

# RAVINDER N. M. SEHGAL

**Institutional Address:**

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**CITIZENSHIP:** USA, Sweden, Lithuania, India (OCI)

**EDUCATION/ PROFESSIONAL EXPERIENCE:**

- |              |   |
|--------------|---|
| 2012-present | Associate Professor<br>Dept. of Biology<br>San Francisco State University, San Francisco, CA.   |
| 2007-2012    | Assistant Professor<br>Dept. of Biology,<br>San Francisco State University, San Francisco, CA.  |
| 2004-2007    | Adjunct Professor<br>Dept. of Biology,<br>San Francisco State University, San Francisco, CA.  |
| 2001-2004    | Postdoctoral Fellow<br>Research Advisors: Professor Thomas B. Smith, Ph.D. and Professor Lisa A. Tell, D.V.M.<br>University of California, Davis, Davis, CA.                        |
| 1999-2001    | Postdoctoral Fellow<br>Research Advisor: Professor Thomas B. Smith, Ph.D.<br>Center for Tropical Research, San Francisco State University, San Francisco, CA.                       |
| 1998-1999    | Cell Biology Specialist<br>Guava Technologies, Alameda, CA.   |
| 1988-1997    | Ph.D. in Cell Biology<br>Thesis Advisor: Professor Louis F. Reichardt, Ph.D.<br>Dept. of Biochemistry and Biophysics<br>University of California, San Francisco, San Francisco, CA. |
| 1992-1994    | Graduate Research Project<br>Advisor: Professor Håkan Persson, Ph.D.<br>Karolinska Institute, Lab of Molecular Neurobiology, Stockholm, Sweden                                      |
| 1984-1988    | B.A. in Biology and B. Music<br>Oberlin College and Conservatory of Music, Oberlin, OH.   |

## RESEARCH EXPERIENCE:

### 1. Current Position: Associate Professor at San Francisco State University

#### Current Projects:

- *Research on the effects of deforestation on the prevalence and host specificity of blood-borne pathogens in African rainforest birds. We are continuing a multi-year project, in collaboration with the Center for Tropical Research at UCLA, studying how the host specificity and prevalence of avian malaria are affected by deforestation.*
- *Research on the impacts of global climate change on avian malaria in the arctic. We are examining how the increased temperatures in Alaska affect the transmission of malaria in birds. We have delineated the border of malaria transmission in resident Alaska birds.*
- *Research on the ecology and evolution of host specificity of avian blood parasites. We are studying the homologues of the protein MAEBL using a comparative genomics approach. The information will be pertinent to understanding the molecular basis of emerging diseases. Recently I have initiated collaborative research to deep sequence the transcriptome of avian malaria.*
- *Research on the pathogens of Socorro Island, Mexico. In collaboration with Endemicos Insulares, and Dr. Juan Martinez at the University of Veracruz, Mexico, we are working on reintroducing the Socorro Island dove to its native habitat. We are examining the avian pathogens of native birds. This will be the first reintroduction of a locally extinct species to its native island habitat.*
- *Research on the effects of pathogens on the migration of California raptors. In collaboration with Buzz Hull and Dr. Chris Briggs at the Golden Gate Raptor Observatory, we have been monitoring the effects of avian malaria on the migration of Red-tailed Hawks.*
- *Research on the effects of blood parasites on the migration of California thrushes. We are attaching geolocators to hermit thrushes, and studying their migration patterns. We are also determining whether Leucocytozoon lineages can serve as an indicator of breeding grounds for migratory thrushes.*

### 2. Postdoctoral Research: Center for Tropical Research, SFSU, and UC Davis

*Research on the host specificity and ecology of Trypanosoma, hemosporidia, microfilariae, and West Nile Virus in birds of Africa and California with a conservation perspective.*

Advisors: Thomas B. Smith, Ph.D., Lisa A. Tell, D.V.M

### 3. Ph.D. Research: UCSF and Karolinska Institute

Thesis: Roles of  $\alpha$ -catenin in the early development of *Xenopus laevis*.

*Developed dominant negative mutations of  $\alpha$ -catenin to elucidate roles of  $\alpha$ -catenin in early gastrulation and the Wnt signaling pathway in *Xenopus laevis*. Cloned chicken BDNF, and *trkC* and developed polyclonal antibodies to study the role of neurotrophins in chick neurogenesis.*

Advisors: Louis F. Reichardt, Ph.D., UCSF, Håkan Persson, Ph.D., Karolinska Institute, Carlos Ibáñez, Ph.D., Karolinska Institute, Barry Gumbiner, Ph.D., Memorial Sloan-Kettering Cancer Center.

