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EDUCATION AND POSITIONS

Assistant Professor- IFM Biology, Linköping University Linköping, Sweden (2015-present).

Post Doctoral Fellow- IFM Biology, Linköping University Linköping, Sweden (2013-2015).

Research: Epigenetic effects of early stress on chickens; Role of epigenetic changes in diversifications of chicken breeds due to domestication.

PI: Dr. Per Jensen

Post Doctoral Fellow- School of Biological Sciences, Washington State University, Pullman, WA, USA (2008-2013).

Research: Transgenerational epigenetic effects of environmental toxicants transmitted through the male germline.

PI: Dr. Michael Skinner

Post Doctoral Grantee- Division of Nutritional Sciences, Cornell University, Ithaca, NY, USA (2006-2008).

Research: The function of piRNAs on gene imprinting in the male germ line. Grant provided by the Cornell University Vertebrate Genomic Center.

PI: Dr. Paul Soloway

Research Assistant- Institute of Nutrition and Food Technology, University of Chile, Santiago, Chile (2005-2006).

Research: Role of nutritional folates in cardiovascular health and effects on DNA methylation of leucocytes.

Co-PI with Dr. Sandra Hirsch and Dr. Ana Maria Ronco

PhD in Ecology and Evolutionary Biology- Faculty of Sciences, University of Chile, Santiago, Chile (2000-2006).

Thesis: Environmental estrogens as inducers of epigenetic change in early stages of development in mammals.

Advisors: Dr. Luis Valladares and Dr. Pablo Sabat

Bachelors of Science in Biological Sciences- University of Chile, Santiago, Chile (1994-1998).

PUBLICATION METRICS

- Google Scholar Metrics: **Citations = 1791**; **h-index = 20**; i10-index = 22 (on 27/11/2015).
- 34 articles published in peer reviewed scientific journals
- 5 book chapters
- 1 USA patent application
- 1 Methodological white paper
- Blog column at the Brazilian edition of the Huffington Post (Brazil Post)
- Contributor to Epibeat.com, website devoted to news in epigenetic research
- Full list of publications is included as a separate document

RESEARCH GRANTS AWARDED

Principal Investigator in project granted by ‘**The Escher Fund for Autism**’ (CA, USA) for studying early exposures and germ line epigenetic marks in autism (2015-2016).

Principal Investigator on **Post Doctoral Grant** by the **Cornell University Vertebrate Genomic Program** to study the role of piRNAs on the establishment of genomic imprinting (2007).

Co-Principal Investigator in project granted by **FONDECYT** (Funding for Development of Science and Technology of the Government of Chile) named ‘Metabolic alterations derived from folate deficiency and their relationship with atherogenesis’ (<http://www.conicyt.cl/bases/fondecyt/proyectos/01/2005/1050380.html>) (2005-2008).

SCHOLARSHIPS, FELLOWSHIPS AND PRIZES AWARDED

Minor Field Study program grant from the Swedish government to establish contacts for Swedish students to acquire practical experience in a developing country. Grant provided for contact trip with Brazilian institutions (2014).

USDA Animal Epigenetics Postdoctoral Travel Fellowship for presenting at the 21st International Conference on Plant and Animal Genomes (2013).

Burroughs-Wellcome fellowship for minorities in reproductive sciences to present at the 45th Annual Meeting of the Society for the Study of Reproduction (2011).

Center for Reproductive Biology Outstanding Scientific Post-Doctoral Presentation, 2nd prize, 14th Annual Retreat (2010).

Gordon Research Conference travel grant for Post Doctoral oral presentation (2009).

Endocrine Society travel grant for oral presentation at the Endocrine Society Meeting (2007).

Dr. Abraham Stekel grant for young researchers, provided by the **Institute of Nutrition and Food Technology (INTA)** of the University of Chile and **Nestlé Chile S.A.** (2000-2001, 2001-2002 and 2004-2005).

Overseas scientific training fellowships provided by **MECESUP** (Ministry of Education, Government of Chile) (2003 and 2005).

CONICYT Chilean government grant for post-graduate studies (2002-2004).

Fellowship for funding of PhD Thesis from the Department of Post-Graduate Studies of the **University of Chile** (2002).

