

**UNIVERSITY OF MIAMI
CURRICULUM VITAE**

JOHN CARLTON BEIER, Sc.D.

1. Date: November 10, 2018

I. PERSONAL

2. Name: John C. Beier
3. Home Phone:
4. Office Phone: 305-243-2977
5. Home Address:
6. Current Academic Rank: Professor
7. Primary Department: Public Health Sciences
8. Secondary or Joint Appointments:
9. Citizenship: U.S.
10. Visa Type (if non-citizen): N/A

II. HIGHER EDUCATION

11. Institutional:

University of Notre Dame, Notre Dame, IN	Post Doc, Vector Biology	1980-82
Johns Hopkins University, Baltimore, MD	Sc.D. in Pathobiology	1976-80
Hiram College, Hiram, Ohio	B.A. in Biology	1972-76

12. Non-Institutional: None

13. Certification, licensure: None

III. EXPERIENCE

14. Academic:

Professor (with tenure). Department of Public Health Sciences, University of Miami School of Medicine.	2003-Present
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Faculty Affiliated Position. Leonard and Jayne Abess Center for Ecosystem Science and Policy, University of Miami.	2006-2014
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Professor (with tenure). Department of Tropical Medicine School of Public Health and Tropical Medicine, Tulane University.	1999-2002
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Associate Professor (with tenure). Department of Tropical Medicine, School of Public Health and Tropical Medicine, Tulane University.	1994-1999
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Professor. Payson Center for International Development and Technology Transfer, Tulane University.	2001-2002
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Associate Professor. Department of Immunology and Infectious Diseases Department of Molecular Microbiology and Immunology (1994),	1991-1994
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School of Hygiene and Public Health, The Johns Hopkins University.

Assistant Professor. Department of Immunology and Infectious Diseases
School of Hygiene and Public Health, The Johns Hopkins University. **1988-1991**

15. Hospital appointments: None

16. Non-Academic:

NIH Expert Appointment in Medical Entomology as Resident Consultant
to the Ain Shams Research and Training Center for Vectors of Diseases,
Ain Shams University, Cairo, Egypt. **1982-1985**

NIH Expert Appointment in Medical Entomology at the Laboratory of
Parasitic Diseases, Malaria Division, National Institutes of Health,
Bethesda, Maryland. **1982**

17. Military:

Parasitologist. U.S. Army (rank: Captain, Medical Service Corps),
U.S. Army Medical Research Unit, Nairobi, Kenya **1986-1988**

Parasitologist. U.S. Army, Department of Immunology,
Malaria Vaccine Program, Walter Reed Army Institute of Research,
Washington, D.C. **1985-1986**

IV. PUBLICATIONS

18. Books and monographs published:

1. **Beier JC**, Wilke ABB, Benelli G. 2018. Chapter 16: *Newer Approaches for Malaria Vector Control and Challenges of Outdoor Transmission*. In: *Towards Malaria Elimination - A Leap Forward*. <http://dx.doi.org/10.5772/intechopen.75513>
2. Qualls WA, Xue RD, **Beier JC**, and Debboun M. **2015**. Chapter 22: *Alterations of Blood-Feeding Behavior and Repellent Response of Pathogen-Infected Biting Flies*. In: *Handbook of Insect Repellents*, 2nd Edition. CRC Press.
3. Van Schayk IMCJ, Agwanda RO, Githure JI, **Beier JC**, Knols BGJ. **2003**. Chapter 17. El Nino causes dramatic outbreak of *Paederus* dermatitis in East Africa. In: *Climate Change for Africa: Science, Technology, Policy and Capacity Building*.
4. Spielman A, **Beier JC**, Kiszewski AE. **2002**. Ecological and community considerations in engineering arthropods to suppress vector-borne disease. Chapter 11, In: *Genetically Engineered Organisms: Assessing Environmental and Human Health Effects*. Eds. D.K. Letourneau and B.E. Burrows. CRC Press. Pages 315-329.
5. **Beier JC**. **2002**. Part I. Assessing risk of infection and severity of disease. Chapter 1. Vector Analysis and Entomological Inoculation Rates. In: *Malaria Methods and Protocols*. Editor: D. Doolan, *Methods in Molecular Medicine*, 3-11.
6. **Beier JC**. **2002**. Part III. Diagnosis and typing. Chapter 8. Vector Analysis. In: *Malaria Methods and Protocols*. Editor: D. Doolan, *Methods in Molecular Medicine*. 95-101.
7. **Beier JC**, Vanderberg JP. **1998**. II. Development in the mosquito. B. Sporogonic development. In: *"Malaria: Parasite Biology, Pathogenesis, Protection"*. Editor: I.W. Sherman. ASM Press. 49-61.
8. Hoffman SL, Oster CN, Mason C, **Beier JC**, Sherwood JA, Ballou WR, Mugambi M., Chulay JD. **1988**. Identification of a Potentially Protective T Cell Epitope on the *Plasmodium falciparum* CS Protein. In: *Technological Advances in Vaccine Development*. Alan R. Liss, Inc., New York, 625-639.
9. Oster CN, Perkins PV, Gargan TP, **Beier JC**, Kaseje DCO, Whitmire RE, Mugambi M. **1987**. Transmission of Malaria in Western Kenya. In: *Proceedings of the Conference on Malaria in Africa: Practical Considerations on Malaria Vaccines in Clinical Trials*. Ed: AA Buck. American Institute of Biological Sciences, Washington, D.C., 227-231.
10. **Beier JC**, Craig GB, Jr. Gregarine Parasites of Mosquitoes. **1985**. In: *Integrated Control of Medically Important Arthropods - Vol. 2*. Eds: M Laird, JW Miles. Academic Press (London).

19. Juried or refereed journal articles and exhibitions:

1. Chen J, **Beier JC**, Cantrell RS, Cosner C, Fuller DO, Guan Y, Zhang G, Ruan S. 2018. Modeling the importation and local transmission of vector-borne diseases in Florida: The case of Zika outbreak in 2016. *J Theor Biol*. 455:342-356.
2. Poltavsky AN, Kravchenko VD, Traore MM, Traore SF, Gergely P, Witt TJ, Sulak H, Beck RH, Junnila A, Revay EE, Doumbia S, **Beier JC**, Muller GC. 2018. The Pyraloidea (Lepidoptera) fauna of the woody savannah belt in Mali, West Africa. *Zootaxa*. 4457:39-69.

3. Fernandes, J. N., Santos, L. M., Chouin-Carneiro, T., Pavan, M. G., Garcia, G. A., David, M. R., **Beier, JC**, Dowell, F.E., Marciel-de-Freitas, R., Sikulu-Lord, M. T. **2018**. Rapid, noninvasive detection of Zika virus in *Aedes aegypti* mosquitoes by near-infrared spectroscopy. *Science Advances*, 4(5). doi:10.1126/sciadv.aat0496
4. Wilke, A. B., Vasquez, C., Mauriello, P. J., & **Beier, JC**. **2018**. Ornamental bromeliads of Miami-Dade County, Florida are important breeding sites for *Aedes aegypti* (Diptera: Culicidae). *Parasites & Vectors*, 11(1). doi:10.1186/s13071-018-2866-9
5. Wilke, A. B., **Beier, JC**, & Benelli, G. **2018**. Transgenic Mosquitoes – Fact or Fiction? *Trends in Parasitology*, 34(6), 456-465. doi:10.1016/j.pt.2018.02.003
6. Kenawy MA, Abdel-Hamid YM, **Beier JC**. **2018**. Rift Valley Fever in Egypt and other African countries: Historical review, recent outbreaks and possibility of disease occurrence in Egypt. *Acta Tropica*, 181:40-49.
7. Fernandes J.N, Moise IK, Maranto GL, & **Beier JC**. **2018**. Revamping Mosquito-borne Disease Control to Tackle Future Threats. *Trends in Parasitology*, 34(5), 359-368. doi:10.1016/j.pt.2018.01.005
8. Blore K, **Beier JC**, Xue R. **2018**. Impact of three species of aquatic plants on *Anopheles quadrimaculatus* and its effect on the efficacy of boric acid and sugar baits. *Journal of the American Mosquito Control Association*, 34(1): 000-000.
9. Manrique PD, **Beier JC**, Johnson NF. **2017**. Simple visit behavior unifies complex Zika outbreaks. *Heliyon*, 3(12):e00482.
10. Kassem HA, **Beier JC**, El Sawaf BM. **2017**. Historical overview of infantile visceral leishmaniasis in El Agamy, Alexandria, Egypt. *Acta Tropica*, 176:335-339
11. Ajelli M, Moise IK, Hutchings TCSG, Brown SC, Kumar N, Johnson NF, **Beier JC**. **2017**. Host outdoor exposure variability affects the transmission and spread of Zika virus: Insights for epidemic control. *PLoS Neglected Tropical Diseases*, 11(9):e0005851
12. Benelli G, **Beier JC**. **2017**. Current vector control challenges in the fight against malaria. *Acta Tropica*, 174:91-96
13. Müller GC, Junnila A, Traore MM, Traore SF, Doumbia S, Sissoko F, Dembele SM, Schlein Y, Arheart KL, Revay EE, Kravchenko VD, Witt A, **Beier JC**. **2017**. The invasive shrub *Prosopis juliflora* enhances the malaria parasite transmission capacity of *Anopheles* mosquitoes: a habitat manipulation experiment. *Malaria Journal*, 16(1):237
14. Zhu L, Müller GC, Marshall JM, Arheart KL, Qualls WA, Hlaing WM, Schlein Y, Traore SF, Doumbia S, **Beier JC**. **2017**. Is outdoor vector control needed for malaria elimination? An individual-based modelling system. *Malaria Journal*, 16(1):266
15. Vasquez D, Palacio A, Nuñez J, Briones W, **Beier JC**, Pareja DC, Tamariz L. **2017**. Impact of the 2016 Ecuador Earthquake on Zika virus cases. *American Journal of Public Health*, 107(7):1137-1142
16. Müller GC, Junnila A, Traore MM, Revay EE, Traore SF, Doumbia S, Schlein Y, Kravchenko VD, Xue RD, Tsabari O, **Beier JC**. **2017**. A novel window entry/exit trap for the study of endophilic behavior of mosquitoes. *Acta Tropica*, 167:137-141
17. Abdul-Ghani R, Mahdy MAK, **Beier JC**, Basco LK. **2017**. Hidden reservoir of resistant parasites: the missing link in the elimination of falciparum malaria. *Infectious Diseases of*

