

PRELIMINARY PROGRAM

AUGUST 30

I Semana de Graduação em Biofísica

III Latin American Postgraduate Program of Biophysics Course

I Colloquium Brazil/Africa of Biophysics

WELCOME CEREMONY – OPENING SESSION 8:30 9:00

Emiliano Medei (Federal University of Rio de Janeiro - IBCCF)

Marcelo M. Morales (Federal University of Rio de Janeiro/ IUPAB member of Council/ President of Latin American Federation of Biophysical Societies)

Denise Pires de Carvalho (Federal University of Rio de Janeiro – Director of Carlos Chagas Filho Biophysics Institute - IBCCF)

CONFERENCE I - 9:00-9:30 Paulo M. Bisch (IBCCF/UFRJ/ Brazil) – “Challenge and Importance of the first

Graduate Course of Biophysics at Federal University of Rio de Janeiro”

Coffee Break: 9:30 – 9:45

Symposium I - MEMBRANE TRANSPORT - 9:45 12:45 Chairpersons: Paulo S. L.

Beirão (UFMG/Brazil); Gabriela Amodeo (UBA – Argentina)

9:45-10:30 Paulo S. L. Beirão (UFMG/Brazil) – “Use of biophysical methods to investigate the mechanism of action of peptide toxins”

10:30-11:15 Gabriela Amodeo (UBA – Argentina) – “Biophysics of water channels”

11:15-12:00 José Wilson M. Bassani (UNICAMP/Brazil) - Ca²⁺ transport in the heart: model of the functionally isolated sarcoplasmic reticulum”

12:00-12:45 Oscar Casis (Univers. País Vasco/España) – “Potassium channels regulation in healthy and diabetic heart”

Symposium II – INTERFACE OF BIOCHEMISTRY AND BIOPHYSICS 14:00 17:45

Chairpersons: Debora Folguel (IBioqMed/Brazil); Silvia Alonso (UNQ/Argentina)

14:00-14:45 Leopoldo de Méis (IBioqMed/Brazil) -

14:45-15:30 Shirley Schreier (USP/Brazil) - Conformational aspects of peptide-membrane interaction. Implications for the mechanism of action of biologically active peptides”

15:30-16:15 Viviane Gomes (IQ – UFRJ) – “Instrumental methods of analysis for molecules and ionic species”

16:15-17:00 Silvia Alonso (UNLQ/Argentina) – “The application, evaluation and promise of nanotechnology in food science and nutrition”

17:00-17:45 Debora Folguel (IBioqMed/Brazil) – “The dark side of protein folding: studies with amyloidogenic proteins”

18:00 – 19:15 - Welcome COCKTAIL

AUGUST 31

Symposium III - PROTEIN STRUCTURE; MOLECULAR MODELING AND DYNAMICS

9:00 12:20

Chairpersons: Paulo Bisch (IBCCF/UFRJ/ Brazil) and Alejandro J. Vila (UNR/ Argentina)

09:00-09:45 David Perahia (Université Paris-Sud - França) – “Normal modes analysis of protein-ligand Interactions”

09:45-10:30 Fabio Almeida (IBioqMed/Brazil) – “The flow of conformational information as seen by protein dynamics of biomolecules”

Coffee Break – 10:30 10:50 10:50-11:35 Paulo Bisch (IBCCF/UFRJ/ Brazil)

“Molecular Modeling and

Computational Biology tools in Post-genomics “

11:35-12:20 **Ana Paula Valente (IBioqMed/UFRJ)** – “Protein Structure Determination by NMR in the New Millennium”

12:30-14:00 ROUND TABLE I – UNDERGRADUATE COURSE IN BIOPHYSICS –

Undergraduate Students Discussion about the Biophysics Course at Federal University of Rio de Janeiro

Symposium IV MEMBRANE BIOPHYSICS 14:00 - 17:30

Chairpersons: Bruno Maggio (U. Córdoba /Argentina) and Jesús G. Romero Muñoz (UCV/Venezuela)

14:00-14:45 **Maria Teresa Lamy (USP/Brazil)** – “Gel-fluid transition of lipid membranes: the anomalous behavior of charged lipids”

14:45-15:30 **Bruno Maggio (U. Córdoba /Argentina)** – “Understanding the Structural Dynamics of Biomembranes”.

Coffee Break 15:30 – 15:50 16:00-16:45 **Luiz Gonzalez Flecha (UBA/Argentina)** – “Thermodynamics of the

interactions between membrane proteins and lipids”

16:45- 17:30 **Jesús G. Romero Muñoz (UCV/Venezuela)** – “Patch Clamp and Molecular Physiology”

SEPTEMBER 1

Symposium V PHYSIOLOGICAL SYSTEMS BIOPHYSICS 8:30 12:00

Chairpersons: Emiliano Horacio Medei (IBCCF/UFRJ/ Brazil) and Doris Rosenthal (IBCCF/UFRJ/Brazil)

08:30-09:15 **Emiliano Horacio Medei (IBCCF/UFRJ/ Brazil)** – “Chagas Disease and Biophysics”

