

## Joan E. Strassmann

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**Personal Data:** US Citizen, married to David C. Queller, three children, Anna, 28, Daniel 25, Philip 18.

**Current Position:** Harry C. and Olga K. Wiess Professor in Natural Sciences and Department Chair of Ecology and Evolutionary Biology, Rice University.

**Research Interests:** Cooperative alliances have occurred at several important steps in the evolution of life, and have proven evolutionarily and ecologically very successful. Studying how these alliances came to be, how conflicts are subsumed into cooperation, what conflicts remain, and how they influence sociality make up my dominant research interests. I have studied a few systems over many years beginning with social wasps, then stingless bees. Currently I study social amoebae (*Dictyostelium*), looking at genetic conflicts of interest in the social stage in several species, kin discrimination, experimental evolution, genomics, and genes that influence social behavior, and their evolutionary history. We are in the process of sequencing 3 more *Dictyostelium* genomes. I am also interested in the evolution of DNA microsatellites which are important markers for genetic relatedness and make up nearly 10% of the *Dictyostelium* genome.

### Education:

Diploma	1970	The International School of Geneva, Switzerland (High School) Univ. of Mich. Biological Station, summers 1972, 1973; winter 1973.
B.S.	1974	University of Michigan (with distinction, and honors in Zoology) Honors thesis advisor: Richard D. Alexander
Ph.D.	1979	The University of Texas at Austin, Department of Zoology Major professors: Lawrence E. Gilbert, Alan R. Templeton

**Foreign Languages:** Spanish, Italian, German, French

### Academic Positions Held:

Harry C. & Olga K. Wiess Professor of Ecology and Evolutionary Biology 2005 –  
Chair, Ecology and Evolutionary Biology Dept., 2003 –  
Professor, Rice University, 1993 –  
Associate Professor, Rice University, 1985 – 1993.  
Assistant Professor, Biology Department, Rice University, 1980 – 1985.  
NSF Postdoctoral Fellow, University of Texas at Austin, 1979 – 1980.

### Editorial Boards:

*Ecology, Ethology, and Evolution*, Editorial Board 2006 – present

*BMC Evolutionary Biology*, Editorial Board, 2005 – present  
*Journal of Evolutionary Biology*, Editorial Board 2005 –2008  
*Ecology Letters*, Editorial Board, 2004 –2007  
*Insectes Sociaux* Editorial Board 2000 – 2006  
*American Naturalist* Editorial Board, 2000 – 2003  
*Animal Behaviour* Editorial Board, 1995 – 1997

**Memberships:**

Animal Behavior Society	American Association for the Advancement of Science
American Society of Naturalists	International Union for the Study of Social Insects
Society for the Study of Evolution	International Society of Hymenopterists
Internat. Soc. for Behavioral Ecology	National Center for Science Education
American Society of Microbiologists	National Association of Biology Teachers
Sigma XI	

**Teaching Experience:**

**Lecture Courses:** Animal Behavior, 1981 to present, Molecular approaches to kin selection in social insects, Univ. São Paulo, Brazil, 1996.

**Labs:** Animal Behavior Laboratory, 1982 to present, Bird Field Biology 2006 to present, Organization for Tropical Studies undergraduate program (USAP) faculty resource person, Costa Rica, 2000; Introductory Biology Laboratory, Behavior Section, 1983 to 1989.

**Seminars:** Advanced Evolution 2003 to present, Advanced Ecology 2006, Topics in Evolution, 1981 to present, Topics in Behavioral Ecology, 1985 to present, Coral reefs and global change 2003, 2005, Ford Honors Undergraduate Interdisciplinary Research Seminar, 1988-1990.

**Undergraduate independent research:** 65 undergraduate researchers, 1995-2003; 19 publications with undergraduates as co-authors 1980 - present.

**Guest Lecturer in:** Introductory Biology (population genetics), 1980 - 1984, A tradition of teaching: recent Rice award winners (Rice Continuing Studies), 1998.

**Graduate Teaching Assistant:** Intro. Biology, Animal Behavior, Genetics. 1974-1976.

**Field Experience:**

University of Michigan Biological Station 1972-1973; Costa Rica 1974; Texas 1976-present; Venezuela 1988-2001; Brazil 1996-2000; Italy 1997-present; Southern Appalachians 2000-present

**Awards, and elected positions:**

American Academy of Arts and Sciences, elected member, April 2008.  
Houston Philosophical Society, elected member, April 2007.  
Honorary Member, Associazione Italiana per lo Studio degli Artropodi Sociali e Presociali, 2 Feb. 2005  
Fellow, American Association for the Advancement of Science, 2004

John Simon Guggenheim Memorial Fellow, 2004  
 Fellow, Animal Behavior Society, 2002  
 Councilor, Society for the Study of Evolution, 2002-2004  
 President, N. American Section, International Union for the Study of Social Insects, 2001.  
 Outstanding associate, Wiess College (Rice University Residential College), 2000  
 Society of National Association Publications Gold Award in the "Scholarly Journals/Feature Article" category for Kin selection and social insects (1998)  
*BioScience*, 48: 165-175  
 Julia Mile Chance Prize for Excellence in Teaching, Rice University, May, 1997  
 Elected to Cambridge Entomological Society, 1984.  
 Elected to Sigma Xi, 1983.  
 Phi Kappa Phi, University of Texas at Austin, 1977.  
 Honors in Zoology, thesis advisor, Richard D. Alexander, Univ. of Michigan, May 1974.  
 Hopwood Award (for undergraduate fiction), University of Michigan, 1973.

### Grants and Fellowships:

Texas Teacher Quality Grants Program Grant: # 358. Science TEKS Training for Grades 3-5 Teachers 2007, \$86,998 plus matching funds of \$113,910 (Rice and Spring Branch).  
 Texas Teacher Quality Grants Program: 786 and 828: Regional Rice Elementary Model Science Lab, \$173,996, plus matching funds of \$207,360, 1 May 2008 – 31 May 2009.  
 NSF DEB0816690 Evolution and genetics of kin recognition in a model system. 4 years 9/1/2008-8/31/2012 \$800,000 (with Queller).  
 Faculty Initiative Fund (Rice Univ.) \$36,000; Self and kin recognition in a model organism.  
 Brown Foundation Grant for innovative teaching (Rice Univ.) 2007 (\$4,800); Wild animal behavior for student-generated hypothesis testing using video uploaded to YouTube and modules on Connexions  
 NSF EF 0626963 Comparative sequencing of social amoebae in the Dictyostelidae 2006, 2 years, \$948,738 (with Gibbs, Kuspa, Queller, Weinstock).  
 Texas Teacher Quality Grants Program: TEKS Training for Grades 3-5 Science Teachers. #352. 2007, \$86,999 plus matching funds of \$113,750 (Rice and HISD).  
 Texas Teacher Quality Grants program: TEKS Training for elementary teachers of science 286. 2006, \$147,448 plus matching funds of \$204,900 (Rice and HISD).  
 Texas Teacher Quality Grants Program: TEKS Science training for elementary teachers 287. 2006, \$147,448 plus matching funds of \$204,900 (Rice and HISD).  
 DOE Joint Genome Institute agreement to sequence *Dictyostelium purpureum* (with Queller, Kuspa, Sucgang)  
 John Simon Guggenheim Memorial Fellowship 2004  
 NSF FIBR EF 0328455 The evolution of biological social systems, 2003, 5 years, \$5,000,000 (with Queller, Kuspa, Shaulsky, Shaw).  
 NSF DEB-0108478 Cell lineage conflicts in the social amoeba, *Dictyostelium discoideum*, 2001, 3 years, \$390,000 (with Queller).

- NSF DEB-0075581 Cell lineage conflicts in the cellular slime mold, *Dictyostelium discoideum*, 2000, 1 year, \$90,000 (with Queller).
- NSF DBI-0070330 An automated DNA sequencer for microsatellite genotyping of social insects and sequencing in molecular biology, 2000, 1 year, \$108,080, plus cost sharing \$50,916 (with Queller, Bennett, Gomer, and Parry).
- NSF IBN-9975351 Cooperation with and without genetic relatedness, 1999, 3 years, \$240,000 (with Queller).
- NSF IBN 9808809 Conflict over male production in stingless bees, 1998, 3 years, \$225,000 (with Queller).
- Fundação de Amparo e Pesquisa do Estado de São Paulo (FAPESP) Organização colonial e padrões de reprodução em abelhas indígenas (Colony organization and patterns of reproduction in native bees [Meliponinae]), 1998, 3 years, through Universidad de São Paulo (with Vera Lucia Imperatriz Fonseca, Hayo Velthuis, David Queller, Carminda Cruz Landim).
- Fundação de Amparo e Pesquisa do Estado de São Paulo (FAPESP) 1996. Travel grant to visit University of São Paulo, about \$5,000.
- NSF IBN-9507515 Worker control of reproduction in multiple-queen wasp societies. 1995, 3 years, \$250,000 (with Queller).
- NSF DEB-9510126 Genetic relatedness and successional structure in *Polistes*, 1995, 3 years, \$220,000 (with Queller).
- NSF IBN-9210051 Within-colony kin discrimination in a social insect, 1992, 3 years, \$166,000 (with Queller).
- NSF BSR-9021514 Relatedness and sociality in neotropical swarm-founding wasps. 1991, 3 years \$263,000 (with Hughes & Queller).
- Brown Foundation Grant for innovative teaching (Rice Univ.) 1989 (\$3,200); Development of computer simulations of evolutionary and behavioral models for undergraduates.
- NSF BSR88-05915, Demographic advantages of eusociality, 1988, 3 years, \$218,000 (with Queller).
- National Geographic 3897-88, Relatedness and the evolution of sociality in tropical wasps, 1988, one year, \$12,000 (with Hughes & Queller).
- NSF BSR86-05026, Relatedness and inclusive fitness in *Polistes*, 1986, 3 years, \$203,000, (with Queller).
- Brown Foundation Grant for innovative teaching (Rice Univ.) 1985 (\$4,700); Development of field experiments in behavioral ecology for undergraduates at Brazos Bend State Park.
- American Philosophical Association Grant, Nest site constraints and cooperative breeding in the social wasp, *Polistes carolinus*. 1986, 1 year \$2,200.
- Brown Foundation Grant for innovative teaching (Rice Univ.) 1982 (\$1,050); Creation of a behavior laboratory for undergraduates on mate choice, schooling, and aggression using fish in aquaria.
- NSF DEB81-17682, Evolutionary Biology of *Polistes* wasps, 1981, 2 years, \$70,000.
- American Philosophical Association Grant, Hormonal control of dominance behavior in paper wasps, 1980 \$1,000.
- Rice University Grant, 1980, \$1,500.
- Sigma Xi Grant in Aid, 1980 \$220.

NSF PCM 80-03766, Pheromone-endocrine interactions and the regulation of dominance behavior and ovarian development in the social wasp, *Polistes annularis* 2 years, (subcontract \$16,758) .  
 NSF Postdoctoral Fellowship, 1979.  
 NIH Genetics Training Grant, 1976 - 1979.  
 Teaching Assistantship, 1974 - 1976.  
 Grant in Aid, University of Michigan Biological Station, 1973.