18. Qualls WA, Naranjo DP, Subía MA, Ramon G, Cevallos V, Grijalva I, Gómez E, Arheart KL, Fuller DO, **Beier JC. 2016.** Movement of *Aedes aegypti* following a sugar meal and its implication in the development of control strategies in Durán, Ecuador. *Journal of Vector Ecology*, 41(2):224-231
19. Alyousefi TA, Abdul-Ghani R, Mahdy MA, Al-Eryani SM, Al-Mekhlafi AM, Raja YA, Shah SA, **Beier JC. 2016.** A household-based survey of knowledge, attitudes and practices towards dengue fever among local urban communities in Taiz Governorate, Yemen. *BMC Infectious Diseases*, 16(1):543
20. Dewald JR, Fuller DO, Müller GC, **Beier JC. 2016.** A novel method for mapping village-scale outdoor resting microhabitats of the primary African malaria vector, *Anopheles gambiae*. *Malaria Journal*, 15(1):489
21. Qualls WA, Scott-Florenzano J, Muller GC, Arheart KL, **Beier JC**, Xue RD. **2016.** Evaluation and adaptation of attractive toxic sugar baits for *Culex tarsalis* and *Culex quinquefasciatus* control in Coachella Valley, California. *J Am Mosq Control Assoc*. 32:292–299.
22. Chen J, Huang J, **Beier JC**, Cantrell RS, Cosner C, Fuller DO, Zhang G, Ruan S. **2016.** Modeling and control of local outbreaks of West Nile virus in the United States. *Discrete and Continuous Dynamical Systems Series B* 21: 2423-2449.
23. Ahumada ML, Orjuela LI, Pareja PX, Conde M, Cabarcas DM, Cubillos EF, Lopez JA, **Beier JC**, Herrera S, Quiñones ML. **2016.** Spatial distributions of *Anopheles* species in relation to malaria incidence at 70 localities in the highly endemic Northwest and South Pacific coast regions of Colombia. *Malaria Journal*, 15(1):407
24. Ulrich JN, **Beier JC**, Devine GJ, Hugo LE. **2016.** Heat Sensitivity of wMel *Wolbachia* during *Aedes aegypti* Development. *PLoS Neglected Tropical Diseases*, 10(7):e0004873
25. Müller GC, Tsabari O, Traore MM, Traore SF, Doumbia S, Kravchenko VD, Junnila A, **Beier JC. 2016.** First record of *Aedes albopictus* in inland Africa along the River Niger in Bamako and Mopti, Mali. *Acta Tropica*, 162:245-7
26. Frederick J, Saint Jean Y, Lemoine JF, Dotson EM, Mace KE, Chang M, Slutsker L, Le Menach A, **Beier JC**, Eisele TP, Okech BA, Beau de Rochars VM, Carter KH, Keating J, Impoinvil DE. **2016.** Malaria vector research and control in Haiti: a systematic review. *Malaria Journal*, 15(1):376
27. Abdul-Ghani R, Mahdy MA, **Beier JC. 2016.** Onchocerciasis in Yemen: Time to take action against a neglected tropical parasitic disease. *Acta Tropica*, 162:133-41
28. Dachraoui K, Fares W, Bichaud L, Barhoumi W, **Beier JC**, Derbali M, Cherni S, de Lamballerie X, Chelbi I, Charrel RN, Zhioua E. **2016.** Phleboviruses associated with sand flies in arid bio-geographical areas of Central Tunisia. *Acta Tropica*, 158:13-19.
29. Barhoumi W, Fares W, Cherni S, Derbali M, Dachraoui K, Chelbi I, Ramalho-Ortigao M, **Beier JC**, Zhioua, E. **2016.** Changes of sand fly populations and *Leishmania infantum* infection rates in an irrigated village located in Arid Central Tunisia. *International Journal of Environmental Research and Public Health*, 13(3):329.

30. Fuller DO, Alimi T, Herrera S, **Beier JC**, Quiñones ML. **2016**. Spatial association between malaria vector species richness and malaria in Colombia. *Acta Tropica*, 158:197-200.
31. Alimi TO, Fuller DO, Herrera SV, Arevalo-Herrera M, Quinones ML, Stoler JB, **Beier JC**. **2016**. A multi-criteria decision analysis approach to assessing malaria risk in northern South America. *BMC Public Health*, 16:221.
32. Chamchod F, Cosner C, Cantrell RS, **Beier JC**, Ruan S. **2016**. Transmission dynamics of Rift Valley Fever Virus: effects of live and killed vaccines on epizootic outbreaks and enzootic maintenance. *Frontiers in Microbiology*, 6:1568.
33. Naranjo DP, **Beier JC**, Gómez E, Jurado H, Arheart K, Qualls, WA. **2016**. Entomological impact and current perceptions of Novaluron and Temephos against the *Aedes aegypti* (Skuse) vector of dengue, chikungunya and Zika arboviruses in a Coastal Town in Ecuador. *Vector Biology Journal*, 1:1.
34. Davidson CA, Scott JM, Hossain TH, **Beier JC**, Xue R. **2016**. Relationship between citizen knowledge, vegetation coverage, and frequency of requests for mosquito control service in St. Johns County, Florida. *Technical Bulletin of the Florida Mosquito Control Association*, 10:30.
35. Qualls WA, Müller GC, Khallaayoune K, Revay EE, Zhioua E, Kravchenko VD, Arheart KL, Xue D, Schlein Y, Hausmann A, Kline DL, **Beier JC**. **2015**. Control of sand flies with attractive toxic sugar baits (ATSB) and potential impact on non-target organisms in Morocco. *Parasites & Vectors*, 8:87.
36. Conde M, Pareja P, Orjuela L, Ahumada M, Durán S, Jara J, Cañon B, Pérez P, **Beier JC**, Herrera S, Quiñones M. **2015**. Larval habitat characteristics of the main malaria vectors in the most endemic regions of Colombia: potential implications for larval control. *Malaria Journal*, 14:476.
37. Alimi T, Fuller DO, Quinones ML, Xue R, Herrera SV, Arevalo-Herrera M, Ulrich JN, Qualls WA, **Beier JC**. **2015**. Prospects and recommendations for risk mapping to improve strategies for effective malaria vector control interventions in Latin America. *Malaria Journal*, 14:519.
38. Zhu L, Marshall JM, Qualls WA, Schlein Y, McManus JW, Arheart KL, Hlaing WM, Traore SF, Doumbia S, Müller GC, **Beier JC**. **2015**. Modelling optimum use of attractive toxic sugar bait stations for effective malaria vector control in Africa. *Malaria Journal*, 14:492.
39. Gil H, Qualls W, Cosner C, DeAngelis D, Hassan A, Gad A, Ruan S, Cantrell S, **Beier JC**. **2015**. A model for the coupling of the Greater Bairam and local environmental factors in promoting Rift-Valley Fever epizootics in Egypt. *Public Health*, 19:1-8.
40. Abdul-Ghani R, Basco L, **Beier JC**, Mahdy M. **2015**. Inclusion of gametocyte parameters in anti-malarial drug efficacy studies: filling a neglected gap needed for malaria elimination. *Malaria Journal*, 14(1):413.
41. Müller G, Hogsette J, Kline D, **Beier JC**, Revay E, Xue R. **2015**. Response of the sand fly *Phlebotomus papatasi* to visual, physical and chemical attraction features in the field. *Acta Tropica*, 141:32-36.
42. Junnila A, Revay E, Müller G, Kravchenko V, Qualls W, Xue R, Allen S, **Beier JC**, Schlein Y. **2015**. Efficacy of attractive toxic sugar baits (ATSB) against *Aedes albopictus*

