

International Autumn School

**BIOPHYSICS &
BIOELECTROCHEMISTRY FOR MEDICINE:
BASIC CONCEPTS, NEW TECHNIQUES
AND APPLICATION PERSPECTIVE**



ABSTRACTS

Vulcan – Brasov, Romania, October 1-6, 2010

International Autumn School
Biophysics & Bioelectrochemistry for Medicine:
Basic Concepts, New Techniques and Application Perspective
Vulcan, October 1-6, 2010

ORGANIZERS

ROMANIAN SOCIETY OF PURE AND
APPLIED BIOPHYSICS (RSPAB)



BIOELECTROCHEMICAL
SOCIETY (BES)



INTERNATIONAL UNION OF PURE AND
APPLIED BIOPHYSICS (IUPAB)



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Justin Teissié
P. Thomas Vernier
Günther M. Zeck

STUDENT SUPPORT TEAM

Minodora Iordache, Iurie Paraico, Lavinia Radacina

The lectures delivered were:

1. **Stefan Andersson-Engels (Lund, Sweden):** *Optical spectroscopy for biomedical diagnostics and treatment control*
2. **Alexandru Babeş (Bucharest, Romania)** *A biophysical perspective on diabetic neuropathy: the role of the reactive metabolite methylglyoxal.*
3. **Gabriel Basarab Hosu (Harvard University, USA):** *Under the hood: a glimpse at e. Coli rotary motor*
4. **Ion-Christian Kiricuta (Wurzburg, Germany):** *When to give up a method. Excellence and hazards in tumor irradiation*
5. **Lluis M. Mir (Paris, Villejuif, France):** *Review of the biological and medical applications of electric fields*
6. **Horea Porumb (Paris, France)** *Integrase as potential target in hiv-1 therapy – a spectroscopic approach*
7. **Marie-Pierre Rols (Toulouse, France)** *Transfer of molecules into cells and tissues by electric field: what do we know?*
8. **Justin Teissié (Toulouse, France):** *Biophysical electrochemistry of biological membranes: what should be known by life scientists*
9. **P. Thomas Vernier (University of Southern California, CA, USA):** *Nanoelectroporation of external and internal membranes — the dielectric landscape of the lipid bilayer interface*
10. **Günther M. Zeck (Münich, Germany):** *Coupling and controlling retinal neurons with semiconductor chips*

The program included also two poster sessions, 3 tutorials and a round table entitled „***Biophysical Education and career at Home or Abroad. Where we are and where we go***”.

The school homepage is still active; the program, abstracts book and list of sponsors and coorganizers is found at

<http://www.biophysicsnet.ro/uploads/files/vulcan%20school%202010.pdf>
and

http://www.biophysicsnet.ro/newsdetail.php?id_nws=20&id_eve=0&id_pag=11