IUPAB NEWS

REPORTS ON THE ACTIVITIES OF THE INTERNATIONAL UNION FOR PURE AND APPLIED BIOPHYSICS
(Union Internationale de Biophysique Pure et Appliquée)
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GENERAL ASSEMBLY PAPERS

Please retain and bring to the General Assembly on Sunday, August 28th, 2005

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Information about IUPAB, national and regional biophysical societies
and extracts from *IUPAB NEWS* are available on the Internet from

http://www.iupab.org

IUPAB 2002 - 2005

PRESIDENT: J Garnier (France)
PAST PRESIDENT: I Pecht (Israel)
VICE-PRESIDENTS: C G dos Remedios (Australia), I C P Smith (Canada)
SECRETARY-GENERAL: F G Parak (Germany)
MEMBERS OF COUNCIL:
P Brzezinski (Sweden), F Conty (Italy), M I El-Gohary (Egypt), G Govil (India)
W Junge (Germany), K Nagayama (Japan), W K Olson (USA),
J E Ponce-Hornos (Argentina), G C K Roberts (UK),
F Separovic (Australia), T P Singh (India), N-m Zhao (China)

CONVENORS OF TASK FORCES:
Bioinformatics J Garnier
Biomedical Engineering I C P Smith
Capacity Building and Education in Biophysics J R Grigera
NMR in Biological Sciences G Govil
Inter-Union Bioinformatics Group H J C Berendsen / J Garnier

Welcome Address to the Montpellier Congress

Dear Colleague,

It is an honour and a great pleasure to invite you to join us in Montpellier for the 15th International Biophysics Congress on behalf of the International Union for Pure and Applied Biophysics (IUPAB). For the first time this international congress will be sponsored both by IUPAB and by the European Biophysical Societies' Association (EBSA). This joint sponsorship reflects both the vitality of the Biophysics in Europe and the commitment of IUPAB and EBSA to promote the largest coverage of researchers in this field. The list of contributors includes the leading scientists in their respective fields. We shall have excellent facilities in the Corum for the oral and poster presentations of submitted original research. Both IUPAB and EBSA are sponsoring younger scientists to attend the congress in their effort to promote Biophysics wherever it needs help especially in countries where this scientific discipline is not well funded. I wish you would spare some of your time to visit the beautiful region of Montpellier and its surroundings. The organizing committee have done their best to make your stay as pleasant as possible. Satellite conferences on special topics have been organized for the period before and after the congress. We look forward to seeing you in Montpellier.

Sincerely yours.

Jean Garnier
President of IUPAB

Remarks for Council Members and Delegates at the General Assembly

Dear Colleagues,

the material you need for the Council Meetings and for the General Assembly is included in this IUPABNEWS. You will not get this material once more in Montpellier. Therefore, **please take this IUPAB NEWS with you**. Otherwise you will miss important information.

I want to bring once more to your attention some time schedules. The Executive Committee will meet on Saturday August 27th at 9:30h. At 11:00h the first meeting of the Council will take place. The IUPAB General Assembly is scheduled for Sunday, August 28th at 18:00h. There is a meeting of the new Council on Wednesday, August 31st at 17:30h. All meetings will take place at the Congress locations. Executive and Council meetings will be in " Salon VIP Einstein" (50 seats) the General Assembly, in "Einstein" (amphitheatre). (318 seats)

With best regards

Fritz Parak
Secretary General

Two short scientific contributions

Biophysics in Medicine?

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E-mail: ian.smith@nrc.ca

Biophysics as we know it today is a very successful and popular field. Much progress is being made on cellular mechanisms and molecular structure. On the other hand, clinical medicine is still largely an observational science with insufficient knowledge of basic mechanisms of health or disease. I suggest that greater connection between these two divergent fields would have an enormous positive impact on humanity, would provide challenging and satisfying research projects for biophysicists, and would stimulate national economies. At our institute we have succeeded in making this connection. Our specialty is non-invasive diagnosis of disease, human or animal. Our approach is one commonly used by biophysicists – sophisticated spectroscopy and imaging combined with advanced computational methods.

Let me begin with a simple example. Proton NMR at the humble frequency of 360 MHz has made enormous strides in the diagnosis of cancer. In collaboration with the Institute for Magnetic Resonance, Sydney, Australia, we have studied fine needle biopsy specimens from normal and cancer-bearing breasts. Figure 1 shows 1H NMR spectra at 360 MHz of normal and malignant specimens.

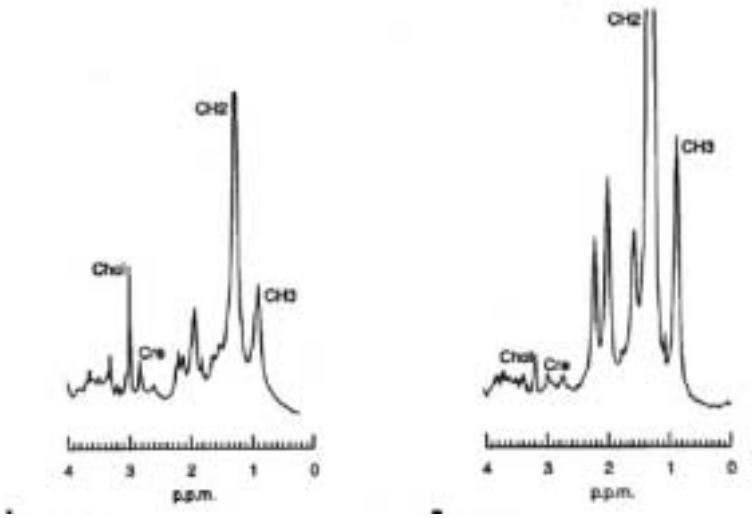

Figure 1: *360 MHz 1H NMR spectra of normal and malignant breast biopsies*

Clearly seen in the spectrum of the malignant specimen, and absent in the normal, is a resonance attributed to choline, a component of membrane lipids.Taking the ratio of this resonance to that to slightly lower chemical shift, attributable to creatine, the scatter plot shows a reasonable separation between the two types of specimen. We have studied 108 biopsies in total, and analyzed the data by means of a Statistical Classification Strategy (SCS, 1). The SCS method yields accuracy of 96%, sensitive 94%, and specificity 98% (2). Furthermore, we can subclassify the biopsies into those which have metastasized to distant lymph nodes or not, and those which have invaded the vascular system or not, with comparable accuracy. The latter two classifications are expected to be extremely valuable in treatment planning for breast cancer (2). A similar degree of success has been had with biopsies of prostate tissue (3, 4). The next phase of this research is to produce diagnostics of

similar value by performing the spectroscopic measurements within an MRI instrument, noninvasively. This is much more difficult due to the lower detection sensitivity and dispersion of the MRI instruments, which operate at frequencies in the range 65 to 130 MHz, but not impossible.

Another example is the verification of cardiac bypass surgeries by means of fluorescence. It is critical when doing a bypass that the flow of blood reach all regions of the heart muscle, and that there be no leaks in the points of attachment. This can be simply measured by injecting a small amount (ca. 1 mg) of fluorescent protein just before opening the bypass, and observing the flow by laser-excited fluorescence. A digital record is made for confirmation of the bypass (5). A view of the apparatus is shown in Figure 2, and a record of a bypass in Figure 3. This instrument has now been used in clinics around the world, and is a product of a spin-off company, Novadaq, from our institute. It has saved many an imperfect bypass.

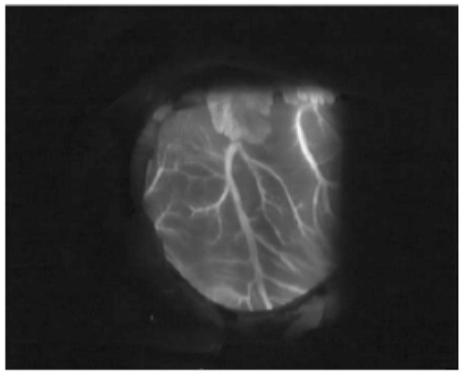

Figure 2: *(left) The Novadaq instrument, known as SPY, for imaging blood circulation in the human cardiac muscle.*
Figure 3: *(above) Map of the blood circulation in a human heart as seen by fluorescenceof a protein imaged by the SPY system*

Near-infrared spectroscopy (NIR) can be used to evaluate the severity of a burn. In the NIR spectra, Hb and HbO2 have distinguishable absorptions, and their ratio can be quantified. This enables a decision on whether the burn is second or third degree (6). This application is currently being assessed in a clinical trial in a Toronto hospital.

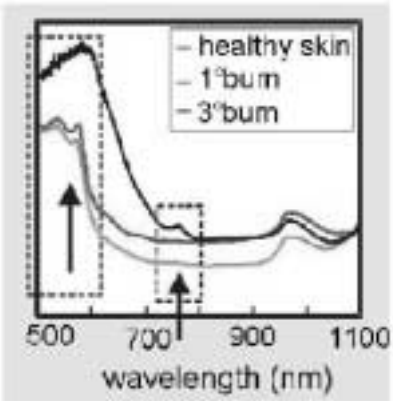

Figure 4: *(left) Near IR spectrum of healthy skin,first degree burn, and third degree burn.*

As a tour de force, I would like to describe another project that has gone from the bench to the bedside to the market. It began with collaboration between a neurosurgeon and our team of biophysicists. The neurosurgeon had experienced situations where his surgical path was unclear, and severe deleterious

effects on the patient could result if he proceeded. He needed an imaging modality to show the way on the operating table. The result was a 1.5 Tesla intraoperative MRI. When the surgeon needs guidance, the magnet moves over the patient on the table, produces the required images and shows them right at the operating table to the surgeon. The magnet then retires, and the surgery proceeds. The secret was in the physics! We had to work out a way to move a superconducting magnet tens of metres without disturbing the homogeneity of the field. This succeeded, and hundreds of surgeries have been performed using the instrument, with many successes attributed mainly to the use of the MRI system (7). A company, IMRIS, has been formed, and it has much success in installing the instrument in hospitals in several countries. Figure 5 shows the IMRIS instrument.

Figure 5: *The IMRIS intraoperative MRI instrument*

In conclusion, I hope that I have attracted the attention of both students and professors of biophysics. The satisfaction derived from the success in this type of research is hard to describe. Not only do humans enjoy earlier diagnosis, and thus earlier cure, but also the economy of the country benefits from the commercial value of the products of its investment in basic research.

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A New Frontier of NMR: Studies of Metabolism

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Nuclear Magnetic Resonance (NMR) spectroscopy has developed into a powerful technique in several branches of biological sciences. Four out of the five major elements in biological world possess nuclei, which can be conveniently studied by NMR. Of these, ^{1}H and ^{31}P are present in almost 100% natural abundance, but ^{13}C and ^{15}N have low abundance. The ^{31}P NMR spectrum is relatively simple as phosphorous occurs in only a few molecules in cells, such as adenosinetriphosphate (ATP), adenosine diphosphate (ADP), phosphocreatine (PCr) etc. These compounds are involved in the energy cycle of living systems and their levels provide vital information on cellular energetics. On the other hand, ^{1}H, ^{13}C and ^{15}N spectra are complex and one has to depend on 2- and 3-D FT-NMR techniques for analysis. NMR applications in medicine, biochemistry and biophysics cover three diverse areas. One is study of the structure and dynamics of biological macromolecules, such as proteins and nucleic acids and molecular assemblies such as biological membrane. The second area is known as

magnetic resonance imaging (MRI) and spectroscopy (MRS). Both these areas are very well developed.