### Publications:

\*undergraduate co-author

Strassmann, J.E. 1979. *Kin selection and the population biology of the social paper wasp Polistes exclamans*. Ph.D. Dissertation, University of Texas at Austin (co-chairs Alan R. Templeton, Lawrence E. Gilbert), Ann Arbor Microfilms.

1. Strassmann, J.E. 1979. Honey caches help female paper wasps (*Polistes annularis*) survive Texas winters. *Science* 204:207-209.
2. Strassmann, J.E. & R.R. Thomas\*. 1980. An analysis of the interrelationships among nest variables in *Polistes exclamans* (Hymenoptera: Vespidae). *Journal of the Kansas Entomological Society* 53:770-780.
3. Strassmann, J.E. 1981. Evolutionary implications of early male and satellite nest production in *Polistes exclamans* colony cycles. *Behavioral Ecology and Sociobiology* 8:55-64.
4. Strassmann, J.E. 1981. Parasitoids, predators and group size in the paper wasp, *Polistes exclamans*. *Ecology* 62:1225-1233.
5. Strassmann, J.E. 1981. Kin selection and satellite nests in *Polistes exclamans* In: *Natural selection and social behavior: recent research and new theory*, pp. 45-57. R.D. Alexander and D.W. Tinkle (Eds.), Chiron Press.
6. Strassmann, J.E. 1981. Wasp reproduction and kin selection: Reproductive competition and dominance hierarchies among *Polistes annularis* foundresses. *The Florida Entomologist* 64: 74-88.
7. Strassmann, J.E. and Meyer, D. C.\*. 1983. Gerontocracy in the social wasp, *Polistes exclamans*. *Animal Behaviour* 31:431-438.
8. Strassmann, J.E. 1983. Nest fidelity and group size among foundress of *Polistes annularis* (Hymenoptera:Vespidae). *Journal of the Kansas Entomological Society* 56:621-634.
9. Strassmann, J.E. and Orgren, C. F. 1983. Nest architecture and brood development times in the paper wasp *Polistes exclamans* (Hymenoptera:Vespidae). *Psyche* 90:237-248.
10. Strassmann, J.E. 1984. Female-biased sex ratios in social insects lacking morphological castes. *Evolution* 38:256-266.
11. Strassmann, J.E., Meyer, C. D.\* and Matlock, R. L.\*. 1984. Behavioral castes in the social wasp *Polistes exclamans*. *Sociobiology* 8:211-225.

12. Lutz, G.G.\*, Strassmann, J. E. and Hughes, C. R. 1984. Nest defense by the social wasps, *Polistes exclamans* and *P. instabilis* (Hymenoptera:Vespidae) against the parasitoid *Elasmus polistis* (Hymenoptera:Chalcidoidea:Eulophidae). *Entomological News*, 95:47-50.
13. Sullivan, J.D.\* and Strassmann, J. E. 1984. Physical variability among nest foundresses in the polygynous social wasp *Polistes annularis*. *Behavioral Ecology and Sociobiology* 15:249-256.
14. Strassmann, J., Lee, R., Rojas, R. and Baust, J. 1984. Caste and sex differences in cold-hardiness in the social wasps, *Polistes annularis* and *P. exclamans* (Hymenoptera: Vespidae). *Insectes Sociaux* 31:291-301.
15. Strassmann, J.E. 1985. Relatedness of workers to brood in the social wasp, *Polistes exclamans* (Hymenoptera:Vespidae). *Zeitschrift für Tierpsychologie* 69:141-148.
16. Strassmann, J.E. 1985. Worker mortality and the evolution of castes in the social wasp, *Polistes exclamans*. *Insectes Sociaux* 32:275-285.
17. Strassmann, J.E. and Hughes, C. R. 1986. Latitudinal variation in protandry and protogyny in polistine wasps. *Monitore Zoologico Italiano (N.S.)* 20:87-100.
18. Hughes, C. R., Beck, M. O.\* and Strassmann, J. E. 1987. Queen succession in the social wasp, *Polistes annularis*. *Ethology* 76:124-132.
19. Strassmann, J.E., Queller, D. C. and Hughes C. R. 1987. Constraints on independent nesting by *Polistes* foundresses in Texas. pp. 379-380. *Chemistry and biology of social insects*, J. Eder and H. Rembold (eds.) Verlag J. Peperny, Munich.
20. Queller, D. C. and Strassmann, J. E. 1987. Selection on group nesting in foundresses of *Polistes annularis*. pp. 333-334. *Chemistry and biology of social insects*, J. Eder and H. Rembold (eds.) Verlag J. Peperny, Munich.
21. Queller, D.C. and Strassmann, J. E. 1988. Reproductive success and group nesting in the paper wasp *Polistes annularis*. pp. 76-96. IN: *Reproductive success: studies of individual variation in contrasting breeding systems* T. Clutton-Brock (Ed.), Chicago.
22. Strassmann, J. E., Queller, D. C., and Hughes, C. R. 1988. Predation and the evolution of sociality in the paper wasp, *Polistes bellicosus*. *Ecology* 69:1497-1505.
23. Strassmann, J. E. 1988. The importance of worker reproduction in social insects. *Trends in Ecology and Evolution* 3:286-287.
24. Queller, D. C., Strassmann, J. E. and Hughes, C. R. 1988. Genetic relatedness in colonies of tropical wasps with multiple queens. *Science* 242:1155-1157.
25. Hughes, C. R. and Strassmann, J. E. 1988. Foundress mortality after worker emergence in social wasps (*Polistes*). *Ethology* 79:265-280.
26. Hughes, C. R. and Strassmann, J. E. 1988. Age is more important than size in determining dominance among workers in the primitively eusocial wasp, *Polistes instabilis*. *Behaviour* 107:1-14.

27. Strassmann, J. E. and Queller, D. C. 1989. Ecological determinants of social evolution. pp. 81-101 IN: M. Breed & R. Page eds. *The genetics of social evolution*. Westview Press, Boulder, Colorado.
28. Queller, D. C. and Strassmann, J. E. 1989. Measuring inclusive fitness in social wasps. pp. 103-122 IN: M. Breed & R. Page eds. *The genetics of social evolution*. Westview Press, Boulder, Colorado.
29. Strassmann, J. E. 1989. Early termination of brood rearing in the social wasp, *Polistes annularis*: (Hymenoptera: Vespidae). *Journal of the Kansas Entomological Society* 62: 353-362.
30. Strassmann, J. E. 1989. Altruism and relatedness at colony foundation in social insects *Trends in Ecology and Evolution* 4:371-374.
31. Strassmann, J. E., Hughes, C. R., Queller, D. C., Turillazzi, S., Cervo, R., Davis, S. K. and Goodnight, K. F. 1989. Genetic relatedness in primitively eusocial wasps. *Nature* 342:268-270.
32. Queller, D. C., Hughes, C. R., and Strassmann, J. E. 1990. Wasps fail to make distinctions. *Nature* 344:388.
33. Strassmann, J. E. 1989. Group colony foundation in *Polistes annularis* (Hymenoptera: Vespidae). *Psyche* 96:223-236.
34. Solís, C. R. and Strassmann, J. E., 1990. Presence of brood affects caste differentiation in the social wasp, *Polistes exclamans*. Viereck (Hymenoptera: Vespidae) *Functional Ecology* 4:531-541.
35. Hughes, C.R., Strassmann, J.E. and Queller, D.C. 1990. Relatedness in primitively eusocial wasps. pp. 67-68. In: *Social Insects and the Environment*, Proceedings of the 11th International Congress of IUSI, 1990, G.K Veeresh, B. Mallik and C.A. Viraktamath (eds.), Oxford and IBH, New Delhi.
36. Hughes, C.R., Queller, D.C. and Strassmann, J.E. 1990. Relatedness in neotropical polygynous wasps. pp. 252-253. In: *Social Insects and the Environment*, Proceedings of the 11th International Congress of IUSI, 1990, G.K Veeresh, B. Mallik and C.A. Viraktamath (eds.), Oxford and IBH, New Delhi.
37. Strassmann, J. E., Hughes, C. R., and Queller, D. C., 1990. Colony defense in the social wasp, *Parachartergus colobopterus*. *Biotropica* 22:324-327.
38. Gastreich, K. R.\* Queller, D. C., Hughes, C. R., and Strassmann, J. E., 1990. Kin discrimination in the tropical swarm-founding wasp, *Parachartergus colobopterus*. *Animal Behaviour* 40:598-601.
39. Davis, S, Strassmann, J., Hughes, C., Pletscher, S. and Templeton, A. 1990. Population structure and kinship in *Polistes* (Hymenoptera: Vespidae): an analysis using ribosomal DNA and protein electrophoresis. *Evolution* 44:1242-1253.
40. Strassmann, J. E., Queller, D. C., Solís, C. R., and Hughes, C. R. 1991. Relatedness and queen number in the neotropical wasp, *Parachartergus colobopterus*. *Animal Behaviour* 42: 461-470.
41. Strassmann, J. E. 1991. Costs and benefits of colony aggregations in the social wasp *Polistes annularis*. *Behavioral Ecology* 2:204-209.

42. Queller, D. C., Strassmann, J. E. and Hughes, C. R., 1992. Genetic relatedness and population structure in primitively eusocial wasps in the genus *Mischocyttarus*. *Journal of Hymenoptera Research* 1:81-89.
43. Strassmann, J. E., Gastreich, K. R., Queller, D. C., and Hughes, C. R., 1992. Demographic and genetic evidence for cyclical changes in queen number in a neotropical wasp, *Polybia emaciata*. *American Naturalist* 140:363-372.
44. Queller, D. C., Negrón-Sotomayor, J. A.\*, Strassmann, J. E. and Hughes, C. R., 1993. Queen number and genetic relatedness in a neotropical wasp, *Polybia occidentalis* *Behavioral Ecology* 4:7-13.
45. Choudhary, M., Strassmann, J. E., Solís C. R., and Queller, D. C., 1993. Microsatellite variation in a social insect. *Biochemical Genetics* 31:87-96.
46. Hughes, C. R., Queller, D. C., Strassmann, J. E., and Davis, S. K., 1993. Relatedness and altruism in *Polistes* wasps. *Behavioral Ecology* 4:128-137.
47. Hughes, C. R., Queller, D. C., Strassmann, J. E., Gastreich, K. R., Solís, C. R., and Negrón, J. A.\*, 1993. The maintenance of high genetic relatedness in multi-queen colonies of social wasps. pp. 153-170 In: L. Keller, & D. Cherix (eds.) *Queen number and sociality in insects* Oxford University Press.
48. Queller, D. C., Strassmann, J. E., and Hughes, C. R., 1993. Microsatellites and Kinship. *Trends in Ecology and Evolution* 8:285-288.
49. Strassmann, J. E. 1993. Weak queen or social contract? *Nature* 363: 502-503.
50. Queller, D. C., Strassmann, J. E., Hughes, C. R., Solís C. R., Moralez DeLoach, D., 1993. A selfish strategy of social insect workers that promotes social cohesion. *Nature* 365:639-641.
51. Carpenter, J. M., Strassmann, J. E., Hughes, C. R., Solís, C. R., Turillazzi, S. and Cervo, R., 1993. The phylogenetic relationships among social parasites and their hosts in polistine wasps, *Cladistics* 9:129-146.
52. Gastreich, K. R., Strassmann, J. E., Queller, D. C., 1993. Determinants of high genetic relatedness in the swarm-founding wasp, *Protopolybia exigua* *Ethology, Ecology and Evolution* 5:529-539.
53. Choudhary, M., Strassmann, J. E., Queller, D. C., Turillazzi, S. and Cervo, R. 1994. Social parasites in polistine wasps are monophyletic: implications for sympatric speciation. *Proceedings of the Royal Society: Biological Sciences*. 257: 31-35.
54. Strassmann, J. E., Hughes, C. R., Turillazzi, S. Solís, C. R., and Queller, D. C., 1994. Genetic relatedness and incipient eusociality in primitively eusocial stenogastrine wasps, *Animal Behavior* 48:813-821.
55. Peters, J.M.\*, Queller, D.C., Strassmann, J.E. and Solís, C.R. 1995. Maternity assignment and queen replacement in a social wasp. *Proceedings of the Royal Society: Biological Sciences*. 260: 7-1251.
56. Strassmann, J.E., Queller, D.C. and Solís, C. R. 1995. Genetic relatedness and population structure in the social wasp, *Mischocyttarus mexicanus* (Hymenoptera: Vespidae). *Insectes Sociaux* 42: 379-383.

