

2015 Graduate Student Research Award Recipients

Investigation of the reservoir competency of two resident passerine birds for west nile virus

Emily Cornelius, Graduate Student in Forest and Wildlife Ecology

Mentor: William Karasov, Professor in the Department of Forest and Wildlife Ecology

Abstract: Since its introduction to North America in 1999, West Nile Virus (WNV) has caused local declines of bird species, and illness and death in both equines and humans. Many bird species are known to be a reservoir of WNV, potentially amplifying local outbreaks or spreading the disease during migration. However, the reservoir competence for WNV of a number of avian species likely to visit our feeders is not known. We propose to study the reservoir competence of two temperate, resident passerine birds, the black-capped chickadee and American goldfinch, for WNV. After capture, birds will be infected with WNV and monitored for viremia titers, shedding, antibody production, body mass and clinical outcome. Ultimately, we expect that both species will be sensitive to WNV and that their performance will decline following exposure to the virus. As the boundary between wildlife and humans continues to decrease and global warming continues to alter vector distribution, special attention must be dedicated to investigating host-pathogen dynamics. This project will increase understanding of the role that temperate resident birds in Wisconsin might play in the spread and/or occurrence of an ecologically important infection disease, West Nile Virus.

Measuring Individual variation in health concepts to determine health outcomes

Matthew J. Jiang, Graduate Student in the Department of Psychology

Mentor: Karl Rosengren, Ph.D, Professor in the Department of Psychology

Abstract: How does individual variation in their beliefs of health influence how they conceptualize health and their health decisions? This is a relatively unexplored area of health cognition. My proposed research project will revise a new measurement tool and use it to identify individual differences in health concepts related to health promotion and illness prevention. This tool will then be used to predict health decisions and outcomes. Our research includes specific plans to target a representative population, and specifically examine how motivation orientations influence health concepts and health outcomes. As an extension of past research, we also aim to identify physical health outcomes such as blood pressure, body fat, Body Mass Index (BMI). The results of this project have potential to impact health education and public policy.

The social determinants of antibiotic misuse: A mixed-methods study in rural india

Anna Barker, Ph.D, MD, Epidemiology in the Department of Population Health.

Mentor: Nasia Safdar, MD, Ph.D, Associate Professor of Infectious Diseases, School of Medicine and Public Health

Abstract: While its severity is agreed upon, the causes and solutions of antibiotic misuse are complex, and require immediate further investigation. Patient and provider understanding of the underlying motivations of both populations. Objectives include: 1) to identify the roles that economic instability, education, and healthcare access, have in a patient's decision making regarding antibiotic use, and 2) To identify how pharmacists' antibiotic dispensing practices are affected by their economic pressures, baseline knowledge of antibiotic resistance, and experience working with patients who use the pharmacy as their primary access to healthcare. Data collection will take place in five rural villages in the district of Allahabad, India, over a ten week period in the summer of 2015. This study utilizes a mixed-methods research design. Focus groups and semi-structured interviews will be used to engage with pharmacists and community members, respectively. In both populations, a quantitative, cross-sectional survey will be conducted to assess levels of antibiotic resistance knowledge.

The subnational politics of doctrinal gender policies: backlashes to reproductive rights in Mexico

Camilla Reuterswaerd, Graduate Student in Political Science, Ph.D in progress

Abstract: Reproductive rights constitute critical global health and human rights issues that disproportionately affect women. In Latin America, where abortion policies remain restrictive, clandestine abortions resulting in high maternal mortality levels are a growing public health issue. The goal of the proposed dissertation project is to conceptualize abortion policy backlash and specify the determinants behind its onset. Advancing knowledge of the factors that trigger backlash and risk exacerbating maternal mortality levels will help us predict the durability of reform, and better understand obstacles to women's fuller exercise of human rights and participation in society. Studying backlash politics in Latin America is of particular importance not only because backlashes have occurred in several countries yet remain understudied, but because women's reproductive and human rights in the region continue to be weak. Based on quantitative and qualitative comparative examination of Mexican states, the findings of the project will travel to other federal systems in the region, including the U.S., and contribute to a greater understanding of the politics of reproductive rights with important implications for women's equitable and sustainable global health.