

Curriculum Vitae: **Laurent Keller****Personal Data**

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Date of Birth - 28 February, 1961, Swiss citizen

**Education**

1983 B.Sc. University of Lausanne, Major Biology  
 1985 M.Sc. University of Lausanne, Major Biology  
 1989 Ph.D. University of Lausanne, Major Zoology

**Positions Held**

1983-1985 Research Assistant, Museum of Zoology, Lausanne and Department of Zoology and Animal Ecology University of Lausanne  
 1985-1987 Research Associate, Laboratory of Entomology, University Paul-Sabatier, Toulouse, France  
 1987-1989 Graduate Student, Museum of Zoology, Lausanne and Department of Zoology and Animal Ecology University of Lausanne  
 1989-1990 Postdoctoral Research Associate, Museum of Zoology, Lausanne and Department of Zoology and Animal Ecology, University of Lausanne  
 1990-1992 Postdoctoral Research Fellow, Museum of Comparative Zoology, Harvard University  
 1992-1996 Holder of a START (Swiss Talents for Academic Research and Teaching) fellowship (Swiss NSF), 84 months), University of Bern and Lausanne. From 1994-1996 Privat Docent at the University of Lausanne  
 1996-2000 Associate Professor of Ecology, University of Lausanne, Switzerland (50%) and Holder of a START (Swiss Talents for Academic Research and Teaching) Fellowship (Swiss NSF), University of Bern and Lausanne (50%)  
 1998-2000 Head of the Institute of Ecology, University of Lausanne  
 2000- Full Professor of Evolutionary Ecology and Head of the new Department of Ecology and Evolution, University of Lausanne

**Professional Honours and Prizes**

1989 Outstanding Ph.D. student award, University of Lausanne  
 1990 Brunner Prize for the best Ph.D. in the Faculty of Sciences, University of Lausanne  
 1992 START (Swiss Talents for Academic Research and Teaching) fellowship (by the Swiss NSF)  
 1993 Award for best talk during the Annual Conference of the Swiss Zoological Society, Satellite symposium  
 1998 Mouline Prize for an article published in *Evolution* (first author: Michel Chapuisat),  
 1999 AETAS (Foundation for research on ageing) Research Award  
 2000 Leenards Research Award  
 2000 National Latsis Prize 2000, awarded by the Swiss NSF  
 2000 Charles D. Michener Lecture, University of Kansas  
 2005 Ernest Dubois Prize  
 2005 E. O. Wilson Naturalist Award  
 2006 Verwey lecture, Verwey meeting 2006

**Main Society Positions**

1989-1990 Secretary, French Section of the International Union for the Study of Social Insects

- 1989-1995 Council member of the French Section of the International Union for the Study of Social Insects  
 1994-1997 President of the Swiss Zoological Society  
 1997-1999 Vice-President of the Zoological Society of Switzerland  
 1998-2004 Member of the Swiss Commission for Biology (Swiss Commission for Biology, Swiss Academy for Science)  
 1999-2003 Member of the Steering Committee of the "National Forum on Biodiversity" (Swiss Commission for Biology, Swiss Academy for Science)

### **Editorial Positions**

- 1994-1997 Editorial board of *Revue Suisse de Zoologie*  
 1995-1998 Reviewing Editors of *Journal of Evolutionary Biology*  
 1997-1999 Consulting Editor for *Animal Behaviour*  
 1998-2004 Editor for *Ecology Letters*  
 1999-2003 Editorial Board of *Selection*  
 2000- Associate Editor for *Behavioral Ecology and Sociobiology*  
 2002- Editorial Board of *Behavioral Ecology*  
 2003-2005 Associate Editor for *Evolution*  
 2003- Editorial Board of *PloS Biology*  
 2004- Faculty of 1000, member  
 2005- Editorial Board of *BMC Evolutionary Biology*  
 2006- Editorial Board of *Current Biology*

### **Main Committees and Boards**

- 1998 Head of the committee "Criteria of the allocation of assistants", Faculty of Biology, University of Lausanne  
 1998 Member of the committee "Future of biology at the University of Lausanne"  
 1998 President of the committee for installing a new procedure to share resources in the Faculty of Biology, University of Lausanne  
 1999 Member of the "Teaching Committee", University of Lausanne  
 1999 Member of an "Evaluation Committee of Scientific Research", CNRS  
 1999 Member of the Scientific Committee "5th European Conference on Artificial Life, the 1999 International EPFL-Latsis Foundation Conference", 13-17 September, Swiss Federal Institute of Technology, Lausanne  
 1999 Evaluation of a project of formation of a new Department of Research, INRA  
 2000 Member of two search committees for new Professors, University of Lausanne  
 2000 Member of the committee developing the scientific program of a new center of Genomics, University of Lausanne  
 2001 Member of a search committee for a "Maitre d'Enseignement et de Recherche", University of Lausanne  
 2001 Member of a search committee for a Professor, University of Zurich  
 2001 Member of a search committee for a Professor, University of Basel  
 2001-2004 Member of the steering committee of the new center of Genomics, University of Lausanne  
 2002 Member of a search committee for a Professor, University of Lausanne  
 2003 Member of the Scientific Committee 5<sup>th</sup> International Workshop "Information Processing in Cells and Tissues (IPCAT2003)", September 8 - 11, 2003, Swiss Federal Institute of Technology, Lausanne  
 2003-2004 Member of a search committee for five positions in the new Center of Genomics, University of Lausanne  
 2003 Member of the steering committee for the new Faculty of Biology and Medicine, University of Lausanne  
 2003 Member of the search committee for the Dean of the Faculty of Biology and Medicine, University of Lausanne  
 2003- Member of the research council, Faculty of Biology and Medicine, University of Lausanne  
 2004-2005 Member of a search committee for a Professor, University of Fribourg  
 2005 President of a Promotion committee, University of Lausanne  
 2005 Member of a search committee for a Professor, University of Basel

- 2006 Member of the Program committee "9th European Conference on Artificial Life, From Animals to Animates", 25-30 September, CNR Roma
- 2006 Member of a search committee for a Professor, University of Lausanne

### Competitive Grants

#### *Grants from the Swiss National Science Foundation:*

- 1990 *Factors Regulating Queen Number in the Fire Ant, Solenopsis invicta*, PI, 823A-26161, 24 months, 101'680 Frs
- 1992 *The Evolution of Social Organization: A Case Study Using the Fire Ant, Solenopsis invicta*, START grant (Swiss Talents for Academic Research and Teaching), 31-35584.92, 60 months, 593'165 Frs
- 1993 *The Evolution of Social Organization: A Case Study Using the Fire Ant, Solenopsis invicta*, 3100-036907.93, 36 months, 240'567 Frs
- 1994 *Evolution in Structured Populations*, Grant to cover the cost of a Workshop, 3101-041191.94, 3'000 Frs
- 1994 *The Evolution of Sex Ratios in Ants with Variable Genetic Structure*, 3100-040828.94, 12 months, PI, 65'656 Frs
- 1995 *Sex Ratio Variation in Ants: The Impact of Kinship and Ecological Factors*, 3100-043330.95, 36 months, 391'144 Frs
- 1996 *Determinants of Community Structure in Plants and Animals*, grant to cover the cost of a scientific meeting, 3101-046404.96, PI D. Meyer 4'100 Frs
- 1996 *The Evolution of Social Organization: A Case Study Using the Fire Ant, Solenopsis invicta*, 3100-036907.93, supplementary grant 10 months, 55'256 Frs
- 1996 *Effect of a Founder Event on Genetic Diversity in the Fire Ant Solenopsis invicta*, 3100-049679.96, 36 months, co-PI K.G. Ross, 147'156 Frs
- 1998 *The Evolution of Social Organization: A Case Study Using the Fire Ant, Solenopsis invicta*, START (Swiss Talents for Academic Research and Teaching) grant, 31-35584.92/2, 24 months prolongation, 73'800 Frs
- 1998 *Testing Reproductive Skew Models Using Allodapine Bees*, 31-54001.98, 36 months, co-PIs M. Schwarz and K. Hogendoorn, 283'304 Frs
- 1998 *Sex Ratio Variation in Ants: The Impact of Kinship and Ecological Factors*, 3100-043330.95, 24 months prolongation, 260'763 Frs
- 1999 *Effect of a Founder Event on Genetic Diversity in the Fire ant Solenopsis invicta*, 3100-049679.96, 24 months prolongation, co-PI K.G. Ross, 98'104 Frs
- 2000 *Sex Ratio Evolution in Ants: Testing Queen Replenishment and Local Resource competition*, 3100-063026, 18 months, 222'000 Frs
- 2001 *Testing Reproductive Skew Models Using Allodapine Bees*, 31-54001.98, 6 months prolongation, co-PIs M. Schwarz and K. Hogendoorn, 47'217 Frs
- 2002 *Caste Differentiation, Aging and the Dynamics of Conflict and Cooperation in Ant Colonies*, 31-67025, 60 months, 1'370'000 Frs
- 2003 *Evolution of Cooperation and Division of Labour in Artificial Ants*. 3152A0-100476, 36 months 410'153 Frs

