



Workshop Program

Monday, December 2nd

9:00-9:30. Arrival, registration.

9:00-9:50. Posters installation.

9:50-10:00. Welcome Dr. Andrés Quiroz, Director of Doctoral Program of Science in Natural Resources, Universidad de La Frontera, Temuco, Chile.

Symposium I. Scientific Entrepreneurship.

Co-Chairs: Dr. Graciela Palma and Dr. Gabriela Briceño.

10:00-10:30: M.Sc. Carlos Isaacs, Universidad de La Frontera, Chile.

Title: Entrepreneurial strategy: moving from the laboratory to the company.

10:30-11:00: M.Sc. Franklin Valdebenito, Universidad de La Frontera, Chile.

Title: Connecting program: Opportunities for International I+D and Scientific Entrepreneurship.

11:00-11:30. **Coffee break.**

Symposium II. Applied Microbiology.

Co-Chairs: Dr. Jacqueline Acuña and M.Sc. Ignacio Rilling.

11:30-12:10: Dr. Michael Sadowsky, University of Minnesota, USA.

Title: The power of microbes - curing human diseases without drugs!.

12:10-12:40: Dr. Marc Dumont, University of Southampton, UK.

Title: Tracking microbial growth in the rice rhizosphere using stable isotopes.

12:40-13:00: M.Sc. Ignacio Rilling, Universidad de La Frontera, Chile.

Title: Tracking and monitoring of plant growth-promoting bacteria: from the conventional proceedings to latest breakthroughs.

13:00-13:30: Dr. Gupta Vadakattu, CSIRO, Australia.

Title: Plant microbiome composition is governed by deterministic selection or random distribution.

13:30-15:00. **Lunch break.**

Symposium III. Aquatic resources.

Co-Chairs: Dr. Milko Jorquera and Dr. So Fujiyoshi.

15:00-15:30: Dr. Jorge Farias, Universidad de La Frontera.

Title: Fish sperm physiology and aquaculture biotechnology.

15:30-16:00: Dr. So Fujiyoshi, Kyoto University, Japan.

Title: Suitcase lab: A new portable and deployable equipment for a rapid detection of specific harmful algae in Chilean coastal waters.

16:00-16:30: Dr. Kyoko Yarimizu, National Research Institute of Fisheries Science, Japan.

Title: Southern California and Baja California coast monitoring: The role of iron and free-living bacteria in harmful algae blooms.

16:30-17:00: Dr. Marco Campos, Universidad de La Frontera, Chile.

Title: Phosphomonoesterase activity and bacterial phosphomonoesterase gene abundance in two rivers from southern Chile.

17:00-18:30. **Coffee Break and Poster Session.**

19:00-19:15: **Welcome Message**, Dr. Renato Hunter, Vicerrector de Investigación y Postgrado, Universidad de La Frontera.

19:15-20:00: **Opening Conference**. Dr. Jorge Babul, Universidad de Chile, Chile.

Title: Formación de Investigadores en Chile: Una visión histórica y de futuro.

20:00-21:30: **Musical show and Welcome Cocktail.**

Tuesday, December 3th

Symposium IV. Food Security under a Climate Change Scenario

Co-Chairs: Dr. María de la Luz Mora and Dr. Marcela Calabi.

9:00-9:40: **Opening Conference**. Dr. Cornelia Rumpel, CNRS, France.

Title: Ecotechnology to increase ecosystem services of organic soil amendments.

9:40-10:00: Dr. Patricia Poblete, Universidad de La Frontera, Chile.

Title: Poultry manure amendment as a sustainable tool to improve pasture production by enhancing physicochemical soil properties.

10:00-10:30: Dr. Mireia Mestre, Universidad Austral de Chile, Chile.

Title: Vertical connectivity in the ocean: Carbon sequestration and microbial dispersion.

10:30-10:50: Dr. Carolina Merino, Universidad de La Frontera, Chile.

Title: Soil organic matter decomposition under anaerobic conditions: biotic and abiotic processes in forest soils.

10:50-11:20: **Coffee break.**

Co-Chairs: Dr. Paula Cartes and Dr. Marjorie Reyes.