- with garlic oil encapsulated in beta-cyclodextrin as the active ingredient. *Acta Tropica*, 152:195-200.
43. Alimi TO, Fuller DO, Qualls WA, Herrera SV, Arevalo-Herrera M, Quinones ML., Lacerda MVG, **Beier JC. 2015.** Predicting potential ranges of primary malaria vectors and malaria in northern South America based on projected changes in climate, land cover and human population. *Parasites & Vectors*. 8:431.
 44. Quinones M, Norris D, Conn J, Moreno M, Burkot T, Bugoro H, Keven J, Cooper R, Yan G, Rosas A, Palomino M, Donnelly M, Mawejje H, Eapen A, Montgomery J, Coulibaly M, **Beier JC**, Kumar A. **2015.** Insecticide Resistance in Areas Under Investigation by the International Centers of Excellence for Malaria Research: A Challenge for Malaria Control and Elimination. *American Journal of Tropical Medicine and Hygiene*, 93(3 Suppl):69-78.
 45. Qualls W, Müller G, Traore S, Traore M, Arheart K, Doumbia S, Schlein Y, Kravchenko V, Xue R, **Beier JC. 2015.** Indoor use of attractive toxic sugar bait (ATSB) to effectively control malaria vectors in Mali, West Africa. *Malaria Journal*, 14:301.
 46. Revay E, Schlein Y, Tsabari O, Kravchenko V, Qualls WA, De-Xue R, **Beier JC**, Traore S, Doumbia S, Hausmann A, Müller G. **2015.** Formulation of attractive toxic sugar bait (ATSB) with safe EPA-exempt substance significantly diminishes the *Anopheles gambiae* population in a desert oasis. *Acta Tropica*, 150:29-34.
 47. Orjuela LI, Ahumada ML, Avila I, Herrera S, **Beier JC**, Quiñones ML. **2015.** Human biting activity, spatial-temporal distribution and malaria vector role of *Anopheles calderoni* in the southwest of Colombia. *Malaria Journal*, 14:256.
 48. Zhu L, Qualls W, Marshall J, Arheart K, DeAngelis D, McManus J, Traore S, Doumbia S, Schlein Y, Müller G, **Beier JC. 2015.** A spatial individual-based model predicting a great impact of copious sugar sources and resting sites on survival of *Anopheles gambiae* and malaria parasite transmission. *Malaria Journal*, 14:59.
 49. Hossain T, Fulcher A, Davidson C, **Beier JC**, Xue R. **2014.** Evaluation of Boric Acid Sugar Baits Sprayed on Plants against the Salt Marsh Mosquito, *Aedes taeniorhynchus* (Diptera: Culicidae). *Florida Entomologist*, 97(4):865-1868.
 50. Xiao Y, **Beier JC**, Cantrell RS, Cosner C, DeAngelis DL, Ruan S. **2014.** Modelling the effects of seasonality and socioeconomic impact on the transmission of rift valley Fever virus. *PLOS Neglected Tropical Diseases*, 9(1):e3388.
 51. Chang AY, Fuller DO, Carrasquillo O, **Beier JC. 2014.** Social justice, climate change, and dengue. *Health and Human Rights Journal*, 16(1):93-104.
 52. Barhoumi W, Qualls WA, Archer RS, Fuller DO, Chelbi I, Cherni S, Derbali M, Arheart KL, Zhioua E, **Beier JC. 2014.** Irrigation in the arid regions of Tunisia impacts the abundance and apparent density of sand fly vectors of *Leishmania infantum*. *Acta Tropica*, 141:73-78.
 53. Chamchod F, Cantrell RS, Cosner C, Hassan AN, **Beier JC**, Ruan S. **2014.** A modeling approach to investigate epizootic outbreaks and enzootic maintenance of rift valley fever virus. *Bulletin of Mathematical Biology*, 76(8):2052-2072.
 54. Abdul-Ghani R, **Beier JC. 2014.** Strategic use of antimalarial drugs that block falciparum malaria parasite transmission to mosquitoes to achieve local malaria elimination. *Parasitology Research*, 113(10):3535-3546.

55. Lizzi KM, Qualls WA, Brown SC, **Beier JC. 2014.** Expanding Integrated Vector Management to Promote Healthy Environments. *Trends in Parasitology*, 30(8):394-400.
56. Naranjo DP, Qualls WA, Jurado H, Perez JC, Xue R, Gomez E, **Beier JC. 2014.** Vector Control Programs in Saint Johns County, Florida and Guayas, Ecuador: Successes and Barriers to Integrated Vector Management. *BMC Public Health*. 14(1):674.
57. Fuller D, Troyo A, Alimi T, **Beier JC. 2014.** Participatory Risk Mapping of Malaria Vector Exposure in Northern South America using Environmental and Population Data. *Applied Geography*, 48:1-7.
58. Müller GC, Hogsette JA, Kline DL, **Beier JC**, Revay EE, Xue RD. **2014.** Response of the sand fly *Phlebotomus papatasi* to visual, physical and chemical attraction features in the field. *Acta Tropica*, 141(A): 32–36.
59. Conley AK, Fuller DO, Haddad N, Hassan AN, Gad AM, **Beier JC. 2014.** Modeling the distribution of the West Nile and Rift Valley Fever vector *Culex pipiens* in arid and semi-arid regions of the Middle East and North Africa. *Parasites & Vectors*, 7(1):289.
60. Drake JM, **Beier JC. 2014.** Ecological niche and potential distribution of *Anopheles arabiensis* in Africa in 2050. *Malaria Journal*, 13(1):213-213.
61. Zhu L, Fulcher A, Hossain T, Davidson C, **Beier JC**, Xue RD. **2014.** Body size, blood feeding activity, and fecundity of *psorophora howardii*, *psorophora ciliata*, and *psorophora ferox* (diptera: Culicidae). *Journal of Medical Entomology*, 51(2): 382-386.
62. Qualls WA, Müller GC, Revay EE, Allan SA, Arheart KL, **Beier JC**, Smith ML, Scott JM, Kravchenko VD, Hausmann A, Yefremova ZA, Xue RD. 2014. Evaluation of attractive toxic sugar bait (ATSB)-Barrier for control of vector and nuisance mosquitoes and its effect on non-target organisms in sub-tropical environments in Florida. *Acta Tropica*. 131:104-110.
63. Chamchod F, Cantrell RS, Cosner C, Hassan AN, **Beier JC**, Ruan S. **2014.** A Modeling Approach to Investigate Epizootic Outbreaks and Enzootic Maintenance of Rift Valley Fever Virus. *Bulletin of Mathematical Biology*.
64. Revay EE, Muller GC, Qualls WA, Kline DI, Naranjo DP, Arheart KL, Kravchenko VD, Yefremova Z, Hausmann A, **Beier JC**, Schlein Y, Xue R. **2014.** Control of *Aedes albopictus* with Attractive Toxic Sugar Baits (ATSB) and potential impact on non-target organisms in St. Augustine, Florida. *Parasitology Research*, 113:73-79.
65. Khallaayoune K, Qualls WA, Revay EE, Allan SA, Arheart KL, Kravchenko VD, Xue RD, Schlein Y, **Beier JC**, Muller GC. **2013.** Attractive toxic sugar baits: Control of mosquitoes with the low risk active ingredient dinotefuran and potential impacts on non-target organisms in Morocco. *Environmental Entomology*, 42:1040-1045.
66. Samson DM, Qualls W, Roque D, Naranjo DP, Alimi T, Arheart KL, Muller GC, **Beier JC**, Xue R. **2013.** Resting and energy reserves of *Aedes albopictus* collected in common landscaping vegetation in St. Augustine, Florida. *Journal of the American Mosquito Control Association*, 29(3): 231-236.
67. Alimi TO, Qualls WA, Roque D, Naranjo DP, Samson D, **Beier JC**, Xue RD. **2013.** Evaluation of a new formulation of Permethrin applied by water based thermal fogger against *Aedes albopictus* in residential communities in St. Augustine, Florida. *Journal of the American Mosquito Control Association*, 29(1): 49-56.

