

MARC CHOISY

PERSONAL DETAILS

Date of birth: 30th of October 1976.
Citizenship: French.
Marital status: single.

Professional address

Génétique et Evolution des Maladies Infectieuses
UMR CNRS-IRD 2724
Centre IRD, 911 Avenue Agropolis, BP 64501
34394 Montpellier Cedex 5 France
phone: +33 4 67 41 61 80
fax: +33 4 67 41 62 99
e-mail: choisy@mpl.ird.fr

Personal address

14, rue des Arbousiers
34070 Montpellier France
phone: +33 4 67 04 82 20

EDUCATION AND QUALIFICATIONS

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| 2005 | Post-Doc in <i>Disease Ecology</i> . University of Georgia, USA. |
| 2001-2004 | PhD in <i>Integrative Biology</i> . University of Montpellier, France. |
| 2000-2001 | MSc in <i>Biostatistics</i> . University of Montpellier, France. |
| 1999-2000 | MSc in <i>Evolutionary Biology and Ecology</i> . University of Montpellier, France. |
| 1998-1999 | Credits in <i>Quantitative Ecology</i> . University of Wisconsin, USA. |
| 1998-1999 | Credits in <i>Wildlife Population Dynamics</i> . University of Wisconsin, USA. |
| 1996-1998 | Engineer in <i>Agronomy</i> . ENSA, Montpellier, France. |
| 1994-1996 | Two-year intensive preparation to enter ENSA. <i>Maths, Physics, Biology</i> . Grenoble, France. |
| 1993-1994 | High School Diploma. Honours, Science Major. <i>Maths, Physics, Chemistry</i> . Valence, France. |

GRANTS AND AWARDS

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| 2005 | Lavoisier Fellowship from the French Minister of Foreign Affairs. |
| 2001-2004 | PhD grant, co-funded by CNRS and Région Languedoc-Roussillon. |
| 1999-2000 | MSc grant from the French Minister of Agriculture. |
| 1998-1999 | Graduate Studentship, University of Wisconsin, McIntire-Stennis Project #3885. |

TEACHING AND SUPERVISING

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| 2004 | Supervision of an MSc student in Biomathematics (University of Paris, France) on the spatio-temporal dynamics of chickenpox in France. |
| 2004 | (3.5 hours). <i>Dynamic aspects of vaccination</i> . MSc students in Evolutionary Biology and Ecology. University of Montpellier, France. |
| 2004 | (3.5 hours). <i>Modelling in epidemiology</i> . BSc senior students in Population Biology. University of Montpellier, France. |
| 2003 | (3.5 hours). <i>Modelling in epidemiology</i> . BSc senior students in Population Biology. University of Montpellier, France. |
| 1999 | (2 hours). <i>The exponential law in biology</i> . BSc junior students in Natural Resources. University of Wisconsin, Stevens Point, USA. |

EMPLOYMENTS AND VISITS

- 2005** (1 year) Post-Doc at the Institute of Ecology, University of Georgia, Athens, USA.
Advisor: Dr. Pejman ROHANI.
Topic: Ecological disease dynamics interference, resonance, and vaccination.
- 2002** (2 weeks) Department of Biology, Lomonosov Moscow State University, Russia.
Advisor: Prof. Anatoli T. TERIOKHIN.
Topic: Global study of repartition, prevalence and virulence of HIV strains.
- 2001** (1 month) Evolutionary Biology Group, Department of Zoology, University of Oxford, UK.
Advisor: Dr. David L. ROBERTSON.
Topic: Maximum likelihood analysis of adaptive evolution in HIVs and SIVs.
- 2001** (4 months) Centre d'Etude sur le Polymorphisme des Micro-organismes (CEPM, UMR CNRS-IRD), Montpellier, France.
Advisors: Drs. Jean-François GUEGAN & Eric ELGUERO.
Topic: Modelling human retroviruses virulence evolution.
- 2000** (8 months) Centre de Biologie et de Gestion des Populations (CBGP, UMR INRA-ENSAM-IRD-CIRAD), Montpellier, France.
Advisor: Dr. Jean-Marie CORNUET.
Topic: Comparing methods of estimating genetic introgressive rate using extensive computer simulations.
- 2000** (1 month) Mangrove Ecosystem Research Centre (MERC), University of Hanoi, Vietnam.
Advisors: Drs. Ester SERRAÕ & Claire BILLOT.
Topic: Population dynamics of *Avicennia marina* mangrove trees.
- 2000** (1 week) Unidade de Ciências e Tecnologias dos Recursos Aquáticos (UCTRA), Universidade do Algarve, Faro, Portugal.
Advisors: Drs. Ester SERRAÕ & Claire BILLOT.
Topic: Population dynamics of *Avicennia marina* mangrove trees.
- 1999** (10 months) Department of Forest Ecology and Management, University of Wisconsin, Madison, USA.
Advisor: Prof. Mark S. BOYCE.
Topic: Population dynamics of Jack Pine budworm (*Choristoneura pinus pinus*).
- 1999** (1 month) College of Natural Resources, University of Wisconsin, Stevens Point, USA.
Advisor: Dr. Evelyn H. MERRILL.
Topic: Courtship behaviour of the Greater Prairie Chicken (*Tympanuchus cupido pinnatus*).
- 1998** (6 months) Australian School of Environmental Science, Griffith University, Queensland, Australia.
Advisor: Dr. Ronda J. GREEN.
Topic: Foraging behaviour of frugivorous birds in tropical rainforest.
- 1997** (1 year) Chaire d'Ecologie Animale, ENSAM, Montpellier, France.
Advisors: Prof. Serge KREITER & Dr. Marie-Jeanne PERROT-MINOT.
Topic: Foraging behaviour of Lesser Kestrel (*Falco naumanni*).
- 1997** (2 months) Instituto de Ecología, Universidad Nacional Autónoma de México (UNAM), México DF, México.
Advisor: Dr. Rodrigo A. MEDELLIN.
Topic: Seed dispersal by birds, bats and opossums in tropical rainforest.