#### *Other competitive grants*

- 1984 Georgine Claraz Foundation, *Reproductive Strategy of the Argentine Ant*, 3'500 Frs
- 1984 "Société Académique Vaudoise" Foundation, *Queen Number and Reproductive Structure of the Argentine Ant*, 4'000 Frs
- 1985 Univ. of Lausanne Research Foundation, *Reproductive Tactics in the Argentine Ant*, 13'800 Frs
- 1986 French Section of the International Union for the Study of Social Insects, travel grant, *Regulation of Queen Number in Argentine Ant*, 500 Frs
- 1987 "Vaudoise" Entomological Society, *Energetics of Reproduction in Ants*, 500 Frs
- 1988 Subside from the "Société Académique Vaudoise" 18th Congrès International of Entomology, Vancouver, 950 Frs
- 1988 Private Funding to cover PhD research costs, 3'000 Frs
- 1988 French Section of the International Union for the Study of Social Insects, travel grant, 800 Frs
- 1989 Univ. of Lausanne Research Foundation, *Mating System of the Argentine Ant*, 3'750 Frs
- 1989 French Minister of Technology, *The Biology of Pest Ants*, Co-PI Luc Passera, 3'000 Frs
- 1990 Janggen-Pöhn-Foundation, *Alternative Reproductive Structure in the Fire Ant*, 5'000 Frs

- 1990 Grant from the French Minister of Research and Technology (in collaboration with other European Laboratories (Toulouse, Marseilles, Paris, Bruxelles), 20'000 FF
- 1993 Travel grant by the Swiss Academy of Natural Sciences, *Genetics of Fire Ants in South America*, 6'900 Frs
- 1993 Travel grant from the Association for the Study of Animal Behaviour, Annual Winter Meeting, London, 600 Frs
- 1993 Special grant from the Faculty of Sciences, University of Lausanne, 50'000 Frs
- 1994 Grant from the "Société Vaudoise des Sciences Naturelles", (Fonds Agassiz), *Sex Ratio in the Ant Formica exsecta*, 2'810 Frs
- 1994 Univ. of Lausanne "Research Foundation, 450e", *Conflict and Cooperation in Colonies of the Argentine Ant*, 3'000 Frs
- 1996 Univ. of Lausanne-Swiss Federal Institute of Technology (Lausanne) Collaborative Research Projects, *Khepera Ants. Collective Intelligence and Dynamics of Division of Labour*, 112'510 Frs
- 1997 MAE Research grants from France for collaborations between France and Switzerland, *Study of Reproductive Strategies in Ants*, 45'000 FF
- 1997 US National Science Foundation DEB 9707331 *Effect of a Founder Event on Genetic Diversity in the Fire ant Solenopsis invicta*, co-PI K.G. Ross, 135'000 Fs
- 1997 University of Lausanne publication grants, 4'800 Frs
- 1998 Travel grant by the Swiss Academy of Natural Sciences, *Genetic Diversity in the Fire Ant Solenopsis invicta*, 5'700 Frs
- 1999 Research grant from the Balbona Bioenvironmental Center, 5'000 Frs
- 1999 Australian National Science Foundation *Testing Reproductive Skew Models Using Allodapine Bee*, 19942063, 36 months, co-PIs M. Schwarz and K. Hogendoorn, 240'363 Frs
- 1999 Research grant from the AETAS foundation, *Testing Genes implicated in Aging in a System with a Naturally selected Variation of Lifespan*, 80'000 Frs
- 2000 EU Research Training Network (Coordinator J.J. Boomsma) *Integrated Studies of the Economic of Insect Societies*, 2'453'000 Frs (contribution to our laboratory, ca. 360'000 Frs)
- 2000 Univ. of Lausanne "Research Foundation, 450e" to cover the cost of a meeting entitled "*Social Systems and Genetic Structures*", 2'000 Frs
- 2000 Leenards Research Award, *Testing Theories of Aging in a System with Tremendous Variation in Lifespan*, 350'000 Frs
- 2000 Société Académique Vaudoise, Research Grant, 12'000 Frs
- 2000 Herbette Foundation Grant to support Prof. L. Passera's sabbatical visit, 12'000 Frs
- 2000 Roche Research Foundation, *Study of the Genetic and Behavioural Relationship of European Populations of the Ant Linepithema humile*, 6'000 Frs
- 2001 Herbette Foundation Grant, 13'600 Frs
- 2001 Univ. of Lausanne-Swiss Federal Institute of Technology (Lausanne) Collaborative Research Projects, *Evolution of cooperation and Labour Division in Artificial Ants*, Co-PIs D. Floreano and R. Siegwart, 80'000 Frs
- 2002 Ministère de l'Aménagement du Territoire et de l'Environnement Français, Projets Ecosystèmes Tropicaux *Genetics of Colonies and Populations of Wasmania auropuncta*, Co-PIs A. Estoup and A. Dejean, 670'000 FF
- 2002 Univ. of Lausanne special grant for genomics (Genomics ; intraspecific interactions), 300'000 Frs
- 2003 Herbette Foundation Grant to contribute to the development of a fire ant microarray , 30'000 Frs
- 2004 Univ. of Lausanne special grant for developing an ant microarray, 60'000 Frs
- 2004 Chuard –Schmid Foundation , subsidy for developing an ant microarray, 20'000 Frs
- 2004 Rub Foundation, subsidy for developing an ant microarray, 10'000 Frs
- 2004 Agassiz Foundation, subsidy for developing an ant microarray, 15'000 Frs
- 2004 Herbette Foundation Grant to contribute to research on fire ant genomics , 25'000 Frs
- 2004 NIH (NHGRI) grant to establish a BAC library for the fire ant *Solenopsis invicta* (with 8 co-PIs)
- 2005 Faculty of Biology and Medicine special inter-disciplinary research projects *Kin recognition and differential gene expression in Arabidopsis thaliana*, 200'000 FS
- 2006 Univ. of Lausanne special grant for genomics (Genomics and interactions), 200'000 Frs

