

8th EBSA European Biophysics Congress August 23rd–27th 2011, Budapest, Hungary

Organized by the Hungarian Biophysical Society, the European Biophysical Societies Association and the Eötvös Loránd University

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Welcome to the 8th European Biophysics Congress



Ladies and Gentlemen,

On behalf of the Hungarian Biophysical Society and the European Biophysical Societies Association I am pleased and honoured to welcome you at the 8th European Biophysics Congress in Budapest. Biophysics has been traditionally strong in Hungary. The first Biophysics Department was organized in Pécs in the late forties followed by several others all over the country. The organization of the Hungarian Biophysical Society started in 1960 and was completed in March, 1961, thus this year we celebrate the 50th anniversary of our society. The first president of the society was Eugene Ernst, followed by József Tigyi, Lajos Keszthelyi, Pál Ormos and Péter Závodszy. The Honorary Presidents are Sándor Damjanovich, Lajos Keszthelyi, Pál Ormos, Györgyi Rontó and József Tigyi. The society started with 111 members. The membership steadily increased and we have had about 400 members for the past 20 years.

This congress is the 8th European Biophysics Congress and is the fifth since EBSA decided to organize congresses biennially. Organizing congresses more frequently became possible because of the larger income generated by EBSA. The main source is the European Biophysics Journal magnificently managed by Anthony Watts. The financial support from EBSA and Springer was pivotal for organizing this congress. This is the first time when 60 bursaries were offered for young talented colleagues to facilitate their participation. The Biophysical Society has agreed to provide US\$6,000 to fund poster awards at the EBSA 2011 meeting. We continue the tradition of the EBSA Prize: this year the winner is Dr. Kinneret Keren from Israel. EBSA is important in supporting

“Biophysics in Europe”. Please be involved in the activities of EBSA, please attend the General Assembly, even if you are not the voting representative of your country.

The continuous increase in the number of abstracts proves that European biophysics is getting stronger. I proudly report that 689 abstracts have been received and almost 1000 people registered from 52 countries. The help of the Scientific Committee was essential in assembling the program. Members of the EBSA Executive Committee were extremely helpful. The continuous support from Anthony Watts and Michael Ferenczi is much appreciated. Hungarian members of the Organizing and the Scientific Committee supported the hard work of organization in the past two years. Special thanks are due to Péter Závodszy and Győző Garab.

All the congress activities will be at the new Campus of the Eötvös Loránd University, conveniently located close to main routes of public transport. The congress follows the now classical scheme, with plenary lectures, followed by three parallel sessions and poster presentations. After the scientific sessions you can explore the sites and the glamour of the city of Budapest — also known as the ‘Queen of the Danube’ — the capital of Hungary, the centre of Hungarian cultural life. The monuments and museums will give you the possibility to learn more about Hungary. Please enjoy the wonderful architecture of Buda, the Castle Hill with the Royal Palace, the Matthias Church and the ramparts of Fisherman’s Bastion, or at Pest the House of Parliament or the Andrassy Boulevard. A river cruise on the Danube or a visit to a thermal bath in one of the Turkish-era bath houses will be a memorable experience.

We hope that you find the 8th EBSA Congress interesting, and that you will plan to attend the 9th Congress, to be held in Lisbon, Portugal, on 13–17 July 2013.

A handwritten signature in blue ink, which appears to read 'László Mátyus'.

László Mátyus
Chairman, Organizing Committee
Vice-President, EBSA

EBSA Welcome



The European Biophysical Societies' Association is pleased and proud to welcome delegates at the 8th European Biophysics Congress in Budapest. This Congress follows the one in Genoa, Italy and precedes the next in Lisbon, Portugal: a long and significant travel of EBSA through Europe for disseminating Biophysics worldwide.

