



Eur Biophys J (1991) 20: 61–64

### Editorial

This EBSA newsletter is being published for the first time in the European Biophysics Journal, courtesy of the publishers, Springer Verlag, whose support and interest we are pleased to acknowledge. The Journal regularly publishes the EBSA Calendar of Events, which helps to publicise all meetings of the Member Societies. Secretaries are particularly asked to send appropriate details to the Journal Editorial Office as early as possible, to ensure inclusion in the Calendar.

The EBSA Newsletter will appear approximately once per volume. Additional copies will be available for distribution by Member Societies at the meetings noted in the Calendar. Society Secretaries should apply (in good time) to Peter Bayley at the Journal Editorial Office.

This Newsletter aims to continue the role established by Julius Clauwaert, formerly secretary of EBSA, in helping to promote communication between the Societies. This includes dissemination of information on EBSA Activities, reports from the Executive Committee, and maintaining an up-to-date record of the Officers of the Member Societies.

In addition, the EBSA Newsletter can act as a forum for discussion of matters of interest to members of the Biophysical Community. Contributions are invited on matters of scientific interest or controversy, or to seek assistance for information or materials. Informal reports of meetings are encouraged, particularly those joint meetings of the Member Societies of EBSA. The present Newsletter contains an article relating to the teaching of Biophysics. This is an abstract of a report made by representatives of the Spanish Biophysical Society on the different approaches currently operating in several countries. In future we hope to carry reports of the IUPAB Commission on Education and Development in Biophysics.

The success of any Newsletter such as this depends considerably on the extent to which the readers make use of the opportunity to communicate with one another, on an informal but regular basis. We hope that readers will indeed contribute material suitable for publication, and this may be sent either to Giuliano Colombetti, Secretary (in Pisa) or to Peter Bayley, (in London).

#### President

Dr. Peter Bayley  
National Institute for Medical Research  
Mill Hill  
London NW7 1AA, UK  
Tel: (44)-81-9 59-36 66  
Fax: (44)-81-9 06-44 77

#### Secretary-Treasurer

Dr. Giuliano Colombetti  
Istituto di Biofisica CNR  
Via S. Lorenzo 26  
I-56100 Pisa, Italy

Tel: (39)-50-51-31-11  
Fax: (39)-50-55-35-01

### EBSA news

#### *EBSA Biophysics Congress*

The Executive Committee of EBSA announced in April that it has proved impossible to organise this Congress for Spring 1992. This decision has been taken with much regret, in view of the amount of detailed discussion and planning which had already gone into the Congress. Despite the energetic and enthusiastic efforts of our colleagues in Madrid, particularly Manuel Cortijo, who had issued the original invitation on behalf of the Spanish Biophysical Society, and who had shouldered the burden of local organiser, we have had to accept the fact that it would be simply unrealistic to proceed further at this time.

This situation is the result of many factors: the initial date proposed (December 1991) was inconvenient for many societies, and the only alternative appeared to be Easter 1992. We have tried to avoid going closer to 1993 at the request of Officers of IUPAB because of the IUPAB Congress in Budapest. However, the high cost of accommodation in Madrid at that time, plus other factors, including the short time available, and the financial position, have led us to accept that the Congress will not now take place.

We would like to thank those member societies who have already expressed their support for the concept of the Congress, and several societies who have already made specific financial provisions to enable speakers and young scientists to be supported from their funds. When future plans are presented, we hope to count on their continued enthusiasm. The address lists (currently held in Madrid) will be made available to any future planning committees.

In trying to plan further ahead, we have the advantage of more time to make secure soundings of a number of possible venues and dates. We also have the experience of drawing up the necessary detailed plans. We still have the prospect of the major IUPAB Congresses in European locations in both 1993 (Budapest) and 1996 (Amsterdam), both of which ensure a high profile for the science of Biophysics in a European context. We would therefore like to invite the Member Societies of EBSA to consider the question of a future European Biophysics Congress, and to promote discussion of this at the committee level in their societies.

We invite your Society to consider the following outline proposal for a future EBSA European Biophysics Congress. Please feel free to duplicate these papers to your committee members as an aid to discussion.

