

ICTP – [The Abdus Salam International Centre for Theoretical Physics](#), Trieste, Italy

## **smr1324/Announcement**

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Adriatico Research Conference on  
Interaction and Assembly of Biomolecules

27 - 31 August, 2001

Miramare - Trieste, Italy

Co-sponsoring Organizations:  
Forschungszentrum Juelich, Germany  
National Institute of Child Health Human Development, NIH, USA

The Abdus Salam International Centre for Theoretical Physics (ICTP) Trieste - Italy, is organising the Adriatico Research Conference on Interaction and Assembly of Biomolecules, to be held at the ICTP from 27 to 31 August 2001. This activity will be directed by: P. Carloni (International School for Advanced Studies, Trieste, Italy); A.A. Kornyshev (Research Center Juelich, Germany); S. Leikin (National Institute of Health, Bethesda, Maryland, USA).

This interdisciplinary meeting will gather a diverse group of physicists, chemists and biologists to discuss interaction, recognition and assembly of biological macromolecules, that are of vital importance for cell biology, molecular genetics and biomolecular engineering.

The main topics are:

Fundamental interactions in biological systems:  
measurement, theory, and computer simulations of  
forces between biopolymers

Supramolecular ordering in biological systems:  
physics of liquid crystals; liquid crystalline phases  
of biopolymers; liquid crystal elastomers; ordered  
structures in biology

Polelectrolytes and polyampholytes: charged and  
uncharged polymers in solution; counterion  
condensation and adsorption, fluctuations and collapse,  
polymer-polymer and polymer-surface interactions

Interactions and self-assembly of nucleic acids:  
Structure of nucleic acids and their ensembles,  
DNA-DNA interactions, DNA condensation,  
DNA supercoiling, RNA self-assembly Protein-DNA interactions and  
molecular genetics:  
thermodynamics, forces and structure of protein-DNA  
complexes; gene activation; physics of genetic recom-  
bination; human genome and biomolecular interactions

Lipid-DNA interactions and gene therapy  
organization of lipid membranes; polymer-amphiphile  
interactions; physics of lipid-DNA complexes; liposomes  
as gene and drug delivery systems

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Interactions and self-assembly of proteins:  
structure, forces, assembly and function of proteins and  
their ensembles; protein-protein interactions and  
intracellular signaling; information transfer within proteins

Supramolecular engineering, biomolecular devices, and  
drug design: DNA chips; supramolecular electronics;  
bioinformatics; combinatorial chemistry and drug design;  
computer-aided drug design

The topics of the conference are relevant for such practical research  
issues as: molecular diseases; genetics and gene therapy; pharmacology  
and drug design; food supply; long-term food storage in hot climate  
conditions; environmentally friendly and degradable biomaterials.

AFTERNOON TUTORIALS: Theoretical tools in modern pharmacology  
(computer graphics, sequence alignment, construction of 3D structural  
models, etc)

Participation is open to all scientists from all member countries of  
the United Nations, UNESCO or IAEA. As the activity will be conducted in  
English, participants should have a good working knowledge of that  
language. The main purpose of the Centre is to help researchers from  
developing countries within a framework of international cooperation.  
Graduate students and post-doctoral scientists from developed countries are  
also encouraged to apply for participation. However, please note that  
funds are extremely limited.

As a rule, travel and subsistence expenses of the participants should  
be covered by the home institutions. Only very limited funds are available  
for some scientists from developing countries who will be selected by the  
organisers. Scarcity of funds allows travel to be granted only in truly  
exceptional cases; therefore, every effort should be made by candidates to  
secure support for their fare from their home country. The closing date  
for receipt of requests for participation is 1 March 2001. There is no  
registration fee for attending the Conference

Candidates should complete and sign the "Request for Participation" form  
(also obtainable via e-mail [smr1324@ictp.trieste.it](mailto:smr1324@ictp.trieste.it) and by using as  
subject line "get Announcement", or via the ICTP Web Server) and post it to:

the Abdus Salam International Centre for Theoretical Physics  
Adriatico Research Conference on Interaction and Assembly of Biomolecules  
(c/o Ms. Valerie Shaw)  
Strada Costiera, 11  
I-34014 Trieste,  
Italy

Telephone: +39 - 040 - 2240541  
Telefax: +39 - 040 - 224163 E-mail: [smr1324@ictp.trieste.it](mailto:smr1324@ictp.trieste.it)

Adriatico Research Conference on  
INTERACTION AND ASSEMBLY OF BIOMOLECULES

27 - 31 August, 2001

ICTP: smr1324/Announment

E-mail address: smr1324@ictp.trieste.it

REQUEST FOR PARTICIPATION FORM

(Please note that unless all requested personal data are provided, the ICTP cannot process any visa request)

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To be completed (typed or in block letters) and returned to: the Abdus Salam ICTP, Adriatico Research Conference on Interaction and Assembly of Biomolecules, (c/o Ms. V. Shaw), Strada Costiera 11, I-34014 Trieste, Italy, before 1 March 2001.

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SURNAME/FAMILY Name: MAIDEN Name: First name: Middle name(s):  
For women only  
(if applicable)

Sex:

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IMPORTANT: PLEASE ALSO COMPLETE THIS SECTION, IF YOUR NAME(S) IN YOUR PASSPORT ARE SPELT DIFFERENTLY FROM THE ABOVE.

SURNAME/FAMILY Name: MAIDEN Name: First name: Middle name(s): For women only  
(if applicable)

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Present nationality: Date of birth:  
Year - Month - Day

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EDUCATION (higher degrees)

University or equivalent Name and place	From	Years attended to	Degrees
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Full address of permanent Institution: Institute: Tel. No.  
Telex/Cable  
Telefax

Your Office: Tel. No.  
Telefax  
E-mail: \*

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Full address of present Institution (if different from permanent):

Institute: Tel. No.  
Telex/Cable  
Telefax

Your Office: Tel. No.  
Telefax:

until: Date ..... E-mail: \*

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Mailing address - please indicate whether: Permanent Institute \_\_\_ OR  
Present Institute \_\_\_  
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Research interests:

- Kindly supply (strictly within indicated lengths) a keyword description of your current scientific activities as follows:

€ Area of research:

|\_\_\_\_\_|  
(no more than 15 letters)

€ Specific topic of interest:

|\_\_\_\_\_|  
re than 30 letters)

- Sketch your current research work, with full reference to published papers, on the subject relevant to the Conference.

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List your scientific publications including books and articles (authors, title, Journal) in the period 1995-2000:

- 2 -

Have you participated in past ICTP activities: Yes \_\_\_ No \_\_\_

ICTP: smr1324/Annoument

If yes, which?

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APPLICABLE ONLY FOR CANDIDATES FROM DEVELOPING COUNTRIES

(Important: Please note that very few grants are available, and preference in selecting participants will be given to eligible candidates who can guarantee travel coverage by their own local sources.)

Please tick as appropriate:

- \_\_\_\_\_ - I can definitely find complete travel funds from local sources
- or
- \_\_\_\_\_ - I can definitely not find travel funds from local sources \_\_\_\_\_  
(specify in US\$ the funds needed) US\$ = \_\_\_\_\_
- \_\_\_\_\_ - I am requesting financial support from the ICTP  
for living allowance \_\_\_\_\_
- \_\_\_\_\_ - I am NOT requesting financial support from the ICTP \_\_\_\_\_

\_\_\_\_\_  
Signature of candidate

\_\_\_\_\_  
Date

\* I agree that my e-mail address(es) may be made public on the ICTP WWW page:

YES \_\_\_\_\_ NO \_\_\_\_\_

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 [BACK to ICTP smr1324](#)