68. Marshall JM, White MT, Ghani AC, Schlein Y, Muller GC, **Beier JC. 2013.** Quantifying the mosquito's sweet tooth: modelling the effectiveness of attractive toxic sugar baits (ATSB) for malaria vector control. *Malaria Journal*, 12(1):291.
69. Muiruri SK, Mwangangi JM, Carlson J, Kabiru EW, Kokwaro E, Githure J, Mbogo CM, **Beier JC. 2013.** Effect of predation on *Anopheles* larvae by five sympatric insect families in coastal Kenya. *Journal of Vector Borne Diseases*, 50(1):45-50.
70. Qualls W, Xue R, **Beier J, Müller G. 2013.** Survivorship of adult *Aedes albopictus* (Diptera: Culicidae) feeding on indoor ornamental plants with no inflorescence. *Parasitology Research*, 112(6):2313-2318.
71. Naranjo D, Qualls WA, Müller GC, Samson DM, Roque D, Alimi T, Arheart K, **Beier JC, Xue R. 2013.** Evaluation of boric acid sugar baits against *Aedes albopictus* (Diptera: Culicidae) in tropical environments. *Parasitology Research*, 112(4):1583-1587.
72. Ulrich JN, Naranjo DP, Alimi TO, Müller GC, **Beier JC. 2013.** How much vector control is needed to achieve malaria elimination? *Trends in Parasitology*, 29:104-109.
73. Gao D, Cosner C, Cantrell R, Beier J, Ruan S. **2013.** Modeling the Spatial Spread of Rift Valley Fever in Egypt. *Bulletin of Mathematical Biology*, 75(3):523-542.
74. Drake J, Hassan A, Beier J. **2013.** A statistical model of Rift Valley fever activity in Egypt. *Journal of Vector Ecology*, 38(2):251-259.
75. Naranjo DP, Qualls WA, Müller G, Samson D, Roque D, Alimi T, Arheart K, **Beier JC, Xue R. 2013.** Evaluation of boric acid sugar baits against *Aedes albopictus* (Diptera: Culicidae) in tropical environments. *Parasitology Research*, 112(4):1583-1587.
76. Mwangangi JM, Mbogo CM, Orindi BO, Muturi EJ, Midega JT, Nzovu J, Gatakaa H, Githure J, Borgemeister C, Keating J, **Beier JC. 2013.** Shifts in malaria vector species composition and transmission dynamics along the Kenyan coast over the past 20 years. *Malaria Journal*, 12:13.
77. Chamchod F, **Beier JC. 2013.** Modeling *Plasmodium vivax*: Relapses, treatment, seasonality, and G6PD deficiency. *Journal of Theoretical Biology*, 316:25-34.
78. Walker M, Winskill P, Basáñez M, Mwangangi JM, Mbogo C, **Beier JC, Midega, JT. 2013.** Temporal and Micro-Spatial Heterogeneity in the Distribution of *Anopheles* Vectors of Malaria along the Kenyan Coast. *Parasites & Vectors*, 6(1):311.
79. Muturi E, Mwangangi J, **Beier JC, Blackshear M, Wauna J, Sang R, Mukabana W. 2013.** Ecology and Behavior of *Anopheles arabiensis* in Relation to Agricultural Practices in Central Kenya. *Journal of the American Mosquito Control Association*, 29(3):222-230.
80. Munoz-Price S, Safdar M, **Beier JC, Doggett SL. 2012.** Bed Bugs in Healthcare Settings. *Infection Control and Hospital Epidemiology*, 33:1137-42.
81. Fuller DO, Parenti M, Hassan AN, **Beier JC. 2012.** Linking land cover and species distribution models to project potential ranges of malaria vectors: an example using *Anopheles arabiensis* in Sudan and Upper Egypt. *Malaria Journal*, 11:264.
82. Müller GC, Xue RD, **Beier JC. 2012.** Controlling and sampling adult sand flies with a fumigant containing permethrin and deltamethrin. *Journal of Vector Ecology*, 37:257-61.
83. Fuller DO, Ahumada ML, Quiñones ML, Herrera S, **Beier JC. 2012.** Near-present and

- future distribution of *Anopheles albimanus* in Mesoamerica and the Caribbean Basin modeled with climate and topographic data. *International Journal of Health Geographics*, 11:13.
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271. Freier JF, **Beier JC**. **1984**. Oral and transovarial transmission of LaCrosse virus by *Aedes atropalpus*. *The American Journal of Tropical Medicine and Hygiene*, 33:708-714.
272. El Sawaf BM, **Beier JC**, Hussein SM, Kassem H, Sattar SA. **1984**. *Phlebotomus langeroni*: A potential vector of kala-azar in the Arab Republic of Egypt. *Transactions of the Royal Society of Tropical Medicine and Hygiene*, 78:421.
273. **Beier JC**. **1983**. Effects of gregarine parasites on development of *Dirofilaria immitis* in *Aedes triseriatus* (Diptera: Culicidae). *Journal of Medical Entomology*, 20:70-75.
274. **Beier JC**, Harris C. **1983**. *Ascogregarina barretti* (Sporozoa: Diplocystidae) infections in natural populations of *Aedes triseriatus* (Diptera: Culicidae). *Journal of Parasitology*, 69:430-431.
275. Schuler TC, **Beier JC**. **1983**. Oviposition dynamics of two released species of *Toxorhynchites* (Diptera: Culicidae) and potential prey species. *Journal of Medical Entomology*, 20:371-376.
276. **Beier JC**, Patricoski C, Travis M, Kranzfelder J. **1983**. The influence of water chemical and environmental parameters on larval mosquitoes. *Environmental Entomology*, 12:434-438.
277. **Beier JC**, Berry WJ, Craig GB, Jr. **1983**. Horizontal distribution of adult *Aedes triseriatus* (Diptera: Culicidae) in relation to habitat structure, oviposition, and other mosquito species. *Journal of Medical Entomology*, 19:239-247.
278. Durso SL, DeMaio JD, **Beier JC**. **1982**. Ovipositional behavior of *Toxorhynchites amboinensis* in a tire yard. *Mosquito News*, 42:255-260.
279. Leiser LB, **Beier JC**, Craig GB, Jr. **1982**. The efficacy of malathion ULV spraying for urban *Culex* control. *Mosquito News*, 42:617-618.
280. Jacques PA, **Beier JC**. **1982**. Experimental infections of *Ascogregarina lanyuensis* (Apicomplexa, Lecudinidae) in *Aedes (Stegomyia)* sp. mosquitoes. *Mosquito News*, 42:438-439.

281. **Beier JC**, Travis M, Patricoski C, Kranzfelder J. **1982**. Habitat segregation among larval mosquitoes (Diptera: Culicidae) in tire yards in Indiana, USA. *Journal of Medical Entomology*, 20:76-80.
282. **Beier JC**, Craig GB. **1982**. Ecology and potential control of mosquito larvae in tires. *Indiana Vector Control Association*, 6:4-5.
283. Leiser LB, **Beier JC**. **1982**. A comparison of oviposition traps and New Jersey light traps for *Culex* population surveillance. *Mosquito News*, 42:391-395.
284. **Beier JC**, Trpis M. **1981**. Incrimination of natural culicine vectors which transmit *Plasmodium elongatum* to penguins at the Baltimore Zoo. *Canadian Journal of Zoology*, 59:470-475.
285. **Beier JC**, Strandberg J, Stoskopf MK, Craft C. **1981**. Mortality in robins (*Turdus migratorius*) due to avian malaria. *Wildlife Disease Association*, 17:247-250.
286. **Beier JC**, Trpis M. **1981**. Local distribution of *Aedes triseriatus* (Diptera: Culicidae) at the Baltimore Zoo. *Mosquito News*, 41:447-455.
287. DeMaio J, **Beier JC**, Durso S. **1981**. The effects of *Bacillus thuringiensis* var. *israelensis* on *Aedes triseriatus* in treehole and tire habitats. *Mosquito News*, 41:765-769.
288. **Beier JC**. **1981**. Larval ecology and potential control of *Aedes triseriatus* breeding in tires. *Ohio Mosquito Control Association*, 11:49-50.
289. **Beier JC**, Stoskopf MK. **1980**. The epidemiology of avian malaria in penguins. *Journal of Zoo and Wildlife Medicine*, 11:99-106.
290. **Beier JC**, Wartzok D. **1979**. Mating behaviour of captive spotted seals (*Phoca largha*). *Animal Behaviour*, 27:772-781.
291. Stoskopf MK, **Beier JC**. **1979**. Avian malaria in African blackfooted penguins. *Journal of the American Veterinary Medical Association*, 175:944-946.

20. Other works, publications and abstracts:

1. Eisele, T., MacIntyre, K., Eckert, E., **Beier, J.** and G. Killeen. **2000**. Evaluating malaria interventions in Africa: A review and assessment of recent research. *MEASURE Evaluation Project*. Working paper sponsored by USAID; pp.36.
2. **Beier JC**. Book Review: *Guidelines for Cost-Effectiveness Analysis of Vector Control*, by M. Phillips, A. Mills, and C. Dye. **1995**. *Journal of the American Mosquito Control Association* 11:155.
3. **Beier JC**. **1993**. Book Review: *The Biology of Mosquitoes*, by A.N. Clements. *Science* 262:1081-1082.
4. **Beier JC**. **1992**. Book Review: *Malaria in Africa: A Cross-Sectorial Approach*. *Journal of the American Mosquito Control Association* 8:343.
5. Lobel HO, **Beier JC**. **1989**. Plan of Action for Malaria Control in Ghana. Vector Biology and Control Publication CE-037-4. Washington D.C. 52 pp.
6. **Beier JC**, Onyango FK, Ramadhan M, Koech DK, Roberts CR. **1988**. Malaria Transmission Potential of Wild Afrotropical *Anopheles*: Sporozoite Loads and *In Vitro*

Sporozoite Transmission. World Health Organization, TDR - Working Paper for Joint IMMAL/FIELDMAL Meeting, Geneva. 30 pp.

21. Other works accepted for publication:

Patents

Killeen GF, Foy BD, **Beier JC**. 1998. SIFTER screening to identify biologically active molecules. US Patent Office (USSN 60/094,036), superseded by a non-provisional application, submitted July 24, 1999; office action August 15, 2001, issued August 1, 2002.