### 4. Biotechnology Research: Guava Technologies

*Aided in the development and characterization of a novel portable flow cytometer.*

Advisor: Phillippe Goix, Ph.D., Founder of Guava Technologies, Hayward, CA.

## PEER-REVIEWED PUBLICATIONS:

\* denotes Master's student under my direct supervision.

• denotes undergraduate student under my direct supervision.

° denotes postdoctoral fellow under my direct supervision.

1. K. S. Oakgrove\*, R. J. Harrigan, C. Loiseau, S. Guers, B. Seppi and **R. Sehgal**. 2014. Distribution, diversity and drivers of blood-borne parasite co-infections in Alaskan bird populations. International Journal for Parasitology.
2. E. L. Walther\*, G. Valkiūnas, A. D. González, N. E. Matta, R. E. Ricklefs, A. Cornel and **R. Sehgal**. 2014. Description, molecular characterization, and patterns of distribution of a widespread New World avian malaria parasite (Haemosporida: Plasmodiidae), *Plasmodium (Novyella) homopolare* sp. nov. Parasitology Research. DOI 10.1007/s00436-014-3995-5.
3. A. Marzal, L. García-Longoria, J. M. C. Callirgos and **R. Sehgal**. 2014. Invasive avian malaria as an emerging parasitic disease in native birds of Peru. Biological Invasions. DOI 10.1007/s10530-014-0718-x. 1-7.
4. M. A. Jasper\*, J. M. Hull, A. C. Hull, and **R. Sehgal**. 2014. Widespread lineage diversity of *Leucocytozoon* blood parasites in distinct populations of western Red-tailed Hawks. Journal of Ornithology. 155: 767-775.
5. C. D. Mendenhall, H. M. Archer\*, F. O. Brenes, C. H. Sekercioglu and **R. Sehgal**. 2013. Balancing biodiversity with agriculture: Land sharing mitigates avian malaria prevalence. Conservation Letters. 6: 125-131.
6. A. Križanauskienė, T. A. Iezhova, **R. Sehgal**, J. S. Carlson\*, V. Palinauskas, S. Bensch, and G. Valkiūnas. 2013. Molecular characterization of *Haemoproteus sacharovi* (Haemosporida, Haemoproteidae), a common parasite of columbiform birds, with remarks on classification of haemoproteids of doves and pigeons. Zootaxa. 3613: 085-094.
7. G. Valkiūnas, T. A. Iezhova, E. Evans\*, J. S. Carlson\*, J. E. Martinez-Gomez, **R. Sehgal**. 2013. Two new *Haemoproteus* (Haemosporida: Haemoproteidae) species from Columbiform birds. Journal of Parasitology. 99(3): 513-521.
8. C. Martinez\*, T. Marzec•, C. D. Smith, L. A. Tell, and **R. Sehgal**. 2013. Identification and expression of *maebl*, and erythrocyte binding gene in *Plasmodium gallinaceum*. Parasitology Research. 112: 945-954.
9. J. S. Carlson\*, J. E. Martinez-Gomez, G. Valkiūnas, C. Loiseau°, D. A. Bell and **R. Sehgal**. 2013. Diversity and phylogenetic relationships of hemosporidian parasites in birds of Socorro Island, Mexico, and their role in the re-introduction of the Socorro Dove (*Zenaida graysoni*). Journal of Parasitology. 99(2): 270-276.
10. M. Dodge\*, S. L. Guers, C. H. Sekercioglu and **R. Sehgal**. 2013. North American transmission of hemosporidian parasites in the Swainson's thrush (*Catharus ustulatus*), a migratory songbird. Journal of Parasitology. 99(3): 548-553.
11. C. Loiseau°, R. J. Harrigan, A. J. Cornel, S. L. Guers, M. Dodge\*, T. Marzec•, J. S. Carlson\*, B. Seppi and **R. Sehgal**. 2012. First evidence and predictions of Plasmodium transmission in Alaskan bird populations. PloS One. 7:e44729.
12. C. Loiseau°, R. J. Harrigan, A. Robert, R. C. K. Bowie, A. Thomassen, T. B. Smith and **R. Sehgal**. 2012. Host and habitat specialization of avian malaria in Africa. Molecular Ecology. 21: 431-441
13. G. Valkiūnas, T. A. Iezhova, J. S. Carlson\* and **R. Sehgal**. 2011. Two new *Trypanosoma* species from African birds, with notes on taxonomy of avian trypanosomes. Journal of Parasitology. 97: 924-930.
14. S. Yanga, J. Martinez-Gomez, **R. Sehgal**, P. Escalante-Pliego, F. C. Camacho, D. A. Bell. 2011. A preliminary survey for avian pathogens of Columbiformes on Socorro Island, Mexico. Pacific Conservation Biology. 17: 11-21
15. A. Marzal, R. E. Ricklefs, G. Valkiūnas, T. Albayrak, E. Arriero, C. Bonneaud, G. A. Pzirták, J. Ewen, O. Hellgren, D. Hořáková, T. A. Iezhova, H. Jensen, A. Križanauskienė, M. R. Lima, F. de Lope, E. Magnussen, L. B. Martin, A. P. Møller, V. Palinauskas, P. L. Pap, J. Pérez-Tris, **R. Sehgal**, M. Soler, E. Szöllősi, H. Westerdahl, P. Zetindjiev, S. Bensch. 2011. Diversity, loss and gain of malaria parasites in a globally invasive bird. Plos One. 6 (7): e21905.
16. T. B. Smith, H. A. Thomassen, A. H. Freedman, **R. Sehgal**, W. Buermann, S. Saatchi, J. Pollinger, B. Milá, D. Pires, G. Valkiūnas and R. K. Wayne. 2011. Patterns of divergence in the olive sunbird

