

**CURRICULUM VITAE
GREGORY E. GLASS**

PERSONAL DATA

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Department of Geography &
Emerging Pathogens Institute
University of Florida
Gainesville, FL 32610
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gglass@epi.ufl.edu

- 1986 Post-doctoral fellow, Department Immunology & Infectious Diseases,
Johns Hopkins University
- 1983 Doctor of Philosophy, Department of Systematics & Ecology (Population Biology)
University of Kansas, Dissertation: Some theoretical considerations of infanticide among
vertebrates
- 1981 Master of Philosophy, Department of Systematics & Ecology, University of Kansas
- 1979 Master of Arts, Systematics & Ecology, University of Kansas
- 1974 Bachelor of Arts, Biology, Boston University

PROFESSIONAL EXPERIENCE

Professor, Department of Geography, University of Florida, Gainesville, FL (2014-present)
Researcher, Emerging Pathogens Institute, University of Florida, Gainesville, FL (2014 –
present)

Director, Global Biological Threat Reduction Program, Southern Research Institute (2012-2014)

Professor, Department of Molecular Microbiology & Immunology, Johns Hopkins University
(2002 – 2014)

Joint appointment Department of Epidemiology, Johns Hopkins University (1998 – 2013)

Director, Environmental Surveillance Laboratory, Malaria Research Initiative, Johns Hopkins
University (2001 – 2013)

Associate, Hopkins Population Center, Johns Hopkins University (1996-1999)

Director, GIS Laboratory, Program in Health Effects of Global Environmental Change, Johns
Hopkins University (1997-2001)

Associate Professor, Department of Molecular Microbiology & Immunology, Johns Hopkins
University (1995- 2002);

Assistant Professor, Department of Immunology & Infectious Diseases, Johns Hopkins
University (1989-1995)

Research Associate, Department of Immunology & Infectious Diseases, Johns Hopkins
University (1986-1989)

Post-doctoral Fellow, Department of Immunology & Infectious Diseases, Johns Hopkins
University (1984-1986)

PROFESSIONAL ACTIVITIES

Advisory Panels:

Group on Earth Observations (GEO) Human Health Advisory Panel (2009)
NASA Applied Science Analysis Group (ASAG) Applied Science Program (2009)
GEOSS Health Society Benefit Area (2009)
NEON Observatory Blue Ribbon Science Reviewer Event (2009)
Malaria Eradication Research Agenda (MalERA) Modeling Consultative Group (2008-2011)

Bill and Melinda Gates Foundation, Infectious Disease Development (2007-2010)
Consortium on Conservation Medicine Implementation Committee; (2007-2013)
U.S. Geological Survey; RGE Science Panel (2006)
Resources for the Future; Workshop on Drought-related policy issues: 2010-2020 (2005)
National Academies, Space Studies Board; Panel on Human Health and Security (2005-2007)
NEON Science and Human Dimensions Committee (Infectious Disease Subcommittee) AIBS
(2004-2006)
Scientific Advisory Board, Annapolis Center (2000-2002)
Spatial Patterns of Infectious Diseases Working Group – National Center for Ecological
Analysis and Synthesis UC Santa Barbara (NSF funded center) (2000-2002)
International Relations Committee - American Society of Mammalogists (1998 - 2000)
Animal Care and Use Committee - American Society of Mammalogists (1991 - 2000)
Metrics Panel – Earth Science Enterprise Federation – NASA (1998 – 2000)
Health Climate and Infectious Disease Colloquium - American Academy of Microbiology (1998
– 2000)
El Niño Experiment – NOAA Office of Global Environmental Change (1997 – 2000)
Mayor's Commission on Rat Control - Baltimore City (1992 - 1998)
Graduate Education Committee - MDGIS (Maryland Society for Geographic Information
Systems) (1991 - 1995)
Mammal Section, Kansas Nongame Wildlife Advisory Council, Kansas
Fish and Game Commission (1980-1982)

Program Development:

Project Coordinator, Biology 83, 84, Association of Systematics Collections (1983-1984)
Assistant Director, Program on Global and Environmental Change, Johns Hopkins School of
Public Health (1997- 2002)
Board of Directors, Annapolis Center (2000-2001)
Workshop leader NEON (National Environmental Observatory Network) 'Ecology and
Evolution of Infectious Diseases' NSF (2004)
NEON Science and Human Dimensions Committee (Infectious Disease Subcommittee) AIBS
(2004-2006)
Implementation Committee, Committee on Conservation Medicine (2007- 2013)
Science Reviewer NEON Observatory Blue Ribbon Event (2009)
Board of Directors, International Association for Ecology and Health (2011 – 2013)
CBR Program, Ukraine (2011-2014)

Consulting:

Boston University, Vertebrate pest control & management (1988)
Argonne National Laboratory, U.S. Naval Petroleum Reserve ecological impact statement
evaluation, (1989)
WHO, Malaria Control Program, Kilifi District, Kenya (1991-1993)
USAID, Application of Geographic Information Systems to infectious disease epidemiology in
Africa (1992-93)
USAID, Development of Geographic Information System for Schistosomiasis Research
Program Egypt (1993-1996)
Baltimore City Health Department, Rodent pest control (1993-1999; 2003-2005)
U.S. National Park Service, Hantavirus risk in seasonal housing, (1994-1997)
Centers for Disease Control and Prevention, Hantavirus monitoring, U. S. (1994-1998)
Vector Research Inc, Development of interactive GIS for Long Island Breast Cancer study
(NIH awarded contract). (1998-2000)
USDA, Application of GIS to spread of imported pest species. (1997-2000)

Camp Dresser & McKee, Inc, Application of GIS to national malaria control strategy, Eritrea, EHP consulting. (1998-2000)

American University of Beirut, Promotion review of faculty in School of Arts and Sciences. (2004)

Jemez Pueblo, NM, Identification of high risk areas for rodent-borne diseases. (2004)

University of North Dakota, Biology Department, Site review for NSF EPSCoR funding (2005)

City of Baltimore, Rat Rubout Program evaluation (2007-2008)

U.S. National Science Foundation, NEON Observatory Blue Ribbon Science Reviewer Event (2009)

Southern Research Institute, Especially Dangerous Pathogens Program – Ukraine (2009-2012)

Overseas Research Experience:

Curacao/Venezuela - 1974-75 Population genetics surveys

Belgium - 1987 Epidemiology of hantavirus

Kenya - 1991-93 Epidemiology/vector biology of malaria

Egypt - 1993-94 Epidemiology/program development of schistosomiasis

Chile – 2000-09 Epizootiology of hantaviruses

Panama – 2004 – 09 Epizootiology of hantaviruses

Bangladesh – 2008, 2010 Malaria program evaluation

Zambia – 2009-2012 Malaria research

Brazil – 2010 - 2012 Forecasting dengue risk

Ukraine -- 2010 – 2014 Especially dangerous pathogens

EDITORIAL ACTIVITIES

Editor: Vector Borne and Zoonotic Diseases (2000-present)

Journal of Medical Entomology (2009-2012)

Peer Reviewer: American Naturalist, Journal of Mammalogy, Journal of Wildlife Diseases, International Wildlife, American Midland Naturalist, Ecology, Occasional Papers Museum of Natural History University of Kansas, Transactions Kansas Academy of Science, Carnivore, Johns Hopkins University Press, American Journal of Tropical Medicine and Hygiene, Journal of Clinical Microbiology, American Journal of Epidemiology, European Journal of Epidemiology, Clinical and Diagnostic Laboratory Immunology, Emerging Infectious Diseases, Southwestern Naturalist, American Entomologist, American Journal of Kidney Diseases, Ecological Applications, Microbes & Infection, Kidney International, International Journal of Epidemiology, Vector Borne and Zoonotic Diseases, Journal of Parasitology, Climate Research, Journal of Virology, Acta Zoologica Sinica, BioScience, International Journal of Parasitology, Bulletin of Mathematical Biology, Ecology Letters, Microbes and Infection, Environmental Entomology, Journal of Medical Entomology, Ecological Modeling, International Journal of Environmental Health Research, Carey Conference Symposium on the Ecology of Infectious Diseases, Acta Tropica, International Journal of Environmental Health Research, Annals of Epidemiology, Journal of Infectious Diseases, EcoHealth, Oecologia, Parasitology International, BMC Public Health, PLoS Pathogens, Landscape Ecology, Ecological Applications, Nephron, PLoS Medicine, Biology Letters; Journal of Vector Ecology; Proceedings of the National Academies of Science; Frontiers in the Ecology and the Environment, Ticks and Tick-borne Diseases, Economic Entomology, Infection, Genetics and Evolution, IEEE

Proposal Reviewer:

NIH Infectious Diseases, Reproductive Health, Asthma, and Pulmonary Conditions Study IRAP (2010)
NIH Virology, VRG1 (2010)
NSF Computational Mathematics and Mathematical Biology, Division of Mathematical Sciences (2010)
NSF Neon Observatory Design Evaluation (2009)
Swedish Research Council (2008)
NSF Division of Biological Infrastructure (2005)
NSF Emerging Infectious Diseases Review Group (2004, 2006, 2010)
NSF International Science and Engineering (ad hoc) (2003)
NIH NICHD Demography and Social Behavior Initial Review Group (ad hoc) (2000 – 2002)
Civilian Research & Development Foundation for the Independent States of the Former Soviet Union (2000 – 2014)
NIH NIAID Tropical Medicine & Parasitology Initial Review Group (ad hoc) (1992 – 2002)
USAID grant review panel (1992, 1997)
Xx Add British foundation xx

HONORS & AWARDS

2002 Delta Omega – Alpha Chapter
1995 Alexander Langmuir Fellow
1986 Honors Fellow Award; Johns Hopkins University School of Hygiene and Public Health
1985 1st place; Johns Hopkins University School of Hygiene & Public Health Alumni Research Competition
1983 Elected member KU Evolutionists, University of Kansas
1981 Summer Fellowship, University of Kansas
1980 Graduate Student Travel Grant, University of Kansas
1979 Masters Thesis Honors
1974 Magna Cum Laude, Boston University
1973 National Science Foundation Undergraduate Research Award

PUBLICATIONS

Journal Articles: (underline = student)

1. Todd, NB, **GE Glass** & I McClure. 1974. Gene frequencies in some cats of South America: Caracas, Venezuela; Willemstadt, Curacao. *Carn Genet Newsl* 2(8):230-235.
2. **Glass, GE** & NB Todd. 1975. Polymorphism for the occurrence of the second upper premolar in *Felis bengalensis*; some implications for the interpretation of fossil felid materials. *Carn Genet Newsl* 2(10):297-305.
3. **Glass, GE** & NB Todd. 1976. Gene frequencies of the domestic cat in Lawrence, Kansas. *Carn Genet Newsl* 3(1):28-34.
4. Todd, NB, **GE Glass** & D Creel. 1976. Cat population genetics in the U.S. Southwest and Mexico. *Carn Genet Newsl* 3(1):43-54.
5. **Glass, GE** & NB Todd. 1977. Quasi-continuous variation in *Felis bengalensis* Kerr 1792 and its significance for some fossil lynxes. *Zeit fur Saugertierk* 42:36-44.
6. **Glass, GE** & LD Martin. 1978. A multivariate comparison of some extant and fossil felidae. *Carnivore* 1:80-87.
7. **Glass, GE** & NA Slade. 1980. The effect of *Sigmodon hispidus* on spatial and temporal activity of *Microtus ochrogaster*: evidence for competition. *Ecology* 61:358-370.
8. **Glass, GE** & NA Slade. 1980. Population structure as a predictor of *Sigmodon hispidus* - *Microtus ochrogaster* spatial association. *J Mammal* 61:473-485.

9. **Glass, GE.** 1981. A preliminary survey of domestic cat gene frequencies in Goodland, Kansas. *Carn Genet Newsl* 4(4):130-132.
10. Slade, NA, JR Sauer & **GE Glass.** 1984. Seasonal variation in field determined growth rates of the cotton rat (*Sigmodon hispidus*). *J Mammal* 65:263-270.
11. **Glass, GE,** RD Holt & NA Slade. 1985. Infanticide as an evolutionarily stable strategy. *Anim Behav* 33:384-391.
12. **Glass, GE.** 1986. Models of infanticide: a reply to Hausfater. *Anim Behav* 34:619-621.
13. Childs, JE, GW Korch, **GE Glass,** KV Shah & JW LeDuc. 1987. Epizootiology of *Hantavirus* infections in Baltimore: isolation of a virus from wild rats, and characteristics of infected rat populations. *Am J Epidemiol* 126:55-68.
14. Childs, JE, **GE Glass,** GW Korch & JW LeDuc. 1987. Prospective seroepidemiology of hantaviruses and population dynamics of small mammal communities of Baltimore, Maryland. *Am J Trop Med Hyg* 37:648-662.
15. Neu, N, NR Rose, KW Beisel, A Herskowitz, **GE Gurri Glass** & SW Craig. 1987. Cardiac myosin induces myocarditis in genetically predisposed mice. *J Immunol* 139:3630-3636.
16. Childs, JE, **GE Glass,** GW Korch, RR Arthur, KV Shah, JW LeDuc, C Rossi & D Glasser. 1988. Evidence of human infection with a rat associated *Hantavirus* in Baltimore, Maryland. *Am J Epidemiol* 127:875-878.
17. Childs, JE, **GE Glass,** GW Korch & JW LeDuc. 1988. The ecology and epizootiology of hantaviral infections in small mammal communities of Baltimore: a review and synthesis. *Bull Soc Vector Ecol* 13:1-9.
18. **Glass, GE,** GW Korch & JE Childs. 1988. Seasonal and habitat differences in growth rates of wild *Rattus norvegicus*. *J Mammal* 69:587-592.
19. **Glass, GE,** JE Childs, GW Korch & JE LeDuc. 1988. Association of intraspecific aggression and hantavirus infection in wild rats (*Rattus norvegicus*). *Epidemiol & Infect* 101:459-472.
20. Childs, JE, **GE Glass** & GW Korch. 1988. Epizootiology of *Capillaria hepatica* (Nematoda) in commensal and sylvatic populations of rodents in Baltimore, Maryland. *Canadian J Zool* 66:2769-2775.
21. **Glass, GE,** JE Childs, GW Korch & JW LeDuc. 1989. Comparative ecology and social interactions of Norway rats *Rattus norvegicus*, in Baltimore, Maryland USA. *Occ Papers Mus Nat Hist Univ Kansas* 130:1-33.
22. Iskjaer, C, NA Slade, JE Childs, **GE Glass** & GW Korch. 1989. Body mass as a measure of body size in small mammals. *J Mammal* 70:662-667.
23. Korch, GW, JE Childs, **GE Glass** & JW LeDuc. 1989. Spatial and temporal analyses and host range of hantaviral infections within small mammal communities of Baltimore, Maryland USA. *Am J Trop Med Hyg* 41:230-240.
24. Childs, JE, **GE Glass,** GW Korch & JW LeDuc. 1989. Effects of hantaviral infection on survival, growth and fertility in wild rat (*Rattus norvegicus*) populations of Baltimore, Maryland. *J Wildl Dis* 25:469-476.
25. **Glass, GE,** JE Childs, JW LeDuc, SJ Cassard & AD Donnenberg. 1990. Determining matriline by antibody response to exotic antigens. *J Mammal* 71:129-138.
26. Anthony, J, JE Childs, **GE Glass,** GW Korch & L Ross. 1990. Land use associations and changes in population indices of urban raccoons during a rabies epizootic. *J Wildl Dis* 26:170-179.
27. Childs, JE, CJ Witt, **GE Glass,** BD Bishop & TR Moench. 1990. Feline immunodeficiency virus: a survey in Baltimore: *Feline Pract* 18:11-18.
28. **Glass, GE,** JE Childs, AJ Watson & JW LeDuc. 1991. Association of chronic renal disease, hypertension, and infection with a rat-borne hantavirus. *Arch Virol Suppl* 1:69-80.