A third and somewhat less explored frontier of NMR, involves studies on the chemistry of living cells, body fluids and tissues. Unlike in other cases, dedicated instruments are not available for such studies. One generally uses high field spectrometers meant for molecular studies and design strategies to keep the cells and tissues viable while they are in the spectrometer, and to prevent them from settling in the sample tube. Through such studies, it is possible to analyze chemical constituents of cells, tissues and biofluids. While chemical methods are available, they frequently employ techniques which destroy cells and tissues during analysis. Strategies have to be developed to look for a particular molecule. Metabolic studies using NMR can be performed while the cells are active and detect all molecules simultaneously. Changes in the kinetics of metabolic processes under the influence of activators or drugs can be followed. NMR can answer vital questions on the chemistry of living cells, which cannot be probed by conventional methods. It has been used as a pathological tool to differentiate between healthy and diseased cells (biopsy) and to detect profile of excreted compounds in urine (pathology). Signals from low molecular weight compounds can be detected with high sensitivity, and their concentrations in cellular systems, body fluids and tissues can be estimated. Water suppressed ^{1}H NMR is particularly useful. In view of the large number of compounds in cells and bio-fluids, it is useful to use techniques such as ^{1}H-^{1}H and ^{1}H-^{13}C correlated spectroscopy. Analysis is aided by a library of the finger print patterns of the expected compounds and confirmed by spiking techniques, where an expected compound may be added to look at change in intensities of existing peaks in the system. The information has proved useful to detect:

(1) Presence of unusual molecules during cell development and maturation.
(2) Changes in levels of compounds as a result of disease, action of a drug, or storage.
(3) Detection of metabolites during cell activity and monitoring unusual metabolism.
(4) Excretion of molecules such as drug or their metabolites in body fluids such as urine.
(5) Detection of diseases for example, identification of cancerous from benign cells.
(6) In follow-up of patients undergoing medical treatment.

We have been working on spermatozoa, a cellular system responsible for reproductive biology of mammals. An illustrative example shows how we can learn about the effect of certain compounds on metabolic pathways, which may be of potential value in drug discovery and in study of inhibition of cell growth. L-Arg is an important molecule in sperm metabolism and is known to increase spermatogenesis. NMR shows that the presence of Arg increases Glc and Fru consumption by cells with a concomitant increase of Lac production and a decrease of pH. Arg also reduces damage due to ionizing radiation and reverses the impairment caused by glycolytic inhibitors. Irrespective of the nature of induction, L-Arg reduces the extent of lipid per-oxidation in a concentration dependent manner. Both L-Arg and α-tocopherol act synergistically in preventing lipid per-oxidation. Arg has a high degree of specificity in its catalytic activities. NMR studies have also helped in establishing that Arg stimulates nitric oxide synthesis in spermatozoa, which is a key factor in enhancement of metabolic activity and plays a role in preventing lipid per-oxidation. It has been concluded that the mechanism of action of Arg is primarily through increased biosynthesis of nitric oxide.

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50th Council Meeting

Agenda

50.1	Adoption of the Agenda
50.2	Apologies for absence
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50.7	15th International Congress, Montpellier
50.8	16th International Congress, Long Beach
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50.15	Draft Agenda for the 51st Council Meeting
50.16	Other Business

Agendum 50.11

Budget 2005 (estimated)

1.)	**Investments**	**2005[USD]**	
	US Treasurey 05.875%Nov15 2005	68.782	
	Fed. Home&Mtg Corp, var.int. (Arne Engström),2011	28.715	
	Merril L. fix.dep.2,05%, Jun.10, 2005	23.907	
	Cred.Lyon.OAT gov.bonds 3,5% Apr.25 2015	80.600	
	Sub-Total	**202.004**	
2.)	**Bank and Deposit Balances**		
	Merril Lynch, deposit and accrued interests	2.634	estimated
	Crédit Lyonnais (USD accounts)	6.200	estimated
	Crédit Lyonnais (Euro accounts)	64.678	estimated
	Sub Total	**73.512**	
Total investments and assets:		**275.516**	
Income and Expenditure Account:			
1. Income:		**2005[USD]**	
Grant from UNESCO		10.000	
Subscriptions from adhering Bodies		75.000	ongoing
Bank interests and investment income		8.000	estimated
Total income		**93.000**	
2. Expenditure			
Scientific activities			
Congress Montpellier			
Travel Fellow Ship		50.000	
Invited Speakers		50.000	
Travel expenses for IUPAB Council		20.000	
Sponsorship of scientific meetings		15.272	done
Sub Total		**135.272**	
Routine meetings			
Executive Committee, Long Beach		**9.428**	done

Other activities		
Dues to ICSU	**3.583**	done
Administrative expenses		
Audit fees	3.500	
Bank charges	1.500	
Secretary General expenses	1.500	
IUPABNEWS, Web etc	2.000	
Sub Total	**8.500**	
Total expenditure	**156.783**	
Total income	**93.000**	
Total income -total expenditure	**--- *63.783***	
Total investments and assets (2004)	**339.299**	
Total investments and assets (2005)	**275.516**	
Decrease	**63.783**	

Agendum 50.9.4

There are 3 proposals to host the 2011 Congress

1. Beijing, Proposal by the Biophysical Society of China
2. Cairo, Proposal by the President of the Academy of Scientific Research & Technology
3. Graz, by telephone, Prof. Laggner

Extraordinary General Assembly of IUPAB

Agenda

1. Accreditation of Delegate
2. Adoption of Agenda
3. Change of the Category of Adhering Bodies
4. Admission of New Adhering Bodies and Observers
5. Change of Statutes
6. Rules of Procedure

16th General Assembly of IUPAB

Agenda

1. Accreditation of new Delegates
2. Adoption of the Agenda
3. Approval of the Minutes of 15th General Assembly, Buenos Aires 2002
4. Report of the President
5. Report of the Secretary General and Financial Report
6. Presentation of Reports of Task Forces
7. Election of Officers and Council Members
8. 16th International Biophysics Congress, Long Beach, USA
9. Place and date of 17th International Biophysics Congress
10. Any other approved business

Notes: The proposal for the change of the Statutes and the implementation of "Rules of Procedure" where accepted at the 49th Council of IUPAB in Paris and communicated in IUPAB NEWS 49 to all Adhering Bodies. The text is once more given in this edition as Annex.

Agendum 4:
Report of the President for 2002 - 2005

The beginning of my term as President of IUPAB coincided with the replacement of Professor A.C.T North as Secretary-General of IUPAB by Professor Fritz Parak. I will certainly be the advocate of IUPAB as a whole for an unanimous recognition for Tony's fairness and devoted action as Secretary-General. I want also to welcome Fritz Parak our new Secretary- General and congratulate him for his election at the last 15th General Assembly of IUPAB in Buenos Aires. Fritz knows how important is his task for the Union and with the help of Tony North we did our best to facilitate his first steps in the Union organization. Our primary task has been to deal with the change of status from a UK based Charity Fund to another non-profit type of organization. After discussion with Fritz Parak and the approval of the Council, IUPAB has been registered as a French non-for-profit organization (association "Loi de 1901") on 23 January 2003, (J.O 15 march 2003), with its legal seat at the ICSU headquarter, 51 Boulevard de Montmorency, Paris. Other international organizations like ICSU, CODATA and IUBS have already the same status with their legal seat at ICSU headquarter with the difference that IUPAB will have no office in Paris but at the location of the Secretary-General, in Munich at present. An association "Loi de 1901" offers many flexibility with no requirement of citizenship for its members that we thought very valuable for IUPAB and we are grateful from ICSU for their help and advice.

On this occasion we had to make some modifications in the statutes of IUPAB concerning its new status of a non-for-profit organization. For this we give thanks to Tony North for his much appreciated help and we took advantage of this necessary exercise to reorder the articles in a more sensible way, to add five new articles to precise some current practice of IUPAB and to write an annex to the statutes as "Rules of procedures". These rules clarify many aspects of the IUPAB functioning: Adhering Bodies, General Assembly (election procedures), the role of the different Executive Officers, quorums and Task Forces. Approved by the Council during its meeting in Paris on April 2004, the new statutes will be presented for approval by the 16th General Assembly in Montpellier.

In Montpellier we are inaugurating a new aspect of sharing the International Congress of Biophysics. To the inviting country (France) the European Biophysical Societies Association (EBSA) will join to IUPAB as sponsor of the International Congress. EBSA is a dynamic regional association of Biophysical Societies. This joint sponsorship will promote a more active international collaboration. We expect that such regional organizations will be developing in the future, as it already exists between some Asiatic countries and in a less formal way between South American Biophysical Societies.

Following the initiative of my predecessor, Prof. Israel Pecht, we have pursued a close collaboration with the Biophysical Society in USA in order to organize with them a joint International Congress of Biophysics in Long Beach on February 2008. During a meeting between the IUPAB Executive Committee and the Biophysical Society representatives last February 2005 in Long Beach we set up a general and favourable agreement, both scientifically and financially, with our American colleagues in a very friendly and understanding atmosphere. The Biophysical Society has many members and one quarter of them are from countries other than United States. It has some equivalence to a regional association. The candidature of the Biophysical Society as an Adhering Body to IUPAB will be submitted for approval at the 16th General Assembly in Montpellier. The US National Committee of Biophysics from the US Academy of Sciences will stay as an Adhering Body to IUPAB. This is well justified by the prominent development of Biophysics in the United States.

I have some regret of not having been able to find an editor-in-chief for our electronic Biophysics Journal. The idea was good but an editor is the key point for a scientific journal, our search was unsuccessful and we had to withdraw this project. There will be some compensation: the Quarterly Review of Biophysics has a project to be published on line although not in the same market conditions as we were planning for an electronic Journal.
As you will see the finances of the Unions are sound. This does not mean that we have to reduce our efforts to encourage new Adhering Bodies to join IUPAB or not helping our members to move to higher categories in spite of limited government funding. We benefited of surplus from previous International Congresses (New Delhi and Buenos Aires). This trend should be enhanced in the future; IUPAB should get more revenue from the International Congresses than it has received in the past.
The IUPAB collaboration with other Unions had some impact. I will cite the recommendations for the enhancement and preservation of primary biological databases adopted by ICSU during its 27th General Assembly in Rio de Janeiro on September 2002. This was obtained thanks to a fruitful collaboration between IUPAB and the International Unions of Crystallography (IUCr), of Pure and Applied Chemistry (IUPAC), of Biochemistry and Molecular Biology (IUBMB) and the Committee on Data for science and technology (CODATA). We have now a member of IUPAB at the executive board of CODATA and Israel Pecht, our Past President, was recently nominated by IUPAB to be a member of the executive board of ICSU in replacement of Prof. David Parry former President of IUPAB.
You will find in the Secretary-General report the list of the workshops financed by IUPAB. Their purpose is to favour the development of Biophysics in countries where it is not fully developed and to facilitate the attendance of scientists from countries not able to finance their travelling to scientific meetings. We still need an effort from the Adhering Bodies to send to us enough proposals for the workshops.
In conclusion I would like to give my thanks for the constant support given to me by the Council members and in particular the Executive Committee, all have contributed to the progress and achievement obtained by the Union during these three years. I want to reserve a special mention for our new Secretary-General for his skills and his commitment to IUPAB. Certainly our new President will receive from Fritz Parak all the help he can hope to accomplish the wish I make for him of a successful and innovative term.

Agendum 5:
Report of the Secretary General for 2002 – 2005
Financial Report

Introduction:

The International Organisation for Pure and Applied Biophysics was formed in Stockholm in 1961 and was established as the International Union in 1966, when it became a member of ICSU. Its objectives are: to organise international co-operation in biophysics and promote communication between the various branches of biophysics and allied subjects; and to encourage within each adhering body co-operation between the societies that are interested in the advancement of biophysics in all its aspects.

In order to achieve these objectives, it has power to: set up Commissions and other bodies for special purposes; to organise international meetings and conferences; collaborate with other scientific organisations; act in all ways as a constituent Union of the International Council of Scientific Unions in accordance with the Statutes of that body; and develop any activity deemed helpful in forwarding its declared objectives.

Membership:

The number of adhering bodies of IUPAB is now 50. In addition there are two former Adhering Bodies where there is no longer any contact (Irac and Vietnam). Formally they are counted as "suspended".