As President of EBSA, on behalf of the Executive Committee and the Member Societies of EBSA, I wish to thank our hosts, the Hungarian Biophysical Society and the Eötvös Loránd University. A special thank is for László Mátyus and for the Members of the Organising and Scientific Committees. Among them, the main patron of the Congress, József Pálinskás, President of the Hungarian Academy of Sciences, Péter Závodszy, President of the Hungarian Biophysical Society and Stefan W. Hell, Director at the Max Planck Institute for Biophysical Chemistry in Göttingen, Chairman of the Scientific Committee. EBSA is also indebted to Ada Yonath, Nobel Prize in Chemistry, 2009, who accepted to be Keynote speaker at the 8th European Biophysics Congress in Budapest.

We are very proud to announce that, since the EBSA Executive Committee received 8 nominations for the EBSA Young Investigators' Prize from Portugal, Spain, Austria, UK, Hungary and Israel. Dr. Kinneret Keren from Israel has been selected as winner of the 2011 EBSA prize. She will receive €2000, an engraved medal and she has been invited to present a lecture at the Congress.

In the last years, from the Genoa to the Budapest conference, we launched the EBSA Biophysics Courses, with the first one on Membrane Biophysics & Lipid/Protein Interaction in June 2010, in Bordeaux, France. Directly following the Congress, EBSA will hold its 2nd EBSA Biophysics Course: "Solar Energy—Biological and Biomimetic Solutions", 27–31 August 2011, Szeged, Hungary Organizers: Győző Garab (Szeged, HU; gyozo@brc.hu), Huub de Groot (Leiden, NL), Alfred R. Holzwarth (Mülheim, GER).

We also celebrated the 50 years of the British Biophysical Society (2010) and the 25 years of the Spanish

Biophysical Society (2011). EBSA provided up to 60 bursaries for European scientists who have no access to funds from National Societies for attending the Conference. This is in addition to the bursaries coming from the National Societies. Much hard work has been done over the past two years to bring together the excellent scientific program in this superb venue: "The Queen of the Danube". Here with the culture, the beauties and the glamour of the city of Budapest, the capital of Hungary and centre of Hungarian cultural life, we are running a great Conference favouring a multidisciplinary cultural mix and exchange of senior and young expertise. EBSA makes this Congress possible also thank to the continuing support of Springer, possible for the incessant and superb work of the EBJ Managing Editor, Anthony Watts. Important projects are running with Springer from the Springer EBSA portal to the Encyclopedia of Biophysics.

EBSA is delighted with the enthusiasm and talent of the scientists that we encourage to take advantage of the EBSA program for working visit to a laboratory in an EBSA country. Please see <http://www.ebsa.org/exchange.htm> for details.

EBSA has to acknowledge in a special way all of you, participants, not only because you are the real effective component of the Scientific Program but also because in this difficult period of economic crisis you have decided to bring your important contribution to the 8th European Biophysics Congress in Budapest. I also wish to thank the fundamental work of the EBSA Executive Committee who devoted time and effort to the activities of the Association. A special mention is for the EBSA Secretary, Antoinette Killian, who has been particularly active and sharp in organising our affairs. EBSA would not exist without the Committee, and at the forthcoming General Assembly we ask you to increase your participation along with your National Societies in the affairs of EBSA. Please come and participate in your General Assembly on Friday 26th.

And last but not least I would like to thank all the Companies sponsoring the Conference: their contribution is vital not only in economic terms but as important technical and scientific service to the community of researchers working everyday with commercial tools and instruments being shown during the meeting.

I am sure that this Congress will be fully enjoyable and beneficial for all of you, and I am looking forward to meeting you all again at the 9th European Biophysics Congress to be held in Lisbon in 2013 under the organization of the Portuguese Biophysical Society.

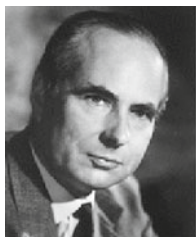
Alberto Diaspro, IIT—Italian Institute of Technology
President of EBSA

50 Years of Biophysics in Britain

The British Biophysical Society (BBS) was formed in 1960 following a report from a Working Party on Biophysics and Biophysical Chemistry initiated by the Council of the then Faraday Society of London. The first full meeting of the Working Party on 4th February, 1960

included DD Eley, LH Gray, AF Huxley, JC Kendrew, CFA Pantin, RD Preston, JT Randall, FJW Roughton and PMB Walker and a new Society eventually called "*The British Biophysical Society*" was founded:

"For the application of physical and chemical concepts to biological systems".