29. **Glass, GE**, GW Korch, JE Gomez & JE Childs. 1991. Using exotic antigens to measure reproduction and dispersal in *Peromyscus leucopus*. *Canadian J Zool* 69:528-530.
30. Childs, JE, **GE Glass**, TG Ksiazek, CA Rossi, JG Barrera Oro & JW LeDuc. 1991. Human-rodent contact and infection with lymphocytic choriomeningitis and Seoul viruses in an inner-city population of Baltimore. *Am J Trop Med Hyg* 44:117-121.
31. Schwartz, BS, E Hoffmeister, **GE Glass**, MR Cranfield, RR Arthur & JE Childs. 1991. A focus of Lyme borreliosis in an inner city park in Baltimore, MD. *Am J Publ Hlth* 81:803-804.
32. **Glass, GE** & JE Childs. 1991. New approaches to studying the population structure of small mammals. *Trends in Ecology* 1: 181-198.
33. Childs, JE, **GE Glass** & JW LeDuc. 1991. Rodent sightings and contacts in an inner city population of Baltimore, Maryland USA. *Bull Soc Vector Ecol* 16:245-255.
34. Childs, JE, BS Schwartz, TG Ksiazek, RR Graham, JW LeDuc & **GE Glass**. 1992. Risk factors associated with antibodies to leptospires in inner-city residents of Baltimore, Maryland. *Am J Publ Hlth* 82:597-599.
35. LeDuc, JW, JE Childs & **GE Glass**. 1992. The hantaviruses, etiologic agents of hemorrhagic fever with renal syndrome. *Ann Rev Publ Hlth* 13:79-98.
36. Childs, JE, **GE Glass**, GW Korch, TG Ksiazek & JW LeDuc. 1992. Lymphocytic choriomeningitis virus infection and house mouse (*Mus musculus*) distribution in urban Baltimore. *Am J Trop Med Hyg* 46:390-397.
37. Arthur, RR, R Loftis, J Gomez, **GE Glass**, JW LeDuc, & JE Childs. 1992. Grouping of hantaviruses by S genome segment PCR and amplification of viral RNA from wild-caught rats. *Am J Trop Med Hyg* 46:410-424.
38. **Glass, GE**, JM Morgan, PM Noy, DT Johnson & BS Schwartz. 1992. Infectious disease epidemiology and GIS: a case study of Lyme disease. *Geo Info Syst* 2(10):65-69.
39. **Glass, GE**, AJ Watson, JW LeDuc, GD Kelen, TC Quinn & JE Childs. 1993. Infection with a ratborne hantavirus in US residents is consistently associated with hypertensive renal disease. *J Infect Dis* 167:614-620.
40. Mbogo, CNM, **GE Glass**, D. Forster, EW Kabiru, JI Githure, JH Ouma & JC Beier. 1993. Evaluation of light traps for sampling anopheline mosquitoes in Kilifi, Kenya. *J Am Mosq Ctrl Assoc* 9:260-263.
41. Conlon, PJ, JJ Walshe, M Carmody, J Donohoe, B Keogh, **GE Glass**, A J. Watson. 1993. Haemorrhagic fever with renal syndrome. *Nephrol Dialy Transplant* 8:1306-1307.
42. **Glass, GE**, AJ Watson, JW LeDuc, & JE Childs. 1994. Domestic cases of hemorrhagic fever with renal syndrome in the United States. *Nephron* 68:48-51.
43. **Glass, GE**, J Amersinghe, JM Morgan & TW Scott. 1994. Predicting *Ixodes scapularis* abundance on white-tailed deer using geographic information systems. *Am J Trop Med Hyg* 51:538-544.
44. Childs, JE, TG Ksiazek, PE Rollin, JW Krebs, **GE Glass**, S Zaki, ST Nichol & CJ Peters. 1994. Hantaviruses and their rodent reservoirs in the United States. *Proc 16th Vert Pest Conf*: 188-191.
45. **Glass, GE**, JM Morgan, DT Johnson, PM Noy, E Israel & BS Schwartz. 1995. Environmental risk factors for Lyme disease identified with geographic information systems. *Am J Publ Hlth* 85:944-948.
46. Rollin, PE, TG Ksiazek, LH Elliott, EV Ravkov, ML Martin, S Morzunov, W Livingstone, M Monroe, **GE Glass**, S Ruo, AS Khan, JE Childs, ST Nichol, and CJ Peters. 1995. Isolation of Black Creek Canal Virus, a new hantavirus from *Sigmodon hispidus* in Florida. *J Med Virol* 46:35-39.

47. Childs, JE, JW Krebs, TG Ksiazek, GO Maupin, KL Gage, PE Rollin, PS Zeitz, J Sarisky, RE Ensore, JC Butler, JE Cheek, **GE Glass** and CJ Peters. 1995. A household-based, case-control study of environmental factors associated with hantavirus pulmonary syndrome in the Southwestern United States. *Am J Trop Med Hyg* 52(5):393-397.
48. Childs, JE, JN Mills, and **GE Glass**. 1995. Rodent-borne hemorrhagic fever virus: a special risk to mammalogists. *J Mammal* 76:664-680.
49. **Glass, GE**, CJ Peters, & KB Nolte. 1995. Pituitary hemorrhage as a complication of hantaviral disease. *Am J Neuroradiol* 16:179.
50. Rodriguez Hernandez, JA, J Vaque Rafart, **GE Gurri Glass**. 1995. Hemorrhagic fever with renal syndrome caused by hantavirus. *Med Clin (Barcelona)* 105:62-67.
51. Craig, LE, DE Norris, **GE Glass**, ML Sanders & BS Schwartz. 1996. Acquired resistance and antibody response of raccoons (*Procyon lotor*) to sequential feedings of *Ixodes scapularis* (Acari:Ixodidae). *Vet Parasitol* 63:291-301.
52. Sanders, ML, AL Scott, **GE Glass** and BS Schwartz. 1996. Salivary gland changes and host antibody responses associated with feeding of male Lone Star ticks (Acari: Ixodidae). *J Med Entomol* 33:628-634.
53. Vinetz, JM, **GE Glass**, CE Flexner, P Mueller, and DC Kaslow. 1996. Sporadic urban leptospirosis. *Ann Int Med.* 125:794-798.
54. **Glass, GE**, JS Johnson, GA Hodenbach, CLJ DiSalvo, CJ Peters, JE Childs & JN Mills. 1997. Experimental evaluation of rodent exclusion methods to reduce hantavirus transmission to humans in rural housing. *Am J Trop Med Hyg.* 56:359-364.
55. Wasser, WG, CA Rossi & **GE Glass**. 1997. Hantavirus antibodies in New York dialysis and emergency room patients. *Ann Int Med.* 127:166-167.
56. **Glass, GE**. 1997. Hantaviruses. *Curr Opin Inf Dis* 10:362-366.
57. Ellis, BA, JN Mills, JE Childs, MC Muzzini, KT McKee, DA Enria & **GE Glass**. 1997. Structure and floristics of habitats associated with five rodent species in an agroecosystem in central Argentina. *J Zoology.* 243:437-460.
58. Johnson, JM & **GE (Gurri) Glass**. 1997. Simple precautions prevent deadly exposures to hantavirus. *Occ Hlth & Safety* 66:67-68.
59. Bunnell, JE, S Dumler, JE Childs & **GE Glass**. 1998. Retrospective serosurvey for human granulocytic ehrlichiosis agent in urban white-footed mice from Maryland. *J Wildlf Dis* 34:179-181.
60. Childs, JE, SL McLafferty, R Sadek, GL Miller, AS Khan R DuPree, R Advani, JN Mills & **GE Glass**. 1998. Epidemiology and geographic patterns of rat bite and rat infestations in New York City. *Am J Epidemiol* 148:78-87.
61. **Glass, GE**, W Livingstone, JN Mills, WG Hlady, JB Fine, PE Rollin, TG Ksiazek, CJ Peters & JE Childs. 1998. Black Creek Canal virus infection in *Sigmodon hispidus* in southern Florida. *Am J Trop Med Hyg.* 59:699-703.
62. Sanders, ML, DC Jaworski, JL Sanchez, RF DeFraitcs, **GE Glass**, AL Scott, S Raha, B Ritchie, GR Needham, BS Schwartz. 1998. Antibody to a cDNA-derived calreticulin protein from *Amblyomma americanum* is a biomarker of tick exposure in humans. *Am J Trop Med Hyg* 59:279-285.
63. Ellis, BA, JN Mills, **GE Glass**, MC Muzzini, KT McKee, DA Enria & JE Childs. 1998. Dietary habits of the common rodents in an agroecosystem in Argentina. *J. Mammal* 79:1203-1220.
64. Becker, KM, **GE Glass**, W Brathwaite & JM Zenilman. 1998. Geographic epidemiology of gonorrhoea in Baltimore using a geographic information system. *Am J Epidemiol* 147:709-716.

64. Sanders ML, **GE Glass**, AL Scott, & BS Schwartz. 1998. Kinetics and cross-species comparisons of host antibody responses to Lone Star and American Dog ticks (Acari:Ixodidae). *J Med Entomol* 35:849-856.
65. Latkin C, **GE Glass** & T Duncan. 1998. Using geographic information systems to assess spatial patterns of drug use, selection bias and attrition among a sample of injection drug users. *Drug Alcohol Depend* 50:167-175.
66. Bishai, WR, NMH Graham, S Harrington, D Pope, N Hooper, J Astemborski, L Sheely, D Vlahov, **GE Glass** & RE Chaisson. 1998. Molecular and geographic patterns of tuberculosis transmission after 15 years of directly observed therapy. *JAMA* 280:1679-1684.
67. American Society of Mammalogy Animal Care and Use Committee. 1998. Guidelines for the capture, handling and care of mammals as approved by the American Society of Mammalogists. *J Mammal* 79:1416-1431.
68. Mbogo, CNM, EW Kabiru, **GE Glass**, D Forster, RW Snow, CPM Khamala, JH Ouma, LI Githure, K Marsh & JC Beier. 1999. Vector-related case-control study of severe malaria in Kilifi District, Kenya. *Am J Trop Med Hyg* 60:781-785.
69. Lambropoulos, S, JB Fine, A Perbeck D Torres, **GE Glass**, P McHugh, & EA Dorsey. 1999. Rodent control in urban areas: an interdisciplinary approach. *J Environ Hlth* 12-17.
70. Sanders ML, **GE Glass**, RB Nadelman, GP Wormser, AL Scott, S Raha, BC Ritchie, DC Jaworski, & BS Schwartz. 1999. Antibody levels to recombinant tick calreticulin increase in humans after exposure to *Ixodes scapularis* (Say) and are correlated with tick engorgement indices. *Am J Epidemiol* 149:777-784.
71. Zenilman, JM, N Elish, A Freisa & **GE Glass**. 1999. The geography of sexual partnerships in Baltimore--applications of core theory dynamics using a geographic information system. *STDs* 26:75-81.
72. Hofmeister, EK, BM Ellis, **GE Glass** & JE Childs. 1999. Epizootiology of infection with *Borrelia burgdorferi* in a population of *Peromyscus leucopus* at a Lyme disease enzootic site in Maryland. *Am J Trop Med Hyg* 60:598-609.
73. Ellis, BA, RL Regnery, L Beati F Bacellar, M Rood, **GG** [sic] **Glass**, E Marston, TG Ksiazek, D Jones, JE Childs. 1999. Rats of the genus *Rattus* are reservoir hosts for pathogenic *Bartonella* species: an Old World origin for a New World disease? *J Inf Dis* 180:220-224.
74. Kabrane-Lazizi, Y, JB Fine, J Elm, **GE Glass**, H Higa, A Diwan, CJ Gibbs, Jr, X-J Meng, SU Emerson & RH Purcell. 1999. Evidence for wide-spread infection of wild rats with Hepatitis E virus in the United States. *Am J Trop Med* 61:331-335.
75. Hofmeister, EK, **GE Glass**, JE Childs & DH Persing. 1999. Population dynamics of a naturally occurring heterogeneous mixture of *Borrelia burgdorferi* clones. *Infect Immun* 67:5709-5716.
76. Yu, X-F, J Chen, Y Shao, C Beyrer, Z Wang, W Liu, J Yang, S Liang, L Su **G Gurri-Glass** & S Lai. 1999. Emerging HIV infections with distinct subtypes of HIV-1 among injection drug users from geographically separated locations in Guangxi Province, China. *J AIDS*. 22:180-189.
77. **Glass, GE**, JE Cheek, JA Patz, TM Shields, TJ Doyle, DA Thoroughman, DK Hunt, RE Ensore, KL Gage, C Ireland, CJ Peters, R Bryan. 2000. Anticipating risk areas for hantavirus pulmonary syndrome with remotely sensed data: re-examination of the 1993 outbreak. *Emerg Inf Dis*. 6:238-247.
78. Hjelle, B & **GE Glass**. 2000. Outbreak of hantavirus infection in the Four Corners Region of the US in the wake of the 1997-98 El Niño Southern Oscillation. *J Inf Dis*. 181:1568-1573.

