

## Heidi Elizabeth Brown

### EDUCATION

#### **Yale University, New Haven, CT**

**Ph.D. Candidate**, Epidemiology of Microbial Diseases

Research Interest: Environmental predictors of mosquito population dynamics as they relate to vector-borne disease.

Advisor: Durland Fish, Ph.D.

#### **George Washington University, School of Public Health and Health Services, Washington, DC**

**M.P.H.**, International Health Promotion, 1999

Thesis: Rabies in Fairfax County

Advisor: Gilbert Kombe, M.D., M.P.H.

#### **Virginia Polytechnic Institute & State University, Blacksburg, VA**

**B.S.**, Psychology with a Minor in Biology, 1995

### EXPERIENCE

#### **Research Experience**

#### **Yale University, New Haven, CT, Vector Ecology Laboratory, Graduate Student, 2004- present**

- Conducted field studies to collect data on mosquito distribution
- Analyze data for environmental predictors of mosquito population dynamics

Advisor: Durland Fish, Ph.D.

#### **Yale University, New Haven, CT, Connecticut's Emerging Infections Program, Graduate Student, 2004**

- Analysis and Summary of Human Granuloma Erlichiosis data from 1997-2003
- Manuscript in preparation

Advisor: Robert Heimer, Ph.D.

#### **Yale University, New Haven, CT, Graduate Student, 2003**

- Conducted analyses of health data at a local New Haven health clinic to identify behavioral and demographic predictors of sexually transmitted infection risk

Advisor: Linda Niccolai, Ph.D.

#### **Institute for Defense Analyses, Alexandria, VA, Research Associate, 2000 –2003**

- Modeling of impacts of biological weapon attacks with specific focus on medical resource requirements
- Analysis of impacts of infectious disease on U.S. military

#### **Georgetown University Medical Center, Washington, DC, Research Assistant, 1996 - 1998**

- Conducting of functional magnetic resonance imaging experimentation
- Assisting in grant proposal, manuscript, presentation, and poster preparation

Advisor: Guinevere Eden, D.Phil.

#### **Georgetown University Washington, DC, Senior Laboratory Technician, 1995 - 1996**

- Project formation and execution to examine the role of nitric oxide in pregnancy induced hypertension

- Conducted experiments using Mulvany isometric myograph to test microvessel reactivity
- Data collection, entry and analysis

Advisor: Gary Helmbrecht, M.D.

## **Teaching Experience**

### **Yale University, New Haven, CT, 2003- 2006**

*Teaching Assistant:* Masters courses (Public Health Issues in HIV/AIDS, Psychosocial Epidemiology, Immunology for Epidemiologists, Epidemiologic Methods in STD/HIV).

- reviewing and grading papers
- leading discussion group (Immunology for Epidemiologists)
- managing and calculating grades

## **PROFESSIONAL AWARDS AND RECOGNITION**

Society for Vector Ecology Student Presentation Award, October 2006

The McColgan Grant-in-Aid, Northeast Mosquito Control Association, November 2005

Yale Council on Southeast Asia Studies, supporting work at Mahidol University, Bangkok Thailand, 2005

McDougal Fellow, Yale University 2004 - present

US Delegate to the NATO Bio Medical Advisory Committee Working Group, Institute for Defense Analyses, 29 April - 3 May 2002

Central Research Project, Institute for Defense Analyses, 2001

M.P.H. Merit Scholarship, George Washington University, 1998

Psi Chi National Psychology Honor Society, 1994

## **ADVANCED SOFTWARE SKILLS**

Data analysis packages: Proficient in EXCEL and STATA, Familiar with SPSS and SAS

Geographical analysis: Proficient in ENVI, ArcGIS, and ERMapper

## **PROFESSIONAL ACTIVITIES**

Yale Journal of Health, Policy, Law, and Ethics, Staff Editor, 2003-present

President, Student Volunteers of the VA Tech Museum of Natural History, 1993 -1995 academic years

## **PROFESSIONAL MEMBERSHIPS**

American Society of Tropical Medicine and Hygiene

New York Academy of Science

## **PUBLICATIONS**

Diuk-Wasser, M.A. Brown, H.E., Andreadis, T.G., and Fish, D., "Modeling the spatial distribution of mosquito vectors for West Nile Virus in Connecticut, USA" Vector-borne and Zoonotic Diseases Sep 2006, Vol. 6, No. 3:283-295..

Bombardt, J. N., and Brown, H.E. "Potential Influenza Effects on Military Populations," (Internal Document, Alexandria, VA: Institute for Defense Analyses). IDA Paper P-3786 completed 2004.

Brown, H.E., "Historical Epidemic Control Measures." (Internal Document, Alexandria, VA: Institute for Defense Analyses).