### Organization of Meetings/Symposia

- 1989 Annual Meeting of the French Section of the International Union of the Study of Social Insects, Le Brassus (with D. Cherix)
- 1990 Symposium entitled "Evolution and significance of polygyny in social insects" during the 11th Meeting of the International Union for the Study of Social Insects, Bangalore
- 1994 Symposium entitled "Intracolony conflicts. Ultimate factors" during the 12th Meeting of the International Union of the Study of Social Insects, Paris (with J. Herbers)
- 1994 Workshop entitled "Evolution in Structured Populations" at the Institute of Zoology and Animal Ecology, University of Lausanne (with J. Goudet and N. Perrin)
- 1995 Workshop entitled "Biology and Economics" during the annual meeting of the Swiss Academy of Sciences, St-Gall
- 1996 Workshop entitled "Cooperation and Conflict" within the framework of the "3e Cycle Romand of Biological Sciences", La Sage (with N. Perrin). Invited speakers: David Haig, John Maynard Smith, Geoff Parker, Anne Pusey, Francis Ratnieks, Eors Szathmary
- 1997 Public Conferences Cycle (Faculty of Sciences, University of Lausanne) on the theme "Sex". Invited speakers: Frank Cézilly, François Renaud and Pierre-Henry Gouyon
- 1997 Symposium entitled "Cooperation and Conflict in Animal Societies" during the International Congress of the European Society for Evolutionary Biology, Arnhem (with J. Heinze)
- 1999 Workshop entitled "Relatedness: concept, measure and evolutionary implications" within the framework of the "3e Cycle Romand of Biological Sciences", La Sage (with J. Goudet and N. Perrin). Invited speakers: Steve Frank, Dave Queller, François Rousset, Jon Seger and Mike Wade
- 2000 22e Annual Meeting of the Association for the study of Biology and Population Genetics, Dijon, with J. Goudet and N. Perrin, Frank Cézilly, Marie-Jeanne Perrot-Minot and Sandrine Trouvé)
- 2000 Workshop entitled "Social Systems and Genetic Structures" within the framework of the "3e Cycle Romand of Biological Sciences", La Sage (with J. Goudet and N. Perrin)
- 2001 Symposium entitled "Sociality and Population Genetics" during the International Congress of the European Society for Evolutionary Biology, Aarhus (with L. Sundström, J. Goudet and N. Perrin)
- 2001 Workshop entitled "Evolutionary and Ecological Genomics", within the framework of the "3e Cycle Romand of Biological Sciences", University of Lausanne (with Y. Poirier, P. Reymond, J. Goudet, N. Perrin, I. Sanders and J.P. Zryd)
- 2002 Workshop entitled "Evolutionary and Ecological Genomics", within the framework of the "3e Cycle Romand of Biological Sciences", University of Lausanne (with P. Reymond)
- 2003 Workshop entitled "Lausanne Genomics days", within the framework of the "3e Cycle Romand of Biological Sciences", University of Lausanne (with O. Hagenbüchle and P. Reymond)
- 2003 Workshop entitled "Social Insect Genomics", within the framework of the INSECT EU network, University of Lausanne (with R. Hammond)
- 2004 Workshop entitled "Lausanne Genomics days", within the framework of the "3e Cycle Romand of Biological Sciences", University of Lausanne (with O. Hagenbüchle and P. Reymond)
- 2005 Workshop entitled "Lausanne Genomics days", within the framework of the "3e Cycle Romand of Biological Sciences", University of Lausanne (with O. Hagenbüchle and P. Reymond)
- 2006 Symposium entitled "The Nature of Human Cooperation", University of Lausanne (with Michel Chapuisat, Jacques Dubochet, Jérôme Goudet and Nicolas Perrin)
- 2006 Symposium entitled "Gene and Gene Networks underlying Social Biology and Behavior" during the International Congress of the International Union for the Study of Social Insects, Washington DC (with John Wang and Guy Bloch)

### Invited Seminars

- 1986 University of Paul-Sabatier, Toulouse, Department of Entomology
- 1989 Society "Vaudoise" of Entomology, Lausanne
- 1990 University of Bern, Institute of Zoology
- 1990 University of Zurich, Institute of Zoology
- 1990 Harvard University, Department of Organismic Biology
- 1991 University of Madison, Wisconsin, Department of Entomology
- 1991 University of California, Berkeley, Department of Entomology
- 1991 University of California, Davis, Department of Entomology
- 1992 University of Geneva
- 1992 Rice University, Department of Ecology and Evolutionary Biology

- 1992 Harvard University, Population Biology Seminars
- 1992 University of Fribourg, Institute of Zoology
- 1992 University of Bern, Section Ethology
- 1992 University of Würzburg, Theodor-Boveri Institut
- 1992 University of Paul-Sabatier, Toulouse, Department of Behavioural Ecology
- 1993 University of Lausanne, Institute of Zoology and Animal Ecology
- 1993 University of Paris-Sud XI, Department of Evolution and Plant Systematics
- 1993 University of Paris-Nord, Department of Experimental and Comparative Ethology
- 1993 University of Basel, Institute of Zoology
- 1993 University of Sheffield Special Symposium on the Biology of Spermatozoa
- 1993 University of Fribourg, Faculty of Sciences
- 1993 Max-Plank Institut für Verhaltensphysiologie, Seewiesen
- 1993 Oxford University, Department of Zoology
- 1993 University of Cambridge, Department of Zoology
- 1993 University Imperial College at Silwood Park, Department of Biology
- 1994 University of Helsinki, Department of Zoology
- 1994 University of Zurich, Institute of Zoology
- 1994 Special Symposium on the Evolution of Colony Characteristics in Social Insects, Tvärminne Zoological Station
- 1994 University of Neuchâtel, Institute of Zoology
- 1994 Harvard University, Department of Organismic Biology
- 1994 Special Symposium on Pest Ants, Museum of Zoology, Lausanne
- 1994 University of Lausanne, Faculty of Sciences
- 1995 Society "Neuchâteloise" of Natural History
- 1995 University of Zurich, Institute of Zoology
- 1995 University of Lausanne, Institute of Zoology and Animal Ecology
- 1995 Technische University of Berlin, Biology Institute
- 1995 Society "Vaudoise" of Natural History, Lausanne
- 1995 University of Zurich, Biodiversity seminars
- 1995 Museum of Zoology, Lausanne
- 1995 University of Lausanne, Faculty of Sciences
- 1995 Cornell University, Department of Neurobiology and Behavior
- 1996 University of Bern, Institute of Zoology
- 1996 University of Zurich, Institute of Zoology
- 1996 University of Lausanne, Institute of Zoology and Animal Ecology
- 1996 Swiss Association of Managers, Geneva
- 1996 University of Texas, Austin, Department of Zoology
- 1996 University of Georgia, Athens, Department of Ecology
- 1996 University of Pierre and Marie Curie, Laboratory of Ecology
- 1996 "Sciences et Citoyens" Meeting organised by the CNRS, Poitiers (Theme: can Biology explain the Society?)
- 1997 University of Lausanne, general conference for the public
- 1997 University of Bern, Institute of Zoology
- 1998 Confederation of European Pest Control Association, Geneva
- 1998 University of Montpellier., Center of Functional Ecology and Evolution
- 1998 University of Konstanz, Institute of Ethology
- 1998 University of Lausanne, General conference for the public
- 1998 University of Bern, Institute of Zoology
- 1998 Center of Applied Ecology of the Littoral, Corrientes
- 1998 University of Lausanne and Federal Institute of Technology, Lausanne, Association "Vaudoise" of researchers in physics
- 1999 University of Lausanne, General conference for the public