Organisational Matters:

General

Due to difficulties with the German charity law the official centre of the Union was shifted to Paris in accordance with the statutes paragraph (V)(12). The Union is registered in France according "Loi du 1er Juillet 1901 - Art. 5" as a charity organisation. Contacts go, as before, via the Secretary General. From the date of the registration of the IUPAB in Paris the responsibility for financial transactions went from A.C.T. North to F.G. Parak. In order to have a smooth transition, the authority to perform financial transactions on the Union's account was extended to A.C.T. North till the end of 2003. At the Executive Committee Meeting 2003 in Munich A.C.T. North was discharged from his duties. The Executive Committee thanked Dr. North for his excellent work and for his assistance to the present Secretary General during a long transfer period.

The IUPAB has now two bank accounts at the Crédit Lyonnais Bank in Paris, one in USD and one in EUR.

An important task was the preparation of some changes of statutes and an introduction of "Rules of Procedure". The text was first formulated by the Executive Committee with the assistance of Dr. North and adopted at the Council Meeting 2004 in Paris. All Adhering Bodies got the present version with the IUPAB NEWS No 49. The text is presented to the General Assembly 2005 for decision. It is given once more in Annex A and Annex B.

15th General Assembly, Buenos Aires Argentina 27 April 2002

Membership

The Azerbaijan Biophysical Society was accepted as an Observer. The Sociedad Venezolana de Biofisicos became the Adhering Body for Venezuela in replace of the research council CONICET. The Indian National Science Academy changed from Category 3 to Category 2.

Activities of IUPAB during 2002 - 2005

The Union supported a variety of meetings ranging from the International Congress to broad Summer Schools and specialist seminars. The 14 meetings had covered a wide range of topics in biophysics, and had been conspicuously successful in attracting a high level of participation by young scientists and by scientists from the less highly developed parts of the world, who had the opportunity of becoming acquainted with each other and with internationally leading scientists in their fields. There were 4 meetings in Asia, 4 in Europe, 3 in Latin America and 1 in Africa, in

Australia and in the USA. The major activity of IUPAB in 2002 was the General Assembly and Congress in Buenos Aires, which was the first Congress in South America.

When meetings were held in the wealthier countries, IUPAB funds were used to assist in the participation of scientists from less wealthy areas; on the other hand, in the cases of meetings in the developing countries, funds were used to help pay the expenses of leading international speakers from the wealthier countries. There were 87 applications for a Travel Fellowships to support the participation of young scientists in the Buenos Aires Congress. 46 awards were given.

Finances

In spite of the difficult situation of Argentina during the time of the Congress the organizers were able to achieve a surplus which was shared with IUPAB on the basis of 50%.

Elections of Officers and Members of Council

The following were elected for 2002 - 2005

President:	J. Garnier (France)
Past President:	I. Pecht (Israel)
Vice-Presidents:	C. G. dos Remedios (Australia)
	I. C. P. Smith (Canada)
Secretary-Gen.:	Fritz G. Parak (Germany)

Members:
P. Brzezinski (Sweden), F. Conti (Italy), M I El Gohary (Egypt) (R), G. Govil (India), W Junge (Germany) (R), K Nagayama (Japan) (R), W.K. Olson (USA), J. E. Ponce-Hornos (Argentina),G.C.K. Roberts (UK), F. Separovich (Australia), T.P. Singh (India), N-m Zhao (China).

15th and 16th International Congresses

The General Assembly received an oral report on arrangements for the 15th Congress, to be held in Montpellier in 2005. It was decided that the 16th International Congress will take place in Long Beach (USA) in 2008.

Meetings of Council and Executive Committee during 2002-2005

The Executive Committee and Council each met twice in the course of the Buenos Aires Congress. An Executive Committee meeting was held in Munich in 2003 hosted by the Secretary General. The 'mid-term' meeting of the Council held in Paris in 2004 was hosted by the President. In February 2005 the Executive Committee met in Long Beach (USA). In between meetings, the Union's business has been progressed by extensive use of email. As usual, much of the business of the meetings was concerned with routine matters, comprising: receiving reports from the Union's Task Forces and affiliated bodies; receiving reports on meetings that the Union had supported financially; allocating support for future scientific meetings; approving

the Financial Accounts and Budgets; and discussing participation in the activities of ICSU, our 'parent body'.

47th and 48th Meeting of Council, Buenos Aires, April 2002

In addition to the normal routine matters outlined above, the pre-Assembly meetings prepared business for the 15th General Assemblies.

The Council approved the plans being made for the 2005 Congress. The site had been visited by the Executive Committee in November 2001 and looks very attractive. The conference organizers stated that with a conference fee of only 300,- USD the budget would break. It was decided that the normal conference fee should not exceed 350,- USD. There was an agreement that this Congress should go ahead as a joint IUPAB/EBSA Congress.

The 48th Council considered actions to be taken following the discussions in the Assemblies. The Council decided to form the following task forces: Bioinformatics (Convenor J. Garnier), Capacity Building and Education in Biophysics (Convenor J. R. Grigera), NMR in Biological Sciences (Convenor G. Govil), and Biomedical Spectroscopy (Convenor I.C.P. Smith). The final outcome of the elections was discussed and it was decided to introduce a formal way to make sure that a country is represented by no more than one member on the Council, including Officers. It was decided that the centre of the Union should not go automatically to office of the new Secretary General. Before a final decision the charity problem has to be solved.

Meeting of Executive Committee, Munich, Germany, February 2003

In accordance with the statutes paragraph (V)(12) it was decide to ask the next Council to move the official centre of the Union to Paris.

The Engström fund was discussed. It should be invested, but remain identifiable. The interests should be used for an Engström lecture every three years.

The auditor's Financial Statements of IUPAB for the year ended 31 December 2002 were accepted by the Executive Committee and signed by A.C.T. North on 23rd February 2003. The Executive Committee discharges A.C.T. North from his duties. It thanks Dr. North for his excellent work. It was decided that from the date of the registration of the IUPAB in Paris the responsibility for financial transactions should go from A.C.T. North to F.G. Parak. In order to have a smooth transition, the authority to perform financial transactions on the Union's account was extended to A.C.T. North till the end of 2003.

The number of grant requests has decreased continuously, as well as the requests for travel fellowships. The adhering bodies are encouraged to organise biophysical workshops and to ask for IUPAB grants.

Another subject was a possible establishment of an electronic IUPAB journal. In favour of such a journal are an easy integration of coloured pictures, the rapid publication after finishing the referee procedure, the immediate availability of references on the computer and an easy access also by the less developed countries. On the negative aspects is the competition with journals like the European Biophysical Journal, the Biophysical Journal and the costs for IUPAB. A new journal makes only sense if it has a strong impact which means it has to have a broad diffusion. Coloured pictures could be included. Authors of less developed countries could ask for a reduction of the price. The access of the journal would be free for every one.

The success of the journal would strongly depend on the editor in chief. There were several suggestions for candidates which should be contacted.

Meeting of the Executive Committee in Paris, April 2004

The proposal for changes in the statutes made by J. Garnier together with A.C.T. North and F.G. Parak was discussed. Several wordings were changed. In addition "Rules" were formulated to facilitate the execution of the statutes.

With respect to a Grant application for an International Workshop on Biomedical MR (2005) it was stated that in general, IUPAB is not supporting workshops in the Congress year. However, since this special workshop was in the centre of interest of two task forces a grant of 5000.- USD was awarded.

The Secretary General pointed out that IUPAB can raise its influence by being more active in the nomination of laureates. He asked for nominations for the King Faisal Prize.

49th Council Meeting in Paris, April 2004

The problem of moving official centre of the Union to Paris was brought into focus once more. The Council confirmed their decisions (i) that the Union should be registered in Paris according to French law (the Loi du 1er juillet 1901) as "Union Internationale de Biophysique Pure et Appliquée", having its legal seat at 51 Boulevard de Montmorency, 75016 Paris, and (ii) that the funds of the Union should be held in Paris. Acting as the Trustees of the Charity registered as no. 1058245 with the U.K. Charity Commission, the Council agreed that the Charity be wound up with immediate effect and that the Charity's funds be transferred to "Union Internationale de Biophysique Pure et Appliquée", which has identical aims and objectives to those of the Charity.

The Council accepted the proposal of the Executive Committee for a revision of the Statutes and the proposed Rules of Procedure. Some wordings were changed. The proposal had to be communicated to all adhering bodies 4 months before the General Assembly.

Immediately before the General Assembly an Extraordinary General Assembly should be called in order to decide on the revision of the Statutes and the proposed Rules of Procedure.

The status of the Montpellier Congress was reviewed. The conference fee was fixed to 350,- Euro and 150,- Euro for participants and students, respectively.

The following Satellite Meetings were announced:
Environmental Biophysics, Cairo, September 4-5 2005 proposal of M. I. El Gohary
Membrane dynamics, Milon, Toulouse
Neutrons in Biology, Thimmis, Grenoble
Biomoleculare Simulations, Samson, Oxford
Croatian Summer School of Biophysics, Zagreb

The main goal of the Council was the discussion of the scientific program of the Congress. The French hosts presented a list of possible speakers for all symposia. This list was complemented by proposals of the Council members and the representatives of EBSA.

A letter of Yale E. Goldman, President of the Biophysical Society of United States was discussed in which it is proposed that the Biophysical Society of the United States becomes

an Adhering Body of IUPAB. The Statutes of IUPAB allow in principle that the Biophysical Society of the United States becomes an Adhering Body in addition to the Academy of Sciences of the United States. Both organisations represent different communities; the Biophysical Society of United States has many members (as foreign members) that are not citizens of the USA.

Jean Garnier reported on the ICSU meeting in February 2004 in Paris. Twenty seven Unions were represented by their President or General Secretary for an important survey of ICSU policy and future prospects. Several topics were covered: Science as a challenge for UNESCO and ICSU, ICSU and sustainable development, ICSU and developing countries, relationships between ICSU and the Unions, ICSU statements on basic science and basic research and more specialized subjects such as science for health and well-being, International Polar year, etc.. Thomas Rosswall has considered new issues for ICSU: nanotechnologies, proteomics, health and environment, natural and man-made hazards. Priority will be given to environment and sustainable development, data information and capacity building concentrating ICSU actions on training of scientists and sponsorship of regional meeting. Rosswall stressed the necessity to explain science to politicians and the public.

The Quarterly Reviews of Biophysics transferred 260,45 British Pounds to IUPAB. Current editors (Astrid Gräslund, David Neuhaus and Peter Wolynes) have to be replaced. The Council endorses Andrew Leslie (MRC Laboratory of Molecular Biology) as new editor. For further replacements the Council suggested Wilma Olson, Department of Chemistry, Wright-Rieman Laboratories, Rutgers University, and Kazuhiko Kinosita , Okazaki Inst. for Integrative Bioscience.

J. Garnier reviewed the history of the discussion on an IUPAB e-journal. The crucial problem was to find a Chief Editor, who would be prominent enough to guaranty a high scientific level from the very beginning. IUPAB invited some highly qualified personalities, but none accepted. As result the proposal for an IUPAB e-journal was withdrawn.

C. dos Remedios described a successful initiative commenced by the US Biophysical Society in which the BS contributed up to $1000 for travel assistance and the host laboratory covered the local costs (living expenses, and laboratory expenditure).

IUPAB acknowledged the support of the Council Meeting and the Scientific Meeting by UNESCO.