57. Strassmann, J. E. 1996. Selective altruism towards closer over more distant relatives in colonies of the primitively eusocial wasp, *Polistes*. in: ***Natural History and Evolution of Paper Wasps*** pp. 190-201(eds. S. Turillazzi & M. J. West-Eberhard) Oxford University Press.
58. Strassmann, J. E., Solís, C. R., and Barefield, K.\*, and Queller, D. C., 1996. Trinucleotide microsatellite loci in a swarm-founding neotropical wasp, *Parachartergus colobopterus* and their usefulness in other social wasps. ***Molecular Ecology*** 5:459-461.
59. Strassmann, J. E., Solís, C. R., Peters, J. M.\* and Queller, D. C., 1996. Strategies for finding and using highly polymorphic DNA microsatellite loci for studies of genetic relatedness and pedigrees. In ***Molecular Zoology: Advances, strategies and protocols*** pp. 163-180 and 528-549. (eds. J. Ferraris & S. Palumbi), Wiley.
60. Goodnight, K.F., Strassmann, J.E., Klingler, C.J. and Queller, D.C., 1996. Single mating and its implications for kinship structure in a multiple-queen wasp. ***Ethology, Ecology & Evolution***. 8:191-198
61. Strassmann, J. E., Barefield, K., Solís, C. R., Hughes, C. R., and Queller, D. C., 1997. Trinucleotide microsatellite loci for a social wasp, *Polistes*. ***Molecular Ecology*** 6: 97-100.
62. Queller, D.C., Peters, J.M., Solís, C.R. & Strassmann, J.E., 1997. Control of reproduction in social insect colonies: individual and collective relatedness preferences in the paper wasp, *Polistes annularis*. ***Behavioral Ecology and Sociobiology*** 40:3-16.
63. Strassmann, J. E., Solís, C. R., Hughes, C. R., Goodnight, K. F. and Queller, D. C., 1997. Colony life history and demography of a swarm-founding social wasp. ***Behavioral Ecology and Sociobiology***. 40: 71-77.
64. Strassmann, J. E., Peters, J. M., Barefield, K., Solís, C. R., Hughes, C. R., Queller, D. C. 1997. Trinucleotide microsatellite loci and increased heterozygosity in cross species applications in the social wasp, *Polistes*. ***Biochemical Genetics*** 35:273-279.
65. Strassmann, J. E., Klingler, C. J., Arévalo, E., Zacchi, F., Husain, A.\*, Williams, J.\*, Seppä, P., Queller, D., 1997. Absence of within-colony kin discrimination in behavioural interactions of swarm-founding wasps. ***Proceedings of the Royal Society: Biological Sciences***. 264: 1565-1570.
66. Queller, D. C. and Strassmann, J. E., 1998. Kin selection and social insects. ***BioScience***, 48: 165-175. (recipient of the Society of National Association Publications Gold Award in the "Scholarly Journals/Feature Article" category)
67. Solís, C. R., Hughes, C. R., Klingler, C. J., Strassmann, J. E. and Queller, D. C., 1998. Lack of kin discrimination during wasp colony fission. 1998. ***Behavioral Ecology*** 9:172-176.

68. Field, J., Solís, C. R., Queller, D. C., Strassmann, J. E., 1998. Social and genetic structure of paper wasp cofoundress associations: tests of reproductive skew models. *American Naturalist*, 151:545-563.
69. Peters, J. M., Queller, D. C., Imperatriz-Fonseca, V. L. and Strassmann, J. E., 1998. Microsatellite loci for stingless bees. *Molecular Ecology*, 7:784-787.
70. Strassmann, J. E. Goodnight, K. F., Klingler, C. J. and Queller D. C. 1998. The genetic structure of swarms and the timing of their production in the queen cycles of neotropical wasps, *Molecular Ecology*, 7:709-718.
71. Arévalo, E., Strassmann, J. E., and Queller, D. C. 1998 Conflicts of interest in social insects: male production in two species of *Polistes*. *Evolution* 52:797-805.
72. Ezenwa, V. O.\*, Henshaw, M. Queller, D. C., and Strassmann, J. E., 1998. Patterns of buzz running, a swarm initiation behavior, in the neotropical wasp, *Parachartergus colobopterus*, *Insectes Sociaux*, 45:445-455.
73. Ezenwa, V. O.\*, Peters, J. M., Hastings, M. D.\*, Zhu, Y., Arévalo, E., Seppä, P. Pedersen, J. S., Zacchi, F. Queller, D. C. and Strassmann, J. E. 1998. Ancient conservation of trinucleotide microsatellite loci in polistine wasps. *Molecular Phylogenetics and Evolution* 10:168-177.
74. Wooninck, L., Strassmann, J. E. Fleischer, R. Warner L. L. 1998. Characterization of microsatellite loci in a pelagic spawner: the bluehead wrasse, *Thalassoma bifasciatum*. *Molecular Ecology* 7:1613-1614.
75. Hastings, M. D.\*, Queller, D. C., Eischen, F. and Strassmann, J. E., 1998. Kin selection, relatedness and worker control of reproduction in a large-colony epiponine wasp, *Brachygastra mellifica*. *Behavioral Ecology*, 9:573-581.
76. Peters, J. M., Queller D. C., Imperatriz-Fonseca, V. L., Roubik, D. W., Strassmann, J. E. 1999. Mate number, kin selection and social conflicts in stingless bees and honey bees. *Proceedings of the Royal Society: Biological Sciences*. 266:379-384.
77. Bernasconi, G. and Strassmann, J. E. 1999. Cooperation among unrelated individuals: the ant foundress case. *Trends in Ecology and Evolution* 14:477-482.
78. Zhu, Y., Queller, D. C., Strassmann, J. E. 2000. A phylogenetic perspective on sequence evolution in microsatellite loci. *Journal of Molecular Evolution* 50:324-338.
79. Herman, R. A.\*, Queller, D. C., and Strassmann, J. E. 2000 Control of worker activity and queen suppression in the swarm-founding wasp *Parachartergus colobopterus* *Animal Behaviour* 59:841-848.
80. Strassmann, J. E., Seppä, P., and Queller, D. C. 2000. Absence of within-colony discrimination: foundresses of the social wasp, *Polistes carolina*, do not prefer their own larvae. *Naturwissenschaften* 87:266-269.
81. Queller, D. C., Zacchi, F., Cervo, R., Turillazzi, S., Henshaw, M., Santorelli, L.\*, and Strassmann, J. E. 2000. Unrelated helpers in a social insect. *Nature* 405:784-787.

82. Henshaw, M. Strassmann, J. E. Quach, S. Queller D. C., 2000 Male production in *Parachartergus colobopterus*, a neotropical, swarm-founding wasp, ***Ethology, Ecology and Evolution* 12:161-174**
83. Henshaw, M. T., Strassmann, J. E., Queller, D. C., 2000. The independent origin of a queen number bottleneck that promotes cooperation in the African swarm-founding wasp, *Polybioides tabidus*. ***Behavioral Ecology and Sociobiology* 48: 478-483.**
84. Zhu, Y. , Landi, M., Queller, D. C., Turillazzi, S., and Strassmann, J. E., 2000. Polymorphic microsatellite loci for primitively eusocial Stenogastrine wasps. ***Molecular Ecology* 9:2203-2205.**
85. Strassmann, J. E., Zhu, Y., and Queller, D. C., 2000 Altruism and social cheating in the social amoeba, *Dictyostelium discoideum*. ***Nature* 408:965-967**
86. Zhu, Y. Strassmann, J. E., and Queller D. C., 2000. Insertions, substitutions, and the origin of microsatellites. ***Genetical Research* 76:227-236.**
87. Henshaw, M. T., Strassmann, J. E., and Queller, D. C., 2001. Swarm-founding in the Polistine wasps: the importance of finding many microsatellite loci in studies of adaptation. ***Molecular Ecology* 10: 185-191.**
88. Strassmann, J. E. 2001. The rarity of multiple mating by females in the social hymenoptera. ***Insectes sociaux* 48: 1-13.**
89. Strassmann, J. E., Sullender, B. W., and Queller D. C., 2002. Caste totipotency and conflict in a large-colony social insect. ***Proceedings of the Royal Society: Biological Sciences*. 269:263-270.**
90. Henshaw, M. T., Queller, D. C., and Strassmann, J. E., 2002. Control of male production in the swarm-founding wasp, *Polybioides tabidus*. ***J. Evolutionary Biology*, 15:262-268.**
91. Queller, D. C., and Strassmann, J. E. 2002. The many selves of social insects. ***Science* 296:311-313.**
92. Seppä, P., Queller, D. C., and Strassmann, J. E. 2002. Reproduction in foundress associations of the social wasp, *Polistes carolina*. ***Behavioral Ecology*13: 531-542.**
93. Tóth, E., Imperatriz-Fonseca, V. L., Queller, D. C., and Strassmann, J. E., 2002. Genetic and behavioral conflict over male production between workers and queens in the stingless bee, *Paratrigona subnuda*, ***Behavioral Ecology and Sociobiology* 53:1-8**
94. Foster, K. R., Fortunato, A., Strassmann, J. E. and Queller, D. C., 2002. The costs and benefits of chimaerism in the social amoeba, *Dictyostelium discoideum*. ***Proceedings of the Royal Society: Biological Sciences*. 269: 2357-2362.**
95. Tóth, E., Strassmann, J. E., Nogueira Neto, P., Imperatriz-Fonseca, V. L., and Queller, D. C. 2002. Male production in stingless bees: variable outcomes of queen- worker conflict. ***Molecular Ecology* 11:2661-2667.**