79. Li, K, T Schuler, Z Chen, **GE Glass**, JE Childs, PG Plagemann. 2000. Isolation of lactate dehydrogenase-elevating viruses from wild house mice and their biological and molecular characterization. *Virus Res.* 67:153-162.
80. **Glass, GE**. 2000. Spatial aspects of epidemiology the interface with medical geography. *Epi Rev.* 22:136-139.
81. Klein, SL, BH Bird & **GE Glass**. 2000. Sex differences in Seoul virus infection are not related to adult sex steroid concentrations in Norway rats. *J Virol.* 74:8213-8217.
82. McKee, KT, T Shields, PR Jenkins, J Zenilman, & **GE Glass**. 2000. Application of a geographic information system to track and control a *Shigella* outbreak. *Clin Inf Dis* 31:728-733.
83. Klein SL, BH Bird & **GE Glass**. 2001. Sex differences in immune responses and viral shedding following Seoul virus infection in Norway rats. *Am J Trop Med Hyg* 65:57-63
84. Shone, SM, PN Ferrao, CR Lesser, DE Norris & **GE Glass**. 2001. Analysis of mosquito vector species in Maryland using geographic information systems. *NY Acad Sci Annals* 951: 364-368
85. Das A, SR Lele, **GE Glass**, T Shields, & JA Patz. 2002. Modeling a discrete spatial response using generalized linear mixed models: application to Lyme disease vectors. *Intl J GIS* 16:151-166.
86. Zenilman, JM, **GE Glass**, T Shields, PR Jenkins, JC Gaydos & KT McKee. 2002. Geographic epidemiology of gonorrhea and chlamydia on a large military installation-application of a GIS system. *STI's.* 78:40-44.
87. Klein SL, BH Bird, RJ Nelson & **GE Glass**. 2002. Environmental and physiological factors associated with Seoul virus infection among urban populations of Norway rats. *J Mammal* 83:478-488.
88. Klein, SL, AL Marson, AL Scott, G Ketner & **GE Glass**. 2002. Neonatal sex steroids affect antibody responses, but not Seoul virus replication, in Norway rats. *Brain, Behavior, and Immunity* 16:736-746.
89. Klein, SL, AB Wisniewski, AL Marson, **GE Glass** & JP Gearhart. 2002. Perinatal exposure to phytoestrogens alters immune function in adult male rats. *Molecular Medicine* 8: 732-739.
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Chapters:

1. Caldwell, JP & **GE Glass**. 1976. Vertebrates of the Woodson County State Fishing Lake and Game Management Area, pp. 62-76, In: Preliminary Inventory of the Biota of Woodson County State Inventory of the Biota of Woodson County State Fishing Lake and Game Management Area, Reports of the State Biological Survey of Kansas No. 5.
2. Borchert, R, R Laushman & **GE Glass**. 1981. Water stress and growth in cottonwood saplings, pp. 136-148 In: Third Central Hardwood Conference. HE Garrett & GS Cox (eds). Univ Missouri Press, Columbia.
3. **Glass, GE**, et al. 1982. Family Felidae, pp. 277-283 In: Mammal species of the world: a taxonomic and geographical reference. JH Honacki, KE Kinman & JW Koepl (eds). Assoc Syst Collect Publ, Lawrence.
4. LeDuc, JW, JE Childs, **GE Glass** & AJ Watson. 1991. Hemorrhagic fever with renal syndrome: past accomplishments and future challenges, pp. 35-48. In W Page (ed). Epidemiology in Military and Veteran Populations. Nat Acad Press, Washington, DC
5. LeDuc, JW, JE Childs, **GE Glass** & AJ Watson. 1993. Hantaan (Korean hemorrhagic fever) and related rodent zoonoses, pp. 149-158 In S Morris (ed) Emerging viruses. Oxford Univ Press, New York
6. Armitage, KB & **GE Glass**. 1994. Communal denning in yellow-bellied marmots, pp. 14-26 In V Yu Rumiantsev (ed). Actual Problems of Marmots (sic) Investigation. ABF, Moscow
7. Kunz, TH, R Rudran & **GE Gurri Glass**. 1996. Human health concerns, pp. 255-264 In DE Wilson, FR Cole, JD Nichols, R Rudran, MS Foster (eds). Measuring and Monitoring Biological Diversity: Standard Methods for Mammals. Smithsonian Institution Press, Washington, DC
8. Bunnell JE, JS Dumler, SR Lele, TM Shields & **GE Glass**. 1999. Molecular ecological analysis of *Ixodes scapularis*, *Borrelia burgdorferi*, and the HGE agent in the Middle Atlantic region of the USA, pp. 432-435 In: Raoult D & Brouqui P, (eds). Rickettsiae and Rickettsial Diseases at the Turn of the Third Millenium, Elsevier, Paris.
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7. Pekosz, A & **GE Glass**. 2008. Emerging viral diseases. Maryland Med 9:11-16
8. **Glass, GE**. 2009. Infectious Disease Ecology [Review]. Bioscience 59:263-264.

**CURRICULUM VITAE
GREGORY E. GLASS**

PART II

TEACHING

Advisees: All advisees are MMI students unless otherwise noted

- Erik Hofmeister**, PhD 1990 - 1994. The epizootiology of infection with *Borrelia burgdorferi* in *Peromyscus leucopus* at a Lyme disease enzootic site in Maryland – (Co-advisor w/J Childs)
- Barbara Ellis**, PhD 1991 - 1996. Microhabitat selection and dietary habits of rodents in the endemic zone of Argentine hemorrhagic fever
- Martin Sanders**, PhD 1992 - 1997. Host antibody responses to tick salivary gland proteins: novel approaches to the development of biologic markers of tick exposure
- William Nicholson**, PhD 1993 - 1998. Epidemiology of human granulocytic ehrlichiosis, with special reference to the role of wild rodents and Ixodid ticks as natural hosts of *Ehrlichia phagocytophila* sensu lato.
- Anuja Rastogi**, MHS 1994-1995. Human papillomavirus and its implications in oral cancer.
- Alvina Chu**, MHS 1997-1998. Characterization of the Lyme disease epidemic in a five-county region of Maryland.
- Sharon Rolando**, MHS 1997-1998. The emergence of human infection with *Penicillium marneffeii* in relation to the HIV epidemic in Southeast Asia.
- Joseph E. Bunnell**, PhD 1997-1999. The pathobiology of granulocytic ehrlichiosis, Lyme borreliosis, and their tick vector in the Middle Atlantic region, USA.
- Thomas Ulrich**, ScM 1998-2000. Partial characterization of the natural history of *Bartonella elizabethae*.
- Brian Bird**, ScM 1998-2000. Sex and seasonality differences in hantavirus infection in *Rattus norvegicus*
- James Stark**, ScM 1998-2000. Risk factors and the prevalence of the human granulocytic ehrlichiosis agent and *Borrelia burgdorferi* in the tick vector and mouse reservoir in Southern Maryland.
- Sabra Klein**, post-doctoral fellow. 1998-2002. Effects of androgens on susceptibility to and transmission of hantavirus in rats.
- Crystal Bennett**, ScM 1999-2001. Genetic variability in *Dermacentor variabilis* and prevalence of *Rickettsia rickettsii* and *Babesia microti* in ticks collected from Baltimore County, Maryland.
- Marc Dimenna**, PhD 2000-2005. Emergence and spread of West Nile virus in the Rio Grande valley.
- Scott Shone**, PhD 2001-2005. Environmental factors impacting mosquito population dynamics in the mid-Atlantic region.
- Derek Armstrong**, MHS 2001-2002. The ecology and epidemiology of Ebola virus infections.
- Andrew Walsh**, PhD 2002-2005. Extracting knowledge from data: Combining environmental measurements and field observations in statistical models of infectious disease ecology.
- Diana Scorpio**, DVM, MPH 2003-2004. Investigation of the CXC chemokine receptor in disease pathogenesis of *Anaplasma phagocytophilum*: mouse model of the tick-borne infection, human granulocytic anaplasmosis
- Michael Johansson**, PhD 2004-2008. The influence of climate on patterns of dengue transmission in Puerto Rico.
- Heidi Bazar**, DVM, MPH 2006-2007. Avian Influenza, a model for control prior to a human pandemic

Stephen Schachterle, PhD 2006-2011 (Epidemiology). Malaria in an Azithromycin mass drug administration for Trachoma in central Tanzania: *Plasmodium falciparum* diagnostics, the environment and the Azithromycin effect.