11:20-11:50: Dr. Adriano Nunes Nesi, Universidade Federal de Viçosa, Brazil.

Title: Regulation of plant metabolism under abiotic stress conditions.

11:50-12:10: Dr. Mabel Delgado, Universidad de La Frontera, Chile.

Title: Proteaceae species: Al hyperaccumulators and P solubilizing species What do we have to learn from them?.

12:10-12:40: Dr. Antonio Di Matteo, University of Naples Federico II, Italy.

Title: Investigating drought response to identify candidate regulative mechanisms for enhancing fruit antioxidants in tomato.

12:40-13:00: Dr. Leyla Parra, Universidad de La Frontera, Chile.

Title: The role of PHT1 transporters in the uptake and redistribution of phosphorus in perennial ryegrass growing in acid soils.

13:00-14:30: **Lunch break.**

Co-Chairs: Dr. Paola Duran and Dr. Patricio Barra.

14:30-15:00: Dr. Concepción Azcon, EEZ-CSIC, Spain.

Title: Metabolic changes associated with stress tolerance in arbuscular mycorrhizal plants.

15:00-15:30: Dr. Alexander Valentine, University of Stellenbosch, South Africa.

Title: Legume N acquisition and metabolism strategies in P-poor soils.

15:30-15:50: Dr. Michel Abanto, Universidad de La Frontera, Chile.

Title: Effect of phosphorus fertilizers on soil microbial structure and its role for sustainable agriculture: a genomic point of view.

15:50-16:20: Dr. Siobhan Staunton, Eco&Sols, INRA, France.

Title: The importance of interfaces in Soil Science: Some examples of the consequences on protein activity and persistence.

16:20-16:50: Dr. Roland Bol, Institute Agrosphere, Germany.

Title: Soil colloidal P and C_{org} profiling in the Atacama desert.

16:50-18:30. **Coffee break and Poster Session.**

19:30: **Camaraderie Cocktail.**

Wednesday, December 4th

Symposium V. Applied Biotechnology.

Co-Chairs: Dr. Gabriela Briceño and Dr. Heidi Schalchli.

9:00-9:30: Dr. María Cristina Diez, Universidad de La Frontera, Chile.

Title: New approaches in biopurification systems for pesticides treatment.

9:30-10:00: Dr. Lutz Weihermüller, Forschungszentrum, Germany.

Title: Processed based pesticide modelling – from batch to the field State-of-the-art and perspectives.

10:00-10:15: Dr. Claudio Lamilla, Universidad de La Frontera, Chile.

Title: Biotechnological application of biosurfactant obtained from bacterial strain of Antarctic origin.

10:15-10:45: Dr. Amedea Seabra, Universidad Federal de ABC, Brazil.

Title: How nitric oxide donors allied to nanomaterials can protect plants in a changing environment.

10:45-11:00: Dr. Heidi Schalchli, Universidad de La Frontera, Chile.

Title: Bio-products by *Streptomyces* spp. – use of agro-industrial wastes as nutrient source.

11:00-11:30 **Coffee break.**

Symposium VI. Chemical Ecology and Natural Products.

Co-Chairs: Dr. Leonardo Bardehle and Dr. Herbert Venthur.

11:30-12:00: Dr. Andrés Quiroz, Universidad de La Frontera, Chile

Title: Chemical Ecology and its biotechnological potentials: Red clover as a successful case of study.

12:00-12:20: Dr. Manuel Chacón, Universidad de La Frontera, Chile.

Title: Are tri-trophic interactions reduced by plant domestication?: The particular example of murtilla.

12:20-12:40: Dr. Javier Espinoza, Universidad de La Frontera, Chile

Title: The role of loline alkaloids from Tall Fescue-*Neotyphodium coenophialum* relationship on the horn fly control.

12:40-13:00: Dr. Herbert Venthur, Universidad de La Frontera, Chile

Title: Chemoreception in the greater wax moth, *Galleria mellonella*: A beehive pest and particular case of study.

13:00-14:30: **Lunch break**

14:30-15:10: **Closing Conference:** Dr. Zed Rengel, University of Western Australia, Australia.

Title: Food security in the world with changed and variable climate.

15:10-16:00: Poster Awards and Closing Ceremony.