Meeting of the Executive Committee Long Beach, February, 2005
The Minutes can be found in this issue of IUPAB NEWS

Meeting of the Executive Committee with the Representatives of the Biophysical Society Long Beach, February, 2005
The main topic was the preparation of the 16th Congress in Long Beach. The Minutes can be found in this issue of IUPAB NEWS

Workshops in 2002 – 2005

1.) Postgraduate course "Spectroscopic and physiological advances in Neurobiology" Bahia Blanca, Argentina April/June 2002. Organizer: Dr. F. J. Barrantes. The IUPAB-

supported course was in fact already a follow-up of two previous, highly successful courses of a similar nature (2.500,-- USD from IUPAB) This postgraduate course was held in Bahia Blanca from April 8-June 30. It was the third edition of this course, normally addressed to a small audience of postgraduate students and young investigators from Argentina and other South American countries.

2.) Education and Capacity Building in Biophysics; Needs of the Asian and African Region. Roorkee (India), February 24-25, 2003; Organizers: J. Raul Grigera and Girjesh Govil
IUPAB support: USD 8.000,--

3.) Protons and Membrane Reactions. Ventura (USA); February 23-27, 2003; Organizer: Colin A. Wraight
IUPAB support: USD 2.000,--

4.) Organization, Chance and Chaos in Biology, Physics (and in daily life).
Prague, March 2003, Organizer: Karel Zimmermann
Spiritual support of IUPAB

5.) Arab Conference on Biophysics. Cairo (Egypt); August 23-25, 2003; Organizer: M.I.El Gohary.
IUPAB support: USD 3.000,--

6.) International Summer School on Biophysics: Supermolecular Structure and Function, Rovinj (Croatia); September 14-26, 2003, Organizer: Greta Pifat-Mrzjak
IUPAB support: USD 8.000,--

7.) Non-invasive Biophysical Methods in Biology and Medicine. Baile Herculane (Romania); October 7-12, 2003; Organizer: Eugenia Kovacs.
IUPAB support: USD 7.500,--

8.) NMR Winter School for Cutting Edge at the Frontier of Life Science
Osaka, Japan, January 19-31, 2004.
Organizer: Professor Hideo Akutsu, Institute for Protein Research (IPR), Osaka University, 3-2 Yamadaoka, Suita 565-0871, Japan. IUPAB support: USD 10.000,--

9.) Biophysical Spectroscopy
Rio de Janeiro, Brazil, March 8-12, 2004.
Organizer: Professor Ian C. P. Smith, Institute for Biodiagnostics, National Research Council, Winnipeg, Canada R3B 1Y6, IUPAB support: USD 12.000,--

10.) "ORDRE, HASARD, CHAOS" in Biology, in Physics (and in the everyday life)
Prague, Czech Republic, March,15 – April 3, 2004.
Organizer: Dr Karel Zimmermann, Unité MIG, bât. 233, INRA, 78350 Jouy-en-Josas, IUPAB support: USD 1000,--.

11.) Electrophysiological Concepts and Techniques for Studying Cells. Ribeirão Preto (Brazil); April 4-18, 2004. Organizer: Wamberto Antonio Varanda
IUPAB support: USD 5.000,--

12.) Use of Optical Spectroscopic Techniques in Biomedical Research. Coffs Harbor (Australia); y September 2004. Organizer: Pierre Moens.
IUPAB support: USD 3.500,--

13.) International Workshop on Biomedical MR. Organizer: Prof. N. R. Jagannathan, Head of Department of NMR, All India Institute of Medical Sciences, New Delhi – 110029 India. IUPAB support: USD 5000,--.

14.) Round Table on Postgraduate Education in Biophysics with participants from FSU countries (Armenia, Russia, Ukraine, Georgia) and Asian and African countries, such as Turkey, Kuwait, Egypt, India, Nepal, Cameroon, Ethiopia, Nigeria. March 2005, Yerevan. Organizer: Prof. Sinerik N. Ayrapetyan, President of the UNESCO Chair-Life Sciences Internationa Postgraduate Educational Center, >31 Acharian St., Yerevan, 375040, Armenia. IUPAB supported the participation of Prof. R. Grigera.

A serious problem comes from the fact that it is very difficult for the Secretary General to get the report on sponsored meetings. Some organizers do not answer even if they have been asked several times.

Quarterly Reviews of Biophysics

The Coordinating Editor Steve Goldstein told us that the editors Dr David Neuhaus, Astrid Graslund and Peter Wolynes have retired and were replaced by Andrew Leslie and Bengt Norden. Suggestions from the IUPAB Council were not considered. As planned, there has been one volume of four issues each year, usually containing two or three articles. Articles in QRB continue to attract a high level of citations and the Editors are to be congratulated on the continuing quality of the journal.

ICSU (International Council for Science)

Past-President Israel Pecht was nominated as a member of ICSU. The next 28th ICSU General Assembly will be held in Shanghai and Suzhou, China on 16-22 October 2005.

Conclusion and Future Plans:

The programme of IUPAB meetings continuous to be highly successful in achieving the aims of the Union. The meetings have taken place in all continents of the world; they have covered a wide range of topics in biophysics and have varied in style, including specialised symposia and workshops and much broader events aimed especially at students; they have been conspicuously successful in attracting a high level of participation by young scientists and by scientists from the less highly developed parts of the world, who had the opportunity of becoming acquainted with each other and with international leaders in their fields. Unfortunately, some plans for Capacity Building and Education could not be realized because of missing grants from ICSU. It is of great

importance to write new proposals which have good chances to be accepted by ICSU. Here, strong efforts of the representatives of the Adhering Bodies of IUPAB are required.

It is expected that the Council of IUPAB will continue to support several scientific meetings and/or workshops each year according to criteria that include (i) the extent to which the meeting is to be of an international nature (ii) the extent to which participants will include young scientists and those from developing countries (iii) the aim to ensure a good geographical coverage of IUPAB-supported meetings (iv) an appropriate coverage of different aspects of biophysics. The Adhering Bodies are encouraged to organize workshops and to apply for grants.

FINANCIAL REPORT FOR 2002-2005

The most recent increase of 20% in each level of subscription had occurred at the General Assembly in 1996. It was clear from the views expressed by members that a further increase in the near future would not be acceptable. This is still valid. However, the Union's finances are still under severe pressure from the combination of increasing costs and missing grant income from ICSU. The Council continued to give careful consideration to the overall finances of the Union and the ways in which its activities could be made optimally cost-effective. Up to now it was not possible to find new sources for funding. The idea to gain money from an own journal was given up for several reasons.

Income and expenditure fluctuated over the 3-year cycle. Subscription income increased from 2002 to 2004 with several countries making up for previous arrears. The very unpleasant development of losing the grants from ICSU was already mentioned. While IUPAB got still a grant of 54.600,- USD in 2002 our proposals in 2003 and 2004 were rejected. 2005 we did not apply. The overall financial outlook cannot be regarded too optimistically as in the past. The Council is well aware that a number of our members are finding it increasingly difficult to maintain the current level of dues. In spite of some discussions some Adhering Bodies went into higher categories and there were no reductions. The Annual Accounts of IUPAB for the years 2002, 2003 and 2004 are reproduced in summary form below.

International Union for Pure and Applied Biophysics

Financial Report and Accounts for 2004

1.)	**Investments**	**2004[USD]**	**2003[USD]**	**2002[USD]**
	US Treasurey 05,875%Nov15 2005	68.782,00	72.087,00	74.307,00
	European Investment Bank 5,250% Apr15 2004	,00	101.746,00	86.590,00
	Fed. Home&Mtg Corp, var.int. (Arne Engström) Nov23,2011	28.715,00		
	Merril L. fix.dep.2,05%, Jun.10, 2005	23.907,00		
	Cred.Lyon.OAT gov.bonds 3,5% Apr.25 2015 (ordered)			
	Sub-Total	**121.404,00**	**173.833,00**	**160.897,00**
2.)	**Bank and Deposit Balances**			
	Merril Lynch, deposit and accrued interests	2.634,00	42.708,00	30.739,00
	National Westminster Bank (USD accounts)	0.00	0,00	53.007,00
	National Westminster Bank (Sterling accounts)	0,00	8.143,95	4.251,00
	Crédit Lyonnais (USD accounts)	86.806,17	62.827,49	0,00
	Crédit Lyonnais (Euro accounts)	128.355,13	10.190,62	0,00
	cash	100,00	0,00	0,00
	Sub Total	**217.895,30**	**123.970,06**	**87.997,00**
Total investments and assets:		**339.299,30**	**297.803,06**	**248.894,00**

Income and Expenditure Account:			
1. Income:	**2004[USD]**	**2003[USD]**	**2002[USD]**
Grant from ICSU	0,00	0,00	54.600,00
Grant from UNESCO	5.000,00	,00	4.989,00
Subscriptions from adhering Bodies	81.931,33	74.942,43	66.197,00
Bank interests and investment income	16.733,39	11.969,00	10.288,00
currency exchange	,00	163,30	767,00
Share of Buenos Aires Congress	0,00	0,00	12.099,00
refund of unspent balance (India)	1.027,98	,00	0,00
Quarterly Review	469,87	,00	0,00
Total income	**105.162,24**	**87.074,73**	**148.940,00**
2. Expenditure			
Scientific activities			
Sponsorship of scientific meetings	21.529	39.262,86	5.665,00
Task forces			47.220,00
Buenos Aires Congress speaker expenses	0,00	0,00	47.629,00
Buenos Aires Congress travel expenses	0,00	0,00	45.755,00
ICSU Rio de Janeiro,Ponce Hornos		1.047,54	
Sub Total	**21.529**	**40.310,40**	
Routine meetings			
Council meeting, Buenos Aires (London)	0,00	0,00	18.894,00
Council meeting, Paris 04	32.667	0,00	
Executive Committee, Munich	0,00	6.529,86	0,00
Secretary General meeting Paris	0,00	811,62	0,00

Sub Total	**32.667,11**	**7.341,48**	**19.667,00**
Other activities			
Dues to ICSU	**3.583,00**	**3.583,00**	**3.433,00**
Administrative expenses			
Miscellaneous (office)	1.148	515,64	1.726,00
Audit fees		1.462,47	1.140,00
Bank charges	1.434	2.732,74	40,00
Secretary General expenses		284,39	388,00
decrease of market value of investments	3.305,00		
Sub Total	**5.887,00**	**4.995,00**	**3.294,00**
Total expenditure	**63.666,00**	**56.230,12**	**156.318,00**
Total income	**105.162,24**	**87.074,73**	**148.940,00**
Total income -total expenditure	**41.496,24**	**30.844,61**	***7.378,00***
Total investments and assets	**339.299,30**	**297.803,06**	**248.894,00**
Increase	**41.496,24**	**48.909,06**	

Election Procedure and Nominations Received

The election procedure is described in the Annex A “Rules of Procedure”. The Curriculum Vitae of the candidates is given in Annex C. The following candidates can be elected (Names alphabetically following the list of Adhering Bodies):

Name	Given Name	Adhering Body	Candidate as:
dos Remedios	Cris	Australia	President
Smith	Ian	Canada	President
Brasseur	Robert	Belgian Biophys.Soc.	Vicepresident
Roberts	G. C. K.	British Biophys. Soc	Vicepresident
El Gohary	M. I.	Egyptian Academy	Vicepresident
Nagayama	Kuniaki	Japan Scient. Counc.	Vicepresident
Olson	Wilma K.	US Nat.Comm.	Vicepresident
Ponce-Hornos	Jorge	Argentine Soc. Bioph.	Council Member
Trchounian	Armen	Armenian Biophys	Council Member
Laggner	Peter	Austrian Acad. Scien.	Council Member
Brasseur	Robert	Belgian Biophys.Soc.	Council Member
Roberts	G. C. K.	British Biophys. Soc.	Council Member
Kovacs	Eugenia	Canada	Council Member
Wang	Andrew H.-J	China (Taipei)	Council Member
Rao	Zi-He	Chinese Acad. Scienc.	Council Member
Pifat-Mrzljak	Greta	Croatian Biophys. S.	Council Member
Singh	T. P.	Indian Nat. Academ.	Council Member
Sagi	Irit	Israel Biophys.Soc.	Council Member
Conti	Franco	Italy CNR	Council Member
Namba	Keiichi	Japan Scient. Counc.	Council Member
van Grondelle	Rienk	Netherland Royal Ac.	Council Member
Bartoz	Gezegorz	Polish Biophys. soc.	Council Member
Prieto	Manuel	Portuguese Biop.Soc.	Council Member
Rubin	Andrew B.	Russian Acad. Scien.	Council Member
Andius	Pavle R.	Serbia & Montenegro	Council Member
Carrascosa	Jose L.	Spanish IUPAB Com.	Council Member
Brzezinski	Peter	Swedish Royal Acad.	Council Member
Harvey	Srephen C.	US Nat. Comm.	Council Member