Post-doctoral fellows:

Karen Becker -1995-1997. Application of GIS to STI epidemiology. (Research supervisor)

Sabra Klein – 1998-2002. Gender differences in rat responses to hantavirus infection.

Chitti Chansang – 2003-2004. Remote sensing evaluation of DHF risk in Thailand.

Jill Anthony – 2004 – 2006. Detection of infectious disease outbreaks from surveillance data.

Armin Gemperli – 2004 – 2006. Spatial statistical methods for malaria in sub-Saharan Africa.

Julie Clennon – 2006-2008. Hydrologic modeling of malaria risk in Zambia.

Veronica Andreo – 2009 (Fulbright Scholar Program). Hantavirus Risk in Argentina

Ubydul Haque – 2011-2013. National Malaria Control Program evaluations in southern Africa

Preliminary Orals: (includes exams as Alternate)

Hector Garcia - International Health

Barbara Ellis – MMI

Joseph Bunnell - MMI

Ibrahim Abd-El Azem - MMI

Martin Sanders - MMI

William Nicholson - MMI

Hsien-Hsien Lei – Epidemiology

Hui Sunny Chang - International Health

Chuan-Yu Chen – Mental Hygiene

Dave Goodman – International Health

Shannon Henshaw – EHS

Katherine Swanson – MMI

Derek Cummings - DOGEE

Kim Fai Ke Shum – Biostatistics

Edward Broughton - International Health

Kristen Gibson – EHS

Jennifer Feder – Biostatistics

Yayi Guo – EHS

Beth Feingold – EHS

Kamau Peters, EHS

Victoria Gammino – International Health

Olugbenga Obasanjo - Epidemiology

Mary Rene Howell - HPM

Maureen Cadorette - EHS

Kimberly Brouwer - MMI

Marc DiMenna - MMI

Rebecca Freeman – DOGEE

Scott Shone – MMI

Jennifer Anderson – MMI

Patrick Mullen – International Health

Andrew Walsh – MMI

Rongheng Lin –Biostatistics

Yue Yin – Biostatistics

Nicholas Reich – Biostatistics

Ann Liu – EHS

Stephen Schachterle – Epidemiology

Talia Chalew – EHS

Zunera Gilani, Epidemiology

Erin Urquhart – EPS (Homewood)

Final Orals (doctoral students, only):

Christopher Moffatt, PhD Psychology. 1995. Seasonal and social regulation of reproductive behavior in female prairie voles, *Microtus ochrogaster*.

Suwat Chariyalertsak, PhD Epidemiology. 1996. Epidemiology and risk factors associated with *Penicillium marneffe* infections in HIV-infected patients in the North of Thailand.

Barbara Ellis, PhD Molecular Microbiology & Immunology. 1996. Microhabitat selection and dietary habits of rodents in the endemic zone of Argentine hemorrhagic fever.

Martin Sanders, PhD Molecular Microbiology & Immunology. 1997. Host antibody responses to tick salivary gland proteins: novel approaches to the development of biologic markers of tick exposure.

Sydney Pettygrove, PhD Epidemiology. 1997. A case control study of neural tube defects and agricultural chemicals using geographic information systems.

- Gregory E. Demas**, PhD Psychology. 1998. Environmental and hormonal factors regulating seasonal changes in reproductive and immune function in deer mice (*Peromyscus maniculatus*).
- Sabra L. Klein**, PhD Psychology. 1998. Behavioral, physiological and evolutionary factors mediating sex and species differences in immune function among rodents.
- Abhik Das**, PhD Biostatistics. 1998. Topics in spatial statistics.
- William Nicholson**, PhD Molecular Microbiology & Immunology 1998. Epidemiology of human granulocytic ehrlichiosis, with special reference to the role of wild rodents and Ixodid ticks as natural hosts of *Ehrlichia phagocytophila* sensu lato.
- Olugbenga Obasanjo**, PhD Epidemiology. 1998. The geographic epidemiology of *Mycobacterium tuberculosis* disease in Baltimore, 1971-1995.
- Lance J. Kriegsfeld**, PhD Psychology. 1999. Proximate factors and mechanisms regulating seasonal adaptation and reproduction in male and female prairie voles (*Microtus ochrogaster*).
- Joseph E. Bunnell**, PhD Molecular Microbiology & Immunology, 1999. The pathobiology of granulocytic ehrlichiosis, Lyme borreliosis, and their tick vector in the Middle Atlantic region, USA.
- Mary Rene Howell**, PhD Health Policy and Management, 2000. The cost-effectiveness of prevention and treatment of *Chlamydia trachomatis*: recommendations for strategies in public health and managed care settings.
- Jingyee Koo**, PhD Biostatistics, 2000. A predictive spatial-temporal model for boreal forest succession.
- Kimberly Brouwer**, PhD Molecular Microbiology & Immunology, 2000. Genetic and epidemiologic assessment of *Schistosoma haematobium* induced kidney and bladder pathology.
- Deborah L. Drazen**, PhD Psychology. 2001. Neuroendocrine mechanisms underlying seasonal changes in immune function and energy balance.
- Joseph M. Casto**, PhD Psychology. 2001. Development and hormonal regulation of sex differences in the song system of European starlings: *Sturnus vulgaris*.
- Rebecca Freeman**, PhD Geography and Environmental Engineering. 2002. A mathematical model for the geographic spread of infectious disease via air travel.
- Staci D. Bilbo**, PhD Psychology. 2003. The neuroendocrine-immune axis in Siberian hamsters: proximate mechanisms underlying seasonal changes in sickness behavior and immune function.
- Shannon L. Henshaw**, PhD Environmental Health Sciences. 2004. Spatial attributes of blood organochlorine concentrations in Washington County, Maryland, 1974-1989.
- Jennifer Anderson**, PhD Molecular Microbiology & Immunology. 2004. Ecological and genetic factors contributing to enzootic Lyme disease in Southern Maryland.
- Scott Shone**, PhD Molecular Microbiology & Immunology 2005. Environmental factors impacting mosquito population dynamics in the mid-Atlantic region.
- Mark DiMenna**, PhD Molecular Microbiology & Immunology 2005. The emergence of West Nile virus in mosquito populations of the New Mexico Rio Grande.
- Andrew S. Walsh**, PhD Molecular Microbiology & Immunology 2005. Extracting knowledge from data: Combining environmental measurements and field observations in statistical models of infectious disease ecology.
- Katherine Swanson**, PhD Molecular Microbiology & Immunology 2005. Enzootic persistence of *Borrelia burgdorferi* in the mid-Atlantic region.
- Rebekah Kent**, PhD Molecular Microbiology & Immunology 2006. Ecological and genetic components of malaria transmission in Macha, Zambia.
- Yue Yin**, PhD Biostatistics 2007. Bayesian analysis of infectious disease time series data and optimal constrained Bayesian updating.

- William Nicholson -1994 - ASPH/PHS summer fellowship
1994 -1998 - CDC IPA
1998 – 2006 – Research Scientist, Viral & Rickettsial Zoonoses Branch, CDC
2006 – present - Branch Chief Disease Assessment and Epidemiology, Viral and Rickettsial Zoonoses Branch
- Joseph Bunnell -1999 - 2001 - Emerging Infectious Disease post-doctoral fellow, University of Texas Medical Branch
- Scott Shone - 2001 - present - Research Scientist, U.S. Geological Survey, Reston, VA
- 2005 - 2007 - CDC Post-doctoral fellow; Division of Public Health and Environmental Laboratories; New Jersey State Department of Health
2007 - 2008 - New Jersey Department of Health and Senior Services, Division of Public Health and Environmental Laboratories, Molecular Detection Services Unit Trenton, NJ. Assistant Director
2008- present - New Jersey Department of Health and Senior Services, Newborn Screening Laboratory Trenton, NJ. Director
- Mark DiMenna - 2005 – 2007 – City of Albuquerque/Bernalillo County, NM; Director of Vector Control
2007 – present - Bio-Disease Management, Albuquerque Environmental Health Department, Albuquerque, NM Environmental Health Manager
- Andrew Walsh - 2005 – 2008 – Post-doctoral fellow, Carnegie- Mellon Institute
2008 – present – Health Monitoring Systems, Inc., Infectious Disease Outbreak Detection model development
- Michael Johansson - 2008 – 2010 – Post-doctoral fellow, U.S. Centers for Disease Control & Prevention
2010 – present – Biologist; Division of Vector-Borne Diseases, National Center for Emerging and Zoonotic Infectious Diseases, CDC.