PUBLICATIONS

- ROCHE B., **CHOISY M.**, DORLÉANS Y., CHAU N.P., FLAHAULT A., VALLERON A.J., GUEGAN J.-F. Spatio-temporal dynamics of varicella in France. The influence of zoster (in preparation).
- CHOISY M.** Ecological Modelling of Infectious Diseases. In *Encyclopedia of Infectious Diseases – Modern Methods* (TIBAYRENC M. Ed.) John Wiley & Sons, Chichester, USA. (in preparation).
- CHOISY M.**, BOYCE M.S., NIEMUTH N.D., RADELOFF V., MLADENOFF D.J. Birds and jack-pine budworm in the northwestern pine barrens of Wisconsin. (in preparation).
- BOYCE M.S., VILJUGREIN H., RADELOFF V.C., NIEMUTH N.D., **CHOISY M.**, GORHAM R.M., MLADENOFF D.J. Low landscape diversity destabilizes jack-pine budworm populations (to be submitted).
- CHOISY M.**, ROHANI P., GUÉGAN J.-F. Dynamics of infectious diseases and pulse vaccination: teasing apart the embedded resonance effects (submitted).
- HIDE M., **CHOISY M.**, BAÑULS A.-L. Molecular evolution of cathepsin like cystein proteases within *Leishmania* genus and other trypanosomatids (submitted).
- CHOISY M.**, HIDE M., BAÑULS A.-L., GUÉGAN J.-F. (2004) Rocking the curve. *Trends in Microbiology* **12**(12): in press.
- PRUGNOLLE F., **CHOISY M.**, THÉRON A., DURAND P., DE MEEÛS T. (2004) Sex-specific correlation between heterozygosity and clone size in the trematode *Schistosoma mansoni*. *Molecular Ecology* **13** : 2859-2864.
- FARGETTE D., PINEL A., ABUBAKAR Z., TRAORÉ O., BRUGIDOU C., FATOGOMA S., HÉBRARD H., **CHOISY M.**, YACOUBA S., FAUQUET C., KONATÉ G. (2004) Inferring the evolutionary history of Rice Yellow Mottle Virus from genomic, phylogenetic, and phylogeographic studies. *Journal of Virology* **78** (7): 3253-3261.
- CHOISY M.**, FRANCK P., CORNUET J.-M. (2004) Estimating admixture proportions with microsatellites: comparison of methods based on simulated data. *Molecular Ecology* **13** : 955-968.
- CHOISY M.**, WOELK C.H., GUÉGAN J.-F., ROBERTSON D.L. (2004) Comparative study of adaptive molecular evolution in different human immunodeficiency virus groups and subtypes. *Journal of Virology* **78** (4): 1962-1970.
- CHOISY M.**, BROWN S.P., LAFFERTY K.D., THOMAS F. (2003) Evolution of trophic transmission in parasites: Why add intermediate hosts? *American Naturalist* **162** (2): 172-181.

