

Curriculum Vitae

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July/2009

EDUCATION:

- 2001 – PhD in Molecular Biology and Biochemistry, Instituto de Química, Universidade de São Paulo, Brazil.
- 1994 – *Licenciatura* in Biological Sciences (Associate Degree Equivalent for Education), Faculdade de Educação, Universidade de São Paulo, Brazil.
- 1992 – BSc in Biological Sciences, Instituto de Biociências, Universidade de São Paulo, Brazil.

RESEARCH INTERESTS:

- Evolution of Nuclear and Mitochondrial Genomes.
- Speciation Process and Hybrid Incompatibilities.
- Molecular Evolution and Molecular Phylogenetics.
- Systematics and Biogeography.

APPOINTMENTS:

- 2008-Present – Postdoctoral Fellow: Universidad Autónoma de Barcelona, Spain.
- 2005-2008 – Postdoctoral Fellow: University of Rochester, NY, USA.
- 2001-2003 – Postdoctoral Researcher: American Museum of Natural History, NY, USA.

PUBLICATIONS:

- Viljakainen, L., **Oliveira, D.C.S.G.**, Werren, J.H. and Behura, S.K. Recent transfers of mitochondrial DNA to the nuclear genome in the wasp *Nasonia vitripennis*. *Insect Molecular Biology*, in review.
- Oliveira, D.C.S.G.**, Hunter, W.B., Ng, J., Desjardins, C.A., Dang, P.M., and Werren, J.H. Data mining cDNAs reveals 3 new ssRNA viruses in *Nasonia* (Hymenoptera: Pteromalidae). *Insect Molecular Biology*, in review.
- Oliveira, D.C.S.G.**, Werren, J.H., Verhulst E., Giebel, J.D., Kamping, A., Beukeboom L.W., and van de Zande, L. 2009. Identification and characterization of the *doublesex* gene of *Nasonia*. *Insect Molecular Biology*, 18: 315-324.
- RayChoudhury, R., Baldo, L., **Oliveira, D.C.S.G.**, and Werren, J.H. 2009. Modes of acquisition of *Wolbachia*: horizontal transfer, hybrid introgression and codivergence in the *Nasonia* species complex. *Evolution*, 63: 165–183.
- Oliveira, D.C.S.G.**, RayChoudhury, R., Lavrov, D.V., and Werren, J.H. 2008. Rapidly evolving mitochondrial genome and directional selection in mitochondrial genes in the parasitic wasp *Nasonia* (Hymenoptera: Pteromalidae). *Molecular Biology and Evolution*, 25: 2167–2180.
- Oliveira, D.C.S.G.**, Leonidas, M., Etges, W.J., O’Grady, P.M., and DeSalle, R. 2008. Species delimitation in the *Drosophila aldrichi* subcluster (Diptera: Drosophilidae) using DNA sequences. *Zootaxa*, 1725: 37–47.
- Dunning Hotopp, J.C., Clark, M.E., **Oliveira, D.C.S.G.**, et al. (20 co-authors). 2007. Widespread lateral gene transfer from intracellular bacteria to multicellular eukaryotes. *Science*, 317: 1753–1756.

Oliveira, D.C.S.G., O'Grady, P.M., Etges, W.J., Heed, W.B., and DeSalle, R. 2005. Molecular systematics and geographical distribution of the *Drosophila longicornis* species complex (Diptera: Drosophilidae). *Zootaxa*, 1069: 1–32.

Oliveira, D.C.S.G., Wintermute, E.H., Etges, W.J., Heed, W.B., O'Grady, P.M., and DeSalle, R. 2003. Hierarchical structure in the *Drosophila mojavensis* cluster (Diptera: Drosophilidae). *Hereditas*, 139: 223–227.

Oliveira, D.C.S.G. and Reinach, F.C. 2003. The calcium-induced switch in the troponin complex probed by fluorescent mutants of troponin I. *European Journal of Biochemistry*, 270: 2937–2944.

Bonacum, J., DeSalle, R., O'Grady, P., **Oliveira, D.**, Wintermute, J., and Zilversmit, M. 2001. New nuclear and mitochondrial primers for systematics and comparative genomics in Drosophilidae. *Drosophila Information Service*, 84: 201–204.