96. Queller, D.C., Ponte, E., Bozzaro, S. and Strassmann, J.E. 2003. Single-gene greenbeard effects in the social amoeba, *Dictyostelium discoideum*. *Science* 299: 105-106.
97. Strassmann, J. E., Nguyen, J. S.,\* Arévalo, E., Cervo, R., Zacchi, F., Turillazzi, S., Queller, D. C., 2003. Worker interests and male production in *Polistes gallicus*, a Mediterranean social wasp, *J. Evolutionary Biology* 16: 254-259.
98. Fortunato, A, Santorelli, L., Strassmann, J. E., Queller, D. C., 2003. Co-occurrence in nature of different clones of the social amoeba, *Dictyostelium discoideum* *Molecular Ecology*, 12:1031-1038.
99. Fortunato, A., Queller, D. C., and Strassmann, J. E., 2003. A linear dominance hierarchy among clones in chimeras of the social amoeba, *Dictyostelium discoideum*, *J. Evolutionary Biology* 16:438-445.
100. Tóth, E., Imperatriz-Fonseca, V. L., Strassmann, J. E., and Queller, D. C., 2003. Queens, not workers produce the males in the stingless bee, *Schwarziana quadripunctata quadripunctata*, *Animal Behaviour*. 66:359-368.
101. Landi, M. Queller, D. C., Turillazzi, S., and Strassmann, J. E., 2003. Low relatedness and frequent queen turnover in the stenogastrine wasp *Eustenogaster fraterna* favor the life insurance over the haplodiploid hypothesis for the origin of eusociality. *Insectes Sociaux* 50:262-267.
102. Queller, D. C., Foster, K. F., Fortunato, A. F., and Strassmann, J. E. 2003. Cooperation and conflict in the social amoeba *Dictyostelium discoideum* in: *Social insects and sociogenetics*. Ed. by P. Kikuchi, T. Kubo, S. Higashi, Hokkaido University Press, pp. 173-200.
103. Platt, T.\* , Queller, D. C., and Strassmann, J. E. 2004. Aggression and worker control of caste fate and male investment in a multiple queen wasp, *Parachartergus colobopterus* *Animal Behaviour* 67:1-10.
104. Dani, F. R., Foster, K. R., Zacchi, F., Seppä, P., Massolo, A., Carelli, A., Arévalo, E., Queller, D. C., Strassmann, J. E., Turillazzi, S. 2004. Can cuticular lipids provide sufficient information for within-colony nepotism in wasps? *Proc. Royal Soc. Lond. B*. 271:745-753.
105. Arévalo, E., Zhu, Y., Carpenter, J. M., Strassmann, J. E. 2004. The phylogeny of the social wasp subfamily Polistinae: evidence from microsatellite flanking sequences, mitochondrial COI sequence, and morphological characters. *BMC Evolutionary Biology* 4: 8.
106. Tóth, E. Queller, D. C., Dollin, A. and Strassmann, J. E. 2004. Conflict over male parentage in stingless bees. *Insectes Sociaux* 51:1-11.
107. Cervo, R., Stemmer, C., Castle, W.\* , Queller, D. C., and Strassmann, J. E. 2004. Social parasitism of *Polistes dominulus* by *Polistes nimphus* (Hymenoptera, Vespidae). *Insectes Sociaux* 51:101-108.
108. Foster, K. R., Shaulsky, G., Strassmann, J. E., Queller, D. C., Thompson, C. R. L. 2004. Pleiotropy as a mechanism to stabilize cooperation. *Nature* 431:693-696.
109. Strassmann, J. E., Fortunato, A., Cervo, C., Turillazzi, S., Damon, J. M.\* , and Queller, D.C. 2004. The cost of queen loss in the social wasp *Polistes dominulus*

- (Hymenoptera: Vespidae). *Journal of the Kansas Entomological Society*, 77:343-355.
110. Strassmann, J., Queller, D., \*Emerson, J., \*Stagi, M., Cervo, C., Turillazzi, S. 2004. Comparing the costs and benefits of grouping with non-relatives in the social amoeba *Dictyostelium discoideum* and the social wasp *Polistes dominulus*. *Redia* 87:145-148.
  111. Castillo, D. I., Switz\*, G. T., Foster, K. R., Queller, D. C., Strassmann, J. E. 2005. A cost to chimerism in *Dictyostelium discoideum* on natural substrates. *Evolutionary Ecology Research*, 7:263-271.
  112. Fanelli, D., Henshaw, M., Cervo, R., Turillazzi, S., Queller, D. C., Strassmann, J. E. 2005. The social parasite wasp *Polistes atrimandibularis* does not form host races. *J. evol. Biol.* 18: 1362-1367.
  113. \*Jha, S., \*Casey-Ford, R. G., Pedersen, J. S., Platt, T. G., Cervo, R., Queller, D. C., Strassmann, J. E. 2006. The queen is not a pacemaker in the small colony wasps *Polistes instabilis* and *Polistes dominulus*. *Animal Behaviour* 71:1197-1203.
  114. Mehdiabadi, N. J., Talley-Farnum, T., Jack, C., Platt, T. G., Shaulsky, G., Queller, D. C., & Strassmann, J. E. 2006. Kin preference in a social microbe. *Nature* 442:881-882.
  115. Cotoneschi, C. Scognamiglio, F., Scala, C., Cervo, R. Strassmann, J. E., Turillazzi, S. 2007, Larval sex identification in the paper wasp *Polistes dominulus* (Vespidae: Hymenoptera). *Insectes Sociaux* 54: 132-135.
  116. Kuzdzal-Fick, J. J., Foster, K. R., Queller, D. C., Strassmann, J. E. 2007. Exploiting new terrain: an advantage to sociality in the slime mold *Dictyostelium discoideum*. *Behavioral Ecology and Sociobiology* 18:433-437.
  117. Strassmann, J. E. Queller, D. C. 2007. Insect societies as divided organisms: the complexities of purpose and cross-purpose. *PNAS* 104:8619-8626.
  118. Gilbert, O. G., Foster, K. R., Mehdiabadi, N. J., Strassmann, J. E., Queller, D. C. 2007. Control of a cheater mutant by kin selection *PNAS* 104:8913-8917.
  119. \*Afkhami, M. E. and Strassmann, J. E. 2007. Adult yellow-crowned night-herons face in opposite directions at the nest. *Wilson Journal of Ornithology* 119: 749-751.
  120. \*McConnell, R., Middlemist, S. Strassmann, J. E. and Queller, D. C. 2007. An unusually low microsatellite mutation rate in *Dictyostelium discoideum*, an organism with unusually abundant microsatellites. *Genetics* 177: 1499-1507.
  121. Santorelli, L. A., Thompson, C. R. L., Villegas, E., Svetz, J., Dinh, C. Parikh, A., Sucgang, R., Kuspa, A., Strassmann, J. E., Queller, D. C., Shaulsky, G. 2008. Facultative cheater mutants reveal the genetic complexity of cooperation in social amoebae. *Nature* 451:1107-1110.
  122. Cervo, R., Dapporto, L., Beani, L., Strassmann, J. E., Turillazzi, S. 2008. On status badges and quality signals in *Polistes dominulus*: body size, facial colour patterns and hierarchical rank. *Proceedings of the Royal Society: Biological Sciences*, 275:1189-1196.

123. Kronforst, M.R., Gilley, D.C., Strassmann, J.E. and Queller, D.C. 2008. DNA methylation is widespread across social hymenoptera. *Current Biology* 18:R287-R288.
124. Cervo, R. Dani, F. R. Cotoneschi, C., \*Scala, C., Lotti, I., Strassmann, J. E., Queller, D. C., & Turillazzi, S. 2008. Why are larvae of the social parasite wasp *Polistes sulcifer* not removed from the host nest? *Behavioral Ecology and Sociobiology* 62:1319-1331.
125. Jack, C. N., \*Ridgeway, J. G., Mehdiabadi, N. J., \*Jones, E. I., \*Edwards, T. A., Queller, D. C., Strassmann, J. E. 2008. Segregate or cooperate – a study of the interaction between two species of *Dictyostelium*. *BMC Evolutionary Biology*, 8, 293.
126. Ostrowski, E. A., Katoh, M., Shaulsky, G., Queller, D. C., Strassmann, J. E. 2008. Kin discrimination increases with genetic distance in a social amoeba. *PLoS Biology* 6:2376-2382, e287
- Mehdiabadi, N. J., Kronforst, M. R., Queller, D. C., Strassmann, J. E. in press. Phylogeny, reproductive isolation and kin recognition in the social amoeba, *Dictyostelium purpureum*. *Evolution*
- Cotoneschi, C., Dani, F. R., Cervo, R. Scala, C., Strassmann, J. E., Queller, D. C., Turillazzi, S. in press. *Polistes dominulus* (Hymenoptera, Vespidae) workers do not use differences in larval cuticular hydrocarbon patterns for controlling colony sex ratio. *Chemical Senses*
- Gilbert, O., Queller D. C., Strassmann, J. E. in press Clonal patch formation in a range-edge population of the social amoeba *Dictyostelium discoideum* *Molecular Ecology*
- Helanterä, H., Strassmann, J. E., Carrillo, J., Queller, D. C. 2009. Uniclonal ants: where do they come from, what are they, and where are they going? *Trends in Ecology and Evolution* in press
- Carpenter, J. M., Hunt, J. H., Strassmann, J. E. 2009. *Mischocyttarus mexicanus cubicola*: Major extension of its range to Texas (Hymenoptera: Vespidae). *Entomologica Americana*, in press
- Queller, D. C. and Strassmann, J. E. 2009. Complex societies: eusociality and multicellularity. Westneat, D. and Fox, C. Eds. *Evolutionary Behavioral Ecology*, in press
- Mehdiabadi, N. J., Kronforst, M. R., Queller, D. C., Strassmann, J. E. submitted. Phylogeography and sexual macrocyst formation in the social amoeba *Dictyostelium giganteum*.

#### Published News and Views, Book Reviews, Letters:

1. Barth, R.H. and J.E. Strassmann. 1980. Hormones and dominance in paper wasps. *American Zoologist* 20:1193.
2. Strassmann, J.E. 1982. Sex investment ratios in *Polistes exclamans*. p. 221 IN: *The Biology of Social Insects*. M.D. Breed, C.D. Michener and H.E. Evans (Eds.), Westview Press, Boulder, Colorado.