V. PROFESSIONAL

22. Funded Research:

Current Projects (annual direct costs given)

OUTDOOR RESTING AND SUGAR FEEDING BEHAVIORS OF AFRICAN MALARIA VECTORS

Principal Investigator: John Beier (30% effort)

Grant #: 1R01AI100968-05

Funding Agency: National Institutes of Allergy and Infectious Diseases

Project Period: 03/01/2013-02/28/2018 [now in no-cost extension for one year]

Total Award: \$492,874

SOUTHEAST REGIONAL CENTER OF EXCELLENCE IN VECTOR-BORNE DISEASE: THE GATEWAY PROGRAM

Principal Investigator: Beier (20% effort) (UM subcontract)

Grant #: U01CK000510-01

Funding Source: CDC

Project Period: 12/30/2016-12/29/2021

Total Award: \$200,000

Completed Projects (total direct costs given)

LATIN AMERICAN CENTER FOR MALARIA RESEARCH AND CONTROL - CLAIM

Principal Investigator: Beier (18.33% effort) (UM subcontract)

Grant #: 1U19AI089702

Funding Source: National Institutes of Allergy and Infectious Diseases

Project Period: 07/01/10-06/30/17

Total Award: \$42,449 (per year)

COMMUNITY-BASED PARTICIPATION FOR SUCCESSFUL DENGUE CONTROL IN ECUADOR

Principal Investigators: John Beier, Whitney Qualls, Eduardo Gomez

Funding Source: Universidad Catolica de Santiago de Guayaquil

Project Period: 10/01/2014-09/30/2016

Total Award: \$330,953

SPECIFIC URBAN LOCATIONS OF TRANSMISSION RISK FOR THE EMERGING ZIKA VIRUS

Principal Investigator: John Beier

Funding Source: Miami CTSI

Project Period: 02/15/2016-05/31/2016

Total Award: \$90,514

ENVIRONMENTAL CHANGES AND MOSQUITO-BORNE DISEASES IN ARID ENVIRONMENTS.

Principal Investigator: John Beier (25 % effort)

Grant #: 1R01 GM093345-01
Funding Source: National Institute of General Medical Sciences
Project Period: 07/01/2010 – 06/30/14
Total Award: \$2,062,788

DENGUE IN THE AMERICAS

Principal Investigator: John Beier
Grant #: N/A
Funding Source: Interdisciplinary Research Development Initiative (IRDI),
 University of Miami
Project Period: 05/01/2009 - 04/30/2010
Total Award: \$100,000

VECTOR-BORNE DISEASE CONTROL IN URBAN ENVIRONMENTS.

Principal Investigator: John Beier
Grant #: 1 P20 RR020770-03
Funding Source: NIH (NIH Director's Exploratory Centers for Interdisciplinary Research)
Project Period: 09/28/2004 - 07/31/2008
Total Award: \$1,593,037

AFRICAN MALARIA VECTORS.

Principal Investigator: John Beier
Grant #: 1 U19 AI45511-06S1
Funding Source: NIH/NIAID (ICIDR Program)
Project Period: 09/01/99 - 08/31/06
Total Award: \$4,055,631

AFRICAN MALARIA VECTORS (TRAINING GRANT).

Principal Investigator: John Beier
Grant #: 1 D43 TW01142-04
Funding Source: NIH Fogarty International Center, ABC Program
Project Period: 06/01/99 - 05/31/06
Total Award: \$653,500

VECTOR ECOLOGY OF URBAN MALARIA IN AFRICA.

Principal Investigator: John Beier
Grant #: 1 F06 TW05588-01
Funding Source: NIH Fogarty International Center, Senior Fellowship
Project Period: 03/01/01-02/29/06
Total Award: \$29,700

23. Editorial responsibilities:

Editorial Boards

Reviews Editor, Acta Tropica	2011-Present
Editor, Acta Tropica	2009-Present
Editorial Board, Malaria Journal	2006-2014
Editorial Board, Insect Sciences and Its Application	1998-2006
Associate Editor, Journal of the American Mosquito Control Association	1994-1997

Reviewing Services for Scientific Journals

Reviewer for: American Journal of Tropical Medicine and Hygiene, Journal of Medical Entomology, Malaria Journal, Acta Tropica, Journal of the American Mosquito Control Association, Journal of Vector Ecology, Medical and Veterinary Entomology, Journal of Parasitology, Experimental Parasitology, Journal of Wildlife Diseases, Vaccine Research, Parasitology Today, Trends in Parasitology, Science, American

Journal of Epidemiology, Insect Science and Its Application, Science, Annals of Tropical Medicine and Parasitology, Journal of Emerging Infectious Diseases, Proceedings of the National Academy of Sciences, Parasitology, Nature Protocols, PLoS ONE, PLoS NTD, Transactions of the Royal Society of Tropical Medicine and Parasitology, Journal of Insect Physiology, Journal of Applied Ecology, Journal of Infectious Diseases, Ethiopian Journal of Science, Environment International, Science, and Nature.

Reviewing Services for Scientific Proposals

Member, NIH Vector Biology Study Section (Chair, 2014-2016)	2012-2016
American Association for the Advancement of Science, King Abdulaziz City for Science and Technology (KACST) (national science agency of Saudi Arabia)	2012
U.S. Department of Defense Military Infectious Diseases Research Program (MIDRP) Entomology Program (Chair, 2011-2014).	1999-2014
Review Panel, NIH Vector Biology Study Section	2011
NIH Director's Early Independence Award applications (DP5)	2011
NIH CRFS small business initiatives, study section panel member [ZRG1 IDM-R (10)]	2011
USAID President's Malaria Initiative Health Research Challenge for Delivery (HRCD)	2010
NIH Fogarty International Research Scientist Career Development	2010
Project NIH IRAP Study Section	2009 & 2010
NIH Challenge Grant review	2009
CDC Special Emphasis Panel CK09-004	2009
NSF, Division of Earth Sciences, Hydrologic Sciences	2008 & 2010
NIH NIAID Special Emphasis Panel, NIH SEP: ZRG1 IDM-H (03)	2008
NIH Roadmap, Facilitating Interdisciplinary Research via Methodological and Technical Innovation in the Behavioral and Social Sciences (R21)	2007
NIH/NIEHS/FIC, International Training and Research in Environmental and Occupational Health	2006
WHO TDR Molecular Entomology Program (3-4 proposals per year)	2002-2006
National Science Foundation	1999-2005
Wellcome Trust Programme in Infection and Immunity (2-4 proposals per year)	1996-2006
Israel National Science Foundation	1996
NIH/NIAID Reviewer for RFA/Special Program on Emerging Diseases	1995
NIH/NIAID Tropical Medicine and Parasitology, Entomology Study Section	1993-1997
FIELDMAL, TDR, World Health Organization	1993
NIH Minority Biomedical Research Program, National Institutes of Health	1993

24. Professional and Honorary Organizations:

Society Membership:

American Society of Tropical Medicine and Hygiene	1982 – Present
Society of Vector Ecology	1987 – 2005, 2012
American Association for the Advancement of Science	1982 – 2005
Entomological Society of America	1981 – 2005
American Mosquito Control Association	1980 – 2005
American Society of Parasitologists	1979 – 2004
Ecological Society of America	1981–92/1999-2003
Royal Society of Tropical Medicine and Hygiene	1988 – 2001
Wildlife Disease Association	1982 - 1992

Society Offices:

Member, American Committee on Medical Entomology (ACME), American Society of Tropical Medicine and Hygiene.	1992 – 2005
Member, Nominations Committee, American Society of Tropical Medicine and Hygiene.	1999 - 2000
Program Leader, Malaria Vector Program, International Center for Insect Physiology and Ecology (ICIPE), Nairobi, Kenya.	1996 - 1999
Member, Scientific Program Committee, American Society of Tropical Medicine and Hygiene.	1993 - 1999

Councilor, American Society of Tropical Medicine and Hygiene, Nominated and Approved as a Faculty Member, Molecular and Cellular Biology Program, Tulane University	1994 – 1998 1995
Nominated and Approved as a Faculty Member, Graduate Program, Tulane University	1995
Chairman, American Committee on Medical Entomology (ACME), American Society of Tropical Medicine and Hygiene.	1994
Delta Omega (The Honorary Public Health Society)	1989-present

25. Honors and Awards: N/A

26. Post-Doctoral Fellowships:

Department of Biology, (Mentor: Dr. George B. Craig, Jr.); NIH Individual Training Grant, University of Notre Dame,	1981 - 1982
NIH Training Grant in Vector Biology and Parasitology, University of Notre Dame,	1980 - 1981

27. Other Professional Activities:

Advisory Committees

Board of Directors, Kuvim Center for the Study of Infectious and Tropical Diseases at the Hebrew University of Jerusalem	2015-present
Vector Control Advisory Group (VCAG), World Health Organization	2013-2016

Biotechnology

Board of Directors, HIATECH Biotechnology, Hialeah, FL	2005-2009
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Consultantships

