

# RAVINDER NATH MARIUS SEHGAL

## **Institutional Address:**

Department of Biology  
San Francisco State University  
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**CITIZENSHIP:** USA, Sweden, Lithuania, India (OCI)

## **I. EDUCATION/ PROFESSIONAL EXPERIENCE:**

- 2017-present Professor  
Dept. of Biology  
San Francisco State University, San Francisco, CA.
- 2012-2017 Associate Professor  
Dept. of Biology  
San Francisco State University, San Francisco, CA.
- 2007-2012 Assistant Professor  
Dept. of Biology,  
San Francisco State University, San Francisco, CA.
- 2004-2007 Adjunct Professor  
Dept. of Biology,  
San Francisco State University, San Francisco, CA.
- 2001-2004 Postdoctoral Fellow  
Research Advisors: Professor Thomas B. Smith, Ph.D. and Professor Lisa A. Tell, D.V.M.  
University of California, Davis, Davis, CA.
- 1999-2001 Postdoctoral Fellow  
Research Advisor: Professor Thomas B. Smith, Ph.D.  
Center for Tropical Research, San Francisco State University, San Francisco, CA.
- 1998-1999 Cell Biology Specialist  
Guava Technologies, Alameda, CA.
- 1988-1997 Ph.D. in Cell Biology  
Thesis Advisor: Professor Louis F. Reichardt, Ph.D.  
Dept. of Biochemistry and Biophysics  
University of California, San Francisco, San Francisco, CA.
- 1992-1994 Graduate Research  
Advisor: Professor Håkan Persson, Ph.D.  
Karolinska Institute, Lab of Molecular Neurobiology, Stockholm, Sweden
- 1984-1988 B.A. in Biology and B. Music  
Oberlin College and Conservatory of Music, Oberlin, OH.

## **II. HONORS/AWARDS:**

- 2016 Elected Fellow of the California Academy of Sciences.
- 2014-2015 SFSU Sabbatical for academic year.
- 2014 ORSP Faculty Development award to attend Statistical Course in R in Heidelberg, Germany.
- 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, NIH IRACDA Program
- 1999-2001 Research in Minority Institutions, NIH Postdoctoral Training Program Awardee
- 1988 Graduated Pi Kappa Lambda, Oberlin Conservatory