3. Vawter, L.A.\* and J.E. Strassmann. 1982. Juvenile hormone production in polistine wasps. p. 222 IN: *The Biology of Social Insects*. M.D. Breed, C.D. Michener and H.E. Evans (Eds.), Westview Press, Boulder, Colorado.
4. Strassmann, J. E. 1982. Hormonal control of dominance behavior in paper wasps. *The American Philosophical Society, Grantees Reports* 1982, pp. 40-41.
5. Strassmann, J.E. 1984. Ecology of social insects (book review). *Ecology* 65:1943.
6. Strassmann, J. E. 1988. Nest site constraints and cooperative breeding in the social wasp, *Polistes carolinus*. *The American Philosophical Society, Grantees Reports* 1988.
7. Strassmann, J. E. 1989. Why do workers refrain from laying eggs? *Trends in Ecology and Evolution* 4:147.
8. Strassmann, J. E. & D. C. Queller, 1991. Correspondence on biological nomenclature. *Nature*. 352:100.
9. Queller, D. C. & J. E. Strassmann 1991. Options for wasps. (book review) *Science* 254:736-737.
10. Strassmann, J. E. 1996. *Social Evolution in Ants*, A. F. G. Bourke and N. R. Franks, review in *Animal Behaviour* 52:432.
11. Bernasconi, G. and J. E. Strassmann 2000. From the laboratory to the field: the advantages of pleometrotic colony founding: reply. *Trends Ecol. Evol.* 15: 117.
12. Strassmann, J. E. 2000. Cheaters in bacteria (News and Views). *Nature* 406:555-556.
13. Strassmann, J. E., D. C. Queller, D. C., 2001. Selfish responses by clone invaders. *Proc. Natl. Acad. Sci. USA* 98:11839-11841.
14. Queller, D.C., and Strassmann, J.E. 2002. A quick guide to kin selection. *Current Biology* 12: R832.
15. Queller, D. C., and Strassmann, J. E. 2003. Eusociality. *Current Biology* 13: 861-863.
16. Strassmann, J. E. and Queller, D. C. 2004 Genetic conflicts and intercellular heterogeneity. Commentary, *Journal of Evolutionary Biology*, 17:1189-1191.
17. Strassmann, J. E. 2004. Rank Crime and Punishment (News and Views). *Nature* 432:160-162.
18. Strassmann, J. E. and Queller, D. C. 2004 Sociobiology goes micro *American Society of Microbiologists News* 70:526-532.
19. Queller, D. C. and Strassmann, J. E. 2006. Models of Cooperation. *Journal of Evolutionary Biology* 19: 1410-1412.
19. Strassmann, J. E. 2006. Social evolution: early production of deadly males by competing queens. *Current Biology* 16: r1023
20. Strassmann, J. E. and Queller, D. C. 2007. Altruism among amoebas. *Natural History* 116:24-29.
21. Strassmann, J. E. and Queller, D. C. 2008. Social Evolution: Ant eggs lacking totipotency. *Current Biology* 18:R299-R301.
22. Strassmann, J. E. 2008. Q & A. Joan E. Strassmann *Current Biology* 18: R986-R988.

**Professional Presentations:**

- The evolution of sociality in polistine wasps. University of Michigan Biological Station, July 1978.
- Kin selection and the significance of satellite nests. Symposium on Natural Selection and Social Behavior. Ann Arbor, Michigan, 16 October 1978.
- Satellite nests and nest predation in *Polistes exclamans*. Entomological Society of America. Denver, CO, Nov. 1979
- Kin selection in paper wasp dominance hierarchies. Dept. Ecology & Behavioral Biol., Univ. of Minn., Minneapolis, 9 Jan. 1980.
- Reproductive competition and kin selection in *Polistes annularis*. Behavioral Ecology Symposium, Florida Entomological Society, Daytona Beach, FL, 23 August 1980.
- Reproductive competition and dominance hierarchies in the social wasp *Polistes annularis*. Population Biology Group, Biological Sciences, Stanford University, March 1981.
- Behavioral Ecology of *Polistes* wasps. Zoologisches Institut, Würzburg Germany, 15 June 1981.
- Behavioral Ecology of *Polistes* wasps. (in French) Centre National de la Recherche Scientifique, Marseille France, 29 June 1981.
- Behavioral Ecology of *Polistes* wasps. Istituto di Zoologia, Università di Firenze, Florence Italy, 9 July 1981.
- Reproductive options of *Polistes* workers. Entomology Department, Cornell University, Ithaca, NY, 22 March 1982.
- Reproductive options of social wasp workers. Kellogg Biological Station, Michigan State University, Hickory Corners, Michigan, 29 July 1982.
- Sex investment ratios in *Polistes* wasps. International Union for the Study of Social Insects, International Congress, Boulder, Colorado, 13 Aug. 1982.
- Caste problems in social insects. Biology Department, University of Houston, Houston, Texas, 13 October 1983.
- Polygyny and latitude in *Polistes* wasps. Entomological Society of America/IUSSI joint symposium, Detroit, Michigan, 1 December 1983 (featured speaker).
- Advantages to group nesting in paper wasps (*Polistes*). Animal Behavior Society, Cheney, WA, 14 Aug. 1984.
- Evolution of cooperative breeding in social wasps. Dept. Zool., Ohio State Univ., Columbus, Ohio, 23 April 1985.
- Subfertility and the evolution of group nesting in paper wasps. Society for the Study of Evolution, Chicago, Il., 23 June 1985.
- The evolution of cooperative breeding in primitively social wasps. Brackenridge Field Lab. Symposium, Univ. of Texas at Austin, Austin, Texas, 24 Oct. 1985.
- Using kin selection theory to investigate group nesting in social wasps. Dept. of Zoology, Univ. Oklahoma, 26 Feb. '86.

- Constraints on independent nesting by *Polistes* foundresses in Texas. 10th International Congress of the International Union for the Study of Social Insects, Munich, West Germany, 19 August 1986.
- Constraints on independent nesting in *Polistes*. Dept. Entomology, Texas A & M University, 23 October 1986.
- Conditional strategies and group nesting in social wasps. Dept. Biol. Sciences, Brock University, 12 March 1987.
- Group size and predation in social wasps. Brackenridge Field Laboratory, University of Texas at Austin, 20th Anniversary Symposium, Austin, Texas, 23 April 1987.
- An experimental study of predation and the evolution of group living in social wasps. Society for the Study of Evolution, Bozeman, Montana, 24 June 1987
- Intriguing studies with social wasps. Hymenoptera workshop: Wasps. Brackenridge Field Laboratory, University of Texas at Austin, Austin, Texas, 16 April 1988.
- Seasonal variation in relatedness among nestmates in the social wasp, *Polistes bellicosus*. Animal Behavior Society meeting, Missoula Montana, 9 August 1988.
- Relatedness and social behavior in wasps. Department of Ecology and Evolutionary Biology, Univ. of Chicago, 30 Jan. '89.
- Relatedness and social structure in tropical swarm-founding wasps. Soc. for the Study of Evolution, State College, PA, 17 June 1989.
- Parentesco y la evolución de la socialidad en avispa tropicales. (in Spanish) Departamento de Biología, Universidad Simon Bolívar, Caracas, Venezuela, 20 June 1989.
- Africanized Bees. Scientia Institute, Rice University, Houston, Texas, 12 September 1989.
- Relatedness and social structure in wasps, Dept. of Ecology and Evolutionary Biology, Univ. of Calif.- Irvine, 11 Oct. 1989.
- Maintenance of sociality in multiple-queen tropical wasps, Department of Ecology and Evolutionary Biology, University of Arizona, 6 November 1989.
- Social structure in the tropical wasp, *Parachartergus colobopterus*. Entomol. Soc. of America, San Antonio, TX 11 Dec. '89.
- Relatedness and queen number in neotropical social wasps, Department of Organismic and Evolutionary Biology, Harvard University, Cambridge MA 11 October 1990.
- Seasonal variation in genetic structure of tropical wasp colonies, Entomological Society of America Meetings, New Orleans LA 5 December 1990.
- Evolutionary advantages of eusociality. Dept. of Zoology, University of Oklahoma, Norman, OK 14 Feb. 1991.
- Cycles of queen number and genetic relatedness in neotropical wasps. Society for the study of evolution meetings, Hilo, Hawaii 1 August 1991.
- Nepotism and genetic conflicts of interest in wasp colonies. Provost's Lecture, Rice University. 30 Sept. 1991.
- Highly variable microsatellite loci in social wasps. Society for the Study of Evolution meetings, Berkeley, CA, 20 June 1992.

- Genetic relatedness and queen number in social wasps. Fourth International Behavioral Ecology Conference, Princeton University, 22 August 1992.
- Phylogenetic Tests of Emery's Rule: are social parasites most closely related to their hosts. Symposium talk, Society for the Study of Evolution, Snowbird, Utah, 20 June 1993.
- Parentesco genético y comportamiento social en avispas neotropicales. Plenary Address, V Congreso Latinoamericano y XIII Venezolano de Entomología, Porlamar, Venezuela, 7 July 1993.
- Genetic relatedness and social interactions in *Polistes* wasps. Symposium of the Centro Fiorentino de Storia e Filosofia della Scienza. Castiglione, Italy, 6 October 1993.
- Conflicts of interest and the evolutionary genetics of sexual production in swarm-founding wasps. Genetics of Sex Symposium, Department of Molecular Biology, Princeton University 5-6 May 1994.
- Curling, aggression, queenship and genetic relatedness in the neotropical epiponine wasp, *Parachartergus colobopterus*. XII International Congress on Social Insects, International Union for the Study of Social Insects, Sorbonne, Paris, France, 26 August 1994.
- Microsatellites and kinship in social wasps, Molecular Approaches in Zoology and Evolution Symposium, American Society of Zoologists St. Louis, 6 January 1995.
- Foundress worker conflict over queen replacement in *Polistes bellicosus*: a model system for teaching large ecology classes without lecturing. 7 Feb. 1995 Colorado State University, Graduate Degree Program in Ecology, Distinguished Ecologist Lecture Series.
- Conflicts of interest and social interactions in *Polistes* wasps. 8 Feb. 1995. Colorado State University, Graduate Degree Program in Ecology, Distinguished Ecologist Lecture Series.
- The maintenance of sociality and genetic relatedness in multiple-queen tropical wasp societies. 9 February 1995. Colorado State University, Graduate Degree Program in Ecology, Distinguished Ecologist Lecture Series.
- Colony cycles and kin recognition in a neotropical swarm-founding wasp: evidence from microsatellites. 9 July 1995, Society for the Study of Evolution yearly meeting, Montreal, Canada
- Demography and social structure of the tropical wasp, *Parachartergus colobopterus*, 19 Dec. 1995, Entomological Society of America yearly meeting, Las Vegas, Nevada
- Worker queen conflicts over sex ratios and reproduction, 8 June 1996, II Encontro Sobre Abelhas, Universidade de São Paulo, Faculdade de filosofia, Ribeirão Preto, São Paulo, Brazil
- Conventions and reproductive dominance among colony foundresses of *Polistes carolinus*, 1 October 1996, 6th International Behavioural Ecology Congress, Canberra, Australia
- Genetic conflicts of interest in social wasps, Genetics Program, Texas A & M University, 27 February 1997.
- Conflicts of interest in social wasps, Biosciences, Ohio State University, 4 March 1997.