Faculty Advisor for Medical Student Training, American Medical Student Association, International Health Committee sponsored "Introduction to Clinical Tropical Medicine in Burkina Faso, West Africa". [www.amsa.org/global/burkina.cfm]	2001-2003
American Institute of Biological Sciences (AIBS), Reviewer for U.S. Department of Defense Infectious Diseases Program.	1/2002
American Institute of Biological Sciences (AIBS), Reviewer for U.S. Department of Defense Infectious Diseases Program.	11-12/2000
NIH/NIAID Trainer, Grant Writing Workshop for African Scientists, Houston, Texas.	11/2000
American Institute of Biological Sciences (AIBS), Reviewer for U.S. Department of Defense Infectious Diseases Program.	1-2/2000
Environmental Health Project of USAID, to direct a workshop on entomological and epidemiological measures for evaluating malaria control programs.	11/2003– 1/2004
Environmental Health Project of USAID, to assist with the development of National Malaria Control Programs in Eritrea and Mozambique.	8/1999-2001
American Institute of Biological Sciences (AIBS), Reviewer for U.S. Department of Defense programs in Infectious Diseases,.	3-4/1999

Environmental Health Project of USAID, to develop an entomology and malaria control training course in Eritrea. 77	2-7/1998
NIH/NIAID, Consultant to assist with project implementation at the Malaria Research and Training Center, Ecole Nationale de Medecine et de Pharmacie, Bamako, Mali.	7/1996
International Center for Insect Physiology and Ecology (ICIPE), Nairobi, Kenya, Consultant to develop a 5-year plan for the Malaria Vector Sub-programme.	4-5/1996
NIH/NIAID, Consultant to assist with project development at the Malaria Research and Training Center, Ecole Nationale de Medecine et de Pharmacie, Bamako, Mali.	3/1996
Labat-Anderson Incorporated, Washington D.C., Consultant to review proposals for the Department of Defense in the area of Infectious Diseases.	7/1995
U.S. Agency for International Development, Consultant to review the Malaria Research and Training Center project at the Ecole Nationale de Medecine et de Pharmacie, Bamako, Mali.	1/1995
NIH/NIAID Office of International Research, Consultant for the NIAID Conference on the Impact of Global Warming on Tropical Diseases.	8/1993
NIH/NIAID Office of International Research, Consultant to the Ain Shams University Research and Training Center on Vectors of Diseases, Cairo, Egypt, to assist with studies of urban filariasis.	5/1992
NIH/NIAID Consultant, Ecole Nationale de Medecine et de Pharmacie, Bamako, Mali, to provide training in ELISA techniques for bloodmeal identification and sporozoite detection.	3/1992
Istituto de Parassitologia, University of Rome, Consultant to plan studies of the <i>Anopheles gambiae</i> complex in Kenya.	2/1992
U.S. Army, Walter Reed Army Institute of Research, Consultant on assignment in Kenya to evaluate entomological components of a malaria vaccine field trial.	6/1990
NIH/NIAID Office of International Research, Consultant to the Ain Shams University Research and Training Center on Vectors of Diseases, Cairo, Egypt, to participate in a meeting of the Egypt-Israel Regional Project in Tropical Medicine.	4/1990
U.S. Agency for International Development, Consultant, Vector Biology and Control Project, Assignment in Accra, Ghana, to prepare a Malaria Plan of Action for the USAID Mission.	4/1989
NIH/NIAID Office of International Research, Consultant to the Ain Shams University Research and Training Center on Vectors of Diseases, Cairo, Egypt, to plan studies on urban filariasis.	2/1989
NIH/NIAID Office of International Research, Consultant to the Ain Shams University Research and Training Center on Vectors of Diseases, Cairo, Egypt, to conduct a training course in ELISA techniques for vector bloodmeal identification.	2/1988
U.S. Army, Walter Reed Army Institute of Research, TDY in Nairobi, Kenya, to develop a malaria field program for vaccine trials	9/10-1995

NIH/NIAID Office of International Research, Assignment in Izmir and Adana, Turkey, to develop a malaria research and control program.	10/1984
NIH/NIAID Office of International Research, Medical Entomology Consultant, Haddassah Medical Center, Jerusalem, Israel.	8/1984
Baltimore Zoological Society, Consultant on avian malaria,	1980-1994
<u>National/International committees</u>	
Military Infectious Disease Review Panel (MIDRP),	1999-2014
World Health Organization Vector Control Working Group (VCWG)	2010-Present
Participant, CDC/USAID/PAHO Amazon Malaria Initiative, Working Group	10/2010
Meeting on Malaria Vector Control, at CDC in Atlanta, Georgia.	9/2010
Second USAID/RTI/WHO Integrated Vector Management Working Group Meeting on Capacity Building and Training, in Washington DC.	10/2010
Participant, Informal Consultation on Global Malaria Control and Elimination: A Technical Review, 17-18th January 2008, WHO, Geneva.	1/2008
Vector Control Consultation, Bill and Malinda Gates Foundation, Seattle, Washington.	7/2008
USAID Technical Advisory Committee on Malaria Research, Washington DC.	1999-2001
Executive Committee, NIH Collaborations in Infectious Diseases, Bethesda, Maryland	1999-2004
Chairman, NIH NIAID Pathogen Specific Group (PSG) for the ICIDR International Program, Entomology PSG, Bethesda, Maryland.	1999-2004
Member, ASTMH/ACME Committee to formulate Guidelines for the Containment of Vector Arthropods.	2000-2002
Member, PDU/TDR/WHO Malaria Transmission-Blocking Vaccine Task Force,	1994-1998
Member, Malaria Task Force, International Center for Insect Physiology and Ecology (ICIPE), Nairobi, Kenya.	1996
Member, External Review Committee, to review and advise on the Malaria Program at the Centers for Disease Control and Prevention, Atlanta, Georgia.	1996
Rapporteur, Entomology, International Conference on Malaria in Africa, Dakar, Senegal.	1/1997.
Member, Committee for the Study on Malaria Prevention and Control, Institute of Medicine, National Academy of Sciences.	1989-1991
<u>Invited presentations (since 1988)</u>	
"Environmental changes and vector-borne diseases" NIH/NIAID workshop on: Endemic and Emerging Infectious Diseases of Priority in the Middle East and North Africa Research Opportunities and Biosafety in a Changing Environment. Istanbul, Turkey	6/2012

"How much vector control is needed to achieve malaria elimination? The Ninth Arbovirus Surveillance & Mosquito Control Workshop Sponsored by AMCD, USDA/CMAVE and FMCA St. Augustine, Florida	3/2012
"Prospects for malaria elimination in non-Amazonian regions of Latin America". Symposium at the ASTMH meetings in Philadelphia,	12/2011
"Non- Amazonian Latin America ICEMR: Centro Latino Americano de Investigación en Malaria CLAIM". Annual NIH ICEMR Workshop, Livingstone, Zambia.	9/2011
"Entomological needs and challenges for the NIH ICEMR network". Caucesco Research Center, Cali, Colombia.	8/2011
Non- Amazonian Latin America ICEMR: Centro Latino Americano de Investigación en Malaria CLAIM". Annual NIH ICEMR Workshop, Washington DC.	8/2010
"Malaria Epidemiology". Microbiology and Immunology Club "Microbiology Awareness Week", University of Miami.	11/2009
"H1N1 Swine Flu: Global Outbreak and Rapid Spread" University of Miami Sigma Xi Symposium on H1N1 Influenza.	11/2009
"Integrated Vector Management for Malaria Vector Control in Africa". University of Bamako, Bamako, Mali, June 2009.	6/2009
"Global outbreak and rapid spread" University of Miami, Department of Epidemiology and Public Health Symposium: Swine Flu (H1N1): Facts and Forecasts.	5/2009
"Sugar-Feeding in African Malaria Vectors" Vector Control Consultation, Bill and Malinda Gates Foundation, Seattle, Washington.	7/2008
"Vector-Borne Diseases and Global Public Health" Department of Epidemiology and Public Health, University of Miami.	7/2008
"Malaria, Dengue, and HIV: The Triple Global Health Threat" National Pediatric Conference, Punta Cana, Dominican Republic.	6/2008
"Climate Change and Malaria", Symposium on Climate Change and Health, University of Miami.	4/2008
"Increasing urban transmission of malaria and dengue in tropical environments" "Salud Publica y Ciudad" (Congress of Public Health), Cali, Colombia.	4/2008
"Vector Biology Program at University of Miami", Florida Working Group on Vector Borne Pathogens Meeting, Vero Beach, FL.	1/2008
"Vector-Borne Diseases in Urban Environments" Naval Medical Research Unit, Cairo, Egypt.	2/2008
"Malaria Advocacy Boot Camp - Nothing But Nets campaign, a grassroots campaign save lives by preventing malaria", University of Miami.	5/2007
"Control of Vector-Borne Diseases in Urban Environments", Abess Center for Ecosystem Science and Policy (ACESP), University of Miami.	4/2007

