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EDUCATION AND EXPERIENCE

Director, Undergraduate Global Health
Certificate, 2006-2012

Global Health Institute
Duke University

Associate Professor of the Practice
7/2006-present

Department of Biology
Duke Global Health Institute

Assistant Professor of the Practice
8/2003-2006

Department of Biology
Duke University

Lecturer
8/2001-7/2003

Department of Biology
Duke University

Instructor
1/2000-8/2001

Department of Biology
Duke University

Visiting Professor
1993-1999

Division of Biological Sciences
SUNY Stony Brook
Stony Brook, NY 11794-5245
Director: Introductory Biology

Postdoctoral Fellow
1990 - 1992

Fred Hutchinson Cancer Research
Center
Division of Basic Sciences
Seattle, WA 98104

Ph.D.
1990

Indiana University
Bloomington, IN 47405
Molecular, Cellular, & Developmental
Biology

B.A. *cum laude*
1984

Cornell University
Ithaca, NY 14853
Major: Genetics and Development

CURRENT RESEARCH INTERESTS

How inclusion of civic issues, international connections, and social engagement alters the cognitive and affective responses of non-major science students to science education.

Impact of psychosocial and structural interventions on HIV education and gender awareness programs in Kenya.

Relationship between school-related gender-based violence, educational outcomes, and health outcomes in rural Kenya.

Watch Me Grow-Kenya: Dietary intake, weight status, and cognition in primary school children in Muhuru Bay, Kenya.

Lighting Up STEM: empowering girls via engineering clubs to build sustainable lights to improve education and health.

RESEARCH FUNDING

Engaging undergraduates in research: dietary intake, weight status and cognition in primary school children in the WISER educational programs in Muhuru Bay, Kenya. Arts and Sciences Council Duke, \$4,500. 2013.

Evaluation of a District-Wide Primary School Intervention to Increase Girls' Educational Retention and Success and Reduce Child Marriages in Rural Kenya. NIKE Foundation, \$10,000. 2011.

Developing a multi-level HIV prevention intervention for youth in Muhuru Bay, Kenya. Division of Corporate Giving, Johnson & Johnson, \$85,000, 2008-2011

Do Linked International Curricula in Biology Enhance Science Literacy and Engagement in Non-Science and Pre-Major Students? NSF #0510575, \$93,641, 8/05-8/09

STUDENT FIELDWORK AND COMMUNITY DEVELOPMENT FUNDING

WISER DukeEngage Program (annually), \$82,000 to mentor 12 undergraduate students and conduct research in rural Kenya.

Transitioning to Healthy Adulthood for AIDS Orphans Interested in Careers in Health Care, \$70,000. Division of Corporate Giving, Johnson & Johnson, 2014-2015

Program Care for Girls Orphaned by AIDS in Rural Kenya, Division of Corporate Giving, Johnson & Johnson, \$45,000. September 2013- September 2014

Program Care for Girls Orphaned by AIDS in Rural Kenya, Division of Corporate Giving, Johnson & Johnson, \$30,000. September 2011- September 2012

Educational Interventions to Improve Outcomes for Youth in Rural Kenya, \$68,000. Johnson & Johnson, September 2011

Building Sustainable Educational Interventions for Girls in Rural Kenya, \$125,000. The Robertson Foundation, Dec 15, 2011.

AWARDS AND HONORS

Josiah Trent Memorial Foundation Award in Medical Ethics and Humanities, 2006

David and Janet Vaughan Brooks Distinguished Teaching in the Sciences Award, 2005

Woman Leader on Campus, Duke Panhellenic Assoc, 2003

AAAS Women in Science Collaboration Award, 2003

National Institutes of Health Postdoctoral Fellowship, 1991-1994 (GM 14007)

National Institutes of Health Training Grant, 1985 - 1988

EXTERNAL AFFILIATIONS AND SERVICE

Book Chapter Reviewer, Biology for Non-Majors offered by Connections (CNX.org), an open space educational site funded by the Hewlett and Gates Foundations. 2013.

External Review Committee, Worcester Polytechnical Institute, Biology and Biotechnology Department, report chair, 2013.

Editorial Board, *Science Education and Civic Engagement, an International Journal*

NSF Center for Science Innovation, Leadership Council, 2008-present

Visiting Scholar, National Center for Science and Civic Engagement, Spring 2005

INVITED PRESENTATIONS

Global Science, Global Citizens: international collaborative learning to deepen understanding. Biology Department, NC A&T State University. Oct 1, 2014

WISER: gender and global health. NC A&T State University. Oct 1, 2014

Final Plenary: 15 Years of Science Education Reform, SENCER Summer Institute, Aug 4, 2014. UNC Asheville.