(*Cyanomitra olivacea*) across the African rainforest-savanna ecotone. Biological Journal of the Linnean Society. 103: 825-835.

17. J. S. Carlson\*, J. E. Martinez-Gomez, A. Cornel, C. Loiseau° and **R. Sehgal**. 2011. Implications of *Plasmodium* parasite infected mosquitoes on an insular avifauna: the case of Socorro Island, Mexico. Journal of Vector Ecology. 36: 213-220.
18. T. A. Iezhova, M. Dodge\*, **R. Sehgal**, T. B. Smith and G. Valkiūnas. 2011. New avian *Haemoproteus* species (Haemosporida: Haemoproteidae) from African birds, with a critique of the use of host taxonomic information in hemoproteid classification. Journal of Parasitology. 97: 682-694.
19. K. Y. Njabo, A. J. Cornel, C. Bonneaud, E. Toffelmier, **R. Sehgal**, G. Valkiūnas, A. F. Russell and T. B. Smith. 2011. Nonspecific patterns of vector, host and avian malaria parasite associations in a central African rainforest. Molecular Ecology. 20: 1049-1061.
20. **R. Sehgal**, W. Buermann, R. Harrigan, C. Bonneaud, C. Loiseau°, A. Chasar\*, G. Valkiūnas, T. Iezhova, I. Sepil, S. Saatchi, and T. B. Smith. 2011. Spatially explicit predictions of blood parasites in a widely distributed African rainforest bird. Proceedings of the Royal Society of London Series B. 278: 1025-1033.
21. H. D. Ishak\*, C. Loiseau°, A. C. Hull, and **R. Sehgal**. 2010. Prevalence of blood parasites in migrating California hawks. Journal of Raptor Research. 44: 215-223.
22. **R. Sehgal**. 2010. Deforestation and avian infectious diseases. Journal of Experimental Biology. 213: 955-960.
23. C. Loiseau°, T. Iezhova, G. Valkiūnas, A. Chasar\*, A. Hutchinson\*, W. Buermann, T. B. Smith and **R. Sehgal**. 2010. Spatial variation of haemosporidian parasite infection in African rainforest bird species. Journal of Parasitology. 96: 21-29.
24. G. Valkiūnas, **R. Sehgal**, T. A. Iezhova, and A. C. Hull. 2010. Identification of *Leucocytozoon toddi* group (Haemosporida, Leucocytozoidae), with remarks on the species taxonomy of leucocytozoids. Journal of Parasitology. 96:170-177.
25. T. A. Iezhova, G. Valkiūnas, C. Loiseau\*, T. B. Smith, **R. Sehgal**. 2010. *Haemoproteus cyanomitrae* sp. nov. (Haemosporida, Haemoproteidae) from a widespread African songbird, the Olive Sunbird (*Cyanomitra olivacea*). Journal of Parasitology. 96: 137-143.
26. A. Chasar\*, C. Loiseau°, G. Valkiūnas, T. Iezhova, T. B. Smith, **R. Sehgal**. 2009. Prevalence and diversity patterns of avian blood parasites in degraded African rainforest habitats. Molecular Ecology. 18: 4121-4133.
27. K. Y. Njabo, A. J. Cornel, **R. Sehgal**, C. Loiseau°, W. Buermann, R. Harrigan, J. Pollinger, G. Valkiūnas and T. B. Smith. 2009. *Coquillettidia* (Culicidae, Diptera) mosquitoes are natural vectors of avian malaria in Africa. Malaria Journal. 8: 193.
28. G. Valkiūnas, T. A. Iezhova, C. Loiseau° and **R. Sehgal**. 2009. Nested Cytochrome *b* polymerase chain reaction diagnostics detect sporozoites of Hemosporean parasites in peripheral blood of naturally infected birds. Journal of Parasitology. 95: 1512-1515.
29. Bonneaud, C., I. Sepil, B. Milá, W. Buermann, J. Pollinger, **R. Sehgal**, G. Valkiūnas, T. Iezhova, S. Saatchi and T. B. Smith. 2009. The prevalence of avian *Plasmodium* is higher in undisturbed tropical forests of Cameroon. Journal of Tropical Ecology. 25: 439-447.
30. G. Valkiūnas, T. A. Iezhova, C. Loiseau°, T. B. Smith and **R. Sehgal**. 2009. New malaria parasites of the subgenus *Novyella* in African rainforest birds, with remarks on their high prevalence classification and diagnostics. Parasitology Research. 104:1061-1077.
31. G. Valkiūnas, T. A. Iezhova, C. Loiseau°, A. Chasar\*, T. B. Smith and **R. Sehgal**. 2008. New species of haemosporidian parasites (Haemosporida) from African rainforest birds, with remarks on their classification. Parasitology Research. 103(5): 1213-28.
32. G. Valkiūnas, T. A. Iezhova, A. Krizanauskiene, V. Palinauskas, **R. Sehgal**, S. Bensch. 2008. A comparative analysis of microscopy and PCR-based detection methods for blood parasites. Journal of Parasitology. 94: 1395-1401.
33. H. D. Ishak\*, J. P. Dumbacher, N. L. Anderson, J. J. Keane, G. Valkiūnas, S. M. Haig, L. A. Tell and **R. Sehgal**. 2008. Blood parasites in owls with conservation implications for the Spotted Owl (*Strix occidentalis*). PLoS One. 3(5): e2304.

