

Cognome \_\_\_\_\_

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La lingua ufficiale del simposio è l'inglese, è previsto un servizio di traduzione simultanea.

Il simposio è rivolto ai medici ed è gratuito.

Dato il numero chiuso dei partecipanti, è indispensabile l'iscrizione al Simposio, almeno 20 giorni prima dell'evento, esclusivamente mediante la presente scheda, inoltrata a mezzo fax al n. 039.6985030

o per e-mail a: francesca.orlandini@named.it

2<sup>nd</sup> INTERNATIONAL SYMPOSIUM

## Biophysical Aspects of Complexity in Health and Disease

**lugano** | 19 maggio 2012

PALAZZO DEI CONGRESSI

Piazza Indipendenza, 4

### Scientific Committee

L. BRIZHIK  
A. DANANI  
A. FOLETTI  
A.R. LIBOFF  
A. LISI  
J. POKORNY  
G.H. POLLACK  
C. ROSSI  
C. SONNENSCHIN  
J.A. TUSZYNSKI  
V. VOEIKOV

### Chair

A. FOLETTI

### Organizing Committee

A. FOLETTI (chair)  
S. GRIMALDI  
C. ROSSI  
A. DANANI  
G. CELLA



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*preliminary  
program*

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SYMPOSIUM

## Biophysical Aspects of Complexity in Health and Disease



**lugano** | 19 maggio 2012

PALAZZO DEI CONGRESSI

Piazza Indipendenza, 4

## 2<sup>nd</sup> International Symposium

### Biophysical Aspects of Complexity in Health and Disease

Lugano, Switzerland, May 19 2012

*Building bridges between physical sciences and life sciences, this conference intend to foster new research directions and scientific collaborations moving biological complexity as research field forward into the future.*

*Invited speakers will present results of the latest research on aspects of biophysics and biophysical medical application that could contribute to an integrative approach to biological dynamics.*

*The talks are also addressed to non-specialists in the research areas that impact integrative biology and information medicine, stimulating a change of paradigm in life sciences assuming complexity as a unifying tool.*

*The conference will emphasize the many multi-disciplinary approaches used to study these subjects, including as topics among others:*

- Applied Biophysics,
- Biophysical Biometric Tools,
- Electromagnetic Activity of Living Systems,
- Intracellular Biophysical Signaling Pathways,
- Cell to Cell physical Communication,
- Biophysical Information,
- Biophysical Coherence in Biological Systems,
- System Biology and System Medicine,
- Health / Disease Biophysical Dynamics,
- Bio-Resonance, Biophysical and System Information Therapy,
- Biophysical role of Water in the Architecture of Biological Complexity.

## International scientific committee

### Larissa Brizhik

Bugolyubov Institute for Theoretical Physics, Kyiv, Ukraine.

### Andrea Danani

Dep. Innovative Technologies, University of Applied Sciences of Southern Switzerland-SUPSI, Manno, Switzerland.

### Alberto Foletti

Dep. Innovative Technologies, University of Applied Sciences of Southern Switzerland-SUPSI, Manno, Switzerland.

### Abraham R. Liboff

Department of Physics, Oakland University, Rochester Hills, MI, USA.

### Antonella Lisi

Institute of Translational Pharmacology, C.N.R., Rome, Italy.

### Jirí Pokorný

Institute of Photonics and electronics, v.v.i., Academy of Sciences of the Czech Republic, Prague, Czech Republic.

### Gerald H. Pollack

University of Washington, Seattle, USA.

### Claudio Rossi

Department of Chemical and Medicinal Sciences and Center of Complex Systems, University of Siena, Siena, Italy.

### Carlos Sonnenschein

Department of Anatomy and Cellular Biology, Tufts University School of Medicine, Boston, MA, USA.

### Jack A. Tuszynski

Department of Physics, University of Alberta, Edmonton, Canada.  
Division of Experimental Oncology, Cross Cancer Institute, Edmonton, Canada.

### Vladimir Voeikov

Department of Biorganic Chemistry, Lomonosov State University, Moscow, Russia.