Delegates at the General Assembly:

Adhering Body	Name	Given Name	Category
Argentina	Ponce-Hornos	Jorge	3
Armenia	Trchounian	Armen	Observer
Australia	dos Remedios	Cris	3
Austria	Laggner	Peter	3
Azerbaidjan			Observer

Adhering Body	Name	Given Name	Category
Belarus			Observer
Belgium			3
Brazil	Bisch	Paulo Mascarello	3
Bulgaria			Observer
Canada			2
Chile			Observer
China (Beijing)	Shen	Jun-Xian	2
	Rao	Zhi-He	
China (Taipei)	Chun-hung	Lin	2
	Po-huang	Liang	
Colombia			Observer
Croatia			3
Czech Republic	Vetterl	Vladimir	3
Denmark			3
Egypt			3
Finland	Puustinen	Anne	3
France	Croquette	Vincent	1
	Kochoyan	Michel	
	Moras	Dino	
Germany	Rüterjans	Heinz	1
	Nienhaus	Ulrich G.	
	Grubmüller	Helmut	
Greece			Observer
Hong Kong	Chang	Donald D.	Observer
Hungary			3
India			2
Irac	suspended		3
Israel	Haas	Elisha	3
Italy	Brunori	Maurizio	2
Japan	Nagayama	Kuniaki	1
	Namba	Keiichi	
	Sokabe	Masahiro	
Korean Republic			3
Mexico			3
Netherlands	van Grondelle	Rienk	2
New Zealand	Parry	David A. D.	3
Norway			3
Poland	Bartosz	Grzegorz	3
Portugal	Soares	Claudio M.	3
Romania	Kovacs	Eugenia	3
Russia	Rubin	Andrew B.	1
	Shuvalov	Vladimir A.	
	Fresenko	Evegenii E.	
Saudi Arabia			3
Serbia & Monten.	Radotic	Ksenija	3
Slovak Republic			3
Slovenia	Strancar	Janez	3
Spain	Carrascosa	Jose L.	2

Adhering Body	Name	Given Name	Category
	Alonso	Alica	
Sweden	Nilson	Lennard	2
	Brzezinski	Peter	
Switzerland			2
Turkey			Observer
Ukraine			Observer
United Kingdom	Watts	Antony	1
	Seddon	John	
	Ferenci	M.	
United States	Olson	Wilma	1
	Toro	Ligia	
Uruguay			Observer
Venezuela			Observer
Vietnam	suspended		Observer

PRESIDENTS OF IOPAB AND IUPAB

1961 - 1964	Arne Engström	Sweden
1964 - 1969	Ahron Katchalsky (Kaczir)	Israel
1969 - 1972	Feodor Lynen	Germany
1972 - 1975	John C Kendrew	U K
1975 - 1978	Britton Chance	U S A
1978 - 1981	Setsuro Ebashi	Japan
1981 - 1984	Richard D Keynes	U K
1984 - 1987	Bernard Pullman	France
1987 - 1990	Lee D Peachey	U S A
1990 - 1993	Maurizio Brunori	Italy
1993 - 1996	Herman J C Berendsen	The Netherlands
1996 - 1999	David A D Parry	New Zealand
1999 - 2002	Israel Pecht	Israel
2002 – 2005	Jean Garnier	France

SECRETARIES GENERAL OF IOPAB AND IUPAB

1961 - 1972	Arthur K Solomon	U S A
1972 - 1978	Richard D Keynes	U K
1978 - 1984	Kurt Wüthrich	Switzerland
1984 - 1993	Joseph Tigyi	Hungary
1993 - 2002	Anthony C T North	U K
2002 – 2005	Fritz G Parak	Germany

LOCATIONS OF INTERNATIONAL BIOPHYSICS CONGRESSES

1961	Stockholm, Sweden
1966	Vienna, Austria
1969	Cambridge, Mass., U S A
1972	Moscow, U S S R
1975	Copenhagen, Denmark
1978	Kyoto, Japan
1981	Mexico City, Mexico
1984	Bristol, U K
1987	Jerusalem, Israel
1990	Vancouver, Canada
1993	Budapest, Hungary
1996	Amsterdam, The Netherlands
1999	New Delhi, India
2002	Buenos Aires, Argentina
2005	Montpellier, France
2008	Long Beach, USA

Reports on activities from Task Forces

An important activity of Prof. Girjesh Govil

Dear Colleagues,

You may recall that during the second meeting of the Task Force on NMR, a very strong view was expressed that the IUPAB Task Force should do something for the African countries. I happened to meet recently, Prof. Gabriel Ogunmola, who is the President of the Nigerian Academy of Sciences. During our discussions, he expressed a very strong desire to hold a workshop in Lagos, during the middle of January 2006, for the benefit of African Faculty members and young scientists, on NMR in Bilogical Systems. By its very nature of the background of the participants, this workshop has to be at a much different level compared to the IUPAB workshops held ealier in Osaka, Rio and New Delhi.

I and Prof. Ogunmola will be writing a proposal for IUPAB for a modest grant from IUPAB, which may suceed if those who are on the Council support such a proposal. However, at this stage, I thought of asking you if you would like to be on the Faculty of the workshop, which will initiate NMR activities in African Continent, and can fund your visit from your resources. This will help us to use the IUPAB money, if granted, to help the African scientists. I hope you will be able to respond to my invitation on a positive note.

Best wishes, Girjesh

Reports on sponsored meetings

Minutes of the Second Meeting of the "Task Force on NMR in Biological systems"

The second meeting of the "Task Force on NMR in Biological Systems" was held in Hyderabad, India on Thursday, January 20, 2005 at 1:20 p.m. Girjesh Govil, K.V.R. Chary, Masatsune Kainosho, John L. Markely, G.C.K. Roberts, Francis Separovic, and Heinz Rüterjans were present. Ian C.P. Smith, Paul Callaghan and Shirley Schreier could not attend. Other special attendees were: Chris Dobson (UK), Tai-Huang Huang (Taiwan), B.D. Nageshwara Rao (USA), A. Rama Moorthy (USA), Kazu Akasaka (Japan), R.V. Hosur (India), Ichio Shimada (Japan), Jane Dyson (USA). The meeting was held during the XXI International Conference on Magnetic Resonance in Biological Systems (XXI ICMRBS).

Background:
Several genome projects are approaching to completion and attention is turning to proteomes and the function of the proteins encoded by the genes. In this direction NMR is gaining importance to unravel 3D structures of various biomolecules. However, it should be emphasized that the structure determination consists of a series of complex and difficult steps, each one of which requires specialized expertise and the availability of the appropriate infrastructure. The work is mostly carried out by a Ph.D. level scientist using sophisticated experimental methodologies and high-field NMR spectrometers, higher-end graphics workstations and highly specialized software. Besides, MRI and MRS instruments have become integral part of clinical centers, and there is an acute need for experts in the field of NMR. Thus, one of our major tasks in the coming years is in education and capacity building

in the field of Biological NMR. With this in the backdrop, Prof. Govil, as one of the organizers of the XXI ICMRBS appropriately thought to create a special platform to discuss this important issue in an open forum. This paved the way to organize a special session on, "Education and Capacity building in NMR", with distinguished speakers such as Girjesh Govil (India), John L. Markely (USA), Heinz Ruterjans (Germany), Ian C.P.Smith (Canada) and Hideo Akutsu (Japan). This session which was chaired by Kazu Akasaka and Francis Separovic attracted large attention and lead to very useful discussions. An invitation was extended to all interested participants of XXI ICMRBS to join the meeting of the "Task Force on NMR in Biological Systems".

Recommendations of the Task Force:

Prof. Govil thanked the members of the Task Force and special attendees for finding time to attend the meeting, in spite of the tight schedule of the scientific program. He briefly highlighted the agenda. The suggestions, which emerged, are summarized below:

1. A need to initiate efforts for International Human Resource generation in the field.
2. Need to organize short-term schools (2-3 weeks) in countries with proper infrastructure for the benefit of young scientists from less developed countries.
3. Dissemination of information by writing textbooks and creating an NMR Bulleting Board on world-wide-web.
4. Regular NMR workshops for scientists in the Asia, Pacific, Latin America, East Europe and African region.
5. Need for good teachers in NMR was emphasized. It was felt that, a parallel workshop for the benefit of pre-selected teachers should be organized whenever and wherever any international conference or symposia takes place. Such endeavor would help in utilizing the expertise of eminent scientists participating in the conference or symposium, as a faculty in the workshop, without any extra expenditure for their travel and local expenses. Under-graduate college teachers should be the target participants and beneficiaries. It was also felt that such workshops may be recorded on DVDs and then could be distributed freely to various science colleges and research institutions. Simultaneously, lectures can be put on a web site for free access to interested individual.
6. Under long term training programs, it was felt that one should identify and encourage student scientists from the developed countries to carryout their Ph.D. program in well-established research institutions. Special favors may need to be given to make it a successful venture. It was felt that UNESCO or any other funding agency might be approached for any financial assistance needed by the beneficiary.
7. There is a need for inter-NMR center interaction at international level for the successful implementation of abovementioned programs. In this respect, it was mentioned that Japan Society for the Promotion of Science (JSPS) could support workshops either in India or Japan for a duration of 2 weeks. Prof. Akutsu promised to look into such a possibility.
8. It was also felt that participation of European Union and Department of Science and Technology (DST), India, should be explored in the above-mentioned ventures.
9. IUPAB may be approached on a regular basis to provide seed money and sponsorship to the programs of the Task Force.

K.V.R.Chary

Task Force on Bioinformatics

Prof. Jean Garnier

The essential activity of the Task Force has been to successfully obtain the recognition by ICSU of the IUBG recommendations. I quote the report of the 27th General Assembly of ICSU in Rio de Janeiro on September 2002 (see also ICSU web site, http://www.icsu.org/)
"73 Annex 11
……
'Principles for Dissemination of and Access to Scientific Data'.
Scientific Data Issues in the Biological Sciences.

The Inter-Union Bioinformatics Group (IUBG) pointed out in their report that new discoveries in biology, especially in the genomics area, clearly demonstrate the need for a primary data repository in public archival database, even for commercial data, in order to safeguard them for the future.
This requires long-term commitments. Additional work is needed on standardization issues with respect to vocabulary, hierarchy of terms, gene ontology, format and data exchange."
This ICSU statement traces a future role for IUBG: a follow-up of its recommendations, however the impact of IUPAB or in association with other Unions as IUBG is limited in regards to standardization issues. This raises the question of the future of the Task Force. A close collaboration in this matter with CODATA is required.

Minutes

Meeting of the Executive Committee of IUPAB

Long Beach, February 15, 2005

05.1.1 **Agenda:** An agenda was proposed at the beginning of the meeting and adopted.