34. G. Valkiūnas, C. T. Atkinson, S. Bensch, **R. Sehgal** and R. E. Ricklefs. 2008. Parasite misidentifications in GenBank: how to minimize their number? Trends in Parasitology. 24(6): 247-248.
35. L. M. E. Svensson•, K. C. Rugg, C. H. Sekercioglu, and **R. Sehgal**. 2007. Widespread and structured distributions of blood parasite haplotypes across a migratory divide of the Swainson's thrush (*Catharus ustulatus*). Journal of Parasitology. 93(6): 1488-1495.
36. **R. Sehgal**, G. Valkiūnas, T. A. Iezhova and T. B. Smith. 2006. Blood parasites of chickens in Uganda and Cameroon with molecular descriptions of *Leucocytozoon schoutedeni* and *Trypanosoma gallinarum*. Journal of Parasitology. 92(6): 1336-1343.
37. J. Masello, R. Gustavo Choconi, **R. Sehgal**, L. A. Tell and P Quillfeldt. 2006. Blood and intestinal parasites in wild Psittaciformes: A case study of Burrowing parrots (*Cyanoliseus patagonus*). Ornologia Neotropical. 17: 515-529.
38. **R. Sehgal**, A. C. Hull, N. Anderson, G. Valkiūnas, M. J. Markovets, S. Kawamura• and L. A. Tell. 2006. Evidence for cryptic speciation of *Leucocytozoon* spp. (Haemosporida, Leucocytozoidae) in diurnal raptors. Journal of Parasitology. 92(2): 375-379.
39. **R. Sehgal**, H. I. Jones, and T. B. Smith. 2005. Molecular evidence for host-specificity of parasitic nematode microfilariae in some African rainforest birds. Molecular Ecology. 14: 3977-3988.
40. G. Valkiūnas, **R. Sehgal**, T. A. Iezhova, and T. B. Smith. 2005. Further observations on the blood parasites of birds in Uganda. Journal of Wildlife Diseases. 41(3): 580-587.
41. **R. Sehgal**, H. I. Jones, and T. B. Smith. 2005. Blood parasites of some West African birds. Journal of Veterinary Medical Sciences. 67(3): 295-301.
42. H. I. Jones, **R. Sehgal** and T. B. Smith. 2005. *Leucocytozoon* (Apicomplexa: Leucocytozoidae) from West African birds, with descriptions of two species. Journal of Parasitology. 91(2): 397-401.
43. **R. Sehgal** and I. J. Lovette. 2003. Molecular evolution of three avian neurotrophin genes: implications for proregion functional constraints. Journal of Molecular Evolution. 57: 335-342.
44. F. A. Richard•, **R. Sehgal**, H. I. Jones, and T. B. Smith. 2002. A comparative analysis of PCR-based detection methods for avian malaria. Journal of Parasitology. 88(4): 819-822.
45. **R. Sehgal**, H. I. Jones, and T. B. Smith. 2001. Host Specificity and incidence of *Trypanosoma* in some African rainforest birds: a molecular approach. Molecular Ecology. 10(9): 2319-2328.
46. **R. Sehgal**, B. Gumbiner, and L. F. Reichardt. 1997. Antagonism of cell adhesion by a mutant of alpha-catenin, and antagonism of the Wnt-Signaling Pathway by alpha-catenin in *Xenopus* embryos. Journal of Cell Biology. 139(4): 1033-1046.
47. T. Svensson, M. Rydén, F. H. Schilling, C. Dominici, **R. Sehgal**, C. F. Ibáñez, and P. Kogner. 1997. Coexpression of mRNA for the full-length neurotrophin receptor trk-C and trk-A in favourable neuroblastoma. European Journal of Cancer. 33(12): 2058-2063.
48. M. Rydén, **R. Sehgal**, C. Dominici, F. H. Schilling, C. F. Ibáñez, and P. Kogner. 1996. Expression of mRNA for the neurotrophin receptor trk-C in neuroblastomas with favourable tumour stage and good prognosis. British Journal of Cancer. 74(5): 773-779.
49. Y. Choi, **R. Sehgal**, P. McCrea, and B. Gumbiner. 1990. A cadherin-like protein in eggs and cleaving embryos of *Xenopus laevis* is expressed in oocytes in response to progesterone. Journal of Cell Biology. 110: 1575-1582.