- 1999 University of Lyon, Department of Life Sciences
- 1999 University of François Rabelais, Tours, Institute of Research on the Biology of Insects
- 1999 Library of France, Paris, debate on the theme "The Man and origin of life", Conference organized jointly with the scientific magazine *La Recherche*
- 2000 National Academy of Sciences, Wien, Konrad Lorenz-Institut für Vergleichende Verhaltensforschung
- 2000 Society "Vaudoise" of Natural History and Groups for Biological Research
- 2000 Harvard University, Museum of Comparative Zoology
- 2000 ISREC (Swiss Institute for Experimental on Research on Cancer), Institute Ludwig and University of Lausanne (Institute of Biochemistry) common seminars, Epalinges
- 2000 University of Princeton, Department of Molecular Biology and Department of Physics
- 2000 University of Basel, Institute of Botany
- 2001 University of Fribourg, Department of Physics
- 2001 ETH Zurich, Department of Computational Sciences
- 2001 University of Fribourg, Institute of Zoology
- 2001 University of Uppsala, Department of Animal Ecology
- 2001 University of Zurich, Institute of Zoology
- 2001 Max Planck Institute for Evolutionary Anthropology, Leipzig
- 2001 University of Montpellier II, CEFE
- 2001 University of Fribourg, interactive seminars, Department of Biology
- 2001 University of Amsterdam (Netherlands), Seminars on Ecology and Evolution
- 2002 University of Calgary, Distinguished Lecture Series, Institute of Biochemistry and Molecular Biology
- 2002 University of Geneva, Academic Thursday, Faculty of Medicine
- 2002 University of Rockefeller
- 2002 University of Edinburgh, Institute of Cell, Animal and Population Biology
- 2002 University of Cambridge, Institute of Zoology
- 2002 Max-Planck Institute für Entwicklungsbiologie, Tübingen
- 2003 Centre Hospitalier Universitaire Vaudois (CHUV) Transbugnon Research Conferences
- 2003 University of Geneva, Seminars in Cellular and Molecular Biology
- 2003 University Libre of Bruxelles
- 2004 University of Bern, Department of Ecology and Evolution
- 2004 ISREC (Swiss Institute for Experimental on Research on Cancer) guest lecture during an off-site day
- 2004 University of Lausanne, Biodiversity and Genomic Interactions Seminar
- 2004 University of Bern, Department of Plant Sciences
- 2005 University of Lyon, Department of Life Sciences
- 2005 University of Regensburg, Department of Biology
- 2005 University of Lausanne, Department of Ecology and Evolution
- 2005 University of Copenhagen, Department of Population Ecology
- 2005 Paris Interdisciplinary College, Cochin-Port-Royal Medicine Faculty) (Opening Seminar)
- 2006 University College London, Center for Ecology and Evolution (CEE)
- 2006 University of Oxford, Department of Zoology
- 2006 Jacques-Monod Institute, Paris
- 2006 University of Geneva, Department of Plant Sciences

### **Presentation of Talks at Meetings**

- 1984 Annual Meeting of the French Section of the International Union for the Study of Social Insects, Diepenbeck
- 1985 Annual Meeting of the Swiss Entomological Society, Lausanne
- 1985 Annual Meeting of the French Society for the Study of Animal Behaviour, Toulouse
- 1986 10th Meeting of the International Union for the Study of Social Insects, München
- 1987 Annual Meeting of the French Section of the International Union for the Study of Social Insects, Paimpont
- 1988 Annual Meeting of the French Society for the Study of Animal Behaviour, Lyon

- 1988 Annual Meeting of the Swiss Entomological Society, Geneva
- 1988 18th International Meeting of Entomology, Vancouver
- 1988 Annual Meeting of the British and French sections of the International Union for the Study of Social Insects, London
- 1989 "3eCycle Romand" of Biological Sciences, Lausanne
- 1989 Annual Meeting of the German Section of the International Union for the Study of Social Insects, Bern
- 1989 Annual Meeting of the French Section of the International Union for the Study of Social Insects, Le Brassus
- 1990 Annual Conference of the Swiss Zoological Society, Zurich
- 1990 11th Meeting of the International Union for the Study of Social Insects, Bangalore
- 1990 Annual Meeting of the Entomological Society of America, New Orleans
- 1991 Annual Conference of the Swiss Zoological Society, Neuchâtel
- 1991 1st European Meeting of the International Union for the Study of Social Insects, Leuven
- 1991 Annual Meeting of the Entomological Society of America, Reno
- 1992 Annual Conference of the Swiss Zoological Society, Geneva
- 1992 4th International Meeting of the Behavioural Ecology Society, Princeton
- 1993 Annual Conference of the Swiss Zoological Society, Bern
- 1993 4th International Congress of the European Society for Evolutionary Biology, Montpellier
- 1993 "Cycle Romand" of Biological Sciences, Bern
- 1993 Annual Winter Meeting of the Association for the Study of Animal Behaviour, London, invited speaker
- 1994 Annual Conference of the Swiss Zoological Society, Lausanne
- 1994 Annual Meeting of the Society for Study of Evolution, Athens GA
- 1994 Annual Summer Meeting of the Association for the Study of Animal Behaviour, Bern, invited speaker
- 1994 5th International Meeting of the Behavioural Ecology Society, Nottingham
- 1994 12th Meeting of the International Union for the Study of Social Insects, Paris, invited speaker
- 1994 Special Meeting "Evolution in Structured Populations", Lausanne
- 1995 24th International Ethological Conference, Honolulu, plenary lecture
- 1995 5th International Congress of the European Society for Evolutionary Biology, Edinburgh, invited speaker
- 1995 Annual Meeting of the Entomological Society of America, Las Vegas, plenary lecture
- 1996 Annual Conference of the Swiss Zoological Society, Fribourg
- 1996 5e International Congress of Systematics and Evolutionary Biology, Budapest, invited speaker
- 1997 Annual Meeting of the Society for Study of Evolution, Boulder, with Giorgina Bernasconi
- 1997 European Science Foundation workshop "Social Evolution in Vertebrates and Invertebrates: Common Principles and Idiosyncratic Differences", University of Sheffield, invited speaker
- 1997 French Meeting on "Microsatellites and Population Genetics", Paris, plenary lecture
- 1997 6th International Congress of the European Society for Evolutionary Biology, Arnhem, invited speaker
- 1997 European Community TMR Network "Workshop Behavioural Ecology", Würzburg, plenary lecture
- 1997 Deutsche Forschungsgemeinschaft Schwerpunktprogramm "Genetic analyses of social systems", Bonn, plenary lecture
- 1997 Dutch Society for Behavioural Biologists, Zwolle, plenary lecture
- 1997 Population Genetic Group Meeting, Nottingham, plenary lecture
- 1998 Santa Fe Institute Workshop "The Interplay of Ultimate Causes and Proximate Determinants of Animal Sociality", Santa Fe, plenary lecture
- 1998 Annual Conference of the Swiss Zoological and Botanical Societies, Geneva
- 1998 International meeting "The Mathematical Biology of Pattern and Progress", Bath, plenary lecture
- 1998 CNRS Conference Jacques Monod "The Evolutionary Theory at the Dawn of the Millennium", Roscoff, plenary lecture
- 1998 13th Meeting of the International Union for the Study of Social Insects, Adelaide, invited lecture
- 1999 Workshop "Cooperation and Conflict in Evolution" sponsored by The Center for Ecology and Evolution (CEE, University College London) and the Center for Population Biology (Silwood Park, Imperial College), London, plenary lecture
- 1999 Annual Meeting of the French Section of the International Union for the Study of Social Insects, Tours, plenary lecture