AF Huxley FRS
(Molecular
Physiology,
Nobel Prize,
1963)



JC Kendrew FRS
(X Ray
Crystallography, Nobel
Prize, 1962)



FJW Roughton
FRS
(Reaction
Kinetics)



LH Gray FRS
(Ionizing Radiation)

Its first meeting was held at King's College (London) organised by Prof J T Randall. The birth of the BBS can be said to date from this inaugural meeting held on 19th and 20th December, 1960. The meeting took the form of two symposia on *Comparative Studies of Muscular Contraction* and on the *Structure of Ribonucleic Acid*, together with sessions for contributed papers. Minutes

of the Steering Committee held on 8th December record that there had already been 183 applications to join the Society and 177 to attend the meeting. By the end of 1960, the membership totaled 224. At the King's College meeting W T Astbury and A V Hill were elected Honorary members.



WT Astbury FRS
(Structural Biology)



AV Hill FRS
(Quantitative Physiology, Nobel Prize,
1922)

Early Years of the Society

The first Steering Committee of the BBS, Dr JC Kendrew became the first Honorary Secretary and Prof DD Eley Meetings Secretary, and the Committee elected Prof JT Randall as its first Chairman and

Dr PBM Walker as Honorary Treasurer. Other committee members were S Brenner, JAV Butler, AF Huxley, RD Keynes, RD Preston, JWS Pringle, FJW Roughton and JT Weiss.

It is clear from this roll call of committee members, in the early 1960s, that the British Biophysical Society

embraced a wide range of topics in Biology. The first major scientific meeting of the British Biophysical Society at King's College, London (on The Structure of Globular Proteins and The Function of Proteins) and a report on proceedings authored by Professor Freddie Gutfreund (one of the Society's founder members), appeared in the journal *Nature*.

BBS Today

The BBS has about 500 members in its newsgroup, and its committee meets three times a year, organizing and sponsoring both specialist and a more general meeting biennially, in the years that EBSA does not have its congress.

BBS also supports travel bursaries for younger scientists, and is the adhering society to IUPAB (Tony North was general Secretary of IUPAB for ~12 years, and a founding member of BBS) and EBSA (since its inception through the initial activities of Peter Bayley, former editor of *Eur. Biophys. J.*), and is working with

the Biophysical Chemistry group of the Royal Chemical Society, and the Biological Physics group of the Institute of Physics. In 2007, BBS was the national society organizing the 6th EBSA/BBS congress at Imperial College, London, with Mike Ferenczi (London) as the local organizer and Tony Watts (Oxford) as scientific chair, attracting over 1350 participants and ~800 posters—both are EBSA committee members.

The 50th Anniversary meeting in Cambridge in July 2010, was a special meeting, not least that Venki Ramakrishnan was elected an Honorary Member of BBS, in the same year that he was awarded the Nobel Prize for his outstanding work on the ribosome, and giving a plenary lecture at the opening ceremony. He joins many highly distinguished Honorary Members of the BBS, including Aaron Klug, Andrew Huxley, John Walker, Sidney Brenner and about 40 others. More can be found at <http://www.britishbiophysics.org.uk/> Tony Watts (Chair, BBS, 2002–2007; 2009–on) [This article is adapted from "A history of BBS", written by David Hornby, Sheffield, 2010).