#### GRANTS:

*I have written over 20 extramural grants for research funding during my affiliation with SFSU. Listed are the ones that were funded.*

1. **NIH SC2** “Malaria erythrocyte binding-like genes & host specificity in a natural population” Principal Investigator: Ravinder Sehgal. \$460,500 total, \$300,000 in direct costs. Oct. 2009-August 2013.
2. **CSUPERB** “Genetic mechanisms of host specificity of malaria” \$15,000. Sept. 2012-Sept. 2013.
3. **National Geographic Society** “Global Climate Change and Avian Malaria in Alaska”. \$18,500 total. Summer of 2012.
4. **SFSU mini-grant, 2008**. “Avian malaria in migrating California hawks” \$5000.

5. **NIH-NSF Ecology of Infectious Diseases Program.** “Effects of deforestation on the prevalence of blood-borne pathogens in African rainforest birds.”  
Principal Investigators: Thomas B. Smith and Ravinder Sehgal. Funded \$1,741,000. SFSU portion: \$768,125 total, \$345,646 in direct costs. Sept. 2004-Aug. 2009.
6. **NATO Cooperative Linkage Grant** “Epizootiology of avian hematozoa; linking genetic and traditional parasitology data”.  
Principal Investigators: Ravinder Sehgal and Gediminas Valkiūnas.  
Funded \$22,000. 2002-2004.
7. **Professors of the Future Postdoctoral Career Development Program Recipient.** “Using habitat structure and stability to predict the incidence of infectious diseases in African rainforest birds”. 2001-2004.
8. **Research in Minority Institutions (RIMI) Postdoctoral Award Recipient.** 1999-2001.

