



VI ESCUELA LATINOAMERICANA DE EVOLUCIÓN (ELAEO) Montevideo, Uruguay, October 2019

I) Background:

The Latin American School of Evolution (“Escuela Latinoamericana de Evolución” [ELAEO]) is an international, graduate level course, whose main objectives are:

- To provide attendants with advanced concepts on selected topics of Evolutionary Biology.
- To stimulate interactions and integration among Latin American students and researchers working in different areas of Evolutionary Biology.

ELAEO takes place every other year since 2009, with a duration of 2-3 weeks, and requiring full-time dedication of registered students. The School includes conferences, lectures and labs, discussion workshops, presentation of student research projects, among other activities.

Earlier editions of ELAEO included: 2009: Montevideo, Uruguay. 33 students from 6 countries (Argentina, Brazil, Chile, México, Perú, and Uruguay); 2011: Valdivia, Chile: 33 students from 9 countries (Argentina, Bolivia, Chile, Colombia, Cuba, México, Perú, Uruguay, and Venezuela); 2013: Buenos Aires, Argentina: 43 students from 5 countries (Argentina, Brazil, Chile, Colombia, and Uruguay); 2015: Armenia, Colombia: 41 students from 4 countries (Chile, Colombia, Perú, and USA); and 2017: São Paulo, Brazil: 12 students from Brazil.

Researchers from outside the region that participated in the editions of ELAEO included: Dr. Robert Anholt (North Carolina State University, USA), Dr. Michael L. Arnold (University of Georgia, USA), Dr. Scott V. Edwards (Harvard University, USA), Dr. Douglas Futuyma (SUNY, USA), Dr. Theodore Garland (University of California, Riverside, USA), Dr. Olivier Gascuel (LIRMM-CNRS, France), Dr. Gaston Gonnet (ETH Zurich, Switzerland), Dr. Federico Hoffmann (Mississippi State University, USA), Dra. Lacey Knowles (University of Michigan, USA), Dra. Trudy Mackay (North Carolina State University, USA), Dr. Luciano Matzkin (The University of Alabama Huntsville, USA), Dr. Allen Moore (University of Exeter, UK), Dr. Arcadi Navarro (Universitat Pompeu Fabra, Spain),

Dr. John Novembre (University of Chicago, USA), Dra. Martha Serrano (University of Lausanne, Switzerland), Dr. Jean-Christophe Simon (INRA-Rennes, France), and Dr. Barry Sinervo (University of California, Santa Cruz, USA), and Dr. Ziheng Yang (University College London, UK), among others.

II) VI ELAEVO: 10 years anniversary edition

Dates: 6-19 October 2019.

Site: Montevideo, Uruguay.

Coordinators:

Dr. Enrique Lessa (lessa@fcien.edu.uy, Universidad de la República, Uruguay)

Dr. Daniel Naya (dnaya@fcien.edu.uy, Universidad de la República, Uruguay)

Organizing Committee:

Dr. Francisco Bozinovic (Pontificia Universidad Católica de Chile, Chile)

Dra. María Inés Fariello (Universidad de la República, Uruguay)

Dr. Matías Feijoo (Universidad de la República, Uruguay)

Dr. Hugo Naya (Instituto Pasteur de Montevideo, Uruguay)

Dr. Héctor Romero (Universidad de la República, Uruguay)

Dra. Ivanna Tomasco (Universidad de la República, Uruguay)

Academic Committee of ELAEVO:

Dr. Juan C. Opazo (Committee Chair; Universidad Austral de Chile, Chile)

Dr. Enrique Lessa (Universidad de la República, Uruguay)

Dr. Francisco Bozinovic (Pontificia Universidad Católica de Chile, Chile)

Dr. Juan José Fanara (Universidad de Buenos Aires, Argentina)

Dr. Esteban Hasson (Universidad de Buenos Aires, Argentina)

Dr. Daniel E. Naya (Universidad de la República)

Dr. Andrew Crawford (Universidad de los Andes, Colombia)

Dr. Víctor Hugo García Merchan (Universidad del Quindío, Colombia)

Dr. Gabriel Marroig (Universidade de São Paulo, Brazil)

Organization:

Evolutionary Physiology Module:

Description: At the intersection between physiology, ecology and evolution, evolutionary physiology studies how the different characteristics of organisms have originated and/or shaped by the process of natural selection. This module will be based on a panel of researchers in the field and function as a workshop to address the foundations of the discipline, as well as topics of recent research, such as phenotypic variability along latitudinal gradients and the evolution of phenotypic plasticity.

Dates: 7-10 October 2018.