- Genetic conflicts of interest in social wasps, Evolution Group, Louisiana State University, 4 April 1997.
- Collective worker control in swarm-founding wasps. Workshop on Kinship Theory of the European Union TMR network on Social Evolution. Mols, Denmark. 9 June 1997.
- Genetic relatedness in stingless bees: evidence from DNA microsatellites. Meetings of North American Section of the International Union for the Study of Social Insects. Nederland, Colorado, 19 September 1997.
- Genetic structure of wasp colonies. Department of Biological Sciences, Stanford University, 4 May 1998.
- The Evolution of swarm-founding wasps: collective worker control. Department of Ecology and Evolutionary Biology, University of Chicago, 7 May 1998.
- Worker-queen conflict in *Polistes*, a small-colony social wasp. Department of Ecology and Evolutionary Biology, University of Chicago, 8 May 1998.
- El parentesco y conflicto social en las abejas meliponinas y *Apis*. (Relatedness and social conflict in meliponine bees and *Apis*). Departamento de Apicultura, Universidad Autónoma de Yucatán, Mérida, Mexico, 14 May 1998.
- Queen control or convention in *Polistes* wasps. Istituto di Zoologia, University of Florence, 12 June 1998, Florence, Italy
- Levels of sociality affect the resolution of worker-queen conflict over male production in wasps. International Society for Behavioral Ecology, 28 July 1998, Asilomar, CA
- Transitions in social evolution: advances based on microsatellites. Invited Plenary Address XIII International Congress of the International Union for the Study of Social Insects, 2 Jan. 1999, Adelaide, Australia
- Mate number, kin selection and social conflicts in stingless bees and honeybees. Instituto de Biociencias, Universidade de São Paulo 14 April 1999.
- Relatedness and the evolution of cooperation. Ecology, Evolution and Behavioral Biology Program, Michigan State University 17 Nov. 1999.
- Social insects and the evolution of cooperation, Entomological Society of America, invited talk, 13 Dec. 1999, Atlanta, Georgia.
- Conflict, genetic bottlenecks and the nature of the individual. Department of Biology, Southern Methodist University, 14 April 2000.
- The origin of microsatellites. Society for the Study of Evolution meeting. University of Indiana, Bloomington, Indiana, 26 June, 2000.
- Conflict and genetic bottlenecks in swarm-founding wasps and slime molds. EU-TMR Workshop on Kinship, communication and diseases in social insects. Florence, Italy, 9 July 2000
- Chimeras and cheater clones in *Dictyoselium discoideum*. Dictyostelium 2000 meeting, University of Dundee, Scotland, 3 August 2000.
- Conflicts of interest in the cellular slime mold, *Dictyostelium discoideum*. 8th International Behavioral Ecology Congress, Zurich, Switzerland, 12 August 2000.
- What can social amoebae, *Dictyoselium discoideum*, tell us about the organization of life? Department of Biology, University of Nevada at Reno, 8 Feb. 2001.

- Social conflict in the cellular slime mold, *Dictyostelium discoideum*. Mountain Lake Biological Station, VA, 28 June 2001.
- Social conflict in the social amoeba, *Dictyostelium discoideum*. Microbial Population Biology Gordon Conference, Williams College, MA 29 July 2001.
- Cooperation, conflict, and the evolution of multicellularity in social amoebae. Museum of Comparative Zoology, Harvard University, Cambridge MA 14 Sept. 2001.
- Multicellularity, chimeras, and conflict in the social amoeba, *Dictyostelium discoideum*. Trinity University, San Antonio, TX 29 Oct. 2001.
- Caste totipotency and conflict in a large colony social insect. Entomological Society of America, San Diego, 11 December 2001.
- Workshop participant: Microbial communities: advantages of multicellular cooperation, American Academy of Microbiology, Tucson, AZ 3-5 May 2002.
- Costs and benefits of chimerism in the social amoeba, *Dictyostelium discoideum*. American Society of Microbiology, Salt Lake City, Utah, 21 May 2002.
- Cooperation and conflict in the social amoeba, *Dictyostelium discoideum*. Symposium in honor of Richard D. Alexander, University of Michigan, 8 June 2002.
- Cooperation and conflict in chimeras of the social amoeba, *Dictyostelium discoideum*. Society for the study of Evolution. Champaign Illinois 29 June 2002.
- Dominance, relatedness and supercedure among colony foundresses and the cost of losing a queen in *Polistes dominulus*. International Union for the Study of Social Insects XIV Congress, Sapporo, Japan 29 July 2002.
- Led Roundtable on social evolution in micro-organisms International Union for the Study of Social Insects XIV Congress, Sapporo, Japan 1 Aug. 2002
- Conflict and cooperation in chimeras of the social amoeba, *Dictyostelium discoideum*. Department of Biochemistry and Cell Biology, Rice University, 26 August 2002.
- The genetic structure of natural *D. discoideum* populations: sex, relatedness, dispersal and cooperation. International Dictyostelium Conference 2002, 23 September 2002, Altavilla, Sicily, Italy.
- Conflict and cooperation in chimeras of the social amoeba, *Dictyostelium discoideum*: Department of Biological Sciences, Sam Houston State University, Huntsville TX 12 September 2002.
- Cooperation and conflict in the social amoeba, *Dictyostelium discoideum*, a model organism for major evolutionary transitions. Department of Biology, University of Virginia, Charlottesville, VA 6 December 2002.
- Evolution of social behavior: lessons from slime molds. Kika de la Garza Subtropical Research Center, USDA, Weslaco TX 6 Feb. 2003.
- Cooperation and conflict in the social amoeba *Dictyostelium discoideum*. Population Biology, Ecology and Evolution, Emory University, Atlanta GA, 18 April 2003.
- Cooperation and conflict in the social amoeba *Dictyostelium discoideum*. Program in Ecology, Evolution and Behavior, University of Illinois at Urbana-Champaign, 29 April 2003.
- A genetical approach to altruism in the social amoeba *Dictyostelium discoideum*. Biology Department, Spelman College, Atlanta GA, 10 June 2003.

- Sex and population structure in the social amoeba *Dictyostelium discoideum*. Society for the study of Evolution meetings, Chico, CA 21 June 2003.
- Dictyostelium discoideum* in its natural context. International *Dictyostelium* meetings, Lorne, Australia, 30 June, 2003.
- Altruism and conflict in the social amoeba *Dictyostelium discoideum*. International Genetics Congress, Melbourne, Australia, 9 July 2003.
- Altruism and conflict in the social amoeba *Dictyostelium discoideum*. Department of Integrative Biology, University of Texas at Austin, Austin TX 25 Sept. 2003.
- Reinventing the individual. Behavioral Ecology Group, University of Texas at Austin 25 Sept. 2003.
- Cell adhesion, cooperation and conflict in the social amoeba *Dictyostelium discoideum*. University of Texas Health Science Center at Houston Medical School Microbiology and Molecular Genetics, Houston TX, 2 Oct. 2003.
- The evolution of self non-self recognition, panel discussion chair. European Molecular Biology Laboratory, Recognition Symposium, Heidelberg, Germany 21 November 2003.
- Mechanisms of kin recognition: a green beard cell adhesion gene in social amoebae and cuticular hydrocarbon profiles in social wasps. EMBL Recognition Symposium, Heidelberg, Germany 22 November 2003.
- Genes for social behavior in social amoebae. Workshop: PEET – A revisionary study of the eumycetozoans. Dept. of Biological Sciences, University of Arkansas, Fayetteville , 16 January 2004.
- The nature of altruism and genetic conflict in social amoebae. Department of Genetics, Texas A & M University, State College, TX 29 January 2004.
- Social Amoebae as a model system for genetics and evolution of social interactions. Genes and Behavior Gordon Conference, Ventura CA 9 February 2004.
- Genes for social behavior in the social amoeba *Dictyostelium discoideum*. Society for the study of evolution meeting, Ft. Collins CO 27 June 2004.
- Exploiting new terrain: an advantage to sociality in the social amoeba *Dictyostelium discoideum*. International *Dictyostelium* Conference, St. Adèle Quebec, Canada 17 August 2004.
- Mechanisms of cooperation in the social amoeba *Dictyostelium discoideum*. Insectes Final meeting, Helsingør, Denmark, 3 Sept. 2004.
- Conflict and Violence in animals *Scientia*, Rice University, 28 Sept. 2004.
- Cooperation and conflict among non-relatives of the social amoeba, *Dictyostelium discoideum*, and the social wasp, *Polistes dominulus*, Plenary address Associazione Italiana per lo studio degli artropodi sociali e presociali, Florence Italy, 1 Feb. 2005.
- Recognition and Discrimination in *Dictyostelium purpureum* and *Polysphondylium violaceum* presented at a workshop: PEET – A revisionary study of the eumycetozoans. Dept. of Biological Sciences, University of Arkansas, Fayetteville , 12 March 2005.
- A genetic approach to cooperation and conflict in the social amoeba, *Dictyostelium discoideum*. School of Life Sciences, Arizona State University, Tempe AZ 15 April 2005.

- Organization of work in *Polistes*. *Polistes* paper wasps: the emergence of a model genus, Tufts University European Center, Talloires, France 30 April 2005.
- The importance of behavior in a genomic age. Animal Behavior Society, Snowbird UT 10 August 2005.
- Kin recognition in *Dictyostelium*. International Dictyostelium Conference, Autrans, France 15 August 2005.
- The importance of behavior in a genomic age. Eco. Evo. Biology Rice U. 12 Sept. 2005
- Social Amoebae as model systems for genetics and evolution of social interactions International Conference on Systems Biology. Invited speaker. Boston 22 Oct. 2005.
- The importance of local field stations: wasp sociobiology at BFL. Integrative Biology University of Texas at Austin 4 November 2005.
- The behavioral ecology of a social amoeba. Biology Department. University of Indiana 18 January 2006.
- The behavioral ecology of a social amoeba. Biology Department. University of Utah, 23 March 2006.
- Genes for conflict and cooperation in a social amoeba. Conflict and Cooperation: The evolution of social interactions symposium, Harvard University, 28 April 2006.
- The behavioral ecology of a social amoeba. Dipartimento di Genetica e Biologia Animale, Universita di Firenze, Italy, 15 June 2006.
- Kin recognition in microbes. Dipartimento di Genetica e Biologia Animale, Universita di Firenze, Italy, 21 June 2006.
- Behavioral ecology of a social amoeba, Pettingill Lecture, University of Michigan Biological Station, Pellston, MI, 27 June 2006.
- Microbial multicellularity and social evolution theory. DARPA Cooperation among Microorganisms Workshop, Park City, UT 25 August 2006.
- Insect societies as divided organisms, the complexities of purpose and cross purpose. In the light of Evolution, National Academy of Sciences, Sackler Colloquium, UC Irvine 1 December 2006.
- Genetics of social interactions in social amoeba. Genetics and Genomics of Social Behavior, NIH workshop, Bethesda MD 4 Jan. 2007.
- Insect societies as divided organisms, the complexities of purpose and cross purpose. Les Ecologistes, Department of Biology, Simon Fraser University, Burnaby, BC, Canada, 1 Feb. 2007.
- Genes for cooperating and cheating in the social amoeba, *Dictyostelium*. Behavioral Ecology Research Group (BERG) annual lecture, Department of Biology, Simon Fraser University, Burnaby, BC, Canada, 1 Feb. 2007.
- Biofilms, disease, and social evolution especially in social amoebae. Dept. of Natural Sciences, University of Houston/Downtown, 16 Feb. 2007.
- Genes for cooperating and cheating in the social amoeba, *Dictyostelium* University of Wisconsin, Madison WI, 15 March 2007
- Evolution and cooperation, NIGMS NIH, Bethesda MD, 11 April 2007
- Cell adhesion and mechanisms of cooperation in social amoebae, Microbial Adhesion & Signal Transduction Gordon Conference Newport RI 23 July 2007.

The genetic basis of cooperation and conflict in the social amoeba, Division of Biological Sciences, University of Montana, 24 September 2007.

Conflict and Cooperation, Discussion Leader, Genes and Behavior Gordon Conference, Il Ciocco, Lucca, Italy, 25 February 2008.

Plenary address: Purpose and Cross Purpose in Insect Societies: an evolutionary approach. Lucian Symposium, St. Edward's University, Austin, TX, 28 March 2008.

Keynote Address: Cooperation and conflict in social amoebae: the challenge of multicellularity through aggregation, 7<sup>th</sup> Annual Conference in Philosophy and Biology Symposium, Duke University 11 April 2008.

Cryptic species, phylogenetics, and sex in four *Dictyostelium* species. International *Dictyostelium* Conference 2008. Tsukuba Japan, 19 Sept. 2008.