05.1.2 **Presence:** J. Garnier, President, I. C. P. Smith and C. G. dos Remedios, Vice – Presidents, I. Pecht, Past President, F. G. Parak, Secretary General

05.1.3 **Report of the Secretary General, Finances:** At April 15, 2003 an investment at Merrill Lynch became due (European Investment Bank 5,875% value at the end of 2003 101.746,- USD) There was no announcement of Merrill Lynch and the money was for some time at the current Euro account at Merrill Lynch. The total sum was 97.402,- Euro. To find an appropriate way for a reinvestment there was a long discussion in the Exec. Comm. and especially between the President and the Secretary General. Offers and advices were obtained by Merrill Lynch and Credit Lyonnais. As result the following arrangements were performed: 29.000,- USD were bought from the cash money and invested at Merrill Lynch as Federal Home &Mtg Corp with varying interests due time Nov. 23, 2011. This is just the amount of the Arne Engström fond. Before, this amount was part of the current account. The remaining Euro cash at Merrill Lynch was transferred to the Euro account at Credit Lyonnais. 65.000,-Euro were invested at Credit Lyonnais as OAT government bonds with 3,5% interest. They represent long term investment, till

25/04/2015, with a guarantee of the capital but with low interest of course.
24.000,- USD were kept at Merrill Lynch as fixed deposit (interests 2,05%) which becomes due at June 10, 2005. It can be used for the Montpellier Congress.
The Secretary General wants to inform the Exec. Comm. that the year 2003 and 2004 have not been controlled by an auditor. In France such a control is not obligatory by law. However, the Secretary General wishes to have an auditor control. The problem is the price which is between 3.500,- and 4.500,- Euro (in UK it was about 1000,- USD). At present we try to install special software which has to be used in order to reduce the price. Moreover, Jean Garnier is looking for a cheaper alternative.

05.1.4 **ICSU General Assembly Shanghai:** It takes place on October 17 – 21 in this year. Israel Pecht will be nominated as ICSU member. He will also be the representative of IUPAB at the General Assembly.
The Secretary General waits for comments to the Strategy Plan of ICSU for 2006-2012. Deadline is March 15 receipt at ICSU.
There will be no participation at the ICSU Regional Meeting for Asia and the Pacific held in Kuala Lumpur on 25-27 April 2005.
Raul Grigera will take part in a meeting organised by Prof. Arapetyan on Biophysics postgraduate program in Asia-Africa. The meeting was scheduled for August 2004 and postponed to March 2005.

05.1.5 Dr. Harvey, President of the Biophysical Society has formally requested that the Biophysical Society becomes an Adhering Body of IUPAB. The matter will be decided at the General Assembly in Montpellier.

05.1.6 The Yugoslavian Biophysical Society asked to become a Category C member instead of an observer. The final decision will be at the General Assembly in Montpellier.

05.1.7 IUPAB positions for the discussion with the representatives of the Biophysical Society concerning the Congress 2008 were discussed. It is important to have a good representation in the Program Committee. The problem of the financing of the Council Members has to be discussed. Other topics are the reimbursement of invited speakers and the travel grants. The congress fee and the logging of students have to be discussed.

05.1.8 In some cases IUPAB will give travel fellowships also to senior scientists from economically deprived countries.

Minutes

Meeting of the Executive Committee of IUPAB with the Representatives of the Biophysical Society

Long Beach, February 16, 2005

05.2.1 **Agenda** adopted as proposed by the Biophysical Society.

05.2.2 **Presence: IUPAB:** J. Garnier, President, I. C. P. Smith and C. G. dos Remedios, Vice – Presidents, I. Pecht, Past President, F. G. Parak, Secretary General.
Biophysical Society: S. C. Harvey, President 2004-2005, S. M. Block, President 2005-2006, Y. E. Goldman, Past President, R. Kampman, Executive Director, B. R. Lentz, President 2006-2007, G. Swindle, Director FASE/OSMC, L. Toro, USNC, W. D. White, Director Board on Int. Scientific. Organisations.

05.2.3 **Introduction to the Annual Congress of the Biophysical Society:** There is only one plenary lecture which is the "National Lecture" proposed by the President of the Biophysical Society. The scientific presentations occur at symposia (up to 21, two parallel, 90 invited speakers), platforms (~ 70, 5 to 7 parallel), workshops (5) and poster presentations 750 posters per day). Invited speakers at symposia get some support from the Conference.

05.2.4 **Jean Garnier** introduces the IUPAB and explains the organisation of the IUPAB Congresses which take place all 3 years. He emphasised that IUPAB represents also Adhering Bodies from less developed countries which have to be represented by invited speakers if it is justifiable from the scientific point of view.

05.2.5 **Amount of Financial Responsibility:** The Biophysical Society will assume responsibility for financial risk. There will be no revenue sharing. The Biophysical Society will pay 25.000,- USD to the IUPAB.

05.2.6 **Programming issues:** A Program Committee will be formed by 5 members of the BS and 3 of IUPAB with chair from the BS to coordinate efforts. The committee should be formed 2005. The IUPAB will ask the Adhering Bodies to propose speakers. The Council of IUPAB will make a list of proposed speakers. The final decision is done by the Program Committee.

05.2.7 **Schedule and time line:** 2005: Nomination of the Program Committee, February 2006: Program Committee meeting at the BS annual meeting in Salt Lake City,
August 2006: Approval of first flyer/announcement listing symposia topics/chairs and tentative speakers, September 2006: Mailing of first flyer/announcement (16 month before meeting), February 2007: Program Committee meeting to finalize program at the BS annual meeting in Baltimore, March/April 2007:Mailing of Call for Abstracts (10 month before the meeting), October 1st 2007: Deadline for receipt of abstracts. February 2 – 6 2008: Conference in Long Beach, California. The operation of the Program Committee will be primarily by electronic communication: phone conferences and e-mail.

05.2.8 The contribution of IUPAB for invited speakers is 50.000,- USD

05.2.9 The **registration rate** is at present 350,-USD but will probable be increased in 2008. Members of IUPAB adhering bodies will be considered as BS member and will pay the same registration fees.

05.2.10 **Conditions for the Council Member of IUPAB:** In all Congresses in the past, the hosts covered the costs of the registration and the accommodation of the Council Members of IUPAB during the whole Congress. The Biophysical Society did not accept this condition since in their society Council Members do not get any support from the Congress. The costs should be paid from the 25.000,- USD mentioned in topic 05.2.5

05.2.11 The problem of **Student Housing** was discussed. There are many economic hotel rooms available. The price becomes reasonable if one takes into account that one has to pay the room, even if 4 persons are sharing it. The same is true for the hotels. It is important to communicate this fact.

05.2.12 IUPAB will contribute 50.000,-USD for **travel grants** for selected participants. The Biophysical Society will contribute roughly the same amount. For the selection both sides will have the same weight.

05.2.13 The problems with **Visa** to enter the USA was discussed. In recent comparable international congresses there were no real problems. The representative of the Board on International Scientific Organisations explained that the Academy is well aware of the problems. Till 2008 most of the difficulties should be solved.

05.2.14 The representatives of IUPAB had a guided tour through the Convention Centre which offers excellent facilities.

Calendar of IUPAB Meetings

15th International Biophysics Congress (IUPAB)
5th European Congress of Biophysics (EBSA)

Montpellier, France, 27th August – 1st September 2005

Sponsored joint by the International Union for Pure and Applied Biophysics and the European Biophysical Societies Association and UNESCO.

http://worldbiophysics2005.sfbiophys.org/

Satellite Meeting "Trends in High Pressure Protein Science", University of Montpellier, 1-3 September 2005.
This satellite meeting is focussed on all aspects of pressure effects on proteins, ranging from very basic science until medical and biotechnological applications. A particular attention is given to protein folding / unfolding. More details on: http://congres.igh.cnrs.fr/Pressure2005/

Satellite Meeting "Biomolecular Simulations", 2-3 September 2005, Bordeaux, France
For further information: http://www.iecb.u-bordeaux.fr/satellite2005/

Cairo Satellite Meeting of the 15th International Biophysics Congress, 4-5 September 2005, Cairo, Egypt
More details on: http://www.ebcsm2005.com. For further contact, e-mail: espab@hotmail.com or mohelgohary@yahoo.com

Satellite Meeting "Neutrons in Biology", 4-7 September 2005, Institut Laue-Langevin, Grenoble, France
Full details and web registration will be available very soon at http://www.ill.fr/neutbio2005

Annex A: Proposal "Rules of Procedure"

(I) Adhering Bodies and Observer Members

Each Adhering Body or Observer Member of IUPAB shall appoint a representative who shall (a) be responsible for communications with IUPAB and (b) shall provide an effective channel of communication with the members of their Scientific Community of biophysicists. The Secretary-General shall communicate the business of IUPAB to the representative.

The representative shall convey to the Secretary-General the name(s) of the Member's delegate(s) who have been appointed to attend General Assemblies of the Union.

The representative shall receive Agenda papers from the Secretary-General, shall submit items for inclusion on the Agenda of General Assemblies and shall prepare nominations for election to the posts of Officers and Members of Council. Nominations should be submitted by completion of nomination forms circulated in advance by the Secretary-General. Such nominations are not restricted to nationals of the nominating body and IUPAB members may support candidates put forward by other members. It should be noted that, although their candidature has to be put forward by IUPAB members, Officers and Members of Council serve in their personal capacities and not as representatives of the bodies that have proposed them.

(II) General Procedures at General Assemblies

Attendance at General Assemblies is open to all participants in the concurrent International Biophysics Congress, but only those appointed as delegates of Adhering or Observing Bodies are entitled to speak.

It is not a requirement that delegates to the General Assembly should be registered participants in the concurrent International Congress.

The President does not have a vote, but may exercise a casting vote if necessary to resolve a tied vote. The other Officers and ordinary Members of Council may vote only if they have been appointed as delegates of an Adhering Body.

(III) General Assemblies – Election Procedures

The Secretary-General shall be responsible for soliciting nominations from Adhering Bodies and Observer members of IUPAB, preparing them in a uniform style and circulating them to the designated representatives of the Union's members.

The following procedures apply to elections at General Assemblies:

(i). Either or both of the serving Vice-Presidents is eligible for nomination for election as **President,** who will be elected by a majority of the valid votes cast. A valid vote is one which carries a **X** against the name of one and only one of the candidates. In case of a tie, the acting President will cast the deciding vote.

(ii) The election of the two **Vice-Presidents** will proceed as follows:

(a) in the first ballot, delegates are instructed to place a **X** against one name only, papers with more than one **X** being treated as invalid. A candidate obtaining more than 50% of the total

number of valid votes will be declared elected. If no candidate secures 50% support, the number of candidates will be reduced to 3 by eliminating those who obtained least votes, and the procedure will be repeated. If again no candidate receives 50% of the valid votes, the candidate with the lowest number of votes will be dropped, and a third ballot taken with the remaining 2 candidates. In case of a tie, the acting President casts the deciding vote.

(b) When one Vice-President has been elected, the balloting procedure will be repeated, starting afresh with all the names unsuccessful in the first ballot, to elect the second Vice-President.

(n.b. The two Vice-Presidents will have equal rights and equal standing, independent of the order in which they have been elected.)

(iii) The election of the Council will proceed as follows:

(a) in the first ballot, delegates are instructed to place a **X** against 11 names, papers with a greater or smaller number of votes being treated as invalid. All those candidates up to 11 obtaining more than 50% of the number of votes cast will be declared elected.

(b) If fewer than 11 candidates secure 50% support, a second ballot will be taken to fill the remaining places, in which the 50% rule will not be applied. In the event of a tie for the last place, a further vote will be taken between the tied candidates.

Note: although Officers and Council Members serve in their personal capacities and not as representatives of their Adhering Bodies or Observer members, it is desirable for the Council to be as widely representative as possible; it would not normally be appropriate for the Council to include more than one member from the same Scientific Community and the President is empowered to invite a candidate to withdraw if this is a possible outcome of the elections.

(IV) The President

The President presides at General Assemblies, at meetings of the Council and the Executive Committee. If (s)he is unable to be present, the Honorary Vice-President (normally the immediate Past President) should preside.

The President shall instruct the Secretary-General to call meetings of the General Assembly, the Council and the Executive Committee and to set the Agenda thereof.

The President may consult (or request the Secretary-General to do so) the Members of Council, representatives of the Union's members, or other appropriate persons upon any matters within the competence of the Union.

