



Cyanobacterial research has paved the way for a number of significant discoveries in photosynthesis, a process which is the source of energy for all living organisms and which has produced our fossil fuels. Today we are facing severe environmental problems due to global warming, which results from using fossil fuels as major energy source and consequent increase in atmospheric CO₂. We see that dedicated cyanobacterial research can have a strong impact on our environmental and energy problems.

- Cyanobacteria serve as model organisms in photosynthesis research. They have been particularly useful in solving the crystal structures of energy conversion complexes in the thylakoid membrane and thereby strongly contribute to biomimetic approaches to construct artificial photosynthesis devices for clean and sustainable energy production.

- Cyanobacterial cells can also be harnessed to biohydrogen production, directly from water by using sunlight. Such clean energy production in bioreactors can be applied from small "family" scale to a large industrial scale.

- There are also vast possibilities to use cyanobacteria as "cell factories" for different high-value metabolites.

To address these challenges, there is an urgent need to advance our knowledge on "Molecular Bioenergetics of Cyanobacteria". Progress in this field must be an interdisciplinary effort, including structural biologists, physicists, chemists, bioinformaticists, biochemists, microbiologists and physiologists. Research approaches also have to be expanded to systems biology level to find the regulatory loops and interacting networks that govern cyanobacterial bioenergetics and metabolism.

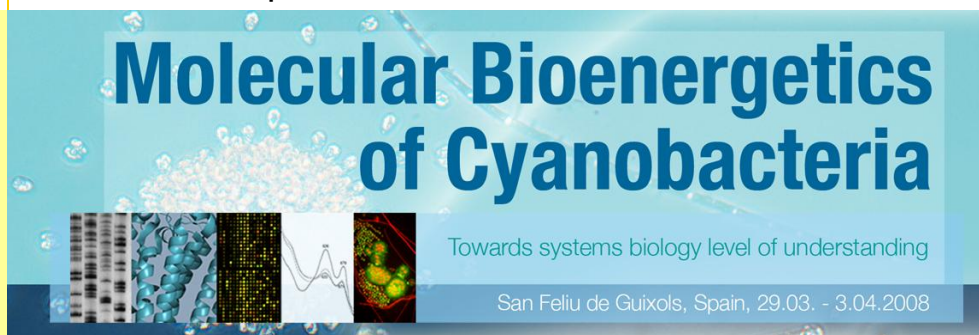
The conference will include short talks selected from the submitted abstracts as well as poster presentations.

RESEARCH CONFERENCES

ESF-EMBO Symposium

Molecular Bioenergetics of Cyanobacteria: Towards Systems Biology Level of Understanding

Hotel Eden Roc, Sant Feliu de Guixols (Costa Brava) • Spain
29 March - 3 April 2008



Copyright: Jan-Christoph Kehr, Humboldt University Berlin

Chair: Eva Mari Aro, University of Turku, FI

Invited Speakers will include

- | | |
|--|---|
| I. Adamska, Konstanz U., DE | D. Knaff, Texas Tech. U., Lubbock, US |
| J. Barber, Imperial College London, UK | J. Komenda, Trebon Acad. of Sciences, CZ |
| N. Battchikova, Turku U., FI | P. Lindblad, Uppsala U., SE |
| W. Cramer, Purdue U., US | H. Matthijs, Amsterdam U., NL |
| C. Dismukes, Princeton U., US | C. Mullineaux, Queen Mary U. London, UK |
| M. Fillat, Zaragoza U., ES | P. Nixon, Imperial College London, UK |
| E. Flores, Seville U., ES | H. Pakrasi, Washington U., US |
| K. Forchhammer, Tübingen U., DE | M. Rögner, Bochum U., DE |
| M. Hagemann, Rostock U., DE | R. Schwartz, Bar Ilan U., IL |
| W. Hess, Freiburg U., DE | I. Vass, Biological Research Center, Szeged, HU |
| H. Iwasaki, Waseda U., JP | W. Vermaas, Arizona State U., US |
| A. Kaplan, Hebrew U., IL | A. Wilde, Humboldt U., DE |
| C. Kerfeld, California U., US | X. Xu, Chinese Acad. of Sciences, CN |
| D. Kirilovsky, CNRS, FR | |

Application Form & Programme available from
www.esf.org/conferences/08253

Closing Date for Application **7 January 2008**

European Science Foundation | Research Conferences Unit
149 avenue Louise | Box 14 | Tour Generali, 15th Floor | Brussels | Belgium
Tel: + 32 (0)2 533 2020 | Fax: +32 (0)2 538 8486
Email: conferences@esf.org | www.esf.org/conferences