The earliest date appears to be 1994. We believe it is not too soon to start discussions with the Member Societies to explore the possibilities of date and locations, so that we can have the benefit of advice from the community in preparing a number of alternatives from which to choose. Given the scale of the operation, it will be advisable to make provisional booking of suitable accommodation and facilities up to 2 years in advance i.e. soon after the end of this year. We would therefore ask you to consider this proposal as an active item of discussion for your Society, and we look forward to having your views and suggestions, after your committee's discussion.

We hope that these proposals will stimulate suggestions which will be of use to organisers of this and future Congresses. The frequency of IUPAB International Biophysics Congress is currently

every three years, with commitments to 1993 and 1996. The question has been raised of whether this might subsequently be changed to a four-yearly cycle, a decision which would clearly facilitate the holding of a future European Congress on a regular basis in the intervening second year. However, the immediate question is the desirability and practicality of holding such a Congress in 1994 or 1995.

A prime requirement is to secure adequate funding for such a Congress. It would be very helpful to know, even at this advanced stage, whether individual societies have had success in obtaining financial support from government sources – both local and national – at a level which could help to underwrite and guarantee a Congress with wide European participation. Also please consider the possibilities of contacts with local industry (particularly those with cross-European activities), in the area of biotechnology, food, pharmaceuticals, chemicals, etc.

The aim of this Congress would be to promote knowledge of the modern techniques and diverse biological systems comprising the subject of Biophysics, and to discuss the application of Biophysics to fundamental investigations of biological systems and to technological and industrial problems. It would seek to consolidate the existing expertise in many areas of Biophysics in Europe, and thereby to encourage young workers in the field. And it would hope to stimulate new and productive collaborative work between partner laboratories and the European Area.

Specific points of discussion:

*a. Date:* summer has the advantage of ease of travel, and avoidance of university terms. 1994 or 1995 appears possible. Please inform us of possible clashes with major related meetings.

*b. Location:* central Europe offers the advantage of rail or road travel to many participants. University sites have the advantage (but not exclusively) of inexpensive accommodation; conference centres have the advantage of some isolation, and freedom from inner city congestion. Assuming numbers in the range 500 to 750, we would like to know of possible locations to which your Society may have access used or may have used previously.

*c. Format:* our present discussions had elicited the following format which provides a basis for further discussion of the general principles: a Programme Committee would decide details, and issue invitations to Session Chairmen and to speakers.

*d. Participation:* the participation of younger biophysicists in the meeting is particularly encouraged. Bursary support would be sought to provide some expenses for post graduate and untenured post-doctoral workers (say up to 30 years).

*e. Specific support should* be sought to enable participants from Member Societies within Eastern Europe. Suggestions for sources of finance for this area would be welcome.

*f. Teaching seminars;* suggestions would be invited for teachers offering suitable subjects as lectures or courses. Student participation in the seminars would be for limited numbers.

*g. European Collaboration and Funding:* to invite presentation and discussion of EC science programmes and the mechanism of setting up collaborative projects.

The participation of members of all the National Biophysical Societies in this Congress would be actively sought. The Executive Committee of EBSA warmly invites the participation of your Biophysical Society in the development of an appropriate format for the EBSA European Biophysics Congress.

#### *EBSA workshops*

The possibility of the EBSA Congress meant that little was done for an EBSA workshop in 1991. Some plans will shortly be announced in the EBSA Calendar for events in 1992. As is well known, EBSA does not have financial resources of its own, but nevertheless feels that it can fulfill an important role in encouraging Member Societies to propose EBSA Workshops, designed around a specialist area.

Particular encouragement is given to facilitating the attendance of younger scientists and those from Biophysical Societies where the subject matter may be only a minority interest. Proposals may be made to any of the EBSA Executive Committee. If you are already involved in the organisation of such a workshop, and wish to investigate the possibilities, please contact one of us without delay. The Executive Committee can endorse the title "EBSA Workshop" to your meeting, and this may help in encouraging participation from a wider multinational audience, as well as promote access to additional sources of financial support. In this connection, details have recently been announced of a programme of Scientific Conferences sponsored by the European Science Foundation, modelled broadly on the American Gordon Research Conferences. We hope that EBSA Member Societies will take advantage of this new initiative and will make successful proposals for Biophysical subjects. We will be pleased to support any such proposals, and to promote the details of the conferences in the EBSA Newsletter and EBSA Calendar of Events.