INVITED SEMINARS AT INSTITUTIONS AND CONFERENCES

Invited speaker to present at **SWETOX (Swedish Toxicology Science Research Center)** (Södertelje, Sweden; 2015). Seminar title: ‘Epigenetics and disease etiology: past exposures, future diseases’. Visit coordinated by y Dr. Joelle Ruegg.

Invited speaker to the ‘**2nd International Workshop on Obesity and Environmental Contaminants**’ (Uppsala, Sweden; 2015). Seminar title: ‘Epigenetics and disease etiology: linking past environmental exposures to current disease trends’.

Invited speaker to the workshop ‘Transgenerational epigenetic inheritance and its relevance for behavioral science’ held at the **University of Konstanz** (Konstanz, Germany; 2015). Seminar title: ‘Epigenetic modifications: marks of past exposures and potential use as animal welfare indicators’. Workshop organized by Dr. Thomas Elbert.

Invited speaker to present at **EMBRAPA (Brazilian agency for agriculture and production animals research)** (Concordia, SC, Brazil; July 2014). Seminar title: ‘Epigenetic modifications: marks of past exposures and potential use as animal welfare indicators’. Visit coordinated by Dr. Ricardo Zanella and Dr. Monica Ledur.

Invited speaker to present at **FuturaGene Inc.** (Itapetinga, SP, Brazil; May 2013). Seminar title: ‘Epigenetic and Transgenerational Effects Derived from the Exposure to Environmental Contaminants’. Visit coordinated by Dr. Rodrigo Graça.

Invited speaker to the ‘**2013 Linköping University Neuroretreat**’ (Jönköping, Sweden; 2013). Seminar title: Environmental signals and transgenerational epigenetics: implications in health and disease.

Invited speaker to present at **EMBRAPA (Brazilian agency for agriculture and production animals research)** (Concordia, SC, Brazil; May 2013). Seminar title: ‘Epigenetics and its relation to health and animal production and reproduction’. Visit coordinated by Dr. Ricardo Zanella.

Invited speaker to present at the **Roslin Institute, University of Edinburgh** (Scotland, UK; May 2013). Seminar title: ‘Environmental signals and transgenerational epigenetics: from disease etiology to evolution’. Visit coordinated by Dr. Adroaldo Zanella.

Invited speaker to the ‘**8th Okazaki Biology Conference, Speciation and Adaptation II, Environment and Epigenetics**’ (Okazaki, Japan; 2012). Seminar title: ‘Environmental Signals and Epigenetic Changes: from Disease Etiology to Evolution’.

Invited speaker to the symposium ‘**Impacts of Environmental Change on Reproduction and Development in Wildlife**’ held at the **Zoological Society of London** (London, UK; 2009). Seminar title: Environmental signals and transgenerational epigenetics.

Invited speaker to the ‘**20th Conference of the German Society of Human Genetics**’ (Aachen, Germany; 2009). Seminar title: Epigenetic transgenerational actions of vinclozolin on male rat germ line.

Invited speaker to the ‘**48th Annual Meeting of the Society of Toxicology**’ (Baltimore, MD, USA; 2009). Seminar title: Epigenetic transgenerational actions of vinclozolin on male rat germ line.

PEER REVIEWED ORAL PRESENTATIONS AT SCIENTIFIC MEETINGS

4th Clinical Epigenetics International Meeting. Düsseldorf, Germany (2014). Seminar title: Environmental Exposures and Epigenetic Transgenerational Effects on Fertility. **Guerrero-Bosagna C** and Skinner MK.

45th Annual Meeting of the Society for the Study of Reproduction. Portland, Oregon, USA (2011). Seminar title: Epigenetic and phenotypic transgenerational changes induced by vinclozolin in the mouse germ line. **Guerrero-Bosagna C**, Covert T, Haque M, Leonard S, Nilsson E and Skinner MK.

III International Symposium on Animal Biology of Reproduction, Epigenetic Control of Reproductive Processes. Aguas de Sao Pedro, Sao Paulo, Brazil (2010). Seminar title: Endocrine disruptors and transgenerational epigenetics (**Invited speaker**).

Center for Reproductive Biology 14th Annual Retreat. Spokane, Washington, USA (2010). Talk: Epigenetic transgenerational actions of vinclozolin on male rat germ line. **Guerrero-Bosagna C**, Settles M, Lucker B and Skinner MK.