## 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. T. C. Groff\*, T. J. Lorenz, R. Crespo, T. Iezhova, G. Valkiūnas and **R. Sehgal**. 2019. Haemoproteosis lethality in a woodpecker, with molecular and morphological characterization of *Haemoproteus velans* (Haemosporida, Haemoproteidae). International Journal for Parasitology: Parasites and Wildlife. Doi: 10.1016/j.iippaw.2019.07.007
2. **R. Sehgal**. 2019. Recognition of the 4th International Conference on Malaria and Related Haemosporidian Parasites of Wildlife, held Nov. 1–5, 2018 in Beijing China. International Journal for Parasitology: Parasites and Wildlife. 8:33-35.
3. M. T. Owens et al. (68 authors including **R. Sehgal**). 2018. Collectively improving our teaching: Attempting Biology Department-wide professional development in scientific teaching. CBE: Life Sciences Education. 17(1): ar2.
4. J. Weinberg\*, J. T. Field\*, M. Ilgūnas, D. Bukauskaitė, T. Iezhova, G. Valkiūnas and **R. Sehgal**. 2018. De novo transcriptome assembly and preliminary analyses of two avian malaria parasites, *Plasmodium delichoni* and *Plasmodium homocircumflexum*. Genomics. doi: 10.1016/j.ygeno.2018.12.004.
5. J. T. Field\*, J. Weinberg\*, S. Bensch, N. E. Matta, G. Valkiūnas and **R. Sehgal**. 2018. Delineation of the genera *Haemoproteus* and *Plasmodium* using RNA-Seq and multi-gene phylogenetics. Journal of Molecular Evolution. 86:646-654.
6. A. K. Townsend, S. S. Wheeler, D. Freund, **R. Sehgal** and W. M. Boyce. 2018. Links between blood parasites, blood chemistry, and the survival of nestling American Crows. Ecology and Evolution. 8:8779-8790.
7. A. K. Townsend, C. C. Taff, S. S. Wheeler, A. M. Weis, M. G. Hinton, M. L. Jones, R. M. Logsdon, W. K. Reisen, D. Freund, **R. Sehgal** and M. Saberi. 2018. Low heterozygosity is associated with vector-borne disease in crows. Ecosphere. 9:e02407.
8. J. S. Carlson\*, B. Nelms, C. M. Barker, W. K. Reisen, **R. Sehgal** and A. J. Cornel. 2018. Avian malaria co-infections confound infectivity and vector competence assays of *Plasmodium homopolare*. Parasitology Research. 117:2385-2394.
9. A. C. Bradshaw\*, L. A. Tell, H. B. Ernest, S. Bahan, J. Carlson\* and **R. Sehgal**. 2017. Detection and prevalence of *Haemoproteus archilochus* (Haemosporida, Haemoproteidae) in two species of California hummingbirds. Parasitology Research. 116: 1879-1885.
10. G. Valkiūnas, T. A. Iezhova and **R. Sehgal**. 2016. Deforestation does not affect the prevalence of a common trypanosome in African birds. Acta Tropica. 162: 222-228.
11. D. Freund\*, S. S. Wheeler, A. K. Townsend, W. M. Boyce, H. B. Ernest, C. Cicero and **R. Sehgal**. 2016. Genetic sequence data reveals widespread sharing of *Leucocytozoon* lineages in corvids. Parasitology Research. 1-9.
12. A. R. Nelson\*, R. L. Cormier, D. L. Humple, J. C. Scullen, **R. Sehgal**, N. E. Seavy. 2016. Migration patterns of San Francisco Bay Area Hermit Thrushes differ across a fine spatial scale. Animal Migration 3:1.
13. L. C. Wilkinson\*, C. M. Handel, C. Van Hemert, C. Loiseau°, and **R. Sehgal**. 2016. Avian malaria in a boreal resident species: long-term temporal variability, and increased prevalence in birds with avian keratin disorder. International Journal for Parasitology. 46: 281-290.