- 1999 Annual Meeting of the German Section of the International Union for the Study of Social Insects, Hohenheim, plenary lecture
- 1999 International Day of Older Persons "The Mysteries of Longevity: From Animals to Man" organized by the Geneva International Network on Ageing (GINAI) and OMS, Geneva, plenary lecture
- 1999 Special workshop "Aging: toward understanding the secret of centenarians", Hospital of Cery, Lausanne-Prilly, invited lecture
- 1999 Conferences of the sections V and VI of the Swiss Academy of Sciences "New trends in biological sciences", Bern, plenary lecture
- 2000 International Workshop "Reproductive skew", Cornell, Ithaca, plenary lecture
- 2000 EU TMR Network "Social Evolution" concluding workshop, Firenze, invited lecture
- 2000 8th International Meeting of the Behavioural Ecology Society, Zürich, plenary lecture
- 2000 Workshop "Evolutionary Ecology of Sex", Groningen, plenary lecture
- 2001 EU TMR Network "Social Evolution" workshop, Granada, overview lecture as group leader in the EU funded project
- 2001 Workshop "Principles of Social Evolution", Wissenschaftskolleg Berlin, plenary lecture
- 2001 Symposium on the "Use of DNA Microarray in Evolutionary Biology", Bern invited lecture (given by my co-author Joel Parker)
- 2001 8th International Congress of the European Society for Evolutionary Biology, Aarhus, invited speaker
- 2002 Annual Conference of the Swiss Botanical and Zoological Societies, Bern, Darwin Birthday's keynote address
- 2002 Research Workshop on Aging, University of Geneva, invited lecture
- 2002 Workshop "Collective Intelligence Seminar", University of Fribourg, invited lecture
- 2002 Dahlem Workshop on "Genetic and Cultural Evolution of Cooperation", Berlin, invited contributor
- 2002 14th Meeting of the International Union for the Study of Social Insects, Sapporo, invited talk
- 2002 Life Science and Society (meeting organised for the 50 years of the Swiss NSF)
- 2003 Annual Symposium, Institute of Biology, Leiden "Progress in Evolution: from Molecules to Communities", keynote address
- 2003 EU TMR Network "Insect" workshop, Laufen, overview lecture as a project leader in the EU funded project
- 2003 12<sup>th</sup> Arolla Workshop "Growth Control in Development and Disease", invited lecture
- 2003 EU Workshop "Exploring the Continuum of Development and Ageing: a Key Biomedical Challenge in Changing World", Bruxelles, invited participant
- 2004 D-Day, Research workshop day organized by the graduate students of the Faculty of Biology and Medicine, University of Lausanne, plenary talk
- 2004 The "Festival des Sciences", Chamonix, invited speaker
- 2004 American Society of Microbiology Conference on "Cell-Cell Communication in Bacteria", Banff, plenary lecture
- 2004 Final symposium for the EU TMR Network "Insect", Helsingoer, overview lecture as a project leader
- 2004 EU meeting ECagents, Rome, as a participant to the EU project
- 2004 Journées Scientifiques of the Ecole Normale Supérieure de Paris, invited guest
- 2005 Center for Nonlinear Studies Workshop "Collective Information and Specialization in Collective Systems", Los Alamos National Laboratories, Santa Fe, invited speaker
- 2005 Gordon conference on "Evolutionary and Ecological Functional Genomics", Oxford, invited speaker
- 2005 10th International Congress of the European Society for Evolutionary Biology, Krakow, invited speaker
- 2005 Festival "Sciences-Cité" Cognitive issues, from Animals to Humans, invited speaker
- 2005 EMBO Workshop on Principles of Self-Organization in Living Matter, Heidelberg, invited speaker
- 2005 Inaugural meeting « Paris Interdisciplinary College (PIC) », invited speaker
- 2005 Workshop "Innovation in Biological Systems: Mechanisms, Evolution, and Consequences", Institut des Hautes Études Scientifiques, Bures-sur-Yvette, invited speaker
- 2006 Symposium "Conflict and Cooperation: the Evolution of Social Interactions", Harvard, invited speaker
- 2006 15th Meeting of the International Union for the Study of Social Insects, Washington, invited speaker
- 2006 Second Congress of the Italian Evolutionary Biology Society, Florence, keynote address
- 2006 Meeting 3eme cycles "Evolutionary Mechanisms underlying Social Interactions", Bern, invited speaker

## Teaching Experience

### *Courses given on a regular basis*

- 1996-2001 General Ecology (undergraduates), University of Lausanne
- 1996-2000 Population Biology (undergraduates), University of Lausanne
- 1996-2000 Theoretical Ecology (undergraduates), University of Lausanne
- 1996-2000 Seminar course in Ecology (undergraduates), University of Lausanne
- 1996-2000 Seminar course in Zoology and Botany (graduates), University of Lausanne
- 1996-2000 Supervision of three laboratory courses (Population Biology, Theoretical Ecology, and Zoology) (undergraduates), University of Lausanne
- 1999-2002 Sampling methods and data analysis (graduates), Universities of Lausanne, Geneva, Neuchâtel, Fribourg and Bern
- Since 1997 Experimental Design (undergraduates), University of Lausanne
- Since 2000 Evolutionary Mechanisms, advanced course (undergraduates), University of Lausanne
- Since 2001 Participation to the organization of a seminar course in Ecology and Evolution
- Since 2001 Introductory course of Evolution (undergraduates), University of Lausanne

### *Courses given on a non-regular basis*

- 1983-1986 Laboratory course in Zoology, (undergraduates) University of Lausanne
- 1985-1989 Laboratory course in Entomology, (undergraduates) University of Lausanne
- 1993-1996 Student seminars at Bern and Lausanne Universities (undergraduates and graduates), participation to the organization
- 1994-1996 Evolutionary Ecology, (undergraduates), University of Lausanne
- 1996-1997 Environmental sciences, (master students), Federal Institute of Technology, Lausanne, participation to teaching
- 1996 Cellular Networks, (master students), Federal Institute of Technology, Lausanne, participation to teaching
- 1997 Informatics and Biology: from Models to their Applications, (master students), Federal Institute of Technology, Lausanne, participation to teaching
- 1997 Genetic Systems and Programming, (master students), Federal Institute of Technology, Lausanne, participation to teaching
- 1998 Course of Tropical Biology (organised by the Tropical Biology Association), Amani, Tanzania, 1-28 September
- 1999 Insects, architecture and arts, Federal Institute of Technology, Lausanne, participation to teaching
- 2000 Aging: The Secret of Centenaries, (courses for adult education), participation to teaching
- 2000 School on "ADN Microsatellites" organized by the CNRS and INRA, La Grande Motte, participation to teaching
- 2000 Biomedical Ethics. Contribution to a seminar entitled "Sociobiology: Genetics and Behaviour", University of Lausanne
- 2000 "Social Evolution" general course (undergraduates), University of Lausanne
- 2004 DEA "The individual: Philosophy, Epistemology and Ethics", University of Geneva, participation to teaching
- 2004 Module "Genes and Behaviour", Certificat of Neurosciences University of Geneva, participation to teaching
- 2005 Project Determinisms (Innate and acquired components in the constitution of individuals), Presentation on "Natural Basis of Ethics"

## Habilitation and Theses Committees, University of Lausanne: 18

### **Habilitation and Theses Committees (out of Lausanne University)**

- 1996 Thesis committee of Else Juliette Fjerdingstad, University of Aarhus
- 1997 Thesis committee of Laura Walin, University of Helsinki
- 1997 Thesis committee of Steffi Knoll, University of Neuchâtel
- 1997 Thesis committee of Peter Jann, University of Zürich
- 1998 Thesis committee of Rachel A. Allan, University of Melbourne
- 1998 Thesis committee of Laurence Gaume, University of Montpellier

1998	Thesis committee of Wee Tek Tay, La Trobe University
1999	Thesis committee of Tom Little, University of Basel
1999	Thesis committee of Pierre Frank, University of Montpellier
2001	Thesis committee of Anne Tsitrone, University of Montpellier
2002	Thesis committee of Minttumaaria Hannonen, University of Helsinki
2003	Habilitation committee Frédéric Fleury, University Claude Bernard Lyon
2003	Thesis committee of Ambroise Dalecki, University of Montpellier
2005	Thesis committee Michiel Dijkstra, University of Copenhagen
2006	Thesis committee Ellen Van Wilgenburg, University of Melbourne

#### **Master Students Currently Supervised**

2006- Danielle Mersch

#### **Graduate Students Currently Supervised**

2001-	Rolf Kümmerli, supported by the University of Lausanne
2002-	Valérie Vogel, supported by the University of Lausanne
2002-	Barbara Holzer, supported by the Swiss NSF and the University of Lausanne
2003-	Tanja Schwander, supported by the Swiss NSF
2003-	Markus Waibel, co-direction with Prof. Dario Floreano, supported by the Swiss NSF
2004-	Danesh S. Tarapore, co-direction with Prof. Dario Floreano, supported by a Nord-Sud special grant, University of Lausanne
2005-	Yannick Wurm, supported by the Swiss NSF
2006-	Mingkwan Nipitwattanaphon, supported by a grant from the Thai government