09:15-10:00 **Burns Blaxall (University of Rochester/USA)** – “Beta adrenergic signaling pathway in heart failure”

Coffee Break 10:00 – 10:20 10:30-11:15 **Doris Rosenthal (IBCCF/UFRJ/Brazil)** - “Homeostasis and cell signaling”

11:15-12:00 **Luis Carlos Reis (UFRJ/Brazil)** - "Brain serotonergic system regulates renal sodium excretion and salt intake"

13:00 17:00 ROUND TABLE II – BIOPHYSICS IN LATIN AMERICA AND ROLE OF CARLOS CHAGAS FILHO INSTITUTE OF BIOPHYSICS 13:00 17:00

Chairperson: Darcy Fontoura de Almeida

Darcy Fontoura de Almeida (Professor Emérito da Universidade Federal do Rio de Janeiro)

Antônio Paes de Carvalho (Professor Emérito da Universidade Federal do Rio de Janeiro and Presidente of EXTRACTA Moléculas Naturais S/A)

Doris Rosenthal (Professora da Universidade Federal do Rio de Janeiro)

Wanderley de Souza (Professor at Federal University of Rio de Janeiro and Director of Projects at National Institute of Metrology Normalization and Industrial Quality - INMETRO)

Rafael Linden (Professor at Federal University of Rio de Janeiro)

17:00 – 19:30 POSTER SESSION – Rodolpho Paulo Rocco Hall (Quinhentão)

SEPTEMBER 2 Symposium VI – FROM THE UNIVERSITY TO THE INDUSTRY I 8:30

10:00 8:30-9:00 - Antonio Werneck – “Vital Brasil Institute” 9:00-9:30 - **Luís Costa** – “PETROBRAS” (Brazilian Petroleum Company) 9:30 - 10:00 - **Radovan Borojevik** -

Excellion Biomedics Services S/A 10:00-10:30 - **Prof. Burns C. Blaxall** (University of Rochester/USA)

10:30 – 10:50 coffee break

Symposium VII MICROSCOPY APPLIED TO BIOPHYSICS 10:50 11:35 10:50 -11:35

Gilberto Weissmuller (IBCCF/UFRJ/Brazil) – “Atomic Force

Microscopy”

11:35 -12:15 Elizabeth Jares (UBA/Argentina)- “FRET and Quantum Dots in biological imaging”

14:00 – 15:30 ROUND TABLE III: CARLOS CHAGAS FILHO AND RESEARCH FINANTIAL SUPPORT IN BRAZIL – FROM THE FUTURE POINT OF VIEW

Chairperson: Rafael Linden (IBCCf/UFRJ/Brazil)

Carlos Alberto Aragão (President of Brazilian Council for Scientific and Technological Development - CNPq)

Maurício Guedes (Director of Rio Technological Park)

Coffee Break 15:30 – 16:00

CONFERENCE II: 16:00-17:00 “CONFERÊNCIA CARLOS CHAGAS FILHO”. José

Gomes Temporão - The Minister of Health of Brazil

17:00 – 18:00 Tribute to Professor Carlos Chagas Filho Family

SEPTEMBER 3 Symposium VIII ENVIROMENTAL BIOPHYSICS 08:30-11:50

08:30-09:00 Paulo Renato Dorneles (IBCCF/UFRJ/Brazil) “Persistent

Bioaccumulative Toxicants: Aquatic Mammals as Sentinel of Human and Environmental Health in Brazilian Waters”

09:00-10:00 Mauro de Freitas Rebelo (IBCCF/UFRJ/Brazil) – “Gene environment relationships”

10:00 – 10:20 coffee break

10:20-11:05 Andrei B. Rubín (Moscow State University, Moscow, Rússia) “Regulation of Photosynthetic Primary Processes and Problem of Ecological Monitoring”

11:05- 11:50 Olaf Malm (IBCCF/UFRJ/Brazil) – “From radioactive tracers in biomedical sciences to the ecology of persistent pollutants and human health”.

CONFERENCE III - 11: 50-12: 35

Ramón Latorre (UV/Chile) “Ion Channels: the doors of perception”

Symposium IX: STUDENT PRESENTATION 13:30 – 14:30 Chairperson: Emiliano

Medei (IBCCf/UFRJ/Brazil) 13:30 - 14:00 Graduate Students

14:00 - 14:30 PhD Students

14:30 – 15:00 CONFERENCE IV: DOCUMENTARY: “Chagas no país da Biofísica”

Chairperson: Doris Rosenthal (IBCCF/UFRJ/Brazil)

Coffee Break 15:00- 15:20

Symposium X POSTGRADUATE: PAST, PRESENT AND FUTURE 15:30-17:00

15:30 -16:15 Ramón Latorre (Chile): A critical view to our PhD Programs

16:15 – 17:00 Jerson Lima Silva (IBqMed/UFRJ/Brazil, Scientific Director from Carlos Chagas Filho Rio de Janeiro State Science Foundation)

17:00 – CLOSING CERIMONY Farwell COCKTAIL