GA, November 2010.

Thavamani, R., C. L. **Hartwig** and T. T. Stedman**.** Comparative analysis of mutations in *Plasmodium falciparum* dhps and resistance to sulfadoxine. American Society of Tropical Medicine and Hygiene, Atlanta, GA, November 2010.

Hartwig, C. L., T. Furuya and T. T. Stedman. Standardization of fluorescence-based assays to determine antimalarial inhibition of *Plasmodium falciparum* growth and viability. Molecular Parasitology Meeting, Woods Hole, MA, 2010.

Hartwig, C. L., E. M. W. Lauterwasser, J. M. Hoke, S. Mahajan, A. R. Renslo and R. A. Cooper. Targeting of neutral lipid bodies by synthetic trioxolane antimalarials supports a common mechanism of endoperoxide action in *Plasmodium falciparum.* Molecular Parasitology Meeting, Woods Hole, MA, 2010.

Hartwig, C. L., J. M. Hoke, A. S. Rosenthal, J. G. D' Angelo, S. Eksi, G. H. Posner, K. C. Williamson, and R. A. Cooper. Activity of artemisinin trioxanes against *Plasmodium falciparum* gametocytes is associated with parasite neutral lipids. Molecular Parasitology Meeting, Woods Hole, MA, 2008.

Hartwig, C. L., A. S. Rosenthal, J. D' Angelo, G. H. Posner and R. A. Cooper. Artemisinin derivatives localize within digestive vacuole-associated neutral lipid bodies in *Plasmodium falciparum*. American Society of Tropical Medicine and Hygiene, Philadelphia, PA, November 2007.

Hartwig, C. L., A. S. Rosenthal, J. D' Angelo, G. H. Posner and R. A. Cooper. Artemisinin derivatives localize within digestive vacuole-associated neutral lipid bodies in *Plasmodium falciparum*. Molecular Parasitology Meeting, Woods Hole, MA, 2007.

Hartwig, C. L., A. S. Rosenthal, G. H. Posner and R. A. Cooper. Artemisinin derivatives localize within digestive vacuole-associated neutral lipid bodies in *Plasmodium falciparum*. American Society of Tropical Medicine and Hygiene, Atlanta, GA, November 2006.

Hartwig, C. L. and R. A. Cooper. Morphological effects of artemisinin treatment on the *Plasmodium falciparum* digestive vacuole. American Society of Tropical Medicine and Hygiene, Washington D.C., December 2005.

Hartwig, C. L. and R. A. Cooper. Morphological effects of artemisinin treatment on the *Plasmodium falciparum* digestive vacuole. Molecular Parasitology Meeting, Woods Hole, MA, September 2005.

Cooper, R. A., K. D. Lane, M. T. Ferdig, B. Deng, J. Mu and C. L. **Hartwig**. A single amino acid change in transmembrane domain nine of PfCRT restores chloroquine sensitivity to *Plasmodium falciparum*. Research Day, Old Dominion University, Norfolk, VA, April 2005.

Cooper, R. A., K. D. Lane, M. T. Ferdig, B. Deng, J. Mu and C. L. **Hartwig**. A single amino acid change in transmembrane domain nine of PfCRT restores chloroquine sensitivity to *Plasmodium falciparum*. American Society of Tropical Medicine and Hygiene, Miami, FL, December 2004.

Cooper, R. A., K. D. Lane, M. T. Ferdig, B. Deng, J. Mu and C. L. **Hartwig**. A single amino acid change in transmembrane domain nine of PfCRT restores chloroquine sensitivity to *Plasmodium falciparum*. Molecular Parisitology Meeting, Woods Hole, MA, October 2004.

Ratzlaff, R. E., C. L. **Hartwig**, R. A. Cooper, W. L. Hynes and J. D. Shields. A pathogenic herpes-like virus from the Caribbean spiny lobster: Isolation of the virus and evidence of an innate host response. Experimental Biology Meeting, Washington D.C., April 2004.

Hartwig, C. L., R. A. Cooper, W. L. Hynes and R. E. Ratzlaff. Detection of a pathogenic herpes-like virus from the Caribbean spiny lobster, *Panulirus argus* (HLV-PA) using a Nested PCR approach. American Society of Microbiology, Charlottesville, VA, November 2003.

Hartwig, C.L. and R.E. Ratzlaff. Characterization of a herpes-like virus (HLV-PA) of the Caribbean Spiny Lobster, *Panulirus argus*. Annual Meeting of the Virginia Academy of Sciences, Charlottesville, VA, May 2003.

Day, F. P., A. L. Pagel, C. L. **Hartwig**, B. T. Herbert and J. J. Dilustro. Response of roots to six years of exposure to elevated atmospheric CO_2 in an oak-scrub ecosystem in Florida. Annual Meeting of the Ecological Society of America, Boone, NC, August 2002.

Publications

Hartwig, C. L., E. M. W. Lauterwasser, S. S. Mahajan, J. M. Hoke, R. A. Cooper and A. R. Renslo. **2011.** Investigating the antimalarial action of 1,2,4-trioxolanes with fluorescent chemical probes. J Med Chem. **54(23):**8207-13. Epub 2011 Nov 9.

Hartwig, C. L., A. S. Rosenthal, J. D' Angelo, C.E. Griffin, G. H. Posner and R. A. Cooper. **2009**. Accumulation of artemisinin trioxane derivatives within neutral lipids of *Plasmodium falciparum* malaria parasites is endoperoxide-dependent. Biochem Pharm. **77:**322-336.

Li, C., J. D. Shields, H. J. Small, K. S. Reece, C. L. **Hartwig**, R. A. Cooper and R. E. Ratzlaff. **2006**. Detection of *Panulirus argus* Virus 1 (PaVI) in the Caribbean spiny lobster using fluorescence *in situ* hybridization (FISH). Dis Aquat Organ. **72:**185-192.

Cooper, R. A., C. L. **Hartwig** and M. T. Ferdig. **2005.** *pfcrt* is more than the *Plasmodium falciparum* chloroquine resistance gene: a functional and evolutionary perspective. Acta Tropica. **94:**170-180.