"Malaria parasite transmission and control in Africa". Department of Global Health, University of South Florida, Tampa, FL.	9/2006
"Malaria parasite transmission and control". Department of Biology, Florida International University, Miami, FL.	4/2006
" <i>Anopheles</i> Larvae in Urban Settings: Ecology and Habitats". American Society of Tropical Medicine and Hygiene annual meeting, Washington DC.	12/2005
"Malaria Parasite Transmission by Mosquitoes and the Burden of Malaria in Africa". Department of Molecular Parasitology and Immunology, New York University.	9/2005
"Malaria Parasite Transmission by Mosquitoes and the Burden of Malaria in Africa". Department of Biology, University of Miami.	9/2005
"The Global Threat of AIDS, Tuberculosis and Malaria". University of Miami, Cosford Cinema, Coral Gables Campus.	11/2004
"Pathogens and their eco-systems". Institut Pasteur, 5 th Louis Pasteur Conference on Infectious Diseases.	11/2004
"University of Miami Global Public Health Research Group (GPHRG) the beginning". Instituto de Inmunologia, Centro Internacional de Vacunas, Cali Columbia.	10/2004
"Standard Indicators And Methods For Measuring And Reporting Malaria Transmission". 52 nd Annual Meeting of the American Society of Tropical Medicine and Hygiene.	12/2003
"Malaria parasite transmission and control". Department of Microbiology and Immunology, University of Miami.	3/2003
"Relationships between the force of malaria parasite transmission by mosquitoes and the public health burden of malaria in communities". Department of Epidemiology and Public Health, University of Miami.	3/2002
"Relationships between the force of malaria parasite transmission by mosquitoes and the public health burden of malaria in communities". Department of Tropical Medicine and Medical Microbiology, University of Hawaii.	2/2002
"Biological basis for the public health burden of malaria in African communities". Imperial College, London, UK.	6/2001
"Malaria public health problems in Africa: transmission dynamics and human infection/disease". School of Public Health, Harvard University, Boston, MA.	5/2001
"New strategies for malaria vector control". Louisiana Mosquito Control Association meetings. New Orleans, LA.	11/2000
" <i>Anopheles</i> mosquito adaptation to urban environments in Africa". Kilifi Research Unit, Kenya Medical Research Institute, Kilifi, Kenya.	8/2000
"Parameters of success: when malaria control will work". JFK Institute of Government, Harvard University, Boston, MA.	6/2000
"Beyond the bednets: the future of malaria vector control in Africa" USAID,	5/2000

Washington, DC.

"Malaria transmission and human infection/disease". School of Public Health, Harvard University, Boston, MA..	5/2000
"Relationships between the force of malaria parasite transmission by mosquitoes and the public health burden of malaria in communities". NIH ICTDR meetings, Bethesda, Maryland, April 2000.	4/2000
"Overview of NIH-supported malaria vector research in Kenya". NIH Workshop on Malaria Vector Ecology, Mbita Point, Kenya.	2/2000
"Malaria vector research in Africa". Jomo Kenyatta University, Nairobi, Kenya,	10/1999
"Malaria transmission and human infection/disease". Kilifi Research Unit, Kenya Medical Research Institute, Kilifi, Kenya.	10/1999
"Establishing levels of control necessary to reduce malaria infection and disease". Symposium on Public Health Promise of Genetically Modified Vectors (Organizer, Andrew Spielman, Harvard University). Society of Vector Ecology meeting, Ashville, NC.	10/1999
"Malaria vector ecology and transmission control in Africa". Department of Entomology, University of California, Riverside, California.	1/1999
"Malaria vector research in Africa". Department of Biology, Ohio University, Athens, Ohio.	11/1998
"Malaria vector control in Africa". Ohio Mosquito Control Association meetings, Athens Ohio.	12/1998
"Malaria vector research in Kenya: Development of an NIH ICIDR grant". Department of Tropical Medicine, Tulane University Medical Center.	8/1998
"Sporozoite transmission by naturally infected mosquitoes". American Society of Tropical Medicine and Hygiene meeting, Orlando, Florida.	12/1997
"Importance of malaria transmission characteristics in malaria epidemiology". Society of Vector Ecology, Orlando, Florida.	10/1997
"Malaria Transmission-Blocking Vaccine Development: Current Status". Malaria Research and Training Center, National School of Medicine and Pharmacy, Bamako, Mali, West Africa.	3/1997
"Malaria Vector Research in Africa". Annual Meeting, Louisiana Mosquito Control Association, Covington, Louisiana.	10/1996
"Malaria Parasite Infections in Mosquitoes". Malaria Research and Training Center, National School of Medicine and Pharmacy, Bamako, Mali, West Africa.	7/1996
"Malaria Parasite Development in Mosquitoes". Department of Pathology, Tulane University Medical Center, New Orleans, Louisiana.	3/1996
"Bottlenecks to Malaria Parasite Development in Mosquitoes". Department of Pharmacology, Tulane University Medical Center, New Orleans, Louisiana.	2/1996

"Malaria Vector-Parasite Relationships". Department of Biology, Loyola University, New Orleans, Louisiana.	2/1996
"Advances in Malaria Epidemiology". Malaria Task Force Meeting, International Center for Insect Physiology and Ecology (ICIPE), Nairobi, Kenya.	2/1996
"Mosquitoes and Malaria: Challenges at Tulane". Department of Medicine, Tulane University, New Orleans, Louisiana.	1/1996
"Malaria Parasite Development in Mosquitoes". Molecular and Cellular Biology Program, Tulane University, New Orleans, Louisiana, December 1995.	12/1995
"The Effect of Environmental Temperature on the Transmission of Malaria Parasites". Invited presentation for the 1995 American Committee on Medical Entomology Symposium entitled: "The Effect of Environmental Temperature on the Transmission of Arthropod-Borne Diseases", San Antonio, Texas.	11/1995
"Malaria Epidemiology in Kenya". Department of Biostatistics and Epidemiology, Tulane University, New Orleans, Louisiana.	10/1995
"Malaria Vector-Parasite Relationships". Department of Tropical Medicine, Tulane University, New Orleans, Louisiana.	7/1994
"Malaria Parasite Transmission Relative to the Incidence of Severe Disease in Children". Department of Epidemiology and Department of Entomology, Michigan State University, East Lansing, Michigan.	3/1994
"Malaria Parasite Transmission in Africa vs. the Caribbean". Caribbean Epidemiologic Research Center and Insect Vector Control Division, MOH, Trinidad.	2/1994
"Malaria Parasite Transmission in Kenya: Ecological Relations between Transmission Intensity and the Incidence of Severe Disease". Tropical Medicine Dinner Club of Washington, NIH, Bethesda, Maryland.	11/1993
"Malaria Vector Research". Department of Immunology and Infectious Diseases, The Johns Hopkins University, Baltimore, Maryland.	10/1993
"New Developments in Malaria Sporozoite Biology". University of Rome, Rome, Italy.	2/1993
"Malaria Sporozoite Biology". Kenya Medical Research Institute, Kilifi Research Unit, Kilifi, Kenya.	2/1993
"Insect Repellants". The Johns Hopkins University, CCIH course: Topics in International Travel & Tropical Medicine, Baltimore, Maryland.	10/1992
"Malaria Sporozoite Biology". Department of Tropical Medicine, Tulane University, New Orleans, Louisiana.	8/1992
"Vector Field Research In Preparation for Malaria Vaccine Field Trials". Division of Disease Assessment, USAMRID, Ft. Detrick, Maryland.	7/1992
"Malaria Vector Field Programs: An Update". Tropical Medicine Society of Washington, NIH, Bethesda, Maryland.	3/1992
"Malaria Parasite Transmission and Severe Disease in Kilifi, Kenya".	2/1992

University of Rome, Rome, Italy.

"Assessing the Malaria Transmission Potential of <i>Anopheles</i> Mosquitoes Used in Vaccine Challenge Studies". Malaria Section, Naval Medical Research Institute, Rockville, Maryland.	7/1990
"Vector-Related Methodology for Conducting Epidemiological Studies of Filariasis in Egypt". National Institutes of Health, Egypt-Israel Regional Project in Tropical Diseases: Eighth Joint Meeting held in Taba, Egypt.	4/1990
"Vector-Related Priorities for Urban Filariasis". National Institutes of Health, Egypt-Israel Regional Project in Tropical Diseases, Cairo, Egypt.	10/1989
"Factors Affecting Sporozoite Transmission by Malaria Vectors in Africa". Atomic Energy Agency Workshop on the <i>Anopheles gambiae</i> Complex in Africa, Rome.	9/1989
"Malaria Transmission in Africa". The Johns Hopkins University Corporate Council on International Health. Baltimore, Maryland.	10/1988
"Malaria Transmission Potential of Wild Afrotropical <i>Anopheles</i> : Sporozoite Loads and <i>In Vitro</i> Sporozoite Transmission". World Health Organization IMMAL/FIELDMAL Meeting, Geneva, Switzerland.	9/1988

VI. TEACHING

28. Teaching Awards Received:

Best Teacher Award (Department of Public Health Sciences)	2013
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29. Teaching Specialization:

Courses Taught University of Miami

Medical Campus:

Ecology and Control of Vector-Borne Diseases EPH 639	2012 to present
Climate & Health EPH 646	2017 to present
Infectious Disease Epidemiology and Control EPH 622 University of Miami; Primary Instructor	2004 to 2009

Coral Gables Campus:

Interdisciplinary Environmental Methods ECS503	2011
Special Topics in Ecosystem Science and Policy ECS572 (Infectious Disease Ecology, Control, and Policy)	2011-2013
Introduction to the Earth's Ecosystem ECS111 University of Miami; Primary Instructor	2009
Special Topics in Ecosystem Science and Policy ECS 372 (Foundations of Infectious Disease Ecology, Control, and Policy)	2008