The challenge of bringing old ideas to a new system: social evolution in amoebae. University of California, Davis, Population Biology Group. 2 Oct 2008.

Social evolution in microbes: Darwin's and Hamilton's theories in a novel system. University of Sussex, Satellite Meeting on Social Insects. 21 Jan. 2009.

Cooperation and conflict in a social amoeba. Oregon State University 9 February 2009.

?? Pennsylvania State University March 2009

Genetics and evolution of cooperation in social amoebae, University of Houston, Houston, TX 8 April 2009.

University of Michigan 28 April 2009

ASM Galapagos

Regensburg University September 2009

### Professional Service:

ISBE 2008 Abstract Reviewing Committee April 2008

NSF FIBR panel 7-8 May 2007

NSF Dissertation improvement panel – Animal Behavior Feb. 28-2March 2007

NIH workshop on genes and behavior 4-5 January 2007

NSF FIBR preproposal panel 14-15 Nov. 2005

NSF Workshop on Frontiers in Evolutionary Biology, 10-12 Jan. 2005

International Union for the Study of Social Insects 2006 Meeting Organizing Committee

International *Dictyostelium* conference, session moderator, 19 Aug. 2004

International Union for the Study of Social Insects nominating committee 2002-2004.

*Dictyostelium* stock center advisory committee, 2002- present

Councilor, Society for the Study of Evolution, 2002 - 2004

NSF Minority Postdoctoral Fellowships Panel 20 March 2003, 11 March 2004.

2008: Reviewed 46 grant proposals and manuscripts, wrote letters of rec. for 40 people.

2007: Reviewed 61 grant proposals and manuscripts, wrote letters of rec. for 41 people.

2006: Reviewed 36 grant proposals and manuscripts, wrote letters of rec. for 40 people.

2005: Reviewed 36 grant proposals and manuscripts, wrote letters of rec. for 39 people.

2004: Reviewed 55 grant proposals and manuscripts, wrote letters of rec. for 49 people.

2003: Reviewed 59 grant proposals and manuscripts, wrote letters of rec. for 33 people.  
 2002: Reviewed 35 grant proposals and manuscripts, wrote letters of rec. for 36 people.  
 President, N. American Section, International Union for the Study of Social Insects,  
 2001.  
 National Science Foundation, IBN, Animal Behavior Panel, October 2001.  
 Duke Review Committee for OTS Undergrad Semester Abroad, Costa Rica March  
 2001.  
 OTS Assembly of Delegates member (Rice University) 2001-2002.  
 National Science Foundation CAREER PI meeting, Senior Biology Faculty, speaker,  
 poster evaluator, 10-12 Jan. 1999.  
 National Science Foundation Molecular Evolution/Sloan Postdoctoral Fellowships  
 Panel, 1994 - 1996.  
*Animal Behaviour* Editorial Board, 1995 - 1997.  
 National Science Foundation Minority Postdoctoral Fellowship Workshop, September  
 1994, 1995.  
 National Science Foundation Committee of Visitors for Population Biology and  
 Systematic Biology, May 1993.  
 National Science Foundation panel member for Population Biology and Physiological  
 Ecology, 1988 - 1990.  
 Referee for professional journals: *Science*, *Nature*, *Proceedings of the National  
 Academy of Sciences*, *Proceedings of the Royal Society of London Series B*, *Current  
 Biology*, *Evolution*, *American Naturalist*, *Ecology*, *Ecology Letters*, *Nucleic Acids  
 Research*, *Genetics*, *Molecular Ecology*, *Behavioral Ecology and Sociobiology*,  
*Behavioral Ecology*, *Animal Behaviour*, *Trends in Ecology and Evolution*,  
*Parasitology*, *Biochemical Genetics*, *Ethology Ecology and Evolution*, *J. of  
 Evolutionary Biology*, *J. Experimental Biology*, *Biology Letters*, *PLOS Biology*,  
*Ethology*, *Journal of the Kansas Entomological Society*, *Insectes Sociaux*, *Annals of  
 the Entomological Society of America*, *J. of Hymenoptera Research*, *J. of Insect  
 Behavior*, and others.  
 Referee for National Science Foundation, programs in population biology, behavior,  
 systematics, National Geographic, Australian Research Council, NERC (UK),  
 Finnish Research Council, Leverhulme Trust  
 Judging panel for posters, Animal Behavior Society meetings, Tucson, Arizona, June  
 1986.  
 Chair, Nominating Committee, International Union for the Study of Social Insects,  
 1981.  
 Organized Symposium on *Nestmate Recognition in Social Insects* for The  
 Entomological Society of America, and International Union for the Study of Social  
 Insects, San Diego, California, 30 Nov. 1981.  
 Scientific Consultant to British Broadcasting Corporation, *Animal Behavior*, July 1981.

### University Service:

ADVANCE Workshop for Career Success for Women 24-24 Oct. 2006  
 Co-director, Center for Evolution  
 Member, Keck Consortium for Computational Biology  
 Member, Rice Institute of Biosciences and Bioengineering  
 Member, Environmental and Energy Systems Institute

Scientia, Fellow  
Chair, Department of Ecology and Evolutionary Biology 2003 to present  
Faculty Sponsor, EEB Graduate Student Association  
Alumni Travel Program Galápagos trip 22-31 March 2004  
Chair, Julia Mile Chance Prize selection committee 2003  
Director, Automated DNA sequencing facility 2000 - present  
Departmental Library Liaison. 1988 to 2004.  
Graduate Council 1999- 2003  
Education Council 2000-2002  
Environmental Safety Committee 1998 - 1999  
Associate, Wiess College (Rice) 1987 - present. (distinguished faculty associate 1999, 2002, 2003, superior 1988, 1998, outstanding 1989, 1991, 1992, 2000, 2001).  
Radiation Safety Officer, Dept. Ecology and Evolutionary Biology, 1992 to 2001.  
Undergraduate Research Training, Keck Center for Computational Biology 1996- 1999.  
Science Olympiad Faculty Sponsor, 1996 to 1998.  
Admissions Committee 1990 to 1997.  
Biosciences Curriculum Committee 1991 to 1997.  
Alumni College presentation April 1995.  
Commission on Women, elected member, Rice University, 1993 to 1995.  
Ford Foundation Honors Program Coordinator, Wiess and Hanzen, (Rice), 1988-1990.  
Organizer of departmental seminar series, 1984-1988.  
Computer Committee, Rice, 1982-1985; 1988-89;  
Pesticide Use Committee, Biology Dept., 1983-1986.  
Curriculum Committee, Biology Dept., 1982-1986.  
Associate, Will Rice College, 1982-1985.  
Lecture on Animal Behavior and Evolution, Rice Alumni Institute, March 1985.

**Science Education Service:**

Rice Elementary Model Science Laboratory, HISD, Training for elementary school science teachers (key personnel) 2006 - present  
Introduce David Hillis for Teaching Evolution is Vital, Emerson Unitarian Church 4 May 2008  
International Baccalaureate Teachers Workshop on social interactions, 7 March 2008  
Life cycles, lecture to teachers at Rice/HISD Elementary Model Science Lab, Sanchez Elementary, HISD, Houston, 11 January 2007, 16 January 2008.  
Sally Ride Science Day for Girls 28 Oct. 2006  
Slime Molds. Nature Discovery Center talk, Bellaire TX 2 November 2005.  
Evolution of social behavior: lessons from slime molds. Science High School Talk, Mercedes TX 6 Feb. 2003.  
Expanding your horizons, Behavior project 11 April 1999  
World Wide Web Electronic studio project with Biology II class at the Science Academy of South Texas High School, Spring 1995 (<http://www.rice.edu/wasps>).  
Advisory Board, Harris County Alliance for Science, Mathematics and Education, Division of School-Based Programs, Baylor College of Medicine, 1995.

Summer Institute of the Houston Elementary Science Alliance unit on animal behavior and ecology 1988-present.  
 Expanding your Horizons in Math and Science Workshop: Why do Birds Sing? Rice Univ. 24 April 1993.  
 Mentor in the Minority High School Student Research Apprentice Program, summer 1992.  
 Advisor in the Rice University Teacher Research Program, summer 1992.  
 Science Partners for Houston mentor 1991 (Lanier Middle School Model Science Laboratory).  
 An Evolutionary Perspective on Infectious Disease. Seminar for In-service Teachers, Rice Univ. 5 Oct. 1991.  
 Reviewer for Sequence, Scope Coordination, Block I, Adaptation, Seventh Grade, 1991.  
 Material evaluator, shoebox hands-on science for Houston Museum of Natural Science 1989-1990.  
 Fondren Middle School Saturday Science Workshop for 30 sixth graders: Field experiments. 30 April 1988.  
 Fondren Middle School Saturday Science Workshop for 60 sixth graders: Rocks, ants, fish. 24 Oct.1987.  
 Summer Life Science Institute for seventh grade teachers 1987.  
 Houston Math-Science Improvement Consortium mentor to high school biology teacher 1985, 1987.  
 Judge, various science fairs, Longfellow, Horn, and MacGregor Elementary Schools; Fondren, Pershing and Lanier Middle Schools, HISD 1987— present.  
 Behavior and ecology laboratories for elementary school students, lecture, Conroe ISD 1985.  
 Teacher-in-Service lecture on Evolutionary Biology, October 1983.  
 Lecture in summer school program for high school students 1981-1985.  
 Field Trip Leader for Ecology Field Trips, Ann Arbor, MI Public Schools 1973-1974.

### Undergraduate Honors and Selected Independent Study Students (partial list):

Mary O'Rourke 1981	Ceal Jenifer Klingler 1992 (freelance writer)
Christine Gorman 1982 (Time magazine)	Karen Barefield 1993 (math teacher)
Genie Lutz 1983 (PriceWaterhouseCooper)	Alice Green 1994 (Colorado State U.)
Karin Gastreich 1989 (PhD, UT Austin, Director OTS Undergraduate Education)	John Peters 1994 (MA Cornell U., NSF Predoctoral Fellowship, MD/PhD UT SW)
Jorge Negrón-Sotomayor 1990 (MBA, Mich.)	Michele Hastings 1996 (Ph.D. Univ. Washington, NSF Predoctoral Fellowship)
Adrian Treves 1990 (Asst. Prof. Univ. Wisc.)	Amina Husain 1997 (Baylor Medicine)
Jeffrey Bates 1990 (MD, UT Southwestern)	Vanessa Ezenwa 1997, (Princeton U., NSF Predoctoral Fellowship)
Mandy Rappaport 1991 (MD, Medical College of Pennsylvania)	Emily DuVal 1997 (UC Berkeley, NSF Predoctoral Fellowship)
Sarah Edmunsen 1992 (MD, Kelsey Sebold)	John Nguyen 1998 (Baylor Medicine)