14. E. L. Walther\*, G. Valkiūnas, E. A. Wommack, R. C. K. Bowie, T. A. Iezhova and **R. Sehgal**. 2016. Description and molecular characterization of a new *Leucocytozoon* parasite (Haemosporida: Leucocytozoidae), *Leucocytozoon californicus* sp. nov., found in American kestrels (*Falco sparverius sparverius*). Parasitology Research. 115: 1853-1862.
15. **R. Sehgal**. 2015. Manifold habitat effects on the prevalence and diversity of avian blood parasites. International Journal for Parasitology: Parasites and Wildlife. 4: 421-430.
16. **R Sehgal**, T. A. Iezhova, T. Marzec\*, G. Valkiūnas. 2015. *Trypanosoma naviformis* sp. nov. (Kinetoplastida: Trypanosomatidae) from widespread African songbirds, the Olive sunbird (*Cyanomitra olivacea*) and Yellow-whiskered greenbul (*Andropadus latirostris*). Zootaxa. 4034: 342-350.
17. E. L. Walther\*, J. S. Carlson\*, A. Cornel, B. K. Morris\*, and **R. Sehgal**. 2015. First molecular study of prevalence and diversity of avian haemosporidia in a Central California songbird community. Journal of Ornithology. 157: 549-564.
18. E. J. Lauron\*, H. X. Aw Yeang, S. M. Taffner, **R. Sehgal**. 2015. De novo assembly and transcriptome analysis of *Plasmodium gallinaceum* identifies the Rh5 interacting protein (*rip1*), and reveals a lack of EBL and RH gene family diversification. Malaria Journal. 14: 296.
19. J.S. Carlson\*, E. Walther\*, R. Trout Fryxell, S. Staley, L. A. Tell, **R. Sehgal**, C. M. Barker and A. J. Cornel. 2015. Identifying avian malaria vectors: sampling methods influence outcomes. Parasites and Vectors. 8: 365.
20. J. E. Martínez-Gómez, N. Matías-Ferrer, **R. Sehgal** and P. Escalante. 2015. Phylogenetic placement of the critically endangered Townsend's Shearwater (*Puffinus auricularis auricularis*): evidence for its conspecific status with Newell's Shearwater (*Puffinus a. newelli*) and a mismatch between genetic and phenotypic differentiation. Journal of Ornithology. 156: 1025-1034.
21. E. J. Lauron\*, C. Loiseau°, R. C. Bowie, G. S. Spicer, T. B. Smith, M. Melo and **R. Sehgal**. 2015. Coevolutionary patterns and diversification of avian malaria parasites in African sunbirds (Family Nectariniidae). Parasitology. 142: 635-647.
22. O. Hellgren, C. T. Atkinson, S. Bensch, T. Albayrak, D. Dimitrov, J. G. Ewen, K. S. Kim, M. R. Lima, L. Martin, V. Palinauskas, R. Ricklefs, **R. Sehgal**, G. Valkiūnas, Y. Tsuda and A. Marzal. 2015. Global phylogeography of the avian malaria pathogen *Plasmodium relictum* based on MSP1 allelic diversity. Ecography. 38: 842-850.
23. E. L. Evans\*, J. E. Martinez-Gomez and **R. Sehgal**. 2015. Phylogenetic relationships and taxonomic status of the endemic Socorro Warbler (*Setophaga pitiayumi graysoni*). Journal of Ornithology. 156: 363-370.
24. E. J. Lauron\*, K. S. Oakgrove\*, L. A. Tell, K. Biskar, S. W. Roy and **R. Sehgal**. 2014. Transcriptome sequencing and analysis of *Plasmodium gallinaceum* reveals polymorphisms and selection on the apical membrane antigen-1. Malaria Journal. 13: 282.
25. 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. 44: 717-727.
26. 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. 113: 3319-3332.
27. 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. 17: 39-45.
28. 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.

29. 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.
30. 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: 85-94.
31. 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.
32. C. Martinez\*, T. Marzec•, C. D. Smith, L. A. Tell, and **R. Sehgal**. 2013. Identification and expression of *maebi*, and erythrocyte binding gene in *Plasmodium gallinaceum*. Parasitology Research. 112: 945-954.
33. 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.
34. 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.
35. 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.
36. 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
37. 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.
38. 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
39. A. Marzal, R. E. Ricklefs, G. Valkiūnas, T. Albayrak, E. Arriero, C. Bonneaud, G. A. Pzirkák, 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. Szöllösi, H. Westerdahl, P. Zetindjiev, S. Bensch. 2011. Diversity, loss and gain of malaria parasites in a globally invasive bird. Plos One. 6 (7): e21905.
40. 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.
41. 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.
42. 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.

43. 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.
44. **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.
45. 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.
46. **R. Sehgal**. 2010. Deforestation and avian infectious diseases. Journal of Experimental Biology. 213: 955-960.
47. 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.
48. 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.
49. 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.
50. 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.
51. 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.
52. G. Valkiūnas, T. A. Iezhova, C. Loiseau° and **R. Sehgal**. 2009. Nested Cytochrome *b* polymerase chain reaction diagnostics detect sporozoites of Hemosporidian parasites in peripheral blood of naturally infected birds. Journal of Parasitology. 95: 1512-1515.
53. 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.
54. 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.
55. 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.
56. 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.
57. 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.
58. 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.

59. L. M. E. Svensson<sup>•</sup>, K. C. Ruegg, 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.
60. **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.
61. 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*). *Ornología Neotropical*. 17: 515-529.
62. **R. Sehgal**, A. C. Hull, N. Anderson, G. Valkiūnas, M. J. Markovets, S. Kawamura<sup>•</sup> and L. A. Tell. 2006. Evidence for cryptic speciation of *Leucocytozoon* spp. (Haemosporida, Leucocytozoidae) in diurnal raptors. *Journal of Parasitology*. 92(2): 375-379.
63. **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.
64. 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.
65. **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.
66. 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.
67. **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.
68. F. A. Richard<sup>•</sup>, **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.
69. **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.
70. **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.
71. 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.
72. 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.
73. 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.