EBSA Workshop, June 1992: "Water-biomolecule interactions", Palermo, Italy; see next EBSA-Calendar, EBJ 20/2.

#### *Constitution*

The EBSA Rules require all Societies applying for association within EBSA to supply copies of their own constitution, and details of membership. Such details were requested originally from the founding Societies, and now need to be brought up to date. The Secretary will write soon to all Member Societies, requesting this information.

#### **Officers of member societies and EBSA executive committee**

Please help to keep this list up to date with addresses, telephone and FAX numbers, and E-mail addresses: information by FAX directly to Peter Bayley (81-9 06 44 77).

#### *Belgium*

Belgian Biophysical Society  
Dr. K. Heremans, K. u. L., Lab. Chemical and Biological Dynamics, Celestijnenlaan 200D, B-3030 Heverlee, Belgium; Dr. O. Dideberg, ULG Institut de Physique B5, B-4000 Sart-Tilman, Liege, Belgium. Tel: 0 41-56 17 62.

#### *Denmark*

Danish National Committee  
Prof. P. Roepstorff, Institute for Molecular Biology, Odense University, DK-5320 Odense M, Denmark, Tel: (45) 66 15-86 00; FAX: (45) 65 93-27 81; E-mail: Roe@dou.DK.

#### *Egypt*

Egyptian Biophysical Society  
Prof. Fadel M. Ali, Head of Biophysics Department, Faculty of Science, Cairo University, Giza-Egypt, Tel: 72 70 22/72 72 13; Prof. F. M. Tera, National Institute of Standards, Dokki, Cairo, Egypt.

#### *Federal Republic of Germany*

German Biophysical Society  
Prof. Dr. W. Pohlit, Institut für Biophysik, Universität Frankfurt, Paul-Ehrlich-Straße 20, W-6000 Frankfurt/M. 70, FRG. Tel. 69-6 30 33 11; Prof. Dr. F. Parak, Molekulare Biophysik, Fachbereich Biologie, Universität Mainz, Welter Weg, W-6500 Mainz, FRG. Tel: 61 31 39-35 70; Fax: 61 31 39-35-57.

#### *France*

Société Française de Biophysique  
Dr. Jean Marc Lhoste, Institut Curie, Section de Biologie, Université Paris-Sud, Bât. 112, F-91405 Orsay Cedex, France. Tel. 69 86 31 63, Fax: 69 86 17 03; Dr. A. Tardieu, C.N.R.S., Centre de Genetique Moleculaire, F-91190 Gif sur Yvette, France. Tel: 69 82 32 11.

### Great Britain

#### British Biophysical Society

Dr. H. W. E. Rattle, Biophysics Laboratory, Portsmouth Polytechnic, White Swan Road, Portsmouth PO1 2DT, UK. Tel: 7 05-82 76 81x7 04; Dr. Keith Fox, Department of Physiol/Pharmacology, University of Southampton, Southampton SO9 3TU, UK. Tel: 7 08-55 91 22x43 74.

### Hungary

#### The Hungarian Biophysical Society

Prof. L. Kesthely, Institute of Biophysics, Biol. Res. Centre, H-6701 Szeged, Hungary. Tel: 36-62-23-0 22; Fax: 36-62-13-7 26; Dr. Sandor Gyorgi, Institute of Biophysics, Semmelweis University of Medicine, Puskin u.9, H-1088 Budapest, Hungary. Tel: 3 37-9 65.

### Israel

#### Israel Biophysical Society

Prof. H. Eisenberg, Weizmann Institute of Science, Rehovot 76100, Israel. Tel: 5 48 21 11/8 31 11.

### Italy

#### Italian Society of Pure and Applied Biophysics, SIBPA

Dr. G. Colombetti, Istituto Biofisica del C.N.R., Via S. Lorenzo, 26, I-56100 Pisa, Italy. Tel: 39 50 51 31 11; Dr. Silvia M. Doglia, Università Studi Milano, Dipartimento di Fisica, Via Celoria 16, I-20133 Milano, Italy. Fax: 39 50 55 35 01.