Invited Lectures at University of Miami

Jay Weiss Center Student Pathway in Social Medicine Foreign Policy and Infectious Disease INS US Globalization and Health INS 370/570 Bridges over Babylon: Ethics, Culture, and International Bio-medical Research 360 HX Seminar in Contemporary Environmental Issues ECS 201	2009-2011
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Courses Taught at Tulane University:

Parasitology Seminar TRMD 702 rotating basis with 4 faculty Primary Instructor; Tulane University	1995-2003
Bioinformatics BIOS 799 co-taught with Dr. Fran Mather; Tulane University	2001-2003
Medical Parasitology for second-year Tulane Medical Students T2 Primary Instructor; Tulane University	1996-2002
Parasitologic Methods TRMD 708 Primary Instructor; Tulane University	1996-2002
Advanced Medical Entomology [new course developed] TRMD 780 Primary Instructor; Tulane University	1996-2002
Special Studies and Research TRMD 799 Primary Instructor; Tulane University	1995-2002
Bioinformatics in Entomology, Specialty Course: co-taught with Dr. Fran Mather with support from the NIH Fogarty, Tulane University	4-5/2002

Guest Lectures at Tulane University

Molecular and Cellular Biology Research Methods MCB 712	1995-2002
Molecular and Cellular Biology Seminar MCB 714	1995-2002
Preventive Tropical Medicine TRMD 632	1995-2002
Disease Control in Developing Countries TRMD 635	1995-2002
Introduction to Infectious Diseases EPID 609/610	1995-1996

Courses Taught at Johns Hopkins University

Field Studies in Ecology and Behavior Primary Instructor; Johns Hopkins University	1991-1994
Malariology [new course developed] Primary Instructor; Johns Hopkins University	1991-1994
Special Studies and Research Primary Instructor; Johns Hopkins University	1989-1994
Laboratory Rotations Primary Instructor; Johns Hopkins University	1989-1994
Vector Ecology [new course developed] Primary Instructor; Johns Hopkins University	1990-1991
Foundations of Tropical Public Health Primary Instructor; Johns Hopkins University	1989-1991

Guest Lectures at Johns Hopkins University**1998-1994**

Tropical Medicine and International Health (JHU School of Medicine)
 Issues and Careers in International Health (JHU School of Medicine)
 Biological Basis of Public Health, (JHU Montgomery County Branch)
 Ecology of Zoonotic Diseases
 Ethics in Biomedical Research

30. Thesis and Dissertation Advising/Post-doctoral student supervision:**Advisees: Research Associates/Postdoctoral Fellows:**

Andre Wilke, PhD, Postdoctoral Associate, University of Miami	2017-present
Whitney Qualls, PhD, Postdoctoral Associate, University of Miami	2012-2016
Amy Conley, PhD, Postdoctoral Associate, University of Miami	2013-2014
Reginald Archer, PhD, Postdoctoral Associate, University of Miami	2012-2014
Yanyu Xiao, PhD, Postdoctoral Associate, University of Miami	2013-2014
Farida Chamchod, PhD, Postdoctoral Fellow, University of Miami,	2011-2012
Daniel Impoinvil, Ph.D. Postdoctoral Fellow, University of Miami	2006-2007
Maria Alonso, Ph.D., Postdoctoral Fellow, University of Miami	2005-2006
Joseph Keating, PhD, Postdoctoral Fellow, University of Miami	2003-2005
Louis Gouagna, PhD, Research Associate, ICIPE, Nairobi, Kenya	1999-2004
Brian Foy, Ph.D., Postdoctoral Fellow, Tulane University	2001-2002
Weidong Gu, Ph.D., Postdoctoral Fellow, Tulane University	2000-2001
Gerard Killeen, PhD, Postdoctoral Fellow, Tulane University	1997-2000
Noboru Minakawa, PhD, Postdoctoral Fellow, ICIPE, Nairobi, Kenya	1998-1999
Yemane Mebrahtu, PhD, Postdoctoral Fellow, Tulane University	1997-1998
Celeste Mazzacano, PhD, Postdoctoral Fellow, Tulane University	1995-1997
Susanne Straif, PhD/MPH, Postdoctoral Fellow, Tulane University	1995-1997
Ji-Min Mei, MD/MS, Postdoctoral Fellow, Johns Hopkins University and Tulane	1994-1995
Seydou Doumbia, MD (Mali), IAEA Trainee, The Johns Hopkins University	1994
James DeMaio, MD/ID Fellow, The Johns Hopkins University	1994
Charles Pumpuni, PhD, Postdoctoral Fellow, The Johns Hopkins University	1992-1994
Chandana Mendis, PhD, Postdoctoral Fellow, The Johns Hopkins University	1992-1993
Jefferson Vaughan, PhD, Research Associate, The Johns Hopkins University	1990-1993

Advisees: MSc and PhD Students:

Lin Zhu, PhD Program, Department of Public Health Sciences	2012-2017
Diana Naranjo, PhD Program, Department of Public Health Sciences	2013-2016
Jill Ulrich, PhD Program, Ecosystem Science and Policy, University of Miami	2013-2016
Temitope Alimi, PhD Program, Ecosystem Science and Policy, University of Miami,	2011-2016
Tanjim Hossain, PhD Program, Ecosystem Science and Policy, University of Miami	2013-2014
Deborah Roque, PhD Program, Ecosystem Science and Policy, University of Miami	2112-2014
Diana Naranjo, MAIA A&S Program, University of Miami	2112
Harold Gil, MSPH Program, DEPH, University of Miami	2012-2014
Mike Parenti, PhD Program, Ecosystem Science and Policy, University of Miami	2010-2012
Gillian Stresman, PhD Program, DEPH, University of Miami	2010-2011
Eddy Perez, PhD Program, University of Miami	2005-2009
Adriana Troyo, PhD Program, University of Miami	2004-2007
Daniel Impoinvil, PhD Program, University of Miami	2002-2006
Maria Alonso, PhD Program, Capella Universit	2002-2005
John Carlson, MD/PhD Program, Tulane University	2002-2004
Paul Mireji, PhD Program, Kenyatta University and ICIPE	2001-2006
Joseph Odhiambo, PhD Program, Kenyatta University and ICIPE	2001-2005
Wilfred Emonyi, PhD Program, Kenyatta University and ICIPE	2001-2005
Ben Jacob, PhD program, University of Miami	2001-2004
Joseph Keating, PhD Program, Tulane University	2001-2003

Tereza Magalhaes, PhD program, University of Miami.	2000-2005
Bernard Okech, PhD program, Kenyatta University and ICIPE	1999-2003
Abdoulaye Toure, PhD Program (Parasitology), Tulane University	1995-2002
Brian Foy, PhD program (Molecular and Cellular Biology), Tulane University	1995-2001
Chansak Suwanchaichinda, PhD Program, Tulane University	1996
Ephantus W. Kabiru, PhD program, University of Nairobi	1991-1995
Charles M. Mbogo, PhD program, University of Nairobi	1991-1995
Bruce Noden, PhD program, The Johns Hopkins University	1991-1995
Ibrahim Azem, PhD program, The Johns Hopkins University	1991-1993
Geoffrey Chege, MSc program, The Johns Hopkins University	1991-1993

Advisees: University of Miami Medical Students and Residents:

Aileen Chang, MD, Resident, Jay Weiss Program,	2011-2012
Yuliya Tipograf, 2 nd year Medical Student, Jay Weiss Program,	2011
Pooja Dharwadkar, 2 nd year Medical Student, Jay Weiss Program,	2011
Onome Ulukpo, 2 nd year Medical Student, Jay Weiss Program,	2011

Undergraduate Minority Students:

Kenechi Okany, Bridge to Baccalaureate Program at UM,	2011
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VII. SERVICE

31. University Committee and Administrative Responsibilities:

Department of Department of Public Health Sciences UM 2003 to Present:

Chief, Division of Environment & Public Health	2013-present
Executive Committee	2013-present
Graduate Programs Committee	2013-present
MPH Admissions Committee	2011-2014
University of Miami Miller School of Medicine Epidemiology and Public Health Grand Rounds Coordinator	2008-2009
University of Miami Miller School of Medicine Epidemiology and Public Health Epidemiology Division Committee	2008-2009
University of Miami Miller School of Medicine Epidemiology and Public Health Epidemiology PhD Admissions Committee	2008-2009
University of Miami Miller School of Medicine Epidemiology and Public Health Faculty Advisory Committee	2003-2005
University of Miami – University-wide University of Miami – University-wide Abess Center for Ecosystem Science and Policy (CESP) Faculty Advisory Committee	2006-2013

University of Miami – University-wide Scientific Misconduct Committee	2006-2010
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University of Miami- University-wide Research Council	2008-2010
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University of Miami - University-wide Organizer, Symposium on Swine Flu Update, University of Miami	4/2009
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University of Miami- University-wide Organizer, Symposium on Climate Change and Your Health,	4/2008
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32. Community Activities:

Grade School Volunteer: participated in Career Day at Gloria Floyd Elementary and Vineland Elementary, Miami, Florida.	2007-2010 and 2017
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