#### **EDITOR-REVIEWED PUBLICATIONS:**

1. **R. Sehgal**. 2016. Death from Deforestation. [ContagionLive.com](http://ContagionLive.com).
2. **R. Sehgal**. 2016, 2017. Deforestation, Disease and Biodiversity in Cameroon. [Huffingtonpost.com](http://Huffingtonpost.com).
3. H. Wester Dahl, S. Bensch, J. Nilsson, E. O'Connor, **R. Sehgal**, S. Tesson, D. Hasselquist. 2014. Book Chapter: Pathogens and Moving Hosts. *Animal Movement Across Scales*, Oxford University Press.
4. **R. Sehgal**. 2012. The spread of Diseases in a Changing World. [Huffingtonpost.com](http://Huffingtonpost.com).

## 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 SC3:** “Mechanisms of pathogenicity in avian malaria” Principal Investigator: Ravinder Sehgal. \$471,000 total. May. 2017- Feb. 2022.
2. **National Geographic Society:** “Effects of rapid deforestation on the transmission of malaria.” Principal Investigator: Ravinder Sehgal. \$20,000 total. Feb. 2016-July 2017.
3. **Lithuanian Academy of Sciences:** “Mechanisms of virulence in protozoan parasites” Co-principal Investigator: Gediminas Valkiūnas and Ravinder Sehgal. €300,000 to Nature Research Centre, Vilnius, Lithuania.
4. **USAID:** “Using geospatial tools to investigate how deforestation affects the transmission of malaria in birds”. Principal Investigator: Damian Anong, University of Buea, Cameroon. \$286,000. Ravinder Sehgal wrote the proposal and is co-investigator.
5. **SFSU Faculty Development Award DRC:** “The first genome of an important avian malaria parasite” \$6000. 2015.
6. **CSUPERB:** “Genetic mechanisms of host specificity of malaria” \$15,000. Sept. 2012-Sept. 2013.
7. **National Geographic Society:** “Global Climate Change and Avian Malaria in Alaska”. \$18,500 total. Summer of 2012.
8. **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.
9. **SFSU mini-grant, 2008:** “Avian malaria in migrating California hawks” \$5000.
10. **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.
11. **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.
12. **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.
13. **Research in Minority Institutions (RIMI) Postdoctoral Award Recipient:** 1999-2001.

## ORAL PRESENTATIONS SINCE 2012:

### Invited presentations

- Guest Professor, University of Brasilia, Brasilia, Brazil, November 2019.
- Guest Professor, University of Buea, Cameroon, July 2018 and July 2019.
- Plenary speaker, Haemosporidians of Wildlife meeting, Beijing, China, November 2018.
- UC Berkeley, Museum of Vertebrate Zoology, April 2018.
- Northern California Parasitology meeting, UCSF, February, 2018.
- Guest Professor University of Buea, Cameroon. July 2017.
- Guest Professor, Nov. 2016. Nihon University, Kanegawa, Japan.
- Plenary speaker, Haemosporidians of Wildlife meeting. Sept. 2016, Bulgaria
- Guest Professor University of Buea, Cameroon. January. 2016.

- University of San Francisco, San Francisco, CA. Dec. 2015.
- National Research and Conservation Training Center, Shepherdstown, WV. Oct. 2015.
- San Francisco State University, San Francisco, CA. Sept. 2015
- National University of Bogota, Colombia, Dec. 2014.
- Plenary Speaker, 4<sup>th</sup> Congreso Colombiano de Zoologia, Cartagena, Colombia, Dec. 2014.
- Plenary Speaker, Meeting on Parasitology Research, Universidade Federal de Minas Gerais, Brazil, Nov. 2014
- University of Cape Town, South Africa, June 2014.
- Plenary Speaker, 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.