Coordinators: Dr. Francisco Bozinovic and Dr. Daniel Naya

Invited researchers: Dr. Andrew Beckerman (University of Sheffield, UK), Dra. Valentina Franco-Trecu (Universidad de la República, Uruguay) Dr. Ernesto Gianoli (Universidad de La

Serena, Chile), Dr. Carlos Navas (Universidad de San Pablo, Brasil), Dr. Enrico Rezende (Pontificia Universidad de Chile, Chile), Dr. Pablo Sabat (Universidad de Chile, Chile).

Phylogenies and Comparative Methods Module:

Description: Understanding evolution is based on comparisons of genes, genomes, organisms, and species, among other entities. Currently, such comparisons are mediated by phylogenetic inference and consideration of biological variants of interest in a phylogenetic framework. This module will offer a perspective on phylogenetic comparative methods and multiple applications to the study of evolution through lectures, laboratories, and discussions of selected articles.

Dates: 11-15 October 2018.

Coordinators: Dr. Hugo Naya and Dr. Héctor Romero

Invited researchers: Dr. Liam Revell (University of Massachusetts, USA), and Dr. Charles Nunn (Duke University, USA).

Evolutionary Transcriptomics Module:

Description: The transcriptome lies at the interphase between the genome, the proteome and the environment. This module will explore those connections, with emphasis on the evolution of genetic divergence, gene expression and adaptation to functional and environmental challenges between populations and closely related species.

Dates: 16-19 October 2018.

Coordinators: Dr. Matías Feijoo and Dra. Ivanna Tomasco

Invited researchers: Dr. Matthew MacManes (University of New Hampshire, USA), Dra. Eileen Lacey (University of California, Berkeley, USA), and Dr. Andrew Whitehead (University of California, Davis, USA).

III) Associated Course 1: Stochastic Models in Population Genetics.

Dates: 30 September-5 October 2019.

Site: Montevideo, Uruguay.

Coordinators:

Dra. María Inés Fariello (Universidad de la República, Uruguay)

Dr. Enrique Lessa (Universidad de la República, Uruguay)

Description:

Population genetics is one of the pillars of evolution; it has evolved on the basis of strong interactions between genetics, natural history, mathematics, statistics and computer sciences. Currently, studies at the scale of the genome present significant challenges and opportunities for interdisciplinary work in the understanding of organic evolution. This course, associated to the VI Latin American School of Evolution is conceived as an introduction to modeling of population genetic processes, aimed at advanced undergraduate and graduate students and researchers in mathematics, physics, computer sciences, and related disciplines, as well as biologists. The course will include lectures by leading scholars in the field, computer labs, and exchanges on open issues and interdisciplinary, collaborative work in the area.

Invited researchers: Dr. John Novembre (University of Chicago, USA), Dr. Bertrand Servin (INRA Toulouse, France), and Dr. Ryan Hernández (University of California, San Francisco, USA).

IV) Associated Course 2: Behind the Trees: Math & Methods in Phylogenetics.

Dates: 21-24 October 2019.

Site: Montevideo, Uruguay.

Coordinator: Dr. Hugo Naya (Instituto Pasteur de Montevideo, Uruguay)

Description: Phylogenetic is the key to understand evolution. A plethora of methods were developed and very powerful software, easy to use, is currently available for each of them. But, what is the math behind these methods? The aim of this course is to explore the fundamentals that allow computing phylogenies, making ancestral reconstructions, dating phylogenetic tree, and making inferences on phylogeography, epidemiology and phylodynamics. The course includes lectures by leading scholars in the field, computer labs and hands-on exercises.

Invited researchers: Pr. Olivier Gascuel (Institut Pasteur Paris, France), Dr. Anna Zhukova (Institut Pasteur Paris, France) and Dr. Miraine Davila Felipe (Institut Pasteur Paris, France).

V) Students accepted for ELAEVO and Associated Course 1.

The inscription process to ELAEVO finished on March 31, 2019. We accepted 29 students from 10 countries (and 16 cities) of Latin America for the ELAEVO, and 16 students from 8 countries (and 11 cities) for the associated course (some of the students will take both):

ELAEVO		ASSOCIATED COURSE 1	
Country (City)	Students	Country (City)	Students
Argentina (BsAs)	5	Argentina (BsAs)	2
Argentina (Mar del Plata)	2	Argentina (Posadas)	1
Argentina (Misiones)	1	Chile (Concepción)	1
Argentina (Posadas)	1	Chile (Coquimbo)	1
Brasil (San Pablo)	1	Chile (Talca)	2
Chile (Concepción)	2	Colombia (Cali)	1
Chile (Coquimbo)	1	Cuba (La Habana)	1
Chile (Santiago)	3	México (DF)	1
Chile (Talca)	1	Paraguay (Asunción)	1
Colombia (Cali)	2	Uruguay (Montevideo)	4
Cuba (La Habana)	1	USA (Albuquerque)	1
México (DF)	1	Total	16
Paraguay (Asunción)	1		
Perú (Lima)	1		
Uruguay (Montevideo)	5		
USA (Albuquerque)	1		
Total	29		