Brown, H.E. and Dubin, R., "Impact of Infectious Disease on Military Operations and Strategies." (Internal Document, Alexandria, VA: Institute for Defense Analyses).

- Co Author, "An Operational Concept for Biological Defense." October 2002 (Draft Final- Under External Review, Alexandria, VA: Institute for Defense Analyses).
- Brown, H.E. and Burr, J.K., "Historical Review of Military Support to Civilian Infectious Disease Outbreaks." November 2001 (Alexandria, VA: Institute for Defense Analyses).
- Burr, J.K. and Brown, H.E., "Development of Operational Concepts for Medical Response to Biological Agent Attacks." May 2001 (Alexandria, VA: Institute for Defense Analyses). IDA-Document, January 1, 2001
- Eden, G.F., Joseph, J.E., Brown, H.E., Brown, C.P. and Zeffiro, T.A. "Utilizing hemodynamic delay and dispersion to detect fMRI signal change without auditory interference: the BIG technique." Magnetic Resonance in Medicine. Jan 1999, 41(1) p13-20.
- Helmbrecht, G.D., Farhat, M.Y., Lochbaum, L., Brown, H.E., Yadgarova, K.T., Eglinton G.S., and Ramwell, P.W. "L-Arginine reverses the adverse pregnancy changes induced by Nitric Oxide Synthase inhibition in the rat." American Journal of Obstetrics and Gynecology. Oct. 1996, 175 (4pt1) p800-5.

#### ABSTRACTS

- Diuk-Wasser, MA, G. Molaei, A. Milkowski, HE Brown, TG Andreadis and D Fish. Habitat determines host-feeding patterns of *Culex salinarius*, a bridge vector for West Nile virus in CT. 55th Annual Meeting of the Wildlife Disease Association, Storrs, CT. August 6-10, 2006.
- Brown, HE, MA Diuk-Wasser, TG Andreadis and D Fish. Remotely sensed correlates of mosquito distribution. In: *American Journal of Tropical Medicine and Hygiene*. December 2005. 73 (6 Supplement): 158.
- Diuk-Wasser, MA, HE Brown, TG Andreadis and D Fish. Spatial prediction of West Nile virus vector abundance in Connecticut, USA. In: *American Journal of Tropical Medicine and Hygiene*. December 2005. 73 (6 Supplement): 306.
- Brown, H.E., Diuk-Wasser, M.A., Andreadis, T.G., and Fish, D., "Hyperspectral Analysis and Larval Sampling in CT Wetlands" 51<sup>st</sup> Annual Meeting of the Northeast Mosquito Control Association, Northampton, MA November 28-30, 2005.
- Brown, H.E., Diuk-Wasser, M.A., Andreadis, T.G., and Fish, D., "Spatial Analysis of Urban Mosquitoes in New Haven, CT" 36<sup>th</sup> Annual Conference of the Society for Vector Ecology. Boston, MA, September 2004.
- Joseph, J.E., Berger, J.S., Brown, H.E., Zeffiro, T.A., and Eden, G.F. "Functional magnetic resonance imaging of silent and oral word reading." Submitted to the GICCS/UMD Conference. May 1998.
- Eden, G.F., Joseph, J.E., Brown, H.E., Brown, C.P. and Zeffiro, T.A. "Utilizing the hemodynamic lag to detect fMRI signal change without auditory interference." Submitted to the International Society for Magnetic Resonance. Australia, April 1998.
- Eden, G.F., Joseph, J.E., Brown, H.E., Brown, C.P. and Zeffiro, T.A. "fMRI acquisition without auditory interference: the 'flatcar' design." Submitted to Human Brain Mapping, Montreal Canada, June 1998.
- Helmbrecht, G.D., Farhat, M.Y., Yadgarova, K.T., Lochbaum, L., Brown, H.E., Eglinton, G.S., and Ramwell, P.W. "L-Arginine reverses the adverse pregnancy changes induced by Nitric Oxide Synthase inhibition in the rat." American Journal of Obstetrics and Gynecology. Jan. 1996, V 174 (1) p304 #7.
- Helmbrecht, G.D., Farhat, M.Y., Lochbaum, L., Brown, H.E., Eglinton G.S., and Ramwell, P.W. "Post partum changes in rat uterine artery vascular tone are due to withdrawal of nitric oxide." American Journal of Obstetrics and Gynecology. Jan. 1996, V 174 (1) p374 #225.

France, M.L., Khodr, B.M., Brown, H.E., Farhat, M.Y., and Ramwell, P.W. "Lipopolysaccharide-induced pulmonary edema and vasomotor injury." American Journal of Respiratory and Critical Care. April 1996, V 153(4) pt 2.