

NOVEMBER, 4th

9h Opening Lecture

JORGE ELIAS KALIL FILHO, State University of São Paulo (USP), Brazil

Desenvolvimento de vacina contra dengue: da bancada aos testes clínicos

Chair: Vivaldo Moura Neto, IECPN, Brazil

10h Coffee break

TOPIC: INTERSECTION BETWEEN BIOLOGY, MATH AND PHYSICS

Chair: Vivaldo Moura Neto, IECPN, Brazil

10h30 KARINA GARCÍA MARTÍNEZ, Center of Molecular Immunology, Cuba

Mathematical models of the impact of IL2 modulation therapies on T cell dynamics: prediction of a novel therapeutic approach based in IL2 muteins

10h50 ADRIANA BASTOS CARVALHO, Federal University of Rio de Janeiro (UFRJ), Brazil

Cardiac differentiation of human pluripotent stem cells

11h10 MARCELO COLAÇO, Federal University of Rio de Janeiro (UFRJ), Brazil

Bayesian techniques applied to bio-heat-transfer problems

11h30 SEBASTIÃO PRATAVIEIRA, University of São Paulo (USP), Brazil

New ideas for cancer diagnosis using light

11h50 Discussion

12h10 Lunch

TOPIC: ECONOMY AND INNOVATION IN SCIENCE EDUCATION

Chair: Debora Foguel, UFRJ, Brazil

13h40 CECILIA BAÑUELOS, Centro de Investigación y de Estudios Avanzados; Unidad de Desarrollo Tecnológico (TechnoPoli) del Instituto Politécnico Nacional (Cinvestav), Mexico

Novel strategies to strengthen innovation in educative institutions

14h ANDRÉS ROMERO-CARVAJAL, Pontificia Universidad Católica del Ecuador, Ecuador

Promoting basic science and translational research in Ecuador through Developmental Biology

14h20 MIGUEL DE CARVALHO, Pontificia Universidad Católica de Chile, Santiago, Chile

Some Mathematical and Statistical Aspects of Black Swan Events

14h40 Discussion

TOPIC: GENETICS AND EVOLUTION

Chair: Flavia Gomes, UFRJ, Brazil

15h FRANCISCO CUBILLOS, Universidad de Santiago de Chile, Chile

Understanding the role of intergenic regions shaping natural phenotypic variation in yeast

15h20 JENNIFER ALCAINO GORMAN, Universidad de Chile, Chile

Genetic Control and Regulation of the Biosynthesis of Isoprenoids in the Red Yeast Xanthophyllomyces dendrorhous.

15h40 MAICKEL ARMENTEROS, Centro de Investigaciones Marinas, Universidad de La Habana, Cuba.

Why use non-biological tools in marine biology? Study cases from Cuba (Caribbean Sea).

16h Discussion

NOVEMBER, 5th

9h Cláudio Bifano

Chair: Debora Foguel, UFRJ, Brazil

10h Coffee break

TOPIC: NEUROSCIENCE AND ITS INTERFACES WITH COMPUTATION, PHYSICS AND CHEMISTRY

Chair: Flávia Gomes, UFRJ, Brazil

10h30 JEAN FABER, Federal University of São Paulo (UNIFESP), Brazil

Hybrid brain computer interfaces with crossmodal feedback

10h50 ADRIANO TORT, Brain Institute, Federal University of Rio Grande do Norte (UFRN), Brazil

Computational approaches to neuroscience research

11h10 PATRICIA GARCEZ, Federal University of Rio de Janeiro, Brazil

The centrosome in brain formation and malformation

11h30 AGUSTIN ANASTASIA, Instituto Ferreyra (INIMEC-CONICET-UNC), Argentina

Brain-derived Neurotrophic Factor (BDNF) and the genetic susceptibility for central nervous system disorders

11h50 BRUNO PONTES, Federal University of Rio de Janeiro (UFRJ), Brazil

Membrane mechanical properties orchestrate cell functions

12h10 MARCELO FARINA, Federal University of Santa Catarina (UFSC), Brazil

Mechanisms mediating methylmercury-induced neurotoxicity

12h30 Discussion

13h Lunch

TOPIC: NEGLECTED DISEASES AND THEIR INTERPLAY WITH ENVIRONMENT

Chair: Debora Foguel, UFRJ, Brazil

14h30 JOSE G. JUAREZ, Centro de Estudios en Salud, Universidad del Valle de Guatemala (CES/UVG), Guatemala

Tackling old foes: above and beyond integrated vector management for malaria, dengue and Chagas disease control

14h50 GABRIELA BETTELLA CYBIS, Federal University of Rio Grande do Sul (UFRGS), Brazil
Phylodynamics: Integrating multiple sources of data to understand epidemics

15h10 VERÓNICA CRESPO-PÉREZ, Facultad de CECOLOGYiencias Exactas y Naturales, PUCE
Global changes and invasive pest distribution in the Tropical Andes.

15h30 Discussion

15h45 CARLOS ALBERTO ARAGÃO DE CARVALHO FILHO, Federal University of Rio de Janeiro (UFRJ)
The role of Brazil in the global bioeconomy
Chair: Vivaldo Moura Neto, IECPM, Brazil

16h45 Closing remarks
Round table: Vivaldo Moura Neto, Carlos Aragão, Esper Cavalheiro (UNESP), Rolf Mentlein (university of Kiel), Debora Foguel and Flavia Gomes