25 Years of Spanish Biophysical Society

The Spanish Biophysical Society (SBE) promotes Biophysics in Spain and it was founded in a meeting held in Sitges, near Barcelona, in 1986, thus in 2011 we are celebrating its Silver Jubilee. The SBE was largely the result of the efforts and vision of a group of biophysicists headed by Professor J.A. Subirana. Along these 25 years the SBE has promoted many activities such as congresses, courses and meetings of different types. (Table 1). A number of them were co-organized in cooperation with biophysicists of other countries. The spirit of international co-operation may be perhaps one of the most distinctive trends in SBE history. Co-operations to organize meetings have been undertaken especially with the Portuguese Biophysical Society and with Iberian-American biophysicists. An additional activity of the Society is to confer awards to distinguished Spanish biophysicists as a small compensation for their invaluable work.

SBE joined EBSA in 1987, and two members of SBE have been Presidents of EBSA, namely Professor Manuel Cortijo, who played a very important role in obtaining a good deal with Springer about the European Biophysics Journal and Professor Bernat Soria, who became the Health Minister of the Spanish Government while he was still in the Executive Committee of EBSA. Other members who have acted as Presidents of SBE are listed in Table 2.

The Silver Jubilee celebration have included different activities among them the XXVth Anniversary Commemorative Lecture that was delivered by Dr. Venkatraman Ramakrishnan (Cambridge), Nobel Laureate in Chemistry in 2009 on "The road to ribosome structure: a personal account". In addition a XXVth anniversary Congress was held in Murcia on June 1–4. This Congress was attended by 220 scientists and plenary lecturers included several distinguished members of EBSA such as Alberto Diaspro (President), Antoinette Killian (Secretary) and Catherine Royer member of the Executive Committee, apart from José L. Carrascosa (also a member of the Executive Committee) who organized one of the specialized sessions. The Congress included 12 specialized sessions encompassing all major areas for Biophysics. The Jubilee commemoration will include the publication of a book on the history of SBE that is being edited by Manuel Cortijo.

SBE intends to make the celebration of this XXVth anniversary a solid foundation to expand our Society and further promote Biophysics in Spain, continuing with our international co-operations and spreading them to many other countries. The congress held recently in Murcia was subtitled XXV years and beyond". This would be in summary the aim of SBE.

Table 1 Meetings organized by Sociedad de Biofísica de España

-I Reunión Española de Biofísica. Sitges, October 1–4, 1986
-I Congreso Sociedad de Biofísica de España. Valladolid, September 14–16, 1987
-1st Spanish-Soviet Congress on Biophysics of Biomembranes. Granada, May 24–26, 1987
-1er Congreso Iberoamericano de Biofísica. Sevilla, September 24–28, 1989
-2nd Spanish-Soviet Congress on Biophysics. Kiev (URSS), October 1–7, 1990
-III Congreso de la Sociedad de Biofísica de España. Madrid, December 4–7, 1991
-IV Congreso de la Sociedad de Biofísica de España. Cáceres, April 7–10, 1994
-II Congreso Iberoamericano de Biofísica. Ciudad de Puebla, México. October 3–7, 1993
-1st Portuguese-Spanish Biophysics Congress. Lisboa, December 4–7, 1995
-III Congreso Iberoamericano de Biofísica. Buenos Aires, Argentina. September 20–23, 1997
-2nd Portuguese-Spanish Biophysics Congress. Madrid, December 4–7, 1998
-IV Congreso Iberoamericano de Biofísica. Alicante, October 11–14, 2000
-VIII Congreso Hispano-Luso de Biofísica. Puerto de la Cruz, July 11–14, 2002
-4th European Biophysics Congress. Alicante, July 5–9, 2003
-V Iberoamerican Congress of Biophysics. Río de Janeiro, December 12–15, 2003
-3rd Portuguese-Spanish Congress of Biophysics. Lisboa, October 2004
-VI Iberoamerican Congress of Biophysics. Madrid, September 24–27, 2006
-1st Portuguese-Spanish-British Joint Biophysics Congress. Lisboa, July 10–13, 2008
-VII Iberoamerican Congress of Biophysics. Búzios (Río de Janeiro), September 30–October 4, 2009
-IV Spanish-Portuguese Biophysical Congress. Zaragoza, July 7–10, 2010
-XI Congreso de la SBE. Murcia, June 1–4, 2011