#### Oral Presentations at meetings

- American Society of Tropical Medicine and Hygiene, Washington DC, November 2019.
- Bay Area Ecology and Evolution of Disease meeting, Stanford, March 2019.
- Impacts of Environmental Change on Infectious Diseases, Sitges, Spain, March 2015.
- American Ornithology Union meeting, Estes Park, CO, Sept. 2014.
- 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.
- American Society for Parasitology, Quebec City, June 2013.

### **III. TEACHING EFFECTIVENESS:**

#### **Summary of All Teaching**

- BIOL 240 “Introductory Biology” S16 and F18
- BIOL 453 “General Parasitology” F09, S08, S09, F10, F11, F12, F13, F15, F16, F17 and F19
- BIOL 454 “Parasitology Laboratory” F09, S09, F10, F11, F12, F13, F15, F16 and F17
- BIOL 863 “Impact of Environmental Change on Infectious Diseases” F15 and F16
- BIOL 425 “Emerging Infectious Diseases” F08, S10, S11, S13, S14, S18 and S19
- BIOL 871 “Colloquium in Microbiology and Molecular Biology” S09
- BIOL 864 “Recent Developments in Microbiology” F07
- BIOL 318 “Our Endangered Planet” F07
- BIOL 478 “Ornithology” S06
- BIOL 380 “Comparative Embryology” S02 and S03
- 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 6 Master’s and 5 undergraduate students working in my laboratory. Since my appointment as an Assistant Professor at SFSU, I have graduated 15 Master’s students: 8 since tenure and promotion in 2012.*

Claire Loiseau, PhD	08-12	Postdoctoral Fellow studying ecology of avian disease.
Melanie Tchoumbou	15-now	PhD Student at University of Dschang, Cameroon
Malange Fedo	15-now	PhD Student at University of Buea, Cameroon
Audrey Mayi	15-now	PhD Student at University of Dschang, Cameroon



David Foncha	15-now	PhD Student at University of Buea, Cameroon	
Smith Asaah Forchu	15-18	PhD Student at University of Buea, Cameroon	
Kowo Cyril	15-now	PhD Student at University of Buea, Cameroon	
Claire Regine Tabe	15-now	Master's Student at University of Buea, Cameroon	
Esack Fonda	15-now	Master's Student at University of Buea, Cameroon	
Aoife Galvin	19-now	Master's Student on Hummingbird Pox virus	
Faith De Amaral	19-now	Master's Student on Avian malaria in Alaska	
Amir Jaber	19-now	Master's Student on Avian malaria genomes	
Wilmer Amaya-Mejia	18-now	Master's Student on Ecoimmunology	
Rama Sarvani	16-17	Visiting graduate student from India.	
Hanna Baek	17-now	Master's Student on Hummingbird parasites.	
Tierra Groff	16-18	Master's Student on Woodpecker parasites.	
Joleen Tseng	16-17	Master's Student on White-crowned sparrow songs	
Joshua Weinberg	15-17	Master's Student on transcriptomics of pathogenic malaria	
Mark Russell	15-now	Master's Student on Peruvian avian blood parasites	
Jasper Toscani Field	15-17	Master's Student on Alaskan avian blood parasites	
Andrew Bradshaw	15-now	Master's Student on Eagle malaria	
Dena Emmerson	13-15	Master's Student on White-crowned sparrow songs	
David Freund	13-15	Master's Student on malaria in crows.	
Bradley Bowser	13-now	Master's Student on malaria genomics	
Allison Nelson	12-15	Master's Student on Hermit thrush connectivity	
Elvin Lauron	12-14	Master's Student on host parasite co-speciation	
Erika Walther	11-14	Master's Student on parasites of California birds.	
Laura Wilkinson	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	
Paul Whiteman	16-now	Undergraduate-SFSU	Malaria of Alaska birds.
Gina Phanthavong	15-16	Undergraduate-SFSU	Malaria of South American birds
Jenny del Rosario	15-16	Undergraduate-SFSU	Malaria of South American birds
Vincent Gloria	15-16	Undergraduate-SFSU	Malaria of South American birds
Brett Morris	13-16	Undergraduate-SFSU	Malaria of PNG birds
Jasper Field	13-15	Undergraduate-SFSU	Malaria in Hawks
Anam Siddiqui	13-15	Undergraduate-SFSU	Malaria transcriptome
Antonia Zhang	13-14	Undergraduate-SFSU	Hermit Thrush parasites
Tim Marzec	10-12	Undergraduate-SFSU	Kingfisher parasites
Liezl Madrona	10-12	Undergraduate-SFSU	California birds
Edward Evans	10-13	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