Classroom Instruction:

Spatial Statistics and Geographic Information Systems, Faculty, Biostatistics, Johns Hopkins University (1999 - 2012) (approx. 60 students/year)

Principles of Public Health Ecology, Faculty; Molecular Microbiology & Immunology, Johns Hopkins University (1993-2012) (approx. 25 students/year)

Field Studies in Ecology and Behavior, Faculty; Molecular Microbiology & Immunology, Johns Hopkins University (1988-2012) (approx. 7 students/year)

Public Health Biology, Faculty, Interdepartmental, Johns Hopkins University (2003-2012) (approximately 40 students/year)

Biological Basis of Public Health, Course Coordinator, Lecturer, Discussion Group Leader; Immunology & Infectious Diseases, Johns Hopkins University (1988-2002) (approx. 50 students/year)

Microbiology & Immunology, Lecturer, Molecular Microbiology & Immunology, Johns Hopkins University (1999-2000). (approximately 30 students/year).

Behavioral Ecology, Faculty, Psychology, Johns Hopkins University (1997- 1998) (approx. 30 students/year)

Mechanisms of Animal Behavior, Course Coordinator, Lecturer; Psychology, Johns Hopkins University (1984-1986) (approx. 100 students/year)

Algebra & Trigonometry, Lecturer; Mathematics, University of Kansas (1983) (approx. 35 students)

Introductory Biology, Laboratory Instructor, Systematics & Ecology, University of Kansas (1981) (approx 20 students)

Population Biology, Teaching Assistant, Systematics & Ecology, University of Kansas (1980)

Biometry, Laboratory Instructor, Systematics & Ecology, University of Kansas (1978-1979)

Other Teaching

Evolution of Infectious Diseases – Guest lecturer (3 lectures) 2007-2013

Infectious Disease Epidemiology – Guest lecturer 1996-2012

Problem Solving in Public Health - Mentor 1993-2002

Advanced Parasitology - Guest lecturer 1991-2008

Advanced Virology - Guest lecturer 2003

Foundations of Tropical Public Health - Guest lecturer 1996-1998

Ecology and Epidemiology of Zoonotic Diseases - Guest lecturer 1988-1992; 2001

Introduction to Remote Sensing - Guest lecturer 1993-1995, 1998, 2002, 2004

Principles of Virology - Guest lecturer 1993-1997

Summer Institute in Tropical Medicine & Public Health - Guest lecturer 1995-1998

PREVIOUS RESEARCH GRANTS

1986 Epidemiology of Hantavirus in Baltimore. US Department of the Army- \$330,000, 1987-1989 (Co-PI, with JE Childs, PI)

1987 Determining matrilineal lines of free-ranging small mammals. Sloan Foundation- \$1,300, 1987-1988 (PI)

1988 Using exotic antigens to study the microepidemiology of zoonotic diseases in free-ranging mammals. Public Health Service Biomedical Research Support Grant - \$6,000, 1988-1989 (PI)

1989 Epidemiology of Hantavirus infection in the United States. US Department of the Army - \$825,000, 1989-1993 (Co-PI, with JE Childs, PI)

1989 DNA fingerprinting of small mammals. Public Health Service Biomedical Research Support Grant - \$16,000, 1989-1991 (PI)

1991 Epizootiology of Lyme borreliosis in Maryland. National Institutes of Health - \$100,000, 1991-1993 (PI)

1992 Vector-related factors affecting micro-distribution patterns of malaria. World Health Organization - \$90,000, 1992-1993 (Co-Investigator, with JC Beier, PI)

1993 Use of GIS in infectious disease epidemiology - \$5,000. Public Health Service Research Support Grant 1993 (PI)

1994 Mapping the risk of Lyme disease in Maryland using GIS. Public Health Service SBIR - \$74,500, 1994 (PI)

1994 Interagency Personnel Agreement. Centers for Disease Control and Prevention - \$220,000, 1994-1998 (PI)

1995 Johns Hopkins STD CRC. National Institutes of Health. Project 4 - \$330,000, 1995-1999 (Co-PI, with J. Zenilman, PI)

1996 Geographic distribution of sexually transmitted diseases at Fort Bragg, NC. U.S. Army - \$173,830, 1997-1998 (Co-PI, with J. Zenilman, PI)

1996 Integrated assessment of the public health effects of climate change for the United States. EPA (Project Leader - vector-borne diseases section \$400,000, 1996-1999, with J Patz, H Ellis, PI's)

1997 Geographic and molecular clustering of tuberculosis. National Institutes of Health - \$346,500, 1997-2000 (PI)

- 1998 Intervention study to prevent tick exposure in Maryland. CDC \$167,300, 1998-2001 (Co-investigator, with B Schwartz, PI)
- 1998 Progressive data mining of remotely sensed data for environmental and public health applications. NASA \$1,950,000, 1998-2003 (PI)
- 1999 Pfiesteria and climate geographic information system. MD Department of Health and Mental Hygiene. \$76,400, 1999-2001 (Co-investigator, with J Patz, PI)
- 1999 Effects of La Niña on Hantavirus Pulmonary Syndrome in the U.S. Southwest. U.S. National Oceanic and Atmospheric Administration - \$15,000 1999-2000 (PI)
- 1999 Hantavirus surveillance with remotely sensed data. USPHS Indian Health Service. \$30,000, 1999-2001 (PI)
- 1999 Hantavirus ecology and disease in Chile. NIH ICIDR U19 AI45452-02, \$565,000, 1999-2004 (Consultant Project 1 with G Mertz, PI)
- 2000 Development of an ADS-based syndromic surveillance system using STD's as a prototype sentinel condition. Henry M. Jackson Foundation. \$66,000, 2000-2002 (PI)
- 2000 Community prevention interventions for urban demolitions. NIH 2000-2003 (Co-investigator with M Farfel, PI)
- 2000 Impact of social networks on syphilis transmission. NIH R01 AI45724, \$2,200,000, 2000-2005 (Co-investigator with A Rompalo, PI)
- 2000 Explaining disparities in cognitive function in seniors. NIH R01 AI19604, \$3,000,000, 2000 – 2005 (Co-investigator with B Schwartz, PI)
- 2001 The ESSENCE II Bio-surveillance system program. DARPA. \$344,400, 2001 – 2003 (PI, subcontract)
- 2001 The Epi-SPIRE: A biosurveillance prototype using model-based multi-modal mining of environmentally related information. DARPA. \$759,200, 2001 – 2004 (PI, subcontract)
- 2001 Ecology of Lyme disease in Southern Maryland. CDC. U50/CCU319554-01 \$363,000, 2001-2004 (Co-PI with D. Norris, PI)
- 2001 Ecology of West Nile virus in Maryland. CDC. Total award: xx 2001-2004 (Co-PI, with D. Norris, PI).
- 2002 Long term study of climatic influences on the dynamics of mosquito populations in the mid-Atlantic region. NOAA NA16GP2631, \$399,500, 2002-2005 (PI)
- 2003 Developing a bioterrorism syndromic surveillance system. CDC Total award \$1,888.600 (Co-investigator; algorithm development)
- 2003 Cellular and molecular mediators of Hantavirus infection. NIH. Total award xx 2003-2007 (Co-PI with S Klein, PI).
- 2004 Computational models of infectious disease threats. NIGMS. Total award \$2,880,000 2003-2009 (PI subcontract JHU) Role: Develop spatially appropriate structures for agent-based modeling.
- 2005 Hantavirus ecology and disease in Chile and Panama. NIH ICIDR. Total award \$4,500,000 (PI: Project 1 Ecology and Epidemiology of Andes and Choclo viruses) 2005-2010.
- 2005 Cats, rats and the prevalence of microparasites in an urban landscape. NSF EID Total award \$1,350,000 PI (2005-2010)
- 2008 Rickettsia rickettsi and Rickettsia-like organisms in Maryland. NIH NIAID Total award \$275,000 (Co-PI with D Norris, PI) role: data analysis, spatial models
- 2008 Malaria Training and Research Capacity Building in Southern Africa. NIH D3TW01587-06A1 (Training Faculty w/ N Kumar PI) (2008-2012)
- 2009 Mapping Malaria Epidemiology in Bangladesh BSPH – JHMRI Grant Total award \$750,000 (Investigator with D Sullivan, PI) (2009-2012)
- 2009 Climate variability and changing rates of severe malaria BSPH – JHMRI Total award \$80,000 PI (2009-2012)