Evolution 2009 Meeting. University of Idaho, Moscow, Idaho, USA (2009). Seminar title: Evolution and endocrine disruptors: how induced epigenetic changes become transgenerational. **Guerrero-Bosagna C** and Skinner MK.

Gordon Conference in Mammalian Gametogenesis & Embryogenesis. Waterville Valley, New Hampshire, USA (2009). Seminar title: Epigenetic transgenerational actions of vinclozolin on male rat germ line. **Guerrero-Bosagna C**, Settles M and Skinner MK.

89th Annual Meeting of the Endocrine Society. Toronto, Canada (2007). Seminar title: Consequences of a continuous pre and post natal exposure to dietary isoflavones on life history and morphometric characters in an experimental population of mice. **Guerrero-Bosagna C**, Valdovinos F, Valladares LE and Sabat P.

XIII Annual Meeting of the Chilean Society of Reproduction and Development. La Serena, Chile (2002). Seminar title: Effect of seasonal photoperiod on melatonin secretion in men: statistical analysis and new measurement methodologies. **Guerrero-Bosagna C**, Palestini M, Cepeda A and Valladares LE.

XII Annual Meeting of the Chilean Society of Reproduction and Development. San Pedro de Atacama, Chile (2001). Seminar title: Estrogens and cardiovascular system: action of phytoestrogens on platelet activity. **Guerrero C**, Garrido A, Sierralta W, Hirsch S, De la Maza MP and Valladares LE.

PEER REVIEWED POSTER PRESENTATIONS AT SCIENTIFIC MEETINGS

5th Meeting of the European Society for Evolutionary Developmental Biology (Euro Evo Devo). Vienna, Austria (2014). Role of epigenetic changes in generating non-adaptive genomic and evolutionary novelty. **Guerrero-Bosagna C**,

21st International Conference on Plant and Animal Genomes. San Diego, CA, USA (2013). Environmentally-Induced Epigenetic Transgenerational Inheritance of Altered Sertoli Cell Transcriptome and Epigenome. **Guerrero-Bosagna C**, Savenkova M, Haque MM and Skinner MK.

14th Annual Northwest Reproductive Sciences Symposium. Beaverton, OR, USA (2012). Environmentally-Induced Epigenetic Transgenerational Inheritance of Altered Sertoli Cell Transcriptome and Epigenome. **Guerrero-Bosagna C**, Savenkova M, Haque MM and Skinner MK.

13th Annual Northwest Reproductive Sciences Symposium. Corvallis, OR, USA (2011). Epigenetic and Phenotypic Transgenerational Changes Induced by Vinclozolin in the Mouse Germ Line. **Guerrero-Bosagna C**, Covert T, Haque MM, Leonard S, Nilsson E and Skinner MK.

11th Annual Northwest Reproductive Sciences Symposium. Beaverton, OR, USA (2009). Epigenetic Transgenerational Actions of Vinclozolin on Male Rat Germ Line. **Guerrero-Bosagna C**, Settles M and Skinner MK.

26th Congress of ESPEN. Lisbon, Portugal (2004). 5-Methyltetrahydrofolic acid decreases endothelial cell-induced LDL oxidation and modifies endothelial cell function. Ronco AM, Tamayo D, **Guerrero C**, Llanos M and Hirsch S.

4th International Homocysteine Conference. Basilea, Switzerland (2003). Effect of folic acid and tetrahydrofolic acid on homocysteine-induced oxidative stress in cultured huvec. Ronco A, Hirsch S, Garrido A, Tamayo D, Vazquez M, **Guerrero C**, Valladares L, Llanos M, Bunout D, de la Maza M.

V National Meeting of Ichthyology. Santiago, Chile (1999). Phylogenetic hypothesis of the Diplomystidae family. **Guerrero C.**

XLII Annual Meeting of the Biological Society of Chile. Pucón, Chile (1999). Glucose-6-P dehydrogenase in amphibian oocytes is the major control site for glucose flux through the pentose-P pathway. **Guerrero C,** Retamal M and Preller A.

VIII Iberoamerican Congress of Biodiversity and Vertebrate Zoology. Concepción, Chile (1997). Population size estimation of Rainbow Trout (*Onchorrincus mykiss*) at the Clarillo River National Reserve. **Guerrero C,** Huerta J and Contreras M.