The President shall report to the Council and to General Assemblies on actions (s)he has undertaken on behalf of the Union.

(V) Honorary Vice-President

In the event that the immediate Past President is not available to serve as Honorary Vice-President, the Council may co-opt a suitable person, such as a previous President or other Officer.

(VI) The Vice-Presidents

The Vice-Presidents may be assigned specific areas of responsibility on behalf of the Union. The two Vice-Presidents have equal rights and standing within the Union. At the end of their terms of office as Vice-President, one of them shall be elected as President and the other shall

automatically remain on the Council as an Ordinary Member for one further term before retiring from the Council.

(VII) The Secretary-General

The Secretary-General shall:

- Act as secretary at all General Assemblies and meetings of the Council and Executive Committee and prepare Agenda, keep Minutes and other records of the Union's activities
- Normally be responsible for the maintenance of communications between the Union and its members, its Task Forces, other Unions and the International Council for Science
- Prepare Annual Reports on the activities of the Union and its bodies
- Act as Treasurer, receiving subscriptions from members, making grants as agreed by the Council, preparing accounts, arranging for the accounts to be professionally audited, and preparing budgets
- Maintain the Union's website

(VIII) Periods of Membership of Council

Ordinary Members of Council, having completed two 3-year terms, are not eligible for further consecutive terms in that role, but are eligible for immediate election to the posts of Secretary-General or Vice-President. The retiring President normally serves for a further 3-year term as Honorary Vice-President, following which (s)he retires from the Council. Similarly, the Vice-President who is not elected to the Presidency automatically serves for one further 3-year period as an Ordinary Member before retiring from the Council. In each case, former Officers and other Council Members are eligible for further periods of membership after the elapse of one or more 3-year periods.

(IX) Quorums for Council and Executive Committee

The Council
The quorum for a Council Meeting shall be 7 members including at least 3 Officers.

The Executive Committee
At least 4 of the 5 Officers should support any actions taken by the Executive Committee on behalf of the Council. If fewer Officers support proposed actions for which an urgent decision is required, the views of the full Council membership should be obtained in writing in which case at least 50% of the Council members should be in support of the proposed actions for the proposals to be put into effect.

(X) Task Forces

Each Task Force must act in accordance with a Mission Statement approved by the Council.

The Task Force should comprise about 6 members active in the relevant field; if possible, at least one should be a Member of the Union's Council, so as to facilitate communication.

Task Force members and Adhering Bodies should be invited to propose members for an Advisory Committee; such a Committee would provide a wider forum for exchange of knowledge, enhance its efficiency and provide a greater involvement of the Adhering Bodies in the Union's activities.

(XI) Payment of Expenses

Officers and other Members of Council may be reimbursed travel and living expenses incurred in the course of the official business of the Union. The Secretary-General, as Treasurer, is responsible for authorising payments according to the circumstances of the duties. Whenever possible, members are encouraged to seek financial support from other bodies. Reimbursement of travel costs should be limited to Economy Class fares by the cheapest route and airline or railway that is reasonably practicable. The costs of meetings of Task Forces or other Committees of the Union should normally be met through specific requests to the Council for grants for the purpose.

Annex B: Revision of the IUPAB Statutes

IUPAB Statutes – proposed revision, Montpellier 2005 (n.b. 'Paragraphs' are now referred to as 'Articles')

Old version (1999 version)	Proposed new version	Notes
	I. **(I) Legal seat and Administrative Centre** II. (1) The International Union for Pure and Applied Biophysics is registered as a non-for-profit organization under French Law. ***The legal seat of the Union shall be 51 Boulevard de Montmorency, 75016 Paris, France*** an***d*** **t**he administrative centre of the Union shall be the Office of the **current** Secretary-General or such other place***(s)*** as the Council of the Union shall from time to time determine.	Partly new, partly moved from old Article 12
(I) Aims and function of the Union (1) The objects of the International Union for Pure and Applied Biophysics are the advancement of education in the Science of Biophysics. In furtherance of this aim the Council may exercise the following powers: (a) to organise international co-operation in Biophysics and to promote communication between the various branches of Biophysics and allied subjects; (b) to encourage within each adhering body co-operation between the societies that represent the interests of Biophysics; (c) to contribute to the advancement of Biophysics in all its aspects. (2) For these purposes it shall have power: (a) to set up task forces, commissions or other bodies for special purposes; (b) to organise international meetings and conferences; (c) to collaborate with other scientific organisations; (d) to act in all ways as a constituent union of ICSU, the International Council for Science,	**(II) Aims and function of the Union** (2) The objects of the International Union for Pure and Applied Biophysics are the advancement of the Science of Biophysics. In furtherance of this aim ***it*** may exercise the following powers: (a) to organise international co-operation in Biophysics and to promote communication between the various branches of Biophysics and allied subjects; (b) to encourage within each adhering body co-operation between the societies that represent the interests of Biophysics; (c) to contribute to the advancement of Biophysics in all its aspects. (3) For these purposes it shall have power: (a) to set up task forces, commissions or other bodies for special purposes; (b) to organise international meetings and conferences; (c) to collaborate with other scientific organisations; (d) to act in all ways as a constituent union of ICSU, the International Council for Science, in accordance with the statutes of that body; (e) to develop any lawful activity deemed helpful to the forwarding of its	Simplifications of wording

in accordance with the statutes of that body; (e) to develop any lawful activity deemed helpful to the forwarding of its declared objects. **(II) Membership** (3) The International Union shall consist of a group of adhering bodies representing Scientific Communities. In each Scientific Community the adhering body shall be a Research Council or similar institution, a scientific Society or a group of such Societies, or a body specially formed for the purpose of adhering to the Union. In each case a Committee with responsibility for international relations in Biophysics shall be formed, and adherence to the Union shall be ratified when the membership of this Committee has been reported to, and recognised by, the General Assembly of the Union. Scientific Communities that are not adhering bodies may be observing bodies of the Union, without voting rights. Applications for observer status will be acted on by the General Assembly. (4) The term Scientific Community shall be applicable to the Biophysicists of a country or of an otherwise defined geographical area that has an independent budget for scientific purposes. (5) The adhering and observing bodies shall be required to pay an annual subscription to the International Union (see Article IV.9). **(III) Committees for Biophysics** (6) Within their own Scientific Communities the Committees for Biophysics will be expected to co-ordinate the interests of the various branches of Biophysics. In the relations with IUPAB each Committee for Biophysics shall appoint	declared objects. **(III) Membership** (4) The International Union shall consist of a group of adhering bodies representing Scientific Communities. In each Scientific Community the adhering body shall be a Research Council or similar institution, a scientific Society or a group of such Societies, or a body specially formed for the purpose of adhering to the Union. In each case a Committee with responsibility for international relations in Biophysics shall be formed, and adherence to the Union shall be ratified when the membership of this Committee has been reported to, and recognised by, the General Assembly of the Union. Scientific Communities that are not adhering bodies ***because of the lack of financial resources*** may be observing bodies of the Union, without voting rights. Applications for observer status will be acted on by the General Assembly. (5) The term Scientific Community shall be applicable to the Biophysicists of a country or of an otherwise defined geographical area that has an independent budget for scientific purposes. (6) The adhering and observing bodies shall be required to pay an annual subscription to the International Union (see Article V.11). ***(7) Termination of membership for adhering bodies that (a) are in arrears with subscriptions or (b) have acted in a way that brings discredit on the Union shall be decided by the General Assembly by a two-third majority of those present.*** **(IV) Committees for Biophysics** (8) Within their own Scientific Communities the Committees for Biophysics will be expected to co-ordinate the interests of the various branches of Biophysics. In ***its*** relations with IUPAB each Committee for Biophysics shall appoint delegate(s) to represent its Scientific Community at the General Assembly of the Union, and shall select a leader of its delegation. Each delegate shall vote on behalf of his or her Scientific Community at the General Assembly	A new article

delegates to represent its Scientific Community at the General Assembly of the Union, and shall select a leader of its delegation. Each delegate shall vote on behalf of his or her Scientific Community at the General Assembly (see Article IV.10). **(IV) General Assembly** (7) The work of the Union shall be directed by the General Assembly of delegates, which shall normally meet once every three years. The General Assembly shall elect the Officers and members of Council; nominations for candidates for election shall be submitted to the Secretary General in writing at least four months before the meeting of the General Assembly. (8) The membership of the General Assembly of the Union shall consist of delegates appointed by the adhering bodies, the delegates of the Task Forces and Commissions (see paragraph 9 and Article VII), the officers, and the ordinary members of the Council. Only those members who have been appointed as delegates and are present in person may vote. Each member of the General Assembly may cast only a single vote. (9) There shall be three categories of membership for adhering bodies, the amount of the corresponding subscriptions to be fixed by the General Assembly. Depending upon the level of membership chosen by the adhering body, it shall have the right to send one, two, or three delegates to the General Assembly. In addition, each Task Force and Commission has the right to send one delegate to the General Assembly. The level of annual subscription for observing bodies shall be set by the General Assembly at a level below the lowest level for adhering bodies. Observing bodies may send one representative to the	**(V) General Assembly** (9) The work of the Union shall be directed by the General Assembly, which shall normally meet once every three years.[§] The membership of the General Assembly of the Union shall consist of ***the*** delegates appointed by the adhering bodies, the ***O***fficers, and the ordinary Members of the Council. ***In addition, each Task Force and Commission has the right to send one representative to the General Assembly.*** Only those Members who have been appointed as delegates ***of the adhering bodies*** and are present in person may vote. Each ***voting*** member of the General Assembly may cast only a single vote. (10) The General Assembly shall elect the Officers and Members of Council; nominations for candidates for election shall be submitted to the Secretary-General in writing at least four months before the meeting of the General Assembly. (11) There shall be three categories of membership for adhering bodies, ***A, B and C according to*** the amount of the corresponding subscriptions to be fixed by the General Assembly, ***category A having the highest and C the lowest amount of subscription.*** Depending upon the ***category*** of membership chosen by the adhering body, it shall have the right to send to the General Assembly ***three delegates for category A, two for category B and one for category C.*** The level of annual subscription for observing bodies shall be set by the General Assembly at a level below the lowest level for adhering bodies. Observing bodies may send one ***representative to*** the Assembly, who shall ~~***not***~~ have the right to participate in the discussions ***but not to*** vote. ***(12) The levels of annual subscription determined by the General Assembly shall be for the three-year period beginning 1st January following the General Assembly. The annual subscription must be paid in the Calendar year to which it applies. Any Adhering Body that is three or more years in arrears at the date of a General Assembly shall be deprived of the right to vote at the General Assembly*** ***(13) The quorum for a General Assembly shall be at least 50% of the Adhering Bodies that are represented in person by duly appointed***	Minor changes to wording These articles have been re-ordered so as to: a. clarify who is entitled to vote b. separate the voting procedure from the nominating procedure **It is proposed that the delegates of Task Forces and Commissions should no longer have the right to a vote.** The wording clarifies the relationship between the membership categories and the number of delegates with