CONGRESSES AND WORKSHOP PARTICIPATIONS

- CHOISY M.**, ROHANI P., GUÉGAN J.-F. *Dynamics of infectious diseases and pulse vaccination: teasing apart the embedded resonance effects*. Gordon Research Conference (GRC) on the Metabolic Basis of Ecology, July 4th-9th 2004, Lewiston, USA (poster). Lodging and registration Graduate Student Grant award from the GRC to attend the congress.
- CHOISY M.**, WOELK C.H., GUÉGAN J.-F., ROBERTSON D.L. *Comparative study of adaptive molecular evolution in different HIV clades*. 11th Conference on Retroviruses and Opportunistic Infections (CROI), February 8th-11th 2004, San Francisco, USA (poster). Travel, lodging, and registration Graduate Student Grant award from the 11th CROI to attend the congress.
- CHOISY M.**, WOELK C.H., GUÉGAN J.-F., ROBERTSON D.L. *A comparative study of adaptive molecular evolution in different HIV clades*. 9th Meeting of PhD Students in Evolutionary Biology, September 11th-16th 2003, Fiesch, Switzerland (communication).
- FARGETTE D., PINEL A., ABUBAKAR Z., TRAORÉ O., BRUGIDOU C., FATOGOMA S., HÉBRARD H., **CHOISY M.**, YACOUBA S., FAUQUET C., KONATÉ G. Evolutionary history of rice yellow mottle virus in Africa and phytopathological implications. EMBO Workshop on Genomic Approaches in Plant Virology, May 28th-31st 2003, Keszthely, Hungary (communication).
- CHOISY M.**, WOELK C.H., GUÉGAN J.-F., ROBERTSON D.L. Maximum likelihood analysis of adaptive evolution in primate lentiviruses. 8th Meeting of PhD Students in Evolutionary Biology, August 28th-September 1st 2002, Lohja, Finland (communication).

CHOISY M., WOELK C.H., GUÉGAN J.-F., ROBERTSON D.L. Maximum likelihood analysis of adaptive evolution in primate lentiviruses. 6th International Meeting on Molecular Epidemiology and Evolutionary Genetics of Infectious Diseases (MEEGID), July 24th-27th 2002, Institut Pasteur, Paris, France (communication).

GUEGAN J.-F., BROUTIN H., **CHOISY M.** Can we suspect different epidemiological patterns and processes for parasite and infectious diseases between developed and developing countries? Pertussis Modelling Workshop, May 9th-10th 2001, Barcelona, Spain (communication).

BOYCE M.S., **CHOISY M.**, MLADENOFF D.J. Plantation forestry destabilises Jack-pine budworm populations. Pine Barrens Research and Management Workshop, March 10th-11th 1999, Ashland, Wisconsin, USA (communication).

MEETING ORGANISATIONS AND SERVICES

Reviewer for *Infection*, *Genetics and Evolution* (2 ms) and *Parasitology* (3 ms).

2002 2nd Host-Parasite Evolutionary Dynamics Workshop, September 16th-20th 2002, Le Pous, Notre Dame de Londres, France.

2001 1st Host-Parasite Evolutionary Dynamics Workshop, September 25th-28th 2001, Agropolis International, Montpellier, France.

1997 Staff of the 7th International Theriological Congress (ITC), September 6th-12th 1997, Acapulco, México.

COMPUTER AND LANGUAGE SKILLS

Operating Systems: Windows^{XP}, MacOS 8.6, UNIX and Linux systems.

Developing Environment: Delphi 5.

Scientific Softwares: S-PLUS 2000, Mathematica 4.1, MATLAB 6.5.

Programming Languages: Object-oriented Pascal, Perl, S, LaTeX, HTML 4.1.

Languages: French(mother tongue), English (spoken, written, read – TOEFL score: 617 points).

REFERENCES

Dr. Mark Stevens BOYCE

Alberta Conservation Association
Chair of Fisheries & Wildlife
Department of Biological Sciences
University of Alberta
Edmonton, AB T6G 2E9
Canada

Phone: +1 (780) 492 0081
Fax: +1 (780) 492 9234
e-mail: boyce@ualberta.ca

Dr. Jean-Marie CORNUET

CBGP
UMR INRA-IRD-CIRAD-ENSAM,
Campus International de Baillarguet
CS 30016
34988 Montferrier-sur-Lez, Cedex
France

Phone: +33 (0)4 99 62 33 36
Fax: +33 (0)4 99 62 33 45
e-mail: jmcornuet@ensam.inra.fr

Dr. Jean-François GUEGAN

GEMI
UMR CNRS-IRD 2724
IRD, 911 Avenue Agropolis,
B.P. 64501
34394 Montpellier Cedex 5
France

Phone: +33 (0)4 67 41 62 05
Fax: +33 (0)4 67 41 62 99
e-mail: guegan@mpl.ird.fr