#### ORAL PRESENTATIONS SINCE 2001:

##### Invited presentations

- University of Cape Town, South Africa, June 2014.
- Annual Meeting of the Brazilian Society of Protozoology, Caxambu, Brazil, Sept. 2013.
- Bay Area Malaria Meeting, Emeryville, Sept. 2013
- University of Missouri, St. Louis, MO, August, 2012.
- Coldfoot Visitor Center, Coldfoot, Alaska, July, 2012
- Universidad Nacional de la Amazonia Peruana, Iquitos, Peru, June 2012
- Universidad Nacional de San Martin, Tarapoto, Peru, June 2012
- Universidad Ricardo Palma, Lima, Peru, June 2012
- Boğaziçi University, Istanbul, Turkey, May, 2012
- Lund University, Lund, Sweden, April, 2012
- University of Utah, Dept. of Biology, Feb 9<sup>th</sup>, 2012.
- Case Western University, Cleveland, OH, Jan 2011
- Research Coordination Network Meeting for Avian Malaria, St. Louis, MO, Oct. 2010.
- California Academy of Sciences, San Francisco, CA, Jan. 2010
- Invited delegate to *Survival in a Changing World* Symposium, Awaji Island, Japan, Aug. 2009.
- Plenary Speaker at World Avian Malaria Meeting, Badajoz Spain, Nov. 2008.
- Vilnius University’s Institute of Ecology, Vilnius, Lithuania, Oct. 2007
- Oklahoma State University, Stillwater, OK. Feb. 2007.
- Golden Gate Audubon Society, Berkeley, CA. Feb. 2007.
- University of Missouri, St. Louis, Dept. of Ecology and Evolution, St. Louis, MO. March. 2005
- Stanford University, Dept. of Biology, Ecology and Evolution, Stanford, CA. Feb. 2005
- UC Davis, Dept. of Nematology, Davis, CA, Jan. 2005
- San Francisco State University, Dept. of Biology, San Francisco, CA, Jan. 2005
- Vilnius University, Institute of Ecology, Vilnius, Lithuania, June, 2004
- Cornell University, Lab of Ornithology, April 2004
- UC Berkeley, Museum of Vertebrate Evolution, Berkeley, CA, Oct. 2003
- Vilnius University, Institute of Ecology, Vilnius, Lithuania, May 2003
- Lund University, Dept. of Ecology, Lund, Sweden, May 2003

##### Presentations at meetings

- ICOPA Parasitology meeting, Mexico City, August 2014.
- American Society of Parasitologists annual meeting, New Orleans, LA, July. 2014.
- Meeting on malaria and related haemosporidians in wildlife, Vilnius, Lithuania, Aug. 2013.
- Bay Area Malaria Meeting,
- American Society for Parasitology, Quebec City, June 2013
- Meeting on malaria and related haemosporidians in wildlife, WV, Aug. 2011.
- American Society for Parasitology, Anchorage, AK, June 2011.
- San Francisco State University Biology Dept. Retreat, Tiburon, Aug. 2010.
- Golden Gate Raptor Observatory 25<sup>th</sup> Anniversary Meeting, SF, CA, Oct. 2009.
- American Society of Parasitologists annual meeting, Arlington, TX, June 2008.
- Avian Diseases and Conservation Conference, Pomona, CA, May 2008.
- Northern California Parasitologists meeting, Marshall, CA. March 2008.
- Bay Area Conservation Biology Meeting, Davis, CA, February 2008.
- Ecology of Infectious Diseases-PI Network Meeting, Albuquerque, Dec. 2007
- Ecology and Evolution of Infectious Diseases, Ithaca, NY, May 2007
- Northern California Parasitologists meeting, Marshall, CA, March 2007

- Ecology of Infectious Diseases-PI Network Meeting, Atlanta, Nov. 2006
- North American Ornithological Conference, Veracruz, Mexico, Oct. 2006
- Society for Conservation Biology, San Jose, CA, June 2006
- Bay Area Conservation Biology Meeting, San Francisco, February, 2006
- Scandinavian-Baltic Society for Parasitology Symposium, Vilnius, Lithuania, May 2005
- Raptor Research Foundation annual meeting, Bakersfield, CA, Nov. 2004
- Cooper Ornithological Society annual meeting, La Crosse, WI, May 2004
- Conservation Genetics meeting, American Genetics Association, Front Royal, VA, Sept. 2003
- Bay Area Conservation Biology meetings, 2002, 2003
- Society for Conservation Biology annual meeting, Canterbury, England, July, 2002
- Ecosystem Health, Washington DC, June 2002
- Society for Conservation Biology annual meeting, Hilo, HI, July 2001

#### TEACHING:

- BIOL 453 “General Parasitology” F09, S08, S09, F10, F11, F12 and F13 at SFSU
- BIOL 454 “Parasitology Laboratory” F09, S09, F10, F11, F12 and F13 at SFSU
- BIOL 871 “Colloquium in Microbiology and Molecular Biology” S09 at SFSU
- BIOL 425 “Emerging Infectious Diseases” F08, S10, S11, S13 and S14 at SFSU
- BIOL 864 “Recent Developments in Microbiology” F07 at SFSU
- BIOL 318 “Our Endangered Planet” F07 at SFSU
- BIOL 478 “Ornithology” S06 at SFSU
- BIOL 380 “Comparative Embryology” S02 and S03 at SFSU
- Substitute High School Teacher, Stockholm, Sweden, 1997-1998. Subjects: English, German, and Music.
- Graduate Teaching Assistant at UCSF for Pharmacy Students, 1989.