### Netherlands

#### Dutch Biophysical Society

Prof. Dr. W. J. Vredenberg, Dept. Plant. Physiol. Res., Agricultural University, Gen. Foulkesweg 72, 6703 BW Wageningen, The Netherlands. Tel: 31.83 70-8 28 00/8 28 02; Dr. D. G. Stavenga, Laboratorium voor Algemene Natuurkunde, Rijksuniversiteit, Westersingel 34, 9718 CM Groningen, The Netherlands. Tel: 31 50/63 47 42.

### Norway

#### The section of Biophysics of the Norwegian Physical Society

Prof. Tore Lindmo, Biophysics Group, Division of Physics, University of Trondheim-NTH, N-7034 Trondheim-NTH, Norway. Tel: 47-7-59 34 01, Fax: 47-7-94 44 08; Dr. Gerd Jarret, Department of Physics, Institute of Energy Technology, P.O. Box 40, N-2007 Kjeller, Norway.

### Poland

#### The Polish Biophysical Society

Prof. S. J. Lukiewicz, Laboratory for Radiobiology, Jagellonian University, Al. A. Mickiewicza 3, PL-31-120 Krakow, Poland. Tel: 34-14-42; Dr. A. Szlachcic, Medical Academy, Department of Physiology, ul. Grzegorzeczka, Krakow, Poland.

### Romania

#### National Soc Pure & Applied Biophysics

Dr. Dan Eremia, Department of Biophysics, Faculty of Medicine, 8 Blvd. Eroiler Sanitari, P.O. Box 15 205, R-76241 Bucharest, Romania; Dr. Eva Katona, Department of Biophysics, Faculty of Medicine, 8 Blvd. Eroiler Sanitari, P.O. Box 15-205, R-76241 Bucharest, Romania.

### Spain

#### The Spanish Biophysical Society

Prof. Manuel Cortijo, Departamento de Quimica-Fisica II, Facultad de Farmacia, Universidad Complutense, E-28040 Madrid, Spain; Tel: 34 15 82 17 51, Fax: 34 15 82 20 32. Dr. J. L. Carrascosa, Centro de Biología Molecular, Universidad Autónoma de Madrid, Canto Blanco, E-28049 Madrid, Spain. Tel: 34 13 97 84 72, Fax: 3 41-3 97 47 99.

### Sweden

#### Swedish Biophysical Society

Prof. A. Graslund, Department of Medical Biophysics, University

of Umeå, S-90187 Umeå, Sweden. Tel: (46)90 16 65 65; Fax: (46)90 13 63 10; Dr. L. Nilsson, Department of Medical Physics, Karolinska Institutet, P.O. Box 60400, S-10 401 Stockholm, Sweden. Fax: (46)8-32 65 05, E-mail: Lennartn@seqz51.

### Switzerland

Sektion Biophysik der Schweizerischen Biochemischen Gesellschaft Prof. N. Jansonius, Biozentrum der Universität, Klingelbergstrasse 70, CH-4056 Basel, Switzerland. Tel: 61 25 38 80; Prof. S. J. Edelstein, Département de Biochimie, Université de Genève, 30, Quai Ernest Ansermet, CH-1211 Geneva 4, Switzerland. Tel: 2 27 02-64 86, Fax: 22 29-61-02, E-mail: edelstei@ch.unige.sc2a.

### Yugoslavia

#### Yugoslav Biophysical Society

Dr. J. Brnjac-Kraljevic, Department of Biophysics, School of Medicine, University of Zagreb, Salata 3, YU-41000 Zagreb, Yugoslavia. Tel: 38-41-27 11 88, Fax: 38-30 41-4 24-0 01; Dr. Rudi Podgornik, J. Stefan Institute, POB 100, Jamova 39, YU-61111 Ljubljana, Yugoslavia. Tel: 61-2 14-3 99; Fax: 2 19-3 85; E-mail: rudi@ijs.ac.mail.yu.

## Biophysics education

### *The teaching of biophysics in selected EEC countries*

The following is a digest of a report presented by Officers of the Spanish Biophysical Society following visits to Belgium, Germany, Italy and the United Kingdom made by Alicia Alonso, Manuel Cortijo, Felix M. Goni and Juan A. Subirana. The chairman was Prof. Goni, Department of Biochemistry, University of the Basque Country, P.O. Box 644, E-4808 Bilbao, Spain, from whom further information may be obtained. The visits were made in 1989, and supported by an ERASMUS contract. Although some of the circumstances may now have changed, the report highlights common problems in the teaching of Biophysics as an undergraduate and post-graduate subject, which are of general interest and importance. Future issues of the EBSA Newsletter could address the present and developing situation in these and other countries.