Jessica Williams 1994 (science teacher)	Rebecca Lewis 1998 (Emory University, NSF Predoctoral Fellowship)
Mara Bryan 1998 (grad student, Mich.State)	Alex Renwick 1998 (Rice Statistics Dept. PhD)
Jennifer Stein 1998 (NIH-Cayo Santiago)	James J. Emerson 1999-2000 (U. Chicago PhD; NSF predoctoral fellowship)
Ashley Vavra 1998-2000 (Baylor Medicine)	Jessica Esparza 1998-2000 (Wash. U., PhD)
Tom Platt 1999-2001 (grad student Indiana)	June Keay 2000-2001 (Univ. Oregon Ph.D.)
Kim Pollard 1999-2001 (UCLA, Ph.D)	Simha Reddy (Stanford Univ.) 2000
Alicia Salamone 2000-2003 (Baylor, Ph. D.)	Rowan Guinivere Casey-Ford 2000 - 2004
Miriam Mendoza 1999-2001 (Baylor Tech.)	Emily Jones 2003-2004 (Univ. Arizona)
Jennie Kuzdzal 2001-2004 (Rice Univ.)	Ghislaine Switz 2002-2003 (Tufts Univ.)
Chandra Jack 2003- 2004	Dulce Carbajal 2004-2005

**Graduate Students:**

- Colin R. Hughes, Ph.D. 1987 Group nesting and reproductive conflict in primitively eusocial wasps. Current Position: Associate Professor, University of Miami, Miami, Florida
- Carlos R. Solís, Ph.D. 1993 Current Position: Rice University Information Technology in charge of teaching technology
- Keith F. Goodnight, Ph.D. 1994 Current Position: Novelist
- C. Jenifer Klingler, MA 1994 Current Position: Poet and Trailrunner, Bishop CA
- Jeanne A. Zeh, Ph.D. 1996 NSF IBN95-20861 Interpopulation crosses and postcopulatory sexual selection: a molecular genetic analysis. 1995. NSF Predoctoral fellowship, \$10,000. Current Position: Assistant Professor, University of Nevada, Reno.
- Debbie Moralez DeLoach Ph.D. 1997 Breeding success, mating success, and mating strategies of the northern mockingbird, *Mimus polyglottos*. Research support: NSF DEB-9212845 Dissertation research: Song and Mating patterns in the Northern Mockingbird. 1992. 2 years \$12,130.
- Steve Quach MA 1997, Maternity and cyclical oligogyny in a colony of *Parachartergus colobopterus*. UTMB Med School Faculty.
- Francesca Zacchi Ph.D. 1998, Genetic structure of *Polistes dominulus* foundress associations. Outside Funding: Univ. Florence, \$15,000. Current position with Eli Lilly in Florence, Italy
- Michael Henshaw Ph.D. 2000 NSF Predoctoral Fellowship; Wray Todd Fellowship Collective worker control in the African social wasp, *Polybioides tabidus* (Postdoc, James Cook U., Australia, currently Assistant professor Grand Valley State University).

Yong Zhu Ph.D. 2000 Wray Todd Fellowship The origin of microsatellites and their application to the study of social evolution in the cellular slime mold, *Dictyostelium discoideum* (Postdoc M.D. Anderson Cancer Center, currently Assistant Professor, Yale Medical School)

Dirk Jan Ronhaar 1999-2001. Wray Todd Fellowship (teaching biology in Costa Rica)

Eva Tóth Ph.D. 2002. Wray Todd Fellowship Conflict over male production in stingless bees (Postdoc, Virginia Marine Science Institute, then STRI on eusocial shrimp)

Angelo Fortunato Ph.D. 2002. Wray Todd Fellowship Evolutionary conflict in chimeras of the social amoeba, *Dictyostelium discoideum* (Junior Faculty, Siena, Italy)

Monica Landi Ph.D. 2002. Wray Todd Fellowship, Reproductive conflicts in the social wasp, *Eustenogaster fraterna*, and in the social amoeba, *Dictyostelium discoideum* University of Bologna postdoc

Thomas Platt M. A. 2003. Environmental heterogeneity and the coexistence of cheaters and victims in the social amoeba *Dictyostelium discoideum*. Current: Ph.D. program University of Indiana

Margaret Smith M. A. 2003. M. A. Claire Booth Luce Fellowship. Genotypic diversity and population structure in *Dictyostelium discoideum*. Current: Science Librarian

Andrea Lasagni M. A. 2005. MS consultant Florence Italy

Wendee Holtcamp M. A. 2005 NSF Predoctoral Fellowship. Current: freelance environmental writer

Lorenzo Santorelli Ph.D. 2007. Post Doc, Leeds University

Clea Scala M.A. 2007 Wray Todd Fellowship

Sara Middlemist Ph.D. 2008 Howard Hughes Predoctoral Fellowship

David Castillo (current) Wray Todd Fellowship

Owen Gilbert (current) Wray Todd Fellowship

Jennie Kuzdzal (current) Wray Todd Fellowship

Sara Kalla (current) Wray Todd Fellowship

Debbie Brock (current)

Xiaoyun Liao (current)

Tracy Edwards (current)

### Postdoctoral Fellows and Visiting Scholars:

Madhusudan Choudhury 1989-1991 Huxley Fellow, Current Position: Research Associate Professor, University of Texas at Houston

Lisa Wooninck, visiting graduate student from Univ. California-Santa Barbara 1992

Jeremy Field 1994-1995 Huxley Fellow, Current Position: Lecturer, University College, London

Elisabeth Arévalo 1994-1998 Postdoc, Funding: NSF Minority Postdoctoral Research Fellowship, Conflicts of interest in genetic relatedness in social wasps \$65,600, Current Position (7/98): Associate Professor, Providence College, Providence RI.

Perttu Seppä, 1995-1996 Postdoc, Funding: Academy of Finland, Natural Sciences Research Council, Partitioning of Reproduction in Social Insects. \$29,000. Current Position: University of Helsinki, Finland.

Jes Pedersen 1995, Funding: grad student, Danish Research Academy and University of Aarhus Faculty of Natural Sciences, \$27,335. Current Position: Assistant Research Professor, University of Copenhagen.

Barry Sullender 1996-2000, Huxley Fellow, Current Position: Laboratory Coordinator and Instructor, Rice University

Jaelyn Eberle 1996 - 1998 Postdoc, NSERC Postdoctoral Fellowship, Current Position Curator of Vertebrate Paleontology, University of Colorado Museum of Natural History.

Aviva Liebert April 1999, Grad student, Funding: Fellowship from Univ. Calif. Los Angeles.

Kimie Simokomaki, July- Aug. 1999, Postdoc, Funding, FAPESP (Brazil)

Kevin Foster Jan. 2001-2004. Huxley Fellow.

Natasha Mehdiabadi Aug. 2002 - present Keck Postdoc, NSF Micro. Biol. Postdoc

Marcus Kronforst Aug 2004 - present (NSF)

Christopher Williams summer 2005 (Bioinformatics York University MS)

Gerda Saxer Oct. 2005 - present

Elizabeth Ostrowski Oct. 2005 - present

David Gilley Feb. 2006

Ana Leticiao Fernandez Jan. – July 2006

Xiangjun Tian July 2007 - present

Jun Tan August 2007 – August 2008

Undergraduates who worked with us since 1995 organized by start year

1995

Troy Kiper 2 years

Erin Newman 1 year

Kira Taylor 2 years

Alberto Youngblood 6 mo

Vanessa Ezenwa 4 years

Emily DuVal 2 years

Michele Hastings 3 years

Ann Nguyen 2 years

Mara Bryan 4 years

Dan Demus 2 years

Nicole Gerardo 2 years

Katrina Harston 1.5 years

Henry Lu 2 years

Eleisha Nelson 1 year

John Nguyen 3 years

Colleen Savoie 2 years

Jessica Williams 2 years

Gary Patterson 1 year

Patrick Tseng 1 year

Megan Kielt 2 years

1996

Amina Husain 2 years

Josue Villesca 2 years

Rebecca Lewis 2 years

Jennifer Rice 1 year

Ting Chi Lu 1 year

Eric Wang 1 year

Patrick J Thomas 2 years

1997

Neema Jones 1 year

Hema Thakur 1 year

Ting-Weh Lu 3 years

Jessica Esparza 3 years (honor's thesis)

1998

Angeli Gohel 6 mo

Leslie Wren 2 years

Ashley Vavra 2 years

Jennifer Stein 1 year (honor's thesis)

Thomas Platt 4 years

Lorenzo Santorelli, University of Florence Undergraduate, 3 years

Max Stagi, University of Florence Undergraduate, 2 years

1999

Wendy Castle, Univ. Houston Undergraduate, 2 years

JJ Emerson 1 year (honor's thesis)

Alex Renwick 2 years

Sloan Speck 6 mo.

Miriam Mendoza 2 years

Jessica Tullar 1 year

Kim Pollard 2 years

Jesse Damon, Brown University Undergraduate, 2 years

Angelo Fortunato 2 years

2000

June Keay 1 year (honor's thesis)

Alexis Grant 6 mo.

Simha Reddi, Stanford Undergraduate, summer 2000

Emily Caveniss 6 mo.

Jason Longoria (Century Scholar) 2 years

Rowan Guinevere Casey-Ford (Century Scholar) 4 years

Alicia Salamone (honors thesis) 2 years

2001

Jenny Kuzdzal 3 years (honor's thesis)

Geneva Rhee (summer 2001)

Lynn Nguyen 1 year

2002

Ghislaine Switz 1.5 years (honor's thesis)

Sunishka Wimalawansa 0.5 year

Shalene Jha 2 years

Eric Sundstrom (Century Scholar)

Ben Walker (2 years)

2003

Amy Conley (2 years)

Chandra Jack (2 years)

Emily Jones 1.5 years (honor's thesis)

James Stone (one year)

Karen Romero (4 mo.)

Abby Smith (2 years)

Jessica Potter (2 years)

Joyce Li (2 years)

2004

Thomas Rodriguez (4 months)

Meredith Gray (1 year)

Farhan Katchi (8 months)

Dulce Carbajal (1 year)

Arely Gonzalez (4 months)

Carlos Ramirez (4 months)

Amanda Cruess (1 year)

Ryan McConnell (1 year)

Farzin Dinyarian (4 months)

2005

Nicole Montgomery (senior thesis, 1 year)

Caitlin Andrews (senior thesis, 1 year)

Katie Stevens (senior thesis, 1 year)

Prince Buzombo (9 mo)

Juan Razo (6 mo)

Michelle Afkhami (senior thesis, 2 years)

Renate Medina (one year)

Nora Saavedra (2 months)

Emily Jones (one year)

Julia Ridgeway (Century Scholar, 4 years)

Joanna Bagniewska (6 months)

Carlos Rojo (6 months)

Rahul Suresh (1 year)

2006

Sara Lark (6 months)

Tracy Edwards (2 years, senior thesis)

Stephen Rodriguez (1 year)

William Massie (8 months)

Emilia Calabresi (1 year)

Jennifer Morton (8 months)

Bryant Jack (Texas Southern University; 1 year)

2007

Paul Maliakkal (4 months)

Kelly Liao (2 years, Senior Honors research)

Jing Luo 1 year (Century Scholar)

Margaret Diddams (Century Scholar)

Valerie Marten-Ellis (Senior Honors Research)

Ross Hamilton (Vanderbilt University)

Jeremy Liao 3 mo. (Bellaire High School)

Maddy Sheik-Salim 3 mo. (Bellaire High School)

John Sultzbach 1 year (University of Houston)

2008

Radhika Chhabra

Boahemaa Adu-Oppong

Meghali Goswami (Senior research)

Nathan Murthy (Berkeley undergrad)

Jing Jin (Bellaire High School)

Anna Li (Bellaire High School)

Michael Powers