#### RESEARCH STUDENTS while at SFSU:

*I currently have 5 Master’s and 3 undergraduate students working in my laboratory. Since my appointment as an Assistant Professor at SFSU, I have graduated 10 Master’s students.*

Claire Loiseau, PhD	08-12	Postdoctoral Fellow studying ecology of avian disease.
Dena Emmerson	13-now	Master’s Student on White-Crowned Sparrow songs
David Freund	13-now	Master’s Student on malaria in crows.
Bradley Bowser	13-now	Master’s Student on malaria genomics
Allison Nelson	12-now	Master’s Student on Hermit thrush connectivity
Elvin Lauron	12-now	Master’s Student on host parasite co-speciation
Erika Walther	11-now	Master’s Student on parasites of California birds.
Laura Wilson	11-13	Master’s Student on global climate change in Alaska.
Khouanchy Oakgrove	11-13	Master’s Student on transcriptomes of avian malaria.
Criseyda Martinez	09-11	Master’s Student on host specificity in malaria.
Molly Dodge	09-11	Master’s Student on parasites of African birds.
Jenny Carlson	08-10	Master’s Student on parasites of Socorro Island at SFSU
Holly Archer	08-11	Master’s Student on Costa Rican avian diseases at SFSU
Mark Jasper	07-09	Master’s Student on California Raptors at SFSU
Dennis Anye Ndeh	08	Visiting Master’s student from Cameroon
Tony Chasar	06-09	Master’s Student on African bird diseases at SFSU
Heather Lannie	05-07	Master’s Student on California Raptors at SFSU
Alexandra Hilliard	10	Undergraduate REU student
Brett Morris	13-now	Undergraduate-SFSU Malaria of PNG birds
Antonia Zhang	13-now	Undergraduate-SFSU Hermit Thrush parasites
Tim Marzec	10-12	Undergraduate-SFSU Kingfisher parasites
Liezl Madrona	10-12	Undergraduate-SFSU California birds
Edward Evans	10-now	Undergraduate-SFSU Papua New Guinea birds
Ashley Green	09-10	Undergraduate-SFSU California hummingbirds
Joy Dionisio	09-10	Undergraduate-SFSU Birds of Costa Rica
Trevor C. Rodriguez	09-10	Undergraduate-SFSU African blood parasites
Steve Lee	08-09	Undergraduate –SFSU Parasites in SF Zoo penguins
Anna Hutchinson	06-08	Undergraduate -SFSU Parasites in California owls
Charlene Pinto	07-09	Undergraduate –SFSU Parasites in African Chickens
Maria Svensson	05-07	Undergraduate-UC Berkeley Parasites of Swainson’s Thush
Shiho Kawamura	04-06	Undergraduate -SFSU <i>Leucocytozoon</i> in Raptors
Dawn LoBaugh	04-05	Undergraduate -SFSU Technical support

Forest Soriano	03-04	Undergraduate -SFSU	<i>Haemoproteus</i> in African birds
Allison Lee	04-04	Undergraduate -SFSU	<i>Haemoproteus</i> in Raptors
Molly Sternberg	02-03	Undergraduate -SFSU	<i>Plasmodium</i> in genus <i>Nectarinia</i>
Jacklyn Taal	02-03	Undergraduate -SFSU	Technical support
F. Alex Richard	00-02	Undergraduate -SFSU	PCR methodologies

#### Thesis Committees since 2007

- Celeste Dodge, SFSU
- Gabriela Rios-Sotelo, SFSU
- Carla Sette, SFSU
- Tina Cheng, SFSU
- David Lake, SFSU
- Shiho Kawamura, SFSU
- Damien Whitfield, SFSU
- Tricia Goulding, SFSU
- Ami Antani, SFSU
- Shruti Manoj Kumar, SFSU
- Constance Agbemelo-Tsomafo, University of Ghana
- Sharon Okanga, University of Cape Town, South Africa
- Rukmali Wimalaratne, Peradeniya University, Sri Lanka
- Diego Santiago Alarcón, PhD Committee, University of Missouri, St. Louis
- Maria Svensson, PhD Committee, University of Missouri, St. Louis
- Asta Križanauskienė, PhD Committee, University of Vilnius, Lithuania

### **CONTRIBUTIONS TO CAMPUS AND COMMUNITY:**

#### **Service to the Profession:**

2010-present Core Member: Research Coordination Network: For Haemosporida of Terrestrial Vertebrates: a model parasite-host system. Funded by the NSF 2010-2014.