Great Problems Seminar, Worcester Polytechnical Institute (WPI). "WISER: Investing in Health and Education". January 22, 2014.

Access Without Equity: Challenges to Improving Gender Parity in Educational Outcomes in Rural Kenya. Oxford Women's Leadership Symposium. Oxford, England. December 5, 2013.

TEDxDuke, A Shrinking World. April 2013.

TEDxJNJ, Caring for the Future, December 2012.

WISER: Educating Girls, Improving Health.
Global Health Week Plenary Speaker, Vanderbilt University. February 11, 2011.

Keynote Speaker: Appalachian College Association STEM Summit, October 23, 2010

Global Health and the Liberal Arts Curriculum. Beloit College, March 12, 2010

Weissberg Conference: The Right to Health. Effecting Change Panel: examples from philanthropy, government and education. Beloit College, March 13, 2010

Multimedia Mapping for Community Development in Muhuru Bay, Kenya, Educause, November 05, 2009

Global Science, Global Citizens: international collaborative learning and social action linking students in the US and Kenya studying HIV / AIDS. Developing a Good Heart in STEM: the First Summit on Incorporating Social Justice and Service-Learning into the STEM Curriculum, June 11, 2009

Science for Global Engagement, SENCER Center for Innovation, UNC Asheville, January 10, 2009

Civic Engagement and the University: What is DukeEngage?, Northwestern University, November 2, 2007

Mainstreaming HIV education into the undergraduate curriculum in African Universities", Association of African Universities 11th meeting, Cape Town, South Africa, February 2005

Origins of HIV: Science and Cultural Constructivism, Rand Afrikaans University, Johannesburg, South Africa, February 2005.

Innovative Course Design: HIV / AIDS courses for secondary school teachers in training, Makerere University, Uganda. October 2005

International Perspectives on Microbiology
American Society for Microbiology, May 2004

Teaching about HIV / AIDS without textbooks. Egerton University, Kenya, May 2003

GRADUATE STUDENTS MENTORED

Sylvia Sable, MSc in Global Health, 2013. Validity of 24-Hour Dietary Recall in Children Age 8 to 16 in Western Kenya.

Amy Stopford, MSc in Global Health, 2011. The Effect of Commercial Sanitary Pad Use on School Attendance and Health of Adolescents in Western Kenya.

GLOBAL TEACHING

Global Health and Research Ethics, Global Health Certificate, Peking University, Beijing, China, June 13-19, 2010

Introduction to Global health, Global Health Certificate, Peking University, Beijing, China, June 12-18, 2011

CONFERENCE PRESENTATIONS

Puffer, E. S., Watt, M. **Broverman, S. A.**, Ogwang-Odhiambo, R.A., and Sikkema, K. J. (2013) Religion and Resilience: The capacity of the Church to provide psychosocial support to children and families in a community in rural Kenya. International Society for Traumatic Stress Studies, session on Social Ties, Social Bonds and Community Resilience.

Puffer, E., Pian, J., **Broverman, S.**, Ogwang-Odhiambo, R., and Sikkema, K. (2011). The Capacity of Churches in Kenya as Settings for Youth HIV Prevention and Mental Health promotion. Biennial HIV and AIDS Research Conference of the National AIDS Control Council in Nairobi, Kenya.

Puffer, E., Pian, J., **Broverman, S.**, Ogwang-Odhiambo, R., and Sikkema, K. (2011). Influence of Adolescents' Relationships with Caregivers on Mental Health and HIV Risk in Rural Kenya. Biennial HIV and AIDS Research Conference of the National AIDS Control Council in Nairobi, Kenya.

Puffer, E. S., Watt, M. **Broverman, S. A.**, Ogwang-Odhiambo, R.A., and Sikkema, K. J. (2010). The Role of Religious Coping with HIV Risk and Poverty in Rural Kenya. Poster presented at the International AIDS Conference. Vienna, Austria

Puffer, E. S., **Broverman, S. A.**, Ogwang-Odhiambo, R.A., and Sikkema, K.J. (2010). Mental Health and HIV Risk Among Youth in Rural Kenya. Paper presented at

the Society for Behavioral Medicine 31st Annual Meeting, Seattle, WA.