# preliminary Program saturday 19 may

8.30-9.00 Registration.

9.00-9.15 Opening ceremony.

## BRIDGING SCIENCES IN UNDERSTANDING BIOLOGICAL COMPLEXITY:

9.15-10.00 **JIRÍ POKORNÝ**

Institute of Photonics and electronics, v.v.i., Academy of Sciences of the Czech Republic, Prague, Czech Republic.

*"Physical properties and electrodynamic activity of living systems."*

10.00-10.30 **LARISSA BRIZHIK**

Bugolyubov Institute for Theoretical Physics, Kyiv, Ukraine.

*"Electromagnetic field and self-regulation of redox processes in living organisms."*

10.30-11.00 **CARLOS SONNENSCHN**

Department of Anatomy and Cellular Biology, Tufts University School of Medicine, Boston, MA, USA.

*"From the cell to cancer. An emerging evolutionary perspective."*

11.00-11.20 **Coffee Break**

## WATER AS A TRANSDISCIPLINARY KEY OF COMPLEXITY

11.20-12.00 **GERALD H. POLLACK**

University of Washington, Seattle, USA.

*"The secret life of water: E=H<sub>2</sub>O."*

12.00-12.20 **ANTONELLA DE NINNO**

UTAPRAD-Dim Centro Ricerche ENEA, Frascati (Rome), Italy.

*"Water is the intermediary in the interactions between electromagnetic fields and living systems."*

12.20-12.50 **VLADIMIR VOEIKOV**

Faculty of Biology, Lomonosov Moscow State University, Moscow, Russia.

*"Sustained non-equilibrium state of bicarbonate aqueous systems representing the basis of all biological liquids."*

12.50-13.10 **CLAUDIO ROSSI**

Department of Chemical and Medicinal Sciences and Center of Complex Systems, University of Siena, Siena, Italy.

*"The complex dynamics of water at the bio-macromolecular interface."*

13.10-14.30 **Lunch**

## BIOPHYSICAL INFORMATION IN BIOLOGICAL DYNAMICS

14.30-15.10 **JACK A. TUSZYNSKI**

Department of Physics, University of Alberta, Edmonton, Canada.  
Division of Experimental Oncology, Cross Cancer Institute, Edmonton, Canada.

*"Molecular models of informational processing, memory encoding and the action of anesthetics at the level of individual neurons with connections to neurological disorders."*

15.10-15.30 **MICHAL CIFRA**

Institute of Photonics and Electronics, Academy of Sciences of the Czech Republic, Prague, Czech Republic.

*"Biophysical and medical aspects of electromagnetic cellular interactions."*

15.30-15.50 **DANIEL FELS**

Institute of Botany, University of Basel, Switzerland.

*"Electromagnetic signal transduction within and between species."*

15.50-16.10 **ANTONELLA LISI**

Institute of Translational Pharmacology, C.N.R., Rome, Italy.

*"Biophysical information protocols in regenerative medicine."*

16.10-16.30 **Coffee Break**

## BIOPHYSICAL INFORMATION IN MEDICAL APPLICATION

16.30-16.50 **PAOLO BARON**

General Practitioner, Palmanova, Italy.

*"Biophysical therapy in the management of pain in current medical practice."*

16.50-17.10 **CAROLINA GALASSO**

Physiatrist, Cisternino, Italy.

*"Biophysical therapy in the systemic approach to scoliosis: basic concepts and a case report."*

17.10-17.30 **VINCENZO PRIMITIVO**

Peter Mandel Institute, Lecce, Italy.

*"Electrophotonic imaging of the systemic effects of biophysical therapy: preliminary report."*

17.30-18.00 **ALBERTO FOLETTI**

Dep. Innovative Technologies, University of Applied Sciences of Southern Switzerland-SUPSI, Manno, Switzerland Institute of Translational Pharmacology, C.N.R., Rome, Italy.

*"Simplexity and the possible integrative role of systems information therapy in autoimmune diseases management."*

18.00 General Discussion and Closing Remarks.