- This is a RCN grant that allows for annual meetings, student training and research.
- I helped organize the “International meeting and workshop on malaria and related haemosporidians in wildlife”, WV, Aug. 2011 and Aug. 2012 and in Vilnius, Aug. 2013.
- Organized and taught Workshop on Molecular Ecology of Malaria in Wildlife in Peru, 2012 and 2013, and in Cameroon, 2014.

2008-2013 President: Northern California Parasitologists.

- Organized the Winter meetings 2008 and 2010 at SFSU
- Organized the Winter meetings 2009, 2011 and 2012 UC Berkeley
- Organized the Spring meetings in 2008, 2009 and 2010 at the Marconi Conference Center in Marshall, California. Organized the Spring meeting in 2011 and Fall meeting 2012 at the SFSU Romberg Tiburon Center

2011 October 11-15<sup>th</sup>, Served on the Systematics Phylogenetics Panel at the National Science Foundation.

- Involved the thorough evaluation of 15 grant proposals to the NSF.

2007-present Member of the Scientific Board: Island Endemics Foundation.

- Involves several meetings each semester
- Attended the Islands of Mexico meeting in Ensenada, Mexico, July, 2009.

2005-present Member of the Editorial Board of the journal Ekologija.

2007-2009 Member of the Editorial Board of The Open Ecology Journal.

I have reviewed >50 manuscripts/proposals for journals/granting agencies since 2007.

#### **Service to the University:**

- Faculty Advisor, SFSU Wildlife Society, 2013-present
- Faculty Advisor, SFSU Pre-Veterinary Society, 2009-present
- Faculty Advisor, SFSU Student Researchers in Biosciences, 2009-2012
- Judge for COSE annual student presentation showcase 2007, 2009
- Judge for Nelson and Beckman Fellowships, 2009
- Faculty marshal in the SFSU 2010 Commencement Ceremony.
- Judge for the 22<sup>nd</sup> annual California State University Research Competition. 2008



**Service to the Department of Biology:**

- Chair, Development Committee, Dept. of Biology, SFSU 2010-present
- (Organized the Friends of Biology Open House, 11. April 2013)
- Chair, Search Committee, Global Health Ecologist Faculty Position, Fall 2011.
- Member of Dept. of Biology Curriculum Committee 2008-present
- Judge for Biology Department Nelson Fellowships and Hensill and Kuby Scholarships. 2008
- Member of Search Committee for Genetics Faculty Candidate. Fall 2008.
- Sponsor for 1-month visiting professors, Dr. Valkiunas in 2008, and Dr. Juan Martinez, 2011.
- Mentor in NSF Research Experiences for Undergraduates Program at SFSU, 2009-11.
- Advisor for General Biology
- I have written letters of recommendation for over 120 SFSU students since 2007.

**Service to the Community:**

- Lecture at Golden Gate Audubon Society, March 2014
- Yearly community presentations at the Golden Gate Raptor Observatory.
- Participation in the Free University of San Francisco: [freeuniversitysf.org](http://freeuniversitysf.org)
- Lecture at the Golden Gate Audubon Society, 2007
- Lecture at the California Academy of Science, 2010

**HONORS/AWARDS:**

2012	Office of Research Sponsored Programs sabbatical for Spring 2012 semester.
2009-present	Research Associate, California Academy of Sciences.
2009	Outstanding Teacher Award, Dept. of Biology, SFSU.
2001-2004	Professors of the Future Training Program Awardee ( <a href="http://prof.ucdavis.edu/">http://prof.ucdavis.edu/</a> )
1999-2001	Research in Minority Institutions, NIH Postdoctoral Training Program Awardee
1998	Full Scholarship to attend NOAHS course: Advances in Conservation Genetics
1988	Graduated Pi Kappa Lamda, Oberlin Conservatory

**LANGUAGES:**

Fluent in Swedish, German and Lithuanian; Reading ability in Spanish

**OTHER ACTIVITIES:**

Tenured Bassoonist with the Berkeley Symphony, under the direction of Joana Carneiro