VIII Iberoamerican Congress of Biodiversity and Vertebrate Zoology. Concepción, Chile (1997). Effect of temperature, oxygen concentration and water velocity on the energetic metabolism of *Diplomystes nahuelbutaensis* Arratia 1987 (Pisces: Diplomystidae). Huerta JA, Fuentes L, **Guerrero C** and Contreras M.

ACADEMIC MENTORING

Supervisor to PhD student Fabio Pertille (University of Sao Paulo, Brazil) for training internship at Linköping University (Linköping, Sweden; 2015)

Supervisor to Masters student Sofia Eleftheriadis for thesis project at Linköping University (Linköping, Sweden; 2015)

Supervisor to PhD student Els Willems (KU Leuven, Belgium) for training internship at Linköping University (Linköping, Sweden; 2013)

Supervisor for Undergrad Honors Thesis of Ms. Tiffany Hylkema, Honors College, Washington State University (Pullman, WA, USA; 2011-2013).

Supervisor to Neuroscience undergraduate student Ms. Shelby Weeks, Washington State University (Pullman, WA, USA; 2010-present).

Supervisor for Undergrad Honors Thesis of Ms. Sean Leonard. Thesis title: 'Analysis of Transgenerational DNA methylation Changes in Sperm'. Honors College, Washington State University (Pullman, WA, USA; 2008-2011).

Supervisor to Bachelors of Science undergraduate student Ms. Fernanda Valdovinos, University of Chile (Santiago, Chile; 2005).

TEACHING EXPERIENCE

Invited instructor to teach a lecture within the Masters course 'Laboratory Techniques in Experimental Biosciences'. Topic of the lecture: 'Epigenetics: concept and mechanisms'. Course coordinated by Dr. Johan Edqvist, **Linköping University** (Linköping, Sweden; September 2015).

Invited instructor to teach lectures within the course 'Applied Ethology'. Topics of the lectures: 'Epigenetics: concept and mechanisms' and 'Epigenetic changes as inducers of genomic and phenotypic evolutionary novelty'. Course coordinated by Dr. Per Jensen, **Linköping University** (Linköping, Sweden; September 2013, 2014 and 2015).

Invited instructor to teach a lecture within the Masters course 'Genomic and Epigenomic Medicine'. Lecture topic: 'Transgenerational epigenetic inheritance: concept, mechanisms and human health implications'. Course coordinated by

Dr. Claes Wadelius, **Uppsala University** (Uppsala, Sweden; February 2015).

Invited instructor to teach a lecture within the post-graduate course 'Animal Welfare Indicators'. Lecture topic: 'Epigenetic modifications: marks of past exposures and potential use as animal welfare indicators'. Course coordinated by Dr. Adroaldo Zanella, **University of Sao Paulo** (Pirassununga, SP, Brazil; July 2014).

Invited instructor to teach a lecture within the post-graduate course 'Epigenetics in Reproduction'. Lecture topic: 'Environmentally-Induced Transgenerational Epigenetic Effects and Consequences on Reproduction'. Course coordinated by Dr. Göran Andersson, **Swedish University of Agricultural Sciences (SLU)** (Uppsala, Sweden; March 2014)

Invited instructor to teach a lecture within the course 'Animal Function and Environmental Adaptations'. Lecture topic: 'Epigenetics: Concept and Mechanisms'. Course coordinated by Dr. Jordi Altamiras, **Linköping University** (Linköping, Sweden; September 2013).

Invited instructor to teach a one week workshop in the epigenetic technique of Methylated DNA Immunoprecipitation. Visit coordinated by Dr. Adroaldo Zanella, **Roslin Institute, University of Edinburgh** (Scotland, UK; May 2013).

Invited instructor to teach two web-streamed lectures within the undergraduate course 'Epigenome: recent advances in genetics, heredity and evolution'. Lecture topic: 'Environmental epigenetics, development and origin of evolutionary novelty'. Course coordinated by Dr. Daniel Frias, **Metropolitan University of Educational Sciences** (Santiago, Chile; December 2012 and January 2013).

Invited instructor to teach a lecture within the undergraduate course 'Law, Ethics and Environment'. Lecture topic: 'Dams in Patagonia: energy needs vs sustainability in Chile'. Course coordinated by Dr. J.D. Wulfhorst and Dr. Renée Hill, **University of Idaho** (ID, USA; October 2012).