CURRENT FUNDING

- 2002-2013** MALARIA RESEARCH INSTITUTE PI:Glass 30% effort (LOA)
Environmental surveillance core.
Total award: \$1,810,000 Annual award: \$180,000
Role: Core Director. Supervise environmental data acquisition from satellite and in situ measures. Integrate epidemiologic and entomologic studies with environmental data
- 2009-2014** Bill and Melinda Gates Foundation Global Health PI: Norris 20% effort (LOA)
OPPGH5332
Predicting dengue epidemics with entomological and virological surveillance by xenomonitoring
Total award: \$2,012,599 Annual award: \$631,317
Role: Co-investigator. Data analysis, programming. This project that will develop a highly sensitive toolkit to predict dengue epidemics such that appropriate control measures can be put into place to reduce the impact of the disease on human populations.
- 2010-2015** NIH T32 AI007417 PI-Griffin 2% effort (LOA)
Training in Molecular and Cellular Bases of Infectious Disease
Role: Training Faculty. The main goal of this project is to provide training in the basic biological disciplines on which an integrated approach to public health depends.
- 2010-2015** NSF 0955897 PI: Daszak 4% effort (LOA)
EcoHealthNet: Ecology, environmental science and health research network
Total award: \$497,000 Annual award: \$99,400
Role: Co-PI. Trainer and Program director. Core Group member
- 2010-2016** NIH 1U19AI089680-01 PI: Agre 10% effort (LOA)
Malaria Transmission and the Impact of Control Efforts in Southern Africa
Total award: \$17,408,000 Annual award: \$2,276,000
Role: Director of Environmental Surveillance Core facility (Core 4). Epidemiology of Malaria (Project 1) characterizing environmental risk factors associated with heterogeneity in transmission.
- 2011-2016** NIH U54 HD070725-01 PI: Wang 25% effort (LOA)
Johns Hopkins Global Center on Childhood Obesity
Total award (Core): \$2,800,000 Annual award: \$580,000
Role: Director of Rapid Response Core facility (RRC). Coordinate spatial and systems modeling for three primary research projects as well as up to 20 short-term research projects in U.S. and China.
- 2012-2015** SRI subcontract PI: Glass 12% effort (Currently 100%)
Mapping especially dangerous pathogens in the Ukraine.
Total award: \$9,300,000 Annual award:\$1,105,000
Role: Cooperative Biological Engagement Director. This project seeks to engage national scientists in Ukraine within the Ministries of Health and Veterinary Services to re-develop the public health infrastructure of this country by training in current practices and methods for epidemiological surveillance and laboratory diagnostics of select infectious agents that impact human and domestic animal populations. Responsibilities involve overseeing training programs, development of best practices standard operating

procedures and creation of research programs. Ukrainian scientists are linked with collaborators in the U.S. and EU to establish viable, long-term research programs.

ACADEMIC SERVICE

Departmental

- Graduate Program Committee**, Department of Molecular Microbiology & Immunology, Johns Hopkins University (1996 – 2000; 2002-2012)
- Admissions Committee**, Department of Molecular Microbiology & Immunology, Johns Hopkins University (1991-1995; 2000-2002; 2011-2012)
- Microbiology & Immunology Program Committee**, Department of Molecular Microbiology & Immunology, Johns Hopkins University (1998 – 2000)
- Departmental Seminar Series Program**, Co-Director, Department of Molecular Microbiology & Immunology, Johns Hopkins University (1998 - 2000)
- Departmental Fellowships Award Committee**, Department of Molecular Microbiology & Immunology, Johns Hopkins University (1996 – 2000)
- Research Forum Coordinator**, Dept. Immunology & Infectious Diseases, Johns Hopkins University (1989-1991; 1997 - 1998)
- Facilities Committee**, Dept. Immunology & Infectious Diseases, Johns Hopkins University (1989-1996; Chair 1992-1996)
- Curriculum Committee**, Dept. Immunology & Infectious Diseases, Johns Hopkins University (1991-1995)
- Fred C Bang Award Committee** 1990

School

- American Meteorological Society** workshop panel member *Earth Observations, Science and Services for the 21st Century* (2011)
- NASA ASAG**; Science Review Group, Applied Earth Systems (2009-2012)
- NYC Departments of Design and Construction** collaboration (2011 – 2012)
- EcoHealth Net** Disease Mapping and Modeling Workshop (13-17 June 2011); Course director, lecturer
- Environmental Health Sciences**, Departmental Chair Search Committee (2011)
- Environmental Health Sciences** Departmental Review (2010-2011)
- Environmental Health Sciences**, Bloomberg School of Public Health; departmental review committee (2009 –2010)
- Committee on Information Technology**, Bloomberg School of Public Health, Johns Hopkins University (2008 - 2010)
- NASA** HysplRI Science Study Group (2008 - 2012). Scheduled launch 2013.
- Gates Foundation Global Health Program** Technical Advisory Group Swiss Tropical Institute program (2008- 2009)
- USAID** World Health Day 2008, Protecting Health from Climate Change panel discussant (2008)
- Maryland Public Television** EnvironHealth Connections 2007 Summer Institute lecturer (2007).
- Consortium on Conservation Medicine** Implementation Committee JHSPH representative; (2007- 2012)
- Malaria Institute Steering Committee**, Bloomberg School of Public Health, Johns Hopkins University (2001-2012)
- Interdepartmental Applied Public Health Program Executive Committee**, Bloomberg School of Public Health, Johns Hopkins University (2005 – 2008)
- Ad Hoc Committee on Appointments EHS**, Bloomberg School of Public Health, Johns Hopkins University (2005 – 2006)

- Student Affairs Subcommittee, Committee on Academic Standards (Chair)**, Bloomberg School of Public Health, Johns Hopkins University (2003-2005)
- Committee to Review Department of Environmental Health Sciences**, Bloomberg School of Public Health, Johns Hopkins University (2002-2003)
- Committee on Academic Standards**, Bloomberg School of Public Health, Johns Hopkins University (2001-2005)
- Minority Health Predoctoral Fellowship Selection Committee**, Bloomberg School of Public Health, Johns Hopkins University (2001)
- Committee to Examine the School's Administrative Structure, Faculty Issues Subcommittee**, School of Hygiene & Public Health, Johns Hopkins University (2000)
- Committee on Information Technology**, School of Hygiene & Public Health, Johns Hopkins University (1999-2000)
- Professional Education Academic Committee**, School of Hygiene & Public Health, Johns Hopkins University (1997 - 1999)
- Steering Committee, Reaccreditation by Council on Education for Public Health (CEPH)**, School of Hygiene & Public Health, Johns Hopkins University (1998 - 1999)
- Animal Care & Use Committee**, School of Hygiene & Public Health, Johns Hopkins University (1992-1997)
- Associate Dean for Professional Programs Search**, School of Hygiene & Public Health, Johns Hopkins University (1993)

University

- JHU Space Sciences Initiative** (2010-2012)
- NASA**, HysplRI SSG member (2008)
- Resources for the Future**, U.S. Climate Change Science Program, Synthesis and Assessment Program 5.1 (2007-2008)
- National Academies**, Space Studies Board, Panel on Human Health and Security (2005-2006)
- National Academies**, Remote Sensing for Decisions about Human Welfare (2005-2006)
- Hopkins Knowledge for the World Tour**, Philadelphia and Boston meetings (2006)
- U.S. Congressional Testimony**, Geographic Earth Observing Systems of Systems GEOSS (2005)

PRESENTATIONS

Scientific meetings (includes published abstracts; * invited presentations):

1. Slade, NA & **GE Glass**. 1975. Asynchronous seasonal population fluctuations in the cotton rat *Sigmodon hispidus*. 55th Ann Meet Amer Soc Mammal.
2. **Glass, GE**. 1977. Effect of *Sigmodon hispidus* on the spatial and temporal activity of *Microtus ochrogaster*. Tech Papers 57th Ann Meet Amer Soc Mammal.
3. **Glass, GE**. 1979. Taxonomic status of *Mayailurus iriomotensis*. Tech Papers 59th Ann Meet Amer Soc Mammal.
4. **Glass, GE** & MS Gaines. 1981. Are there multiannual cycles in microtines? 61st Ann Meet Amer Soc Mammal.
5. Rose, RK, RK Everton & **GE Glass**. 1982. Experimentally induced winter breeding in populations of small mammals. Tech Papers 62nd Ann Meet Amer Soc Mammal.
6. Rose, RK, RK Everton & **GE Glass**. 1982. Experimentally induced winter breeding in populations of small mammals. 3rd Int Theriol Congr.
7. **Glass, GE**, JE Childs & GW Korch. 1985. Host distribution of hantaviruses in the mammal fauna in Baltimore City. 65th Ann Meet Amer Soc Mammal.