### **As member of Thesis Committees**

- Kacie Ring, SFSU
- Puneet Sanghera, SFSU
- Jordan Soloman, SFSU
- Samantha Sambado, SFSU
- 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
- Dovilė Bukauskaitė, PhD Committee, University of Vilnius, Lithuania
- 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
- Rita Žiegytė, PhD Committee, University of Vilnius, Lithuania
- Asta Križanauskienė, PhD Committee, University of Vilnius, Lithuania

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

#### **Service to the Profession since 2012:**

- 2010-2018            Core Member: Research Coordination Network: For Haemosporida of Terrestrial Vertebrates: a model parasite-host system. Funded by the NSF 2010-2015.
- This is a RCN grant that allows for annual meetings, student training and research.
  - Helped teach the “International workshop on malaria and related haemosporidians in wildlife”, WV, Aug. 2011, Aug. 2012 and Oct. 2015. Helped organize corresponding meetings in Vilnius, Aug. 2013 and in Bulgaria, Sept. 2016.
  - 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, 2010 and 2015 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
- 2007-present            Member of the Scientific Board: Island Endemics Foundation.
- Involves several meetings each year.
  - Attended the Islands of Mexico meeting in Ensenada, Mexico, July, 2009.
- 2015-present            Associate Editor of the journal International Journal for Parasitology: Parasites and Wildlife
- 2005-present            Member of the Editorial Board of the journal Ekologija.

#### **I have reviewed >40 manuscripts/proposals for journals/granting agencies since 2012.**

Journals include: *Science, Parasitology, PNAS, PLoS ONE, Raptor Research, International Journal of Parasitology, J. Parasitology, J. Zoology, Canadian J. Zoology, Molecular Ecology, Oikos and Parasitology Research.*

Granting agencies include: NSF, NIH, National Geographic Society, Czech Science Foundation, Lithuanian Academy of Sciences, Qatar Research Foundation.

**Service to the University:**

- Member of All-University Committee of International Programs (AUCIP), 2016-present
- Faculty Advisor, Globe Med Student Society, 2016-present
- Faculty Advisor, SFSU Wildlife Society, 2013-present
- Faculty Advisor, SFSU Pre-Veterinary Society, 2009-present

**Service to the Department of Biology:**

- Hiring Committee: Virologist Position, 2018-2019
- Chair, Development Committee, Dept. of Biology, SFSU 2010-2018
- Organized the Friends of Biology Open House, 11. April 2013, and April 2016.
- Member of Search Committee for Cell and Molecular Biology Faculty Candidate. Fall 2013.
- Chair, Hiring Committee, Global Health Ecologist Faculty Position, Fall 2011.
- Sponsor for 1-month visiting professors, Dr. Valkiūnas in 2008, Dr. Juan Martinez, 2011, Dr. Tatjana Iezhova, 2015.
- Advisor for General Biology
- I have written letters of recommendation for over 90 SFSU students since 2012.

**Service to the Community:**

- Co-founder and Technical Adviser for Partners for Sustainable Development in Cameroon. [www.pasdev.org](http://www.pasdev.org)
- Ongoing work with students at the Universities of Buea and Dschang in Cameroon.
- 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)
- Lectures at the Golden Gate Audubon Society
- Lectures at the California Academy of Science

**LANGUAGES:**

Swedish, German, Lithuanian, Spanish; Reading ability in French

**OTHER ACTIVITIES**

Tenured Bassoonist with the Berkeley Symphony, under the direction of Joseph Young.

Member Bohemian Club, San Francisco

Vegan Activist