The object of the investigation was to compare the different approaches to the teaching of Biophysics in different academic environments, and to evaluate the possibilities for academic links or exchanges between countries as envisaged under the ERASMUS programme.

The report finds that there is a wide variety of approaches operating in the different countries examined. In Belgium, there is relatively little formal training in Biophysics, and no specific degree. A "Certificate of Biophysics" exists, based on a concentrated series of courses for postgraduate students with Biochemical, Medical, Engineering and Physical Chemical background, taught (in alternate years) in English or French in Leuven and Liège. The course is well-established and outside participation is relatively easy.

In Germany, the teaching of Biophysics has usually been part of the formal training of Physics students, as an option at the Diplom level (i.e. Master's degree). Courses extend over 1-2 seminars, with a variety of practical classes in different universities. This system was not so attractive to students from more biological backgrounds, and there has been pressure for independent courses to be established. (Editorial Note: the German Biophysics Society is presently reviewing the options for studies in Biophysics in Germany, and has published some information in the current Society Rundschreiben: information from Prof. Parak). The possibility of a separate Biophysics degree is not favoured: a primary market for Physics graduates (especially Ph. D.'s) is industry. Some well-established practical courses exist, e.g. the Biophysics Section at Ulm, which has been conducted as a Summer School. This included Molecular Biophysics, Cell systems, and Biophysics of organisms. The German approach appears often to have stressed the macroscopic side of the subject.

In Italy, Biophysics is taught as part of the coursework for undergraduate and post-graduate qualifications in Science, Medicine and Engineering. There is a current move toward integrated courses in the Italian system. In many universities, Biophysics has been an optional subject. In some cases (e.g. Parma), Biophysics is one of the major subjects within Physics. The Biological Physics course includes components on General and Molecular Biology, Biophysical Chemistry, and Biophysics, plus two integrated biological and biophysical subjects. Some newly created Medical courses have included Biophysics as a compulsory subject, integrated with biomedical technology, Computer Science, Instrumentation and Medical Physics. These recent developments parallel those in the restructuring of the Italian system towards the Ph.D. qualification. A Ph.D. in Physics with substantial Biophysics has been offered jointly by Genoa, Parma, Modena and Padova. Visiting teachers have previously been widely welcomed by the Italian system.

In the United Kingdom, the options for undergraduate studies in Biophysics have in fact decreased in the past few years. Leeds previously offered a full Biophysics option (3-years) for up to 20 students. Most other universities offer biophysical studies within programmes leading to Physics or within the Biological Sciences, with an option to specialise in the final (third) year on a Biophysical subject. The doctoral degree usually is taken after a further three years work; this is predominantly experimental with rather little general requirement for coursework. This involves the student being supervised within a department which is rarely designated as "Biophysics" but which nonetheless may contain a significant fraction of Biophysicists on its staff. Exchange options would most readily be implemented at the post-graduate level; possibilities for a year's study mainly in biophysics would appear possible at Leeds, London (Imperial), East Anglia or Lancaster.

#### Critical evaluation

i) *Content*: this is clearly very heterogeneous, for local and historical reasons. It ranges from heavily macroscopic (full systems) to the highly molecular biophysics, with instrumentation and computing as adjuncts. It can be oriented towards human, medical or plant systems. The report notes some moves towards convergence but this is not a co-ordinated operation.

ii) *Exchange possibilities*: the exchange of teaching staff is relatively straightforward, and usually organised on a personal basis. For a graduate student to perform Master's or Doctoral research work, the situation is relatively simple, given appropriate funding.

At the undergraduate level, difficulties clearly exist between different systems. Exchange is not very practical, and partial participation in another system for degree work is complicated. Registration in the host country is required, and the home institution needs to validate the equivalence of the course work. The most attractive options appear to be for short, concentrated courses, as per the examples from Belgium (Liege/Leuven) and Germany (Ulm), and the possibility of registration for a full academic year in a host country.