#### **Post-Doctorals Currently Supervised**

2002-	Dr. Rob Hammond. Supported by a EU grant, Swiss NSF and special grant from the University of Lausanne
2003-	Dr. John Wang. Supported by a genomic grant, University of Lausanne
2005-	Dr. Michael Nicolas. Supported by the University of Lausanne
2006-	Dr. Morgan Percy. Supported by an EMBO fellowship
2006-	Dr. Lino Ometto. Supported by the Swiss NSF
2006-	Dr. Stéphanie Jemielity, supported by the Leenards Foundation NSF

#### **Master Students Previously Supervised**

1995-1997	Christina Wai Ying Chang
1998-2000	Hervé Rosset. Currently Graduate Student at the University of Lausanne
1999	Denis Fournier. Currently Post-Doctoral at the University of Bruxelles
2000	Stéphanie Jemielity. Currently Post-Doctoral at the University of Lausanne
2001-2002	Valérie Vogel. Currently Graduate Student at the University of Lausanne
2002-2003	Nadia Bruyndonckx. Currently Graduate Student at the University of Lausanne
2003-2004	Julie Jaquieri. Currently Graduate Student at the University of Lausanne
2003-2004	Céline Ohayon. Currently Research Assistant at the University of Lausanne
2004-2005	Stephanie Dreier. Currently Graduate Student at the University of Copenhagen
2004-2005	Johannes Graeff. Currently Graduate Student at the ETHZ
2005-2006	Dominique Vuille. Currently Research Assistant at the University of Lausanne
2005-2006	Jean-Yves Humbert. Currently Research Assistant at the University of Lausanne

#### **Graduate Students Previously Supervised**

1993-1997	Giorgina Bernasconi. Currently Swiss NSF Assistant Professor at the University of Lausanne
1993-1998	Michael J. B. Krieger. Currently independent Post-Doctoral at Rockefeller University
1997-2002	Cathy Liautard. Currently Post-Doctoral at the University of Helsinki
1997-2002	Max Reuter. Currently Post-Doctoral at University College London

- 1997-2002 Drude Molbo. Currently Post-Doctoral at the University of Edinburgh  
 1998-2003 Philipp Langer. Currently Post-Doctoral at the University of Harvard  
 2000-2001 Magda Konior. Supervised during 1-year. Currently Post-doc at the University of Jagiellonski, Krakow  
 2001-2006 Stéphanie Jemielity. Currently Post-Doctoral at the University of Lausanne

#### **Post-Doctorals Previously Supervised**

- 1994-1995 Liselotte Sundström. Currently full Professor at the University of Helsinki  
 1996-1999 William D. Brown. Currently Assistant Professor, State University of New York, Freedonia  
 1997-1999 Else J. Fjerdingsstad. Currently Post-Doctoral at the University Pierre et Marie Curie, Paris  
 1998-2001 Jes Soee Pedersen. Currently Associate Professor, University of Copenhagen  
 1999-2000 Tatiana Giraud. Currently Permanent Researcher, CNRS, University of Paris-Sud  
 1999-2005 Joel D. Parker. Currently Lecturer, University of Southampton  
 2000-2001 Michel Chapuisat. Currently “Maître Assistant “at the University of Lausanne  
 2000-2002 Ken R. Helms. Currently Research Associate University of Vermont  
 2000-2004 Sara Cahan Helms. Currently Assistant Professor, University of Vermont  
 2001-2003 Andres Perez-Uribe. Currently Professor at the HES at Yverdon  
 2002-2003 Max Reuter. Currently Post-Doctoral at University College London  
 2002-2006 Dr. Hélène Niculita. Currently Post-Doctoral at the University of Lausanne  
 2003-2004 Paolo Uva. Currently Post-Doctoral at the University of Rome  
 2003-2004 Philipp Langer. Currently Post-Doctoral at the University of Harvard  
 2004-2005 Virginie Ravigné. Currently Maître de Conférence (Lecturer), University of Pau  
 2004-2005 Julien Varaldi. Currently Maître de Conférence (Lecturer), University of Lyon  
 2004-2005 Denis Fournier. Currently Post-Doctoral at the University of Bruxelles

**Manuscripts and Books Reviewed (over 600) for:**

<i>Academic Press</i>	<i>Experimental and Applied Acarology</i>
<i>Acta Ethologica</i>	<i>Functional Ecology</i>
<i>Adaptive Behavior</i>	<i>Genetica</i>
<i>Aging Cell</i>	<i>Genetics, Selection Evolution</i>
<i>American Naturalist</i>	<i>Genome Biology</i>
<i>Animal Behaviour</i>	<i>Insect Molecular Biology</i>
<i>Annales Zoologici Fennici</i>	<i>Insectes Sociaux</i>
<i>Apidologie</i>	<i>Journal of Applied Ecology</i>
<i>Applied and Environmental Microbiology</i>	<i>Journal of Chemical Ecology</i>
<i>Austral Ecology</i>	<i>Journal of Evolutionary Biology</i>
<i>Behavioral and Brain Sciences</i>	<i>Journal of Insect Behavior</i>
<i>Behavioral Ecology</i>	<i>Journal of Insect Physiology</i>
<i>Behavioral Ecology and Sociobiology</i>	<i>Journal of Theoretical Biology</i>
<i>Behaviour</i>	<i>Journal of Zoology</i>
<i>Behavioural Processes</i>	<i>Kluwer Academic Press</i>
<i>Biochemical Systematics and Ecology</i>	<i>Mechanisms of Ageing and Development</i>
<i>Biological Invasions</i>	<i>Molecular Biology and Evolution</i>
<i>Biological Reviews</i>	<i>Molecular Ecology</i>
<i>Biology Letters</i>	<i>Nature</i>
<i>Blackwell</i>	<i>Naturwissenschaften</i>
<i>BMC Evolutionary Biology</i>	<i>New Zealand Journal of Ecology</i>
<i>Cambridge University Press</i>	<i>Oecologia</i>
<i>Canadian Journal of Zoology</i>	<i>Oikos</i>
<i>Conservation Biology</i>	<i>Oxford University Press, UK</i>
<i>Current Biology</i>	<i>Oxford University Press, USA</i>
<i>Ecography</i>	<i>PlosBiology</i>
<i>Ecological Entomology</i>	<i>Princeton University Press</i>
<i>Ecological Research</i>	<i>Philosophical Transactions of the Royal Society, London</i>
<i>Ecology</i>	<i>Proceedings of the National Academy of Sciences, USA</i>
<i>Ecology, Ethology &amp; Evolution</i>	<i>Proceedings of the Royal Society, London, B</i>
<i>Ecology Letters</i>	<i>Physiological Entomology</i>
<i>Elsevier</i>	<i>Schweizerische Entomologische Gesellschaft</i>
<i>Ethology</i>	<i>Science</i>
<i>Evolution</i>	<i>Springer Verlag</i>
<i>Evolution and Development</i>	<i>Theoretical Population Biology</i>
<i>Experientia</i>	<i>Trends in Ecology and Evolution</i>

**Grants Reviewed (over 100) for:**

<i>Australian Research Council</i>	<i>NERC (Natural Environment Research Council, UK)</i>
<i>Austrian Science Fund</i>	<i>NSERC (Natural Sciences and Engineering Research Council, Canada)</i>
<i>Biotechnology and Biological Sciences Research Council</i>	<i>NSF (USA)</i>
<i>Bureau des Ressources Génétiques</i>	<i>NWO, the Dutch Research Council</i>
<i>Ecole Normale Supérieure de Lyon</i>	<i>Research Council for Environment and Natural Resources of the Academy of Finland</i>
<i>ECOS-Sud</i>	<i>Smithsonian Institution</i>
<i>EPSRC (Engineering and Physical Sciences Research Council)</i>	<i>The John Templeton Foundation</i>
<i>Swiss NSF</i>	<i>USDA</i>
<i>Institut de la Longévité et du Vieillissement</i>	<i>Wissenschaftskolleg zu Berlin</i>
<i>Israel Science Foundation</i>	
<i>Katolieke Universiteit Leuven</i>	
<i>The Leverhulm Trust</i>	

**Promotion and Tenure Cases Reviewed: 19****Professional Societies**

American Society of Naturalists  
 Association for the Study of Animal Behaviour  
 European Society for Evolutionary Biology  
 International Society for Behavioral Ecology  
 International Society for the Study of Social Insects  
 Society "Académie Vaudoise"

Swiss Society of Zoology  
Society for the Study of Evolution

## Publications

### Book

1. *Le Monde des Fourmis*. In press. L. Keller & E. Gordon, Odile Jacob, Paris, 303 pp.