Puffer, E. S., **Broverman, S. A.**, Ogwang-Odhiabmo, R. A., and Sikkema, K. J. (2010) Helping Families get READY to Prevent HIV: Development of a Culturally-Anchored Intervention in Rural Kenya. NIMH Annual International Research Conference on the Role of Families in Preventing and Adapting to HIV. Nashville, TN

Green, E., Rieck, V., Puffer, E, and **Broverman, S.** (2010) Community Health and Activity Mapping. Paper presented at the annual meeting of the Association of American Geographers, Washington, DC

PUBLICATIONS

Green, E. P., Warren, V.A., **Broverman, S.A.**, Ogwang, B., and Puffer, E. S. (*submitted 2014.*) Participatory mapping in low- resource settings: Three novel methods used to engage Kenyan youth in community-based HIV prevention research. *Global Public Health*.

Puffer, E.S, Green, E.P., Sikkema, K.J., **Broverman, S.A.**, Ogwang-Odhiambo, R.A., and Pian, J. (*in prep*) A church-based intervention for families to promote mental health and prevent HIV among adolescents in rural Kenya: Results of a randomized pilot trial. *Journal of Adolescent Health*.

Matthews, E. J., Puffer, E. S., Meade, C. S, and **Broverman, S. A.** (2014) Implementation of a of a school-based HIV prevention program in rural Kenya after national dissemination. *East African Medical Journal* **91 (5)**: 152-160.

Puffer, E. S., Pian, J., Sikkema, K.J., Ogwang-Odhiambo, R.A., and **Broverman, S. A.** (2013) Developing a family-based HIV prevention intervention in rural Kenya: Ethical challenges in community based participatory research. *Journal of Empirical Research on Human Research Ethics* **8 (2)**: 119-128. DOI: 10.1525/jer.2013.8.2.119

Puffer, E. S., Drabkin, A., Stashko, A., **Broverman, S. A.**, Ogwang-Odhiambo, R, and Sikkema, K.J. (2012) Associations between orphan status, HIV risk behavior and mental health outcomes among adolescents in rural Kenya *Journal of Pediatric Psychology* **37 (8)**: 868-878. DOI: 10.1093/jpepsy/jss077

Puffer, E. S., Watt, M., Sikkema, K. J., Ogwang-Odhiambo, R. A., & **Broverman, S. A.** (2012). The Protective role of religious coping in adolescents' responses to poverty and sexual decision-making in rural Kenya: a brief report. *Journal of Research on Adolescence*, **22 (1)**: 1-7. (Epub Oct 2011).

Puffer, E. S., Meade, C., Drabkin, A., **Broverman, S.A.**, Ogwang-Odhiambo, R. A., and Sikkema, K. J. (2011) Psychosocial correlates of HIV risk behavior among youth in rural Kenya. *AIDS and Behavior* **15**: 1264-1274. DOI: 10.1007/s10461-010-9823-8

Ogwang-Odhiambo, R. and **Broverman, S.** (2005) Globalizing the Microbiology Curriculum. *ASM News* **71** (10): 448-449.

Broverman, S., and G. Prestwich (1995) Fast ion-exchange membrane purification of a microsomal protein. *Biotechniques* **19** (6), 874-875.

Broverman, S. and P. Meneely (1994) Meiotic mutants that cause a polar decrease in recombination on the X chromosome in *Caenorhabditis elegans*. *Genetics* **136**: 119-127.

Broverman, S., M. MacMorris, and T. Blumenthal (1993) Alteration of *C. elegans* gene expression by targeted transformation. *Proc. Nat. Acad. Sci. (USA)* **90**: 4359-4363.

MacMorris, M., **S. Broverman**, S. Greenspoon, K. Lea, C. Madej, T. Blumenthal, and J. Spieth (1992) Regulation of vitellogenin gene expression in transgenic *C. elegans* : short sequences required for activation of the *vit-2* promoter. *Mol. Cell. Biol.* **12**, 1652-1662.

Shepard, S., **S. Broverman**, and M. Muskavitch (1989) A tripartite interaction among *Drosophila* neurogenic genes during imaginal development. *Genetics* **122**, 429-438.

Spieth, J., M. MacMorris, **S. Broverman**, S. Greenspoon, and T. Blumenthal (1988) Regulated expression of a vitellogenin fusion gene in transgenic nematodes. *Dev. Biol.* **130**, 285-293.