The report notes the need for some co-ordinating activity in the design and provision of Biophysics teaching at all levels, to facilitate movement between systems in different countries as envisaged by the ERASMUS scheme. Since the report was compiled some definite progress has been made in this area, and it is hoped that those involved in these initiatives will contribute some of their findings to future issues of the EBSA Newsletter. In particular, discussion is invited of ideas for the definition of the "core" area of Biophysics which might be seen as the basic requirement to engage in such exchanges, taking advantage of current moves to stimulate the movement of young scientists between different part of the European area, in pursuit of their advanced educational experience.

The assistance of Professor Goni in making this resume of the report is warmly acknowledged.

#### Promotional material

Promotional material is becoming increasingly important in responding to enquiries concerning professional scientific activities, and also for recruiting purposes. There is an attractive booklet "Careers in Biophysics" recently prepared by the American Biophysical Society and copies of this are being sent to the individual societies, for the information of their members.

A further publication of interest is called "Finding the Critical Shapes", published by the Howard Hughes medical Institute, Communications Office, 6701, Rockledge Drive, Bethesda, MD 20871/9866 USA. This describes how X-ray crystallography and computer graphics bring new approaches to the fight against viral disease, cancer and other ills. It is beautifully illustrated with stereo models. Copies on request from the above address.

It would be most helpful to be informed of similar publications which can be made available to Member Societies for providing information about Biophysics, and for encouraging recruitment of young scientists as Biophysicists.

#### European Biophysics Journal

*Editorial Office*: Peter Bayley, NIMR, Mill Hill, London NW7 1AA, UK. Telephone: (44)-81-9 59-36 66x20 85/20 89; FAX: (44)-81-9 06-44 77, E-mail: p-bayley@NIMR.MRC.UK.AC.

As discussed in the IUPAB meeting in Vancouver, the European Biophysics Journal will continue to support the activities of EBSA, and the Editors are always open to suggestions from individuals and from the member Societies for increasing the level of interaction.

The following changes are announced to the Editorial Boards of the Journal, to take effect from Volume 20/1, 1991.

The following, previously members of the Advisory Board will join Peter Bayley, London: Franco Conti, Genova; Rudolf Rigler, Stockholm; and Erich Sackmann, Munich as Editors:

P. F. Devaux, Paris; F. G. Parak, Mainz; P. Schuster, Wien; W. F. Van Gunsteren, Zürich.

Please note that the submission policy of the Journal has now been modified to allow authors to submit manuscripts direct to these Editors, as well as via the Editorial Office. The reviewing procedure remains unchanged; generally, reports are requested from two independent reviewers to advise the responsible Editor in making the Editorial Decision.

Members of the Advisory Editorial Board who will be retiring: R. Cherry, Essex; J. Clauwaert, Wilrijk; J. Dubois, Orsay; A. Ehrenberg, Stockholm; J. Engel, Basel; C. Helence, Paris; K. C. Holmes, Heidelberg; I. Pecht, Rehovoth; T. J. Schaafsma, Wageningen; G. Schwartz, Basel; H. B. Stuhmann, Hamburg; K. Wüthrich, Zürich.

Their contribution in supporting the activities of the Journal over a considerable period of time are very much appreciated and I wish warmly to acknowledge their service.

The following have now accepted the invitation to join the Advisory Editorial Board of the Journal:

G. Colombetti, Pisa; M. Cortijo, Madrid; D. Gadian, London; J. Garcia de la Torre, Murcia; W. Junge, Osnabrück; J. Lugtenberg, Leiden; A. Marty, Paris; T. Montenay-Garestier, Paris; L. Nilsson, Stockholm; A. G. Petrov, Sofia; F. Siebert, Freiburg; W. Stühmer, Göttingen

The following continue to serve as Advisory Editors:

I. Campbell, Oxford; M. Chabre, Sophia-Antipolis; R. E. Dale, Manchester; U. Fringeli, Zürich; F. Jähnig, Tübingen; G. C. K. Roberts, Leicester; W. Saenger, Berlin; H. G. Schindler, Linz; A. J. W. G. Visser, Wageningen.

Enquiries concerning the Journal may be directed to me or to Dr. Stephan Martin at the above telephone and FAX numbers.