Assembly, who shall not have the right to participate in the discussions or vote.	***delegates.***	votes.
	(14) At the General Assemblies, questions shall be decided by a simple majority of all delegates present except for the modification of Statutes (see ***Article XI, 31***).	
	(VI) Extraordinary General Assembly	Observing Bodies can now participate in the discussion
	(15) An Extraordinary General Assembly shall be summoned by the Secretary-General if unanimously requested by the Executive Committee,or 2/3 of the Council or in response to a written request to the President from at least half of the Union's Adhering Bodies. The time, place and Agenda shall be notified in writing to all Adhering Bodies and Observer Members at least 3 months before the proposed date. No matter shall be discussed at an Extraordinary General Assembly that has not been included in the pre-circulated Agenda. The voting procedure should be as in a General Assembly (section V)	Two new articles defining the present practice for annual subscription (12) and a quorum (13)
(10) At the General Assemblies, questions shall be decided by a simple majority of all delegates present except for the modification of Statutes (see paragraph 24).		
	(VII) The Council	
	(16) The executive body of the General Assembly shall be a Council, which shall be guided in all its decisions by the tradition of free international scientific co-operation. ***Members of Council serve in their personal capacities and not as representatives of Adhering Bodies.***	
	(17) The Council shall consist of the five Officers of the Union, who shall also be the Officers of the Council, and not more than 12 ordinary Members. ***They*** shall be elected, ***with the exception of the Honorary Vice-President and the former Vice-President (Article 22), by the General Assembly and normally from among its members.***	This is a new article to define the formal arrangements for summoning an Extraordinary General Assembly.
(V) Officers of the Union		
(11) The Officers of the Union shall be a President, two Vice-Presidents, and a Secretary General, elected by the General Assembly, together with an Honorary Vice-President. The President shall hold office for a period of about three years, i.e. from the end of one General Assembly to the end of the	(18) The ordinary Members of the Council shall serve for a term of three years and may not serve ***in that capacity*** for more than two consecutive terms. The Council may co-opt to any vacancies which occur (including the Officers) and any person so co-opted has the same tenure of office as the person replaced.	

succeeding General Assembly. Similarly, the Vice-Presidents may hold office for about three years, one of them normally then becoming President and the other continuing to serve as an ordinary member of the Council for one further term. The position of Honorary Vice-President shall normally be held for three years by the immediate past President. The Secretary General shall hold office for six years, but may be re-elected for further periods of three years to a maximum of twelve years. (12) The official centre of the Union shall be the Office of the Secretary General or such other place as the Council of the Union shall from time to time determine. It shall be the duty of the Secretary General to maintain relationship with all bodies adhering to the international Union and all other relevant organisations within the field of Biophysics. The Secretary General shall prepare budgets and agenda, and circulate them at least four months before meetings of the Council and General Assembly. **(VI) The Council** (13) The executive body of the General Assembly shall be a Council, which shall be guided in all its decisions by the tradition of free international scientific co-operation. The Officers of the Union, acting as a group, may conduct the business of the Council in the intervals between meetings of the Council, reporting subsequently to the Council. (14) The Council shall consist of the five Officers of the Union, who shall also be the Officers of the Council, and not more than 12 ordinary members (including the retiring Vice-President) who shall normally be elected from among the members of the General Assembly. The ordinary members of the Council shall serve for a term	(19) In the execution of the purposes of the Union, no member of the Council, shall be liable for any loss to the property of the Union ***or any of its Task Forces, Commissions or Committees*** arising (i) by reason of any improper investment made in good faith (provided that he/she shall have sought professional advice before making such investment) or (ii) through the negligence or fraud of any agent employed in good faith by him/her or by any other member of the Council (provided reasonable supervision shall have been exercised) even if the employment of such agent was strictly not necessary or (iii) by reason of any mistake or omission made in good faith by any member of the Council or (iv) by any other reason except wilful and individual fraud, wrongdoing or wrongful omission on the part of the member of the Council who is sought to be made liable. (20) No member of the Council shall acquire any interest in property belonging to the Union (otherwise than as a trustee for the Union) or receive remuneration or be interested (otherwise than as a member of the Council) in any contract entered into by the Council. (21) The meetings of the Council shall be held: (a) during the General Assembly; (b) normally once between each General Assembly, but exceptionally at other times upon the decision of the Council. Seven Members of the Council shall constitute a quorum at a Council meeting . **(VIII) Officers of the Union** (22) The Officers of the Union shall be a President, two Vice-Presidents, and a Secretary-General, together with an Honorary Vice-President. The President shall hold office for a period of three years. Similarly, the Vice-Presidents may hold office for three years, one of them normally then becoming President and the other ***former Vice-President*** continuing to serve ***on the Council for one further term only, as an ordinary member before retiring from the Council.***	The material in sections V and VI has been edited into a more logical order to form new sections VII, VIII and IX. The descriptions of election procedure and periods of office have been clarified. The role of the Executive Committee has been explained in a new Article. Old article (12) has been moved to the first article in the Statutes Article 15 has been simplified slightly

of three years and may not serve for more than two consecutive terms. The Council may co-opt to any vacancies which occur (including the officers) and any person so co-opted has the same tenure of office as the person replaced. No member of the Council either an ordinary member or an officer, shall be individually liable for the corporate debts and liabilities of the Union or any of its Commissions or Committees. (15) In the execution of the purposes of the Union, no member of the Council, Secretary, Auditor or other officer of the Union shall be liable for any loss to the property of the Union arising (i) by reason of any improper investment made in good faith (provided that he/she shall have sought professional advice before making such investment) or (ii) through the negligence or fraud of any agent employed in good faith by him/her or by any other member of the Council (provided reasonable supervision shall have been exercised) even if the employment of such agent was strictly not necessary or (iii) by reason of any mistake or omission made in good faith by any member of the Council or (iv) by any other reason except wilful and individual fraud, wrongdoing or wrongful omission on the part of the member of the Council who is sought to be made liable. (16) No member of the Council shall acquire any interest in property belonging to the Union (otherwise than as a trustee for the Union) or receive remuneration or be interested (otherwise than as a member of the Council) in any contract entered into by the Council. (17) The meetings of the Council shall be held: (a) during the General Assembly; (b) normally once between each General Assembly, but exceptionally at other times upon the decision of the Council. Seven members of the Council shall constitute a quorum at a Council meeting .	The position of Honorary Vice-President shall normally be held for three years by the immediate past President. The Secretary-General shall hold office for six years, but may be re-elected for further periods of three years to a maximum of twelve years. (23) It shall be the duty of the Secretary-General to maintain relationship with all bodies adhering to the international Union and all other relevant organisations within the field of Biophysics. ***The Secretary-General shall act as Treasurer of the Union and shall be responsible for the preparation of Financial Accounts and arranging for them to be professionally audited.*** The Secretary-General shall prepare budgets and agenda, and circulate them at least four months before meetings of the Council and General Assembly. ***(IX) The Executive Committee*** ***(24) The Officers of the Union, acting as the Union's Executive Committee, may conduct the business of the Council in the intervals between meetings of the Council. It is customary for the Executive Committee to meet mid-way between Council Meetings and to consult by mail or email as necessary on day-to-day matters. All decisions and activities of the Executive Committee shall be reported to the Council.*** ***(X)*** **Task Forces and Commissions** (25) Task Forces and Commissions may be set up by the General Assembly or by the Council to take responsibility: (a) for the various branches of Biophysics; (b) for any other necessary purpose, including co-operation with other international organisations. (26) The constitution of each Task Force must be approved by the Council. The Convenor of each Task Force shall be responsible for the presentation of a report on its work at each General Assembly. Decisions of Task Forces are made by a simple majority of the votes of their members.	Wording simplified in view of the footnote inserted above. Slight changes of wording to clarify the period of Office of the Vice-President who is not elected President.

	(27) The Adhering Bodies shall be consulted regarding the membership of each Task Force. The Council shall appoint from among its ***members*** at least one representative on each Task Force, one of whom shall ***preferably*** act as convenor. (28) Existing international bodies may be admitted as Affiliated Commissions to the Union by the General Assembly or by the Council (subject to confirmation by the next General Assembly). Affiliated Commissions shall pay an annual subscription, the amount to be designated by the General Assembly. (29) The Council shall have the right to designate a representative to sit on the executive body of each Affiliated Commission. The Secretary-General shall receive copies of all official communications pertaining to the activities of the Affiliated Commissions. (30)In addition to grants made to them by the Council, Task Forces and Commissions may receive grants from other sources.	Explicit reference to the duties of the Secretary-General including acting as Treasurer. New Article explaining membership and role of the Executive Committee.
(VII) Task Forces and Commissions (18) Task Forces and Commissions may be set up by the General Assembly or by the Council to take responsibility: (a) for the various branches of Biophysics; (b) for any other necessary purpose, including co-operation with other international organisations. (19) The Adhering Bodies shall be consulted regarding the membership of each Task Force. The Council shall appoint from among its number at least one representative on each Task Force, one of whom shall normally act as convenor. (20) Existing international bodies may be admitted as Affiliated Commissions to the Union by the General Assembly or by the Council (subject to confirmation by the next General Assembly). Affiliated Commissions shall pay an annual subscription, the amount to be designated by the General Assembly. (21) The constitution of each Task Force must be approved by the Council. The Convenor of each Task Force shall be	**~~(VIII)~~ (XI) Modification of the Statutes** (31)The present statutes may be modified only by a two-thirds written vote of all adhering bodies present at a General Assembly to which prior notice of the change has been given on the agenda. (32) ***These Statutes shall be governed by, and interpreted in accordance with, French law. The working language of the Union is English***. **(XII) Dissolution** (33)If the Council decides that it is necessary or advisable to dissolve the Union it shall call ***~~a meeting~~ a General Assembly*** of all Members of the Union, of which not less than three months notice (stating the terms of the resolution to be proposed) shall be given. If the proposal is confirmed by a two-thirds majority of those present and voting the Council shall have power to realise any assets held by or on behalf of the Union. Any assets remaining after the satisfaction of any proper debts and liabilities shall be given or transferred ***as determined by the Members of the Union*** to ***one or more*** institutions having objects similar to ***those*** of the Union or failing that	Paragraphs referring to the Task Forces and Affiliated Commissions have been re-ordered. 'normally' has been replaced by

responsible for the presentation of a report on its work at each General Assembly. Decisions of Task Forces are made by a simple majority of the votes of their members. (22) The Council shall have the right to designate a representative to sit on the executive body of each Affiliated Commission. The Secretary General shall receive copies of all official communications pertaining to the activities of the Affiliated Commissions. (23) In addition to grants made to them by the Council, Task Forces and Commissions may receive grants from other sources. **(VIII) Modification of the Statutes** (24) The present statutes may be modified only by a two-thirds written vote of all adhering bodies present at a General Assembly to which prior notice of the change has been given on the agenda. (25) The English text is to be used in interpreting the present Statutes. **(IX) Dissolution** (26) If the Council decides that it is necessary or advisable to dissolve the Union it shall call a meeting of all members of the Union, of which not less than three months notice (stating the terms of the resolution to be proposed) shall be given. If the proposal is confirmed by a two-thirds majority of those present and voting the Council shall have power to realise any assets held by or on behalf of the Union. Any assets remaining after the satisfaction of any proper debts and liabilities shall be given or transferred to such other charitable institution or institutions having objects similar to the objects of the Union as the members of the Union shall determine or failing that shall be applied to some other charitable purpose.	shall be applied to some other ***appropriate*** purpose. ADOPTED, STOCKHOLM, 2 August 1961 MODIFIED, VIENNA, 7 September 1966. MODIFIED, CAMBRIDGE MASS., 31 August 1969. MODIFIED, COPENHAGEN, 6 August 1975. MODIFIED, MEXICO CITY, 26 August 1981. MODIFIED, BUDAPEST, 28 July 1993. MODIFIED, AMSTERDAM, 14 August 1996. MODIFIED, NEW DELHI, 22 September 1999. ***MODIFIED, MONTPELLIER ?? 2005.***	‘preferably’ as experience has shown that it is often not possible or appropriate to have a Council member acting as Task Force Convenor. Change required following registration under French law.

ADOPTED, STOCKHOLM, 2 August 1961. MODIFIED, VIENNA, 7 September 1966. MODIFIED, CAMBRIDGE MASS., 31 August 1969. MODIFIED, COPENHAGEN, 6 August 1975. MODIFIED, MEXICO CITY, 26 August 1981. MODIFIED, BUDAPEST, 28 July 1993. MODIFIED, AMSTERDAM, 14 August 1996. MODIFIED, NEW DELHI, 22 September 1999.		References to ‘charitable’ replaced as the term was misunderstood by members unfamiliar with English law.