Table 2 Presidents of SBE

-Juan Antonio Subirana: 1986–1989
-Manuel Cortijo: 1989–1993
-Félix M. Goñi. 1993–1998
-Bernat Soria: 1998–2003
-José L. Carrascosa: 2003–2006
-Alicia Alonso: 2006–2010
-Juan C. Gómez-Fernández: 2010–

Juan C. Gómez-Fernández¹ and Alicia Alonso²

¹Departamento de Bioquímica y Biología Molecular A, Facultad de Veterinaria, Universidad de Murcia, 30100-Murcia, Spain

²Unidad de Biofísica (Centro Mixto CSIC-UPV/EHU), Departamento de Bioquímica, Universidad del País Vasco, Bilbao, Spain

Satellite Meetings

Spectroscopy in the biological sciences of the XX1st century

August 20–22, 2011, Pécs

Organizers:

Beáta Bugyi (Pécs, Hungary)

Gábor Hild (Pécs, Hungary)

Alexander P. Demchenko (Kyiv, Ukraine)

Fluorescence correlation spectroscopy in cell biophysics

August 22, 2011, Debrecen

Organizers:

György Vámosi (Debrecen, Hungary)

Joerg Langowski (Heidelberg, Germany)

Nanobiotechnology

August 22–23, 2011, Budapest

Organizers:

Sandor G. Vari (Los Angeles, USA)

S. Moein Moghimi (Copenhagen, Denmark)

Leland Chung (Los Angeles, USA)

EBSA Biophysics Course on solar energy—Biological and biomimetic solutions

August 27–31, 2011, Szeged

Organizers:

Alfred R. Holzwarth (Mülheim, Germany)

Huub J.M. de Groot (Leiden, Netherlands)

Győző Garab (Szeged, Hungary)

Structure, function, folding and assembly of membrane proteins—Insight from biophysics

August 27–31, 2011, Tata

Organizers:

Tibor Páli (Szeged, Hungary)

Anthony Watts (Oxford, UK)

Alajos Bérczi (Szeged, Hungary)

Balázs Szalontai (Szeged, Hungary)

49th EPHRG Conference

August 28–September 2, 2011, Budapest

Organizer:

László Smeller (Budapest, Hungary)



Congresses of the

EUROPEAN BIOPHYSICAL SOCIETIES' ASSOCIATION

1st EUROPEAN BIOPHYSICS CONGRESS, 1971, BADEN, AUSTRIA

2nd CONGRESS, 1997, ORLEANS, FRANCE

3rd CONGRESS, 2000, MUNICH, GERMANY

4th CONGRESS, 2003, ALICANTE, SPAIN

5th EBSA / 15th IUPAB / SFB CONGRESS, 2005, MONTPELLIER, FRANCE

6th CONGRESS, 2007, LONDON, UNITED KINGDOM

7th CONGRESS, 2009, GENOA, ITALY

8th CONGRESS, 2011, BUDAPEST, HUNGARY

for your diary

9th CONGRESS, 2013 Lisbon, Portugal
13 -17 July 2013

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10th CONGRESS, 2015 Dresden, Germany
18 -22 July 2015

(see <http://www.ebsa.org/> for venue and dates)

EBSA Bursaries

Awarded to:

Alenkina, Irina, <i>Yekaterinburg, Russia</i>	Kopani, Martin, <i>Bratislava, Slovakia</i>
Artamonov, Dmitry, <i>Moscow, Russia</i>	Kulkarni, Chandrashekhar, <i>Graz, Austria</i>
Baldassarri, Enrico Jr., <i>Ancona, Italy</i>	Kumar, Dhruv, <i>Bologna, Italy</i>
Barbieri, Raffaella, <i>Genoa, Italy</i>	Kutsenko, Olga, <i>Kharkov, Ukraine</i>
Bernasinska, Joanna, <i>Lodz, Poland</i>	Liepina, Inta, <i>Riga, Latvia</i>
Bibineyshvili, Elena, <i>Moscow, Russia</i>	Loureiro, Joana, <i>Porto, Portugal</i>
Buimaga-Iarinca, Luiza, <i>ClujNapoca, Romania</i>	Makshakova, Olga, <i>Kazan, Russia</i>
Carrasco, Carolina, <i>Madrid, Spain</i>	Manzo, Carlo, <i>Barcelona, Spain</i>
Castro Coelho, Sílvia Maria, <i>Porto, Portugal</i>	Marincu, Bogdan-Nicolea, <i>Timișoara, Romania</i>
Chilom, Claudia, <i>Magurele, Romania</i>	Mikulska, Karolina, <i>Torun, Poland</i>
Corvaglia, Stefania, <i>Trieste, Italy</i>	Neunert, Grazyna, <i>Poznan, Poland</i>
Domenech, Rosa, <i>Alicante, Spain</i>	Nizsalóczy, Enikő, <i>Debrecen, Hungary</i>
Durgaryan, Andranik, <i>Yerevan, Armenia</i>	Pannuzzo, Martina, <i>Catania, Italy</i>
Dzurová, Lenka, <i>Kosice, Slovakia</i>	Partskhaladze Tamar, <i>Tbilisi, Georgia</i>
Enciso Carrasco, Marta, <i>Madrid, Spain</i>	Pitulice, Laura, <i>Timisoara, Romania</i>
Feofilova, Maria, <i>St.-Petersburg, Russia</i>	Polyanichko, Alexander, <i>St.-Petersburg, Russia</i>
Ferencz, Csilla, <i>Szeged, Hungary</i>	Rezabkova, Lenka, <i>Prague, Check Republic</i>
Georgiadou, Dimitra, <i>Athens, Greece</i>	Roviello, Giovanni, <i>Napoli, Italy</i>
Gogolinska, Anna, <i>Torun, Poland</i>	Sanavio, Barbara, <i>Trieste, Italy</i>
Gulak, Ksenia, <i>Kiev, Ukraine</i>	Saraiva, Ivo, <i>Oeiras, Portugal</i>
Hakobyan, Nune, <i>Yerevan, Armenia</i>	Semenova, Anna, <i>Moscow, Russia</i>
Hobi, Nina, <i>Insbruck, Austria</i>	Strikha Oksana, <i>Kharkov, Ukraine</i>
Ianeselli, Luca, <i>Trieste, Italy</i>	Szwed, Marzena, <i>Lodz, Poland</i>
Iordache, Florin, <i>Bucharest, Romania</i>	Tavano, Frederica, <i>Trieste, Italy</i>
Istrate, Claudia, <i>Bucharest, Romania</i>	Trchounian, Karen, <i>Yerevan, Armenia</i>
Jesus, Caterina, <i>Coimbra, Portugal</i>	Tugarova, Anna, <i>Saratov, Russia</i>
Kaliasniova, Katsiaryna, <i>Minsk, Belarus</i>	Varga, Andrea, <i>Vienna, Austria</i>
Karaduleva, Elena, <i>Pushchino, Russia</i>	Vus, Katerina, <i>Kharkov, Ukraine</i>
Kastorna, Anna, <i>Kharkov, Ukraine</i>	Wesolowska, Olga, <i>Wroclaw, Poland</i>
Khabatova, Venera, <i>Moscow, Russia</i>	Wypijewska, Anna, <i>Warsaw, Poland</i>
Kollár, Veronika, <i>Pécs, Hungary</i>	

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Winner of 2011 EBSA young investigator medal

Kinneret Keren, Department of Physics, The Network Biology Research Laboratories and The Russell Berrie Nanotechnology Institute, Technion-Israel Institute of Technology, Haifa, Israel.

Keren K (2011) Cell Motility: The Integrin Role of the Plasma Membrane. Eur Biophys J. DOI: [10.1007/s00249-011-0741-0](https://doi.org/10.1007/s00249-011-0741-0)