Invited instructor to teach a one week module, including lectures and laboratories, within the graduate course 'Topics in Modern Biology – OMICS: New Tools, New Areas'. Topic: 'Epigenetics'. Course coordinated by Dr. Jose Garcia, **University of Puerto Rico** (PR, USA; 2011).

Invited instructor to teach a web-streamed lecture within the course 'Animal Breeding and Genetics' to Veterinary Medicine students. Lecture topic: 'Epigenetics: Concept and Mechanisms'. Course coordinated by Dr. Ricardo Zanella, **Berry College** (GA, USA; 2011).

Invited instructor to the undergraduate course 'Energy and Ethics'. Lecture topic: 'Fossil fuel formation and carbon cycle'. Course coordinated by Dr. Renée Hill, **University of Idaho** (ID, USA; 2009).

Invited instructor to the graduate course 'Plant Transmission Genetics'. Lecture topic: 'Endocrine disruptors, transgenerational epigenetics and evolution'. Course coordinated by Dr. Stephen Jones, **Washington State University** (WA, USA; 2009).

Invited instructor to the undergraduate course 'Public Speaking: Theory and Practice'. Lecture topic: 'Endocrine disruptors, transgenerational epigenetics and evolution'. Course coordinated by Dr. Mary Grace Antony, **Washington State University** (WA, USA; 2009).

Invited instructor to the undergraduate course 'Evolution'. Lecture topic: 'Epigenetics'. Course coordinated by Dr. Jorge Mpodozis, **University of Chile** (Santiago, Chile; 2006).

Invited instructor to the graduate course 'Reproductive Physiology of Fish'. Lecture topic: 'Fish thermoregulation'. Course coordinated by Dr. Luis Valladares, **Institute of Nutrition and Food Technology (INTA), University of Chile** (Santiago, Chile; 2001-2004, 2006).

Teaching assistant for the undergraduate course 'Biology I'. Topic: 'Developmental Biology'. Course coordinated by Dr. Luis Valladares, **University of Chile** (Santiago, Chile; 2003-2004 and 2006).

Teaching assistant for the undergraduate course 'Animal Physiological Adaptations to the Environment'. Course coordinated by Dr. Pablo Sabat, **University of Chile** (Santiago, Chile; 1999-2000).

Teaching assistant for the undergraduate course 'Biochemistry'. Course coordinated by Dr. Tito Ureta and Dr. Ana Preller, **University of Chile** (Santiago, Chile; 1999).

Teaching assistant for the undergraduate course 'Zoology I'. Course coordinated by Dr. Michel Sallaberry, **University of Chile** (Santiago, Chile; 1996-2000).

REVIEWING FOR SCIENTIFIC JOURNALS AND FUNDING AGENCIES

Scientific journals: Molecular Psychology, Scientific Reports, Molecular and Cellular Endocrinology, Biology of Reproduction, Journal of Experimental Zoology, PLoS Genetics, PLoS One, Epigenomics, Journal of Clinical Investigations, BMC Biology, BMC Genetics, Environmental Epigenetics, Epigenetics, Reproduction.

Editorial Board member: Environmental Epigenetics.

Funding agencies: Netherlands Organisation for Scientific Research (NWO); USA National Science Foundation (NSF, USA); National Science Centre of Poland (NCN); Chilean Government Science and Technology Commission (CONICYT).

ADDITIONAL TRAINING

Continuing education - Courses taken as Post Doc at Washington State University (Pullman, WA, USA):

Bioinformatics, MBioS 578 (2012)/Fundamentals of Environmental Toxicology, ES/RP 531 (2011)/Epigenetics and Systems Biology, Biol 576 (2011)/Case Studies Workshop: an NSF sponsored Teaching Workshop for Faculty, Instructors, Postdocs, Teachers, Graduate & Undergraduate Students & Educators (2011)/Molecular and Cellular Reproduction, MBioS 528 (2009).

Graduate Research Internships:

Doctoral thesis work measuring DNA methylation patterns through *Bisulphite Sequencing* with Dr. Susan Clark, Epigenetics Lab, Garvan Institute of Medical Research, Sydney, Australia (November 2003 to January 2004, March to July 2005).

Measurement of salivary melatonin on military personnel of the Chilean Army at the O'Higgins Station, Chilean Antarctic Territory (January 2002).

LANGUAGE PROFICIENCY

Proficient in conversation, reading and writing in English, Spanish and Portuguese.