### Edited Books

2. *Levels of Selection in Evolution*. 1999. L. Keller (ed.), Princeton University Press, Princeton, 318 pp.
3. *Queen Number and Sociality in Insects*. 1993. L. Keller (ed.), Oxford University Press, Oxford, 439 pp.

### Papers in International Refereed Journals (reverse chronological order)

4. Brown, W. D. & Keller, L. In press. Resource supplements cause a change in colony sex-ratio specialization in the mound-building ant, *Formica exsecta*. *Behavioral Ecology and Sociobiology*.
5. Christe, P., Keller, L. & Roulin, A. In press. The cost of being a male: implications for sex-specific rates of ageing. *Oikos*.
6. Helms Cahan, S., Julian, G. E., Schwander, T. & Keller, L. In press. Reproductive isolation between the harvester ant *Pogonomyrmex rugosus* and two lineages of hybrid origin. *Ecology*.
7. Holzer, B., Chapuisat, M. & Keller, L. In press. Unicoloniality, recognition and genetic differentiation in a native *Formica* ant. *Journal of Evolutionary Biology*.
8. Jemielity, S., Gräff, J. & Keller, L. In press. How to fool a virgin: Artificial dealation triggers oviposition in virgin *Lasius niger* queens. *Insectes Sociaux*.
9. Holzer, B., Kümmerli, R., Keller, L. & Chapuisat, M. In press. Sham nepotism as a result of differences in brood viability in ants. *Proceedings of the Royal Society, London B*.
10. Lehmann, L. & Keller, L. In press. The evolution of cooperation and altruism. A general framework and a classification of models. *Journal of Evolutionary Biology*.
11. Tarapore, D., Floreano, D. & Keller, L. In press. Influence of the level of polyandry and genetic architecture on division of labour. Proceedings Tenth International Conference on the Simulation and Synthesis of Living Systems (ALIFE'06), MIT Press.
12. Tripet, F., Fournier, D., Nonacs, P. & Keller, L. In press. Kin recognition and the paradoxical patterns of aggression between colonies of a Mojave desert *Pheidole* ant. *Insectes Sociaux*.
13. Wang, J., Hammond, R. L. & Keller, L. Evolutionary genomics of adaptation. Commissioned by *Annual Reviews of Genetics*.
14. Keller, L. & Jemielity, S. 2006. Social insects as a model to study the molecular basis of ageing. *Experimental Gerontology*, 41, 553-556.
15. Keller, L. & Surette, M. G. 2006. Communication in bacteria. An ecological and evolutionary perspective. *Nature Reviews Microbiology*, 4, 249-258.
16. Konior, M., Radwan, J., Kolodziejczyk, M. & Keller, L. 2006. Strong association between a single gene and fertilisation efficiency of males and fecundity of their mates in the bulb mite. *Proceedings of the Royal Society, London B*, 273, 309-314.
17. Langer, P., Hogendoorn, K., Schwartz, M. P. & Keller, L. 2006. Reproductive skew in the Australian allodapine bee *Exoneura robusta*. *Animal Behaviour*, 71, 193-201.
18. Pedersen, J. S., Krieger, M. J. B., Vogel, V., Giraud, T. & Keller, L. 2006. Native supercolonies of unrelated individuals in the invasive Argentine ant. *Evolution*, 60, 782-791.
19. Schwander, T., Helms Cahan, S. & Keller, L. 2006. Genetic caste determination in *Pogonomyrmex* ants imposes costs during colony founding. *Journal of Evolutionary Biology*, 402-409.
20. Waibel, M., Floreano, D., Magnenat, S. & Keller, L. 2006. Division of labour and colony efficiency in social insects: effects of interaction between genetic architecture, colony kin structure and rate of perturbations. *Proceedings of the Royal Society, London B*, 273, 1815-1823.

21. Brakefield, P. M., Gems, D., Cowen, T., Christensen, K., Grubeck-Loebenstein, B., Keller, L., Oeppen, J., Rodriguez-Pena, A., Stazi, M. A. & Tatar, M. 2005. What are the effects of maternal and pre-adult environments on aging in humans, and are there lessons from animal models? *Mechanisms of Ageing and Development*, 126, 421-438.
22. Fournier, D., Foucaud, J., Loiseau, A., Cross-Arteil, S., Jourdan, H., Orivel, J., Le Breton, J., Chazeau, J., Dejean, A., Keller, L. & Estoup, A. 2005. Characterization and PCR multiplexing of polymorphic microsatellites in the invasive ant *Wasmania auropunctata*. *Molecular Ecology Notes*, 5, 239-242.
23. Fournier, D., Estoup, A., Orivel, J., Foucaud, J., Jourdan, H., Le Breton, J. & Keller, L. 2005. Clonal reproduction by males and females in the little fire ant. *Nature*, 435, 1230-1234.
24. Helms, K. R., Reuter, M. & Keller, L. 2005. Sex-ratio conflict between queens and workers in eusocial Hymenoptera: Mechanisms, costs, and the evolution of split colony sex ratios. *Evolution*, 59, 2626-2638.
25. Jaquiéry, J., Vogel, V. & Keller, L. 2005. Multilevel genetic analyses of two European supercolonies of the Argentine ant *Linepithema humile*. *Molecular Ecology*, 14, 589-598.
26. Jemielity, S., Chapuisat, M., Parker, J. D. & Keller, L. 2005. Long live the queen: Studying aging in social insects. *Age*, 27, 241-248.
27. Konior, M., Keller, L. & Radwan, J. 2005. Effect of inbreeding and heritability of sperm competition success in the bulb mite *Rhizoglyphus robini*. *Heredity*, 94, 577-581.
28. Kümmerli, R., Helms, K. R. & Keller, L. 2005. Experimental manipulation of queen number affects colony sex ratio investment in the highly polygynous ant *Formica exsecta*. *Proceedings of the Royal Society, London B*, 272, 1789-1794.
29. Reuter, M., Pedersen, J. S. & Keller, L. 2005. Loss of *Wolbachia* infection during colonisation in the invasive Argentine ant *Linepithema humile*. *Heredity*, 94, 364-369.
30. Rosset, H., Keller, L. & Chapuisat, M. 2005. Experimental manipulation of colony genetic diversity had no effect on short-term task allocation in the Argentine ant *Linepithema humile*. *Behavioural Ecology and Sociobiology*, 58, 87-98.
31. Aron, S., Passera, L. & Keller, L. 2004. Evolution of miniaturisation in inquiline parasitic ants: Timing of male elimination in *Plagiolepis pygmaea*, the host of *Plagiolepis xene*. *Insectes Sociaux*, 51, 395-399.
32. Fjerdingstad, E. J. & Keller, L. 2004. Relationships between phenotype, mating behaviour, and fitness of queens in the ant *Lasius niger*. *Evolution*, 58, 1056-1063.
33. Hammond, R. L. & Keller, L. 2004. Conflict over male parentage in social insects. *PLoS Biology*, 2(9): e248, 1472-1482.
34. Fournier, D., Aron, S. & Keller, L. 2004. Significant reproductive skew in the facultatively polygynous ant *Pheidole pallidula*. *Molecular Ecology*, 13, 203-210.
35. Helms Cahan, S., Julian G. E., Rissing S. W., Schwander, T., Parker, J. D. & Keller, L. 2004. Loss of phenotypic plasticity generates genotype-caste association in harvester ants. *Current Biology*, 14, 2277-2282.
36. Helms, K. R., Fournier, D., Keller, L., Passera, L. & Aron, S. 2004. Colony sex ratios in the facultatively polygynous ant *Pheidole pallidula*: A reanalysis with new data. *Evolution*, 58, 1141-1142.
37. Keller, L. 2004. Evolution: Informational constraints on adaptation. *Current Biology*, 14, R757-758.
38. Langer, P., Hogendoorn, K. & Keller, L. 2004. Tug-of-war over reproduction in a social bee. *Nature*, 428, 844-847.
39. Langer, P., Molbo, D. & Keller, L. 2004. Polymorphic microsatellite loci in Allodapine bees for investigating the evolution of social behaviour. *Molecular Ecology Notes*, 4, 303-305.
40. Molbo, D., Machado, C. A., Herre, E. A., Keller, L. 2004. Inbreeding and population structure in two pairs of cryptic fig wasp species. *Molecular Ecology*, 13, 1613-1623.
41. Parker, J. D., Parker, K. M. & Keller, L. 2004. Molecular phylogenetic evidence for extracellular Cu Zn superoxide dismutase gene in insects. *Insect Molecular Biology*, 13, 587-594.
42. Parker, J. D., Parker, K. M., Sohal, B. H., Sohal, R. S. & Keller, L. 2004. Decreased expression of Cu-Zn Superoxide Dismutase 1 in ants with extreme lifespan. *Proceedings of the National Academy of Sciences, USA*, 101, 3486-3489.

