



International Union for Pure & Applied Biophysics

IUPAB

CONNECTING THE
WORLD OF BIOPHYSICS

<http://iupab.org/>

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Taskforces to Assist Sub-Saharan Africa:

- Computational Biophysics
- Biomedical Spectroscopy
- NMR in Biological Systems
- Schools on Biophysics

Taskforce on Biomedical Spectroscopy

MISSION STATEMENT: To enhance communication between specialists in biophysical spectroscopy and imaging and those wishing to apply such methods to medical research.

AIMS: (1) To provide linkages between IUPAB and organizations specializing in medical biophysics; (2) To catalyze collaborations between specialists in biophysical and biomedical methods; (3) To transfer the necessary critical knowledge to scientists and physicians with limited access to it; (4) To translate this type of research into clinical impact.

PERFORMANCE INDICATORS: (1) Organization of schools and/or workshops to catalyze collaboration between biophysical and biomedical scientists; (2) Provide updates on technology and applications via the IUPAB web site.

COMPOSITION OF THE TASKFORCE: Shirley Schreier, Department of Chemistry, University of Sao Paulo, Sao Paulo, Brazil; Eugenia Kovacs: Department of Biophysics, Carl Davila Medical University, Bucharest, Romania; Girjesh Govil: Tata Institute for Fundamental Research, Mumbai (Bombay), India.
Email enquiries to: mail@iupab.org

TASKFORCE on COMPUTATIONAL BIOPHYSICS

AIM: To provide a network-based mentoring program for computational biophysicists, particularly in developing nations including many countries in Sub-Saharan Africa.

BACKGROUND: It is not unusual that research groups in countries with limited resources turn to using computational methods to research using computational methods. This approach required brains but little in the way of resources. A modern PC and the internet is enough to get started, but what happens if you run into computational barriers. You may need a mentor to help or you may need assistance to acquire a faster PC. So, how do you solve the problem?

METHOD: IUPAB can provide a research-based network to allow early-career scientists using computational methods to seek advice about new approaches, overcoming problems involving algorithms, strategies, hardware problems with biophysical problems.

OUTCOMES: Contact the IUPAB team via the web (<http://www.iupab.org/>). We will invite you to join RESEARCH GATE, a novel network specifically designed for Researchers and together we will see if there is a software and/or hardware solution to the problem.

CONTACTS: Willy Wriggers, DE Shaw & Co, New York (Convenor); Wilma Olson, Rutgers University, New Jersey USA; Joerg Stelling, Institute for Computational Science Switzerland.
Email enquiries to mail@iupab.org

Taskforce on NMR in Biological Systems

MISSION STATEMENT: To promote communication among scientists using Nuclear Magnetic Resonance (NMR) in a wide variety of applications.

AIMS: (1) To build capacity in the field of NMR, particularly in developing countries. (2) To organize NMR workshops for scientists in the African region. (3) A textbook NMR in Biological Systems: From Molecules to Humans" by Govil and Chary was published by Springer this year and an abridged version will be available at this workshop. (4) To disseminate information by creating an NMR Bulletin Board on the www. (5) To organize training programs for scientists from developing countries to visit established laboratories, with local support for their stay by the host laboratory. (6) To develop databases in NMR in close collaboration with the IUPAB Task Force on Bioinformatics.

TaskForce Personnel: The following experts have agreed to provide advice and suggestions: Paul Callaghan, New Zealand; K.V.R. Chary, India; Ian C.P. Smith Canada; Masatsune Kainosho, Japan; John L. Markely, USA; Gordon Roberts, Leeds, UK. Heinz Ruterjans, Germany; Shirley Schreier (Brazil). The Task Force will keep posting regular progress reports in the field of NMR for inclusion in IUPAB website. Email enquiries to: mail@iupab.org

Taskforce on Building Capacity in Sub-Saharan Africa

MISSION STATEMENT: To develop a post-graduate program in Biophysics in Sub-Saharan Africa.

BACKGROUND: The Sub-Saharan Region is largely lacking in post-graduate courses for its graduates in biophysics. Accordingly IUPAB is currently developing a new Taskforce to assess the prospects of generating post-graduate training in biophysics. The proposal is based on a successful model developed in the Latin America but it will be modified to ensure it is relevant to Sub-Saharan African nations. The program will be developed with the cooperation of Mr Robert Krieger who is a key participant in and contributor to national, regional and International Science and Technology policy in South Africa. It will focus on applied aspects of biophysics in the African context, particularly involving the environment.

AIMS: To develop post-graduate training programs for Sub-Saharan Africa
COMPOSITION OF THE TASKFORCE: Raul Grigera, (Instituto de Física de Líquidos y Sistemas Biológicos, La Plata, Argentina; Robert Kriger, (Manager of the Policy and Strategy Unit at the National Research Foundation of South Africa in Cape Town), and Cris dos Remedios, (IUPAB); Email enquiries to mail@iupab.org

Africa: Is it possible to acquire medical MRI Imaging equipment in Mozambique?

Canada: We may be able arrange to send equipment to Africa that is no longer needed in other countries

MOZAMBIQUE: Q to IUPAB Computational Biophysics I am trying to compute the migration of a toxic chemical in a ground water sources from point A to point B Is there an algorithm I can use?

SWITZERLAND: Email details of the software you have tried. There may be better algorithms, or maybe you are limited by your hardware. I will ask my colleague in New York.

How do I obtain a post-graduate degree in Biophysics?

Brazil: We are developing a new Taskforce to examine ways of developing such a program.

Are there workshops in biophysics that I can attend?

There will be a workshop in Croatia in October and another in Mumbai in November 2009.