RECENT SEMINARS:

2008 – On the search for the transposable element Galileo in the *Drosophila repleta* species group. I Jornada de Genómica, Bioinformática y Evolución, BCN, Spain.

2008 – Cytonuclear coevolution and hybrid incompatibilities in the parasitic wasp *Nasonia*. VIII Jornada de Biología Evolutiva. Societat Catalana de Biologia, BCN, Spain.

2008 – Rapidly evolving mitochondrial genome and cytonuclear incompatibilities in hybrids of the parasitic wasp *Nasonia*. Departamento de Genética y Microbiología, Universidad Autónoma de Barcelona, Spain.

2007 – Hybrid Breakdown in *Nasonia*: the role of mitochondrial F1Fo ATP Synthase. 2nd *Nasonia* Genome Annotation and Assembly Meeting. Arizona State University, AZ, USA.

2006 – *Wolbachia* genes transferred to the *Nasonia* genome. Ecology and Evolutionary Biology Seminars. University of Rochester, NY, USA.

2006 – Unusual molecular evolution and new gene order in the mitochondrial genome of the parasitic wasp *Nasonia*. 4th International *Nasonia* Meeting. New York University, NY, USA.

2005 – Evolutionary genomics of *Nasonia* and *Wolbachia*. Department of Biology Fall Retreat, Cummings Nature Center. University of Rochester, NY, USA.

2005 – A preliminary look at postembryonic ESTs in *N. vitripennis* and *N. giraulti*. *Nasonia* meeting. Western Washington University, Bellingham, WA, USA.

2004 – Sistemática e distribuição geográfica do complexo de espécies *Drosophila longicornis* (grupo *repleta*). Centro de Biologia Molecular e Engenharia Genética, Universidade Estadual de Campinas, SP, Brazil.

POSTER PRESENTATIONS:

Oliveira, D.C.S.G., Raj, M., Lavrov, D.V., and Werren, J.H. 2006. Unusual molecular evolution and new gene order in the mitochondrial genome of the parasitic wasp *Nasonia*. Evolution 2006, joint annual meeting of the Society for the Study of Evolution, the Society of Systematic Biologists, and the American Society of Naturalists, poster 148.

Leonidas, M., Bolnet, C., **Oliveira, D.**, and DeSalle, R. 2003. Investigating species boundaries in *Drosophila aldrichi*. 36th Annual Metropolitan Association of College and University Biologists.

Oliveira, D.C.S.G., O'Grady, P.M., and DeSalle, R. 2002. Phylogenetic questions in the *repleta* species group addressed by high throughput sequencing technology. 43rd Annual *Drosophila* Research Conference, abstract 896B.

Oliveira, D.C.S.G. and Reinach, F.C. 2001. Calcium binding to the troponin complex: Clues from intrinsic spectral probes in troponin I. V Congresso do Departamento de Bioquímica, Instituto de Química, Universidade de São Paulo, Brazil.

Oliveira, D.C.S.G. and Reinach, F.C. 2000. Probing the calcium induced switch in troponin complex: Two new intrinsic spectral probes of troponin I. XXIX Reunião Anual da Sociedade

Brasileira de Bioquímica e Biologia Molecular.

Oliveira, D.C.S.G. and Reinach, F.C. 1999. A fluorescent troponin I sensitive to calcium binding to troponin C. XXVIII Reunião Anual da Sociedade Brasileira de Bioquímica e Biologia Molecular.

Oliveira, D.C.S.G. and Reinach, F.C. 1997. Fluorescent mutants of troponin I. International Symposium on Protein Condensation.

Oliveira, D.C.S.G. and Reinach, F.C. 1997. Fluorescent mutants of troponin I. XXVI Reunião Anual da Sociedade Brasileira de Bioquímica e Biologia Molecular.

OTHER PARTICIPATIONS IN CONGRESSES AND WORKSHOPS:

2009 – IX Jornada de Biologia Evolutiva. Societat Catalana de Biologia, BCN, Spain.

2008 – Annual Meeting of the Society of Molecular Biology and Evolution (SMBE). Barcelona, Spain.

2008 – International Congress on Transposable Elements. Saint-Malo, France.