8. Korch, GW, JE Childs, **GE Glass** & JW LeDuc. 1987. Epizootiology of hantavirus in diverse habitats in Baltimore, MD, USA. 30th Ann Meet Amer Soc Trop Med Hyg.
9. ***Glass, GE**, JE Childs, GW Korch & JW LeDuc. 1987. Characteristics of *Hantavirus* infections among small mammals of Baltimore, MD. 29th Colloquium Belgian Soc Trop Med (invited).
10. ***Glass, GE**, JE Childs, GW Korch & JW LeDuc. 1987. Human infection with a domestic rat strain of Hantavirus in Baltimore, MD. 29th Colloquium Belgian Soc Trop Med (invited).
11. **Glass, GE** & JE Childs. 1988. Using antibody profiles against exotic antigens to determine maternity in *Microtus pennsylvanicus*. 68th Ann Meet Amer Soc Mammal.
12. Childs, JE, JW LeDuc & **GE Glass**. 1988. Epizootiology of hantaviral infections in rodent hosts. Amer Soc Trop Med Hyg.
13. ***Glass, GE**, JE Childs, AJ Watson & JW LeDuc. 1989. Association of hantaviral infection and chronic disease in Baltimore, MD. NIAID Joint Japan-US Conf Viral Dis (invited).
14. ***Glass, GE**, JE Childs, AJ Watson & JW LeDuc. 1989. Association of hypertension, and chronic renal disease with infection with a rat-borne Hantavirus. 2nd Int Conf Hemorrhagic Fevers (invited).
15. Childs, JE, **GE Glass**, T Ksiazek, C Rossi, & JW LeDuc. 1989. Rat and mouse contact and infection with two rodent-borne viruses in an urban population from Baltimore, MD. Amer Soc Trop Med Hyg.
16. Kassebaum-Johnson, L, JE Childs, **GE Glass**, & J Frazier. 1990. Lead nephropathy in feral rats. Amer Coll Vet Path.
17. Watson, AJ, JE Childs, **GE Glass**, R Mohini, & JW LeDuc. 1990. Hantavirus infection in renal disease. 23rd Ann Meet Amer Soc Nephrology.
18. *Childs, JE, **GE Glass** & JW LeDuc. 1991. Epidemiology of hantavirus infections in Baltimore. Int Symp Hemorrhagic Fevers with Renal Syndrome, Leningrad (invited).
19. ***Glass, GE**. 1991. Transmission and risk factors for Lyme disease. 10 Ann Corp Council Int Hlth (invited).
20. **Glass, GE**, JE Childs, AJ Watson & JW LeDuc. 1991. Correlates of hantaviral infection in patients from Baltimore, MD USA. Amer Soc Trop Med Hyg.
21. ***Glass, GE**. 1992. Application of GIS for analyzing the distribution of Lyme disease in Maryland. TSU GIS92 (invited).
22. **Glass, GE**, BS Schwartz & JM Morgan. 1992. Identifying environmental risk factors associated with Lyme disease using GIS. Amer Soc Trop Med Hyg.
23. ***Glass, GE** & JM Morgan. 1993. Predicting Lyme disease vector (*Ixodes dammini*) abundance on white-tailed deer using GIS. TSU GIS93 (invited).
24. ***Glass, GE**. 1993. Remote sensing and the control of Lyme disease. NIH/NASA Coop Res Workshop Immun Infect Macromol Assemb Related Micrograv (invited).
25. Nicholson, WL & **GE Glass**. 1993. Differentiation of *Borrelia* species and strains by random amplified polymorphic DNA (RAPD) markers. Amer Soc Trop Med Hyg.
26. **Glass, GE**. 1993. Predicting *Ixodes scapularis* abundance on white-tailed deer using GIS. Am Soc Trop Med Hyg.
27. ***Glass, GE**. 1993. GIS and Lyme disease. 2nd Workshop Lyme Disease in Southeastern United States (invited).
28. *Aron, JL, **GE Glass**, RB Lowenstein & H El-Sayed. 1993. The flow of information for injury prevention in Egypt: the use of information technology. Conf Injury Prevention, Cairo (invited).
29. ***Glass, GE**. 1994. An overview of hantaviruses prior to 1993. 75th Ann Meet Amer Soc Mammal (invited).
30. ***Glass, GE** & JE Childs. 1994. Inventory and monitoring for zoonotic diseases. 75 Ann Meet Amer Soc Mammal (invited).

31. *Childs, JE, TG Ksiazek, PE Rollin, JW Krebs, **GE Glass**, ST Nichol & CJ Peters. 1994. Hantaviruses and their rodent reservoirs in the United States. 75th Ann Meet Amer Soc Mammal (invited).
32. ***Glass, GE**, & JE Childs. 1994. Spatial analysis of raccoon rabies in Baltimore, Maryland. Amer Soc Trop Med Hyg (invited).
33. ***Glass, GE**, & JE Childs. 1994. Natural history of hantaviruses in the United States. Amer Soc Microbiol (invited).
34. ***Glass, GE**. 1994. Hantavirus in chronic renal disease. Amer Soc Nephrol (invited).
35. Zenilman, JM, **GE Glass**, & NJ Ellish. 1995. Validating the core theory of gonorrhea in sexual partnerships. Int Soc STD Research
36. Sanders, ML, **GE Glass**, AL Scott & BS Schwartz. 1995. Host antibody responses to tick salivary gland proteins: novel approaches to biologic markers of tick exposure. Int Soc Toxinol.
37. Vinetz, JM, **GE Glass**, S Bragg, P Mueller, DC Kaslow. 1995. Leptospirosis: an endemic disease in Baltimore, Maryland. Am Soc Trop Med Hyg.
38. ***Glass, GE**, JM Morgan, T Strickland and C Pena. 1995. Combining remote sensing and GIS to evaluate Lyme disease risk in Maryland USA. Int. Astronaut Fed. (invited)
39. Wasser, WG, and **GE Glass**. 1995. Prevalence of rat-associated hantavirus in hemodialysis patients of metropolitan New York City. J Am Soc Nephrol 6:407.
40. Becker, K, **G Glass**, W Brathwaite, C Gaydos, TC Quinn, J Zenilman. 1995. Comparative epidemiology of gonorrhea and chlamydia in Baltimore -- Insights from geomapping [sic] using GIS. Clin Infect Dis 23 (4):#311
41. Yousif F, M El-Emam, CJ Shiff and **G Gurri-Glass**. 1996. Focal transmission of Schistosomiasis [sic] mansoni in Egypt. Am Soc Trop Med Hyg.
42. **Glass, GE**, JS Johnson, CJ Peters, JE Childs, and JN Mills. 1996. Experimental evaluation of rodent exclusion methods to reduce hantavirus transmission to humans in rural housing. Am Soc Trop Med Hyg.
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Invited seminars: I have given over 320 invited seminars to various professional and educational groups.

ADDITIONAL INFORMATION

Fields of interests:

Infectious disease epidemiology, geographic information systems and remote sensing, quantitative methods, host-parasite interactions, behavioral and evolutionary ecology, population biology

Research experience:

Using Geographic Information Systems to identify environmental risk factors associated with infectious diseases (Lyme disease, plague, hantavirus, malaria, rabies, tuberculosis, sexually transmitted diseases) (1991 -present), initial position assistant professor, promoted to professor, Johns Hopkins University

Epizootiology of *Borrelia burgdorferi* in Maryland; involving ecological, behavioral, serological, molecular biological studies of small mammals involved in Lyme disease transmission (1988-2013), initial position research associate, promoted to professor, Johns Hopkins University

DNA fingerprinting of small mammals; involving use of DNA probes, molecular biological techniques to determine genetic relatedness in small mammals (1987-1992), initially research associate, promoted to assistant professor, Johns Hopkins University

Epidemiological studies of human infections of hantaviruses in the United States; involving serological, virological and statistical studies of human populations, initial position research associate, promoted to professor (1986-2013), Johns Hopkins University

Studies of maternal antibody transfer of exotic antigens; involving immunodiagnostic techniques to examine patterns of antibody transfer in small mammals to identify maternity in free-ranging small mammals, (1985-1992) initial position post-doctoral fellow, promoted to assistant professor, Johns Hopkins University

Epizootiology of hantaviruses in Baltimore; involving population biology, behavioral ecology, viral isolation, serodiagnostic techniques to identify the hosts, and methods of viral transmission (1984-1986), postdoctoral fellow, Johns Hopkins University

Mathematical modeling of vertebrate behavior and population biology; involving analytical, and graphical solutions, computer simulations, and statistical analyses of vertebrate populations (1983), research associate, University of Kansas

Effects of plant-derived compounds on reproductive patterns of small mammals; Involving ecological, and physiological studies of the role of plant compounds on reproduction in wild populations of rodents (1981-1982), research associate, Old Dominion University

Habitat selection and population dynamics of small mammals; involving ecological, and behavioral studies of wild populations of rodents, (1978-1981), research assistant, University of Kansas. Faunal surveys of terrestrial vertebrates; involving ecological studies, and habitat surveys for state agencies (State Biological Survey of Kansas, Kansas Fish & Game Commission) (1976-1978), research assistant, University of Kansas

Keywords: Emerging infectious diseases; hantavirus; Lyme disease; zoonoses; rodents; rats; geographic information systems; GIS; remote sensing; disease ecology; vector-borne diseases

30 December 2013