43. Pearcy, M., Aron, S., Doums, C. & Keller, L. 2004. Conditional use of sex and parthenogenesis for workers and queen production in ants. *Science*, 306, 1780-1783.
44. Reuter, M., Helms, K. R., Lehmann, L. & Keller, L. 2004. Effects of brood manipulation costs on optimal sex allocation in social Hymenoptera. *American Naturalist*, 164, E73-E82.
45. Braendle, C., Hockley, N., Brevig, T., Shingleton, W. & Keller, L. 2003. Size-correlated division of labour and spatial distribution of workers in the driver ant, *Dorylus molestus*. *Naturwissenschaften*, 90, 277-281.
46. Brown, W. D., Liautard, C. & Keller, L. 2003. Sex-ratio dependent execution of queens in polygynous colonies of the ant *Formica exsecta*. *Oecologia*, 134, 12-17.
47. Fjerdingstad, E. J., Gertsch, P. J. & Keller, L. 2003. The relationship between multiple mating by queens, within-colony genetic variability and fitness in the ant *Lasius niger*. *Journal of Evolutionary Biology*, 16, 844-853.
48. Fournier, D., Keller, L., Passera, L. & Aron, S. 2003. Colony sex ratios vary with breeding system but not relatedness asymmetry in the facultatively polygynous ant *Pheidole pallidula*. *Evolution*, 57, 1336-1342.
49. Helms Cahan, S & Keller, L. 2003. Complex hybrid origin of genetic caste determination in harvester ants. *Nature*, 424, 306-309.
50. Jemielity, S. & Keller, L. 2003. Queen control over reproductive decisions –no sexual deception in the ant *Lasius niger*. *Molecular Ecology*, 12, 1589-2597.
51. Keller, L. 2003. Behavioural plasticity : Levels of sociality in bees. *Current Biology*, 13, R644-R645.
52. Liautard, C., Brown, W. D., Helms, K. R. & Keller, L. 2003. Temporal and spatial variations of female production in the ant *Formica exsecta*. *Oecologia*, 138, 558-564.
53. Mescher, M. C., Ross, K. G., Shoemaker, D. D., Keller, L. & Krieger, M. J. B. 2003. Distribution of the two social forms of the fire ant *Solenopsis invicta* in the native south american range. *Annals of the Entomological Society of America*, 96, 810-817.
54. Molbo, D., Machado, C. A., Sevenster, J. G., Keller, L. & Herre, E. A. 2003. Cryptic species of fig pollinating wasps: implications for the fig-wasp mutualism, sex allocation, and precision of adaptation. *Proceedings of the National Academy of Sciences, USA*, 10, 5867-5872.
55. Perez-Uribe, A., Floreano, D. & Keller, L. 2003. Effects of group composition and level of selection in the evolution of cooperation in artificial ants. *Advances in Artificial Life, Proceedings Lecture Notes in Artificial Intelligence*, 2801,128-137.
56. Reuter, M. & Keller, L. 2003. High levels of multiple *Wolbachia* infection and recombination in the ant *Formica exsecta*. *Molecular Biology and Evolution*, 20, 748-753.
57. Shoemaker, D. D., Ahrens, M., Sheill, L., Mescher, M. C., Keller, L., & Ross, K. G. 2003. Distribution and prevalence of *Wolbachia* infection in native populations of the fire ant *Solenopsis invicta* (Hymenoptera : Formicidae). *Environmental Entomology*, 32, 1329-1336.
58. Sundström, L., Keller, L. & Chapuisat, M. 2003. Inbreeding and sex-biased gene flow in the ant *Formica exsecta*. *Evolution*, 57, 1552-1561.
59. Brown, W. D. & Keller, L. 2002. Queen recruitment and split sex ratios in polygynous colonies of the ant *Formica exsecta*. *Ecology Letters*, 5, 102-109.
60. Brown, W. D., Keller, L., Sundström, L. 2002. Sex allocation in mound-building ants: the roles of resources and queen replenishment. *Ecology*, 83, 1945-1952.
61. Chapuisat, M. & Keller, L. 2002. Division of labour influences the rate of ageing in weaver ant workers. *Proceedings of the Royal Society, London B*, 269, 909-913.
62. Fjerdingstad, E. J., Gertsch, P. J. & Keller, L. 2002. Why do some social insect queens mate with several males? Testing the sex-ratio manipulation hypothesis in *Lasius niger*. *Evolution*, 56, 553-562.
63. Giraud, T., Pedersen, J. S. & Keller, L. 2002. Evolution of supercolonies: The Argentine ants of Southern Europe. *Proceedings of the National Academy of Sciences, USA*, 99, 6075-6079.
64. Goudet, J & Keller, L. 2002. The correlation between inbreeding and fitness: does allele size matter? *Trends in Ecology and Evolution*, 17, 201-202.
65. Keller, L. 2002. Marsupial sperm pairing: a case of ‘sticky’ green beards? *Trends in Ecology and Evolution*, 17, 113.

66. Keller, L. & Fournier, D. 2002. Lack of inbreeding avoidance in the Argentine ant *Linepithema humile*. *Behavioral Ecology*, 13, 28-31.
67. Keller, L. & Parker, J. D. 2002. Behavioral genetics. A gene for supersociality. *Current Biology*, 12, 180-181.
68. Molbo, D., Krieger, M. J. B., Herre, E. A. & Keller, L. 2002. Species-diagnostic microsatellite loci for the fig wasp genus *Pegoscapus*. *Molecular Ecology Notes*, 2, 440-442.
69. Ross, K. G. & Keller, L. 2002. Experimental conversion of colony social organization by manipulation of worker genotype composition in fire ants (*Solenopsis invicta*). *Behavioral Ecology and Sociobiology*, 51, 287-295.
70. Aron, S., Passera, L. & Keller, L. 2001. Role of resource availability on sex, caste and reproductive allocation ratios in the Argentine ant *Linepithema humile*. *Journal of Animal Ecology*, 70, 831-839.
71. Bernasconi, G. & Keller, L. 2001. Female polyandry affects their sons' reproductive success in the red flour beetle *Tribolium castaneum*. *Journal of Evolutionary Biology*, 14, 186-193.
72. Fournier, D. & Keller, L. 2001. Partitioning of reproduction among queens in the Argentine ant, *Linepithema humile*. *Animal Behaviour*, 62, 1039-1045.
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