2005 – FIBR: Integrative studies of *Wolbachia*-eukaryotic interactions. Second Annual Meeting. Southwest Research Station (AMNH), Portal, AZ, USA.

2002 – *Drosophila* Species Workshop. Tucson *Drosophila* Stock Center, University of Arizona, AZ, USA.

2002 – 48^o Congresso Nacional de Genética – Sociedade Brasileira de Genética. Águas de Lindóia, SP, Brazil.

ACTIVE RESEARCH PROJECTS:

With Alfredo Ruiz (Universidad Autónoma de Barcelona) and Mar Marzo (Universidad Autónoma de Barcelona). Distribution and evolution of the transposable element Galileo in the genus *Drosophila*.

With Christopher Ellison (University of California, San Diego), Daniel Reed (University of Rochester), and John H. Werren (University of Rochester). The role of complex V in hybrid cyto-nuclear incompatibilities in *Nasonia*.

With Christopher Desjardins (University of Rochester) and John H. Werren (University of Rochester). *Nasonia* expression libraries from larvae, pupae, and adults.

With Patrick O'Grady (University of California, Berkeley), Rob DeSalle (American Museum of Natural History, NY), and William Etges (University of Arkansas). Molecular phylogenies in the *Drosophila repleta* species group.

FELLOWSHIPS:

2001-2003 – Ambrose Monell Research Fellowship, AMNH (American Museum of Natural History, NY, USA).

1998-2001 – PhD Graduate Fellowship, FAPESP (Fundação de Amparo à Pesquisa do Estado de São Paulo, Brazil).

1996-1998 – MSc Graduate Fellowship, CNPq (Conselho Nacional de Desenvolvimento Científico e Tecnológico, Brazil).

STUDENTS AND TECHNICIANS TRAINING:

2007 – Julienne Ng, rotating graduate student, University of Rochester, NY, USA.

2006 – Robert Laport, rotating graduate student, University of Rochester, NY, USA.

2006-2008 – Daniel Reed, technician, University of Rochester, NY, USA.

2005-2006 – Martha Raj, technician, University of Rochester, NY, USA.

2003 – Melissa Leonidas, program “Research Experiences for Undergraduates”, American Museum of Natural History, NY, USA.

2003 – William Calvert, high school student, program “Inside View”, American Museum of Natural History, NY, USA.

1998-1999 – Anna Victoria Rotberg, advanced training undergraduate student, Instituto de Química, Universidade de São Paulo, Brazil.

FIELD WORK:

2009 – Sonora, Mexico: Collection of *Drosophila* and other arthropods.

2005-2007 – Rochester, NY, USA (several): Collection of arthropods for *Wolbachia* screening.

2005 – Southwest Research Station (AMNH), Portal, Arizona, USA: Collection of arthropods for *Wolbachia* screening.

2005 – Racho San Bernardino, Sonora, Mexico: Collection of arthropods for *Wolbachia* screening.

2003 – Biological stations of La Selva, Las Cruces, and Palo Verde, Costa Rica: *Drosophila* collecting.

2002 – Maui, Molokai, and Oahu, Hawaii, USA: *Drosophila* collecting.

2002 – Oaxaca and Puebla, Mexico: *Drosophila* collecting.

RESEARCH SKILLS:

Experience with a broad range of molecular techniques including: sequencing, PCR, DNA and RNA purification, primer design, etc.

Experience with phylogenetics, molecular evolution, population genetics, and related softwares: Paup, MacClade, DNAsp, MEGA, PAML, Modeltest.

Experience with genome sequencing, genome assembly, gene finding and annotation, EST data, and related softwares: stand alone Blast, Blast2go, Apollo.

Experience with gene cloning, site-direct mutagenesis, expression of recombinant proteins, and protein purification.

Experience collecting arthropods using several methods: net sweeping, Malaise trap, light trap, Berlese funnel, etc.

Experience handling *Drosophila* and *Nasonia*.

Programming skills: Unix, Perl.

OTHER PROFESSIONAL SERVICES:

2005-Present – Reviewer Molecular Phylogenetics and Evolution.

2008-Present – Reviewer Insect Science.

2009-Present – Reviewer Molecular Biology and Evolution.