
THE EUROPEAN PEPTIDE SOCIETY NEWSLETTER



Issue Number 22, 1 January 2000



1997 Tod D. Romo

The Green Fluorescent Protein of *Aequorea victoria*

Image created by Tod Romo; for the structure see Fan Yang, Larry G Moss and George N Phillips Jr
Nature Biotechnology, 1996, 14, 1246-1251. Reproduced by kind permission of
George Phillips and his colleagues.

6th EPTON SYMPOSIUM



A Sponsor's booth at York



Jennifer Patterson and Bhupinder Hothi, Novabiochem Young Investigator Awardees, with Peter White of Novabiochem

The 6th International Symposium on Solid Phase Synthesis and Combinatorial Libraries, to give it its full title (subtitles: Peptides, Glycopeptides, Oligonucleotides, DNA, RNA, Proteins, *etc*; Complementary Solution Methods Biological and Biomedical Applications) took place under the affable chairmanship of Roger Epton at the University of York 31 August – 4 September 1999. It was under the joint auspices of the Society and the UK BS/RSC Protein and Peptide Science Group. It was a great success, with about 350 delegates from all over the world, and a substantial exhibition - including many of the Society's regular Sponsors. There was a full programme with over 70 lectures (delivered to parallel sessions) and as many again of poster presentations. Some of the subject matter was not strictly "peptide science" but a very high proportion was, and it was all interesting. In any case, old demarcation lines are fading away, as papers on PNAs and peptide-oligonucleotide conjugates demonstrated. Tactful warnings in the Symposium papers that English weather is notoriously unpredictable proved quite unnecessary: it was gloriously sunny and warm. Evening excursions to the Jorvik Viking Centre and



Bob Sheppard with some Cambridge associates at York

Linda Cammish, Eric Atherton, John Wade, Mike Gait, RCS, Carolyn Hyde, Alex Eberle

York Minster (including an organ recital by Philip Moore, Master of Music) contributed to a convivial atmosphere. The whole thing was a great success, as its sequel (Southampton 2001 – see the Calendar of Meetings) will no doubt also be.

Contributed by the Editor

BRIEF BOOK REVIEWS

TW Greene and PGM Wuts. *Protective Groups in Organic Synthesis*. Third edition. Wiley. 1999. ISBN 0-471-16019-9.

The writers of publishers' blurbs are, like Dr Johnson's authors of lapidary inscriptions, not on oath. But what the copywriter says in this case does not breach the UK Trades Descriptions Act, and the simplest way of outlining the content and scope of this valuable source is to reproduce the blurb:

"Reflecting the latest advances in protective group methodology, this third edition of the proven laboratory reference is expanded by more than 50%, providing readers with a comprehensive compendium of 1,050 of the most useful protective groups as well as 5,350 references to original publications. Protective groups are organised by six major organic functional groups: hydroxyl, amino, carboxyl, carbonyl, sulfhydryl, and phosphate groups (the last new to this edition). Also added in this edition are protection of alkyne-CH, expanded coverage of protection of all groups, and many new enzymatic methods of protection and deprotection. Each chapter briefly describes the classes of available protective groups, followed by an in-depth look at the chemistry of individual protective groups, their properties, and the best methods of formation and cleavage. Ten reactivity charts with more than 28,000 entries summarise the relative reactivities of 270 commonly used protective groups with 108 reagents. This book will be an indispensable reference for synthetic chemists and students."

There are a few peculiarities of organisation (Procrustean forcing of *im*-, *in*- and amide nitrogen into the chapter on amino-group protection, for example), and sometimes material of prime importance to peptide chemists (such as the references to Hmb protection) is well buried among stuff which is probably of little importance to anybody. But as a bibliographic resource for protecting groups generally, ideas for refinements in methodology (in linker chemistry as well as protecting group chemistry), and possible escape routes from synthetic dilemmas, it is invaluable.

S Bajusz and F Hudecz (Eds.). *Peptides 1998*. Proceedings of EPS-25, Budapest, 1998. Akadémiai Kiadó, Budapest. ISBN 963 05 7622 8.

These Proceedings were published with all the crisp efficiency which characterised the Budapest 1998 Symposium they record, arriving in England only about eight months after the event. We congratulate the Editors, who were of course also the principal organisers of the Symposium.

The Proceedings of the previous Budapest EPS (EPS-7, 1964) were also published by Akadémiai Kiadó, as a special issue of *Acta Chimica Academiae Scientiarum Hungaricae*, 1965, 44(1-2), 1-239. The two make an interesting comparison. For EPS-7 we have about one third as many pages as for EPS-25, in a 500g slim soft bound format; the Proceedings volume for EPS-25 weighs in at 1.7Kg. It has around 400 contributions and is provided with both author and subject indexes. But there is more to think about than mere vital statistics. Many of us have grown in girth during the interim, after all, and we do not want to dwell on that. We would rather reflect on the expansion of our horizons. So it is with EPS-7 and EPS-25. In 1964 the syllabus was almost entirely chemical, and indeed largely synthesis; insulin, glucagon and gastrin were the most ambitious targets discussed. By 1998, the range was greatly extended. Random dipping finds of course a lot of relevant organic chemistry, but we also note many contributions on topics which would not have been considered appropriate in 1964 (in some cases they could hardly have been imagined): epitope mapping, high-tech mass spectrometry, conformational calculations, software, biological peptide pools, platelet aggregation, peptide design, Alzheimer's, drug delivery, diverse disease therapies, and so on. And as for targets, we need only mention the total solution synthesis of *Aequorea victoria* green fluorescent protein, 238 residues in one sequence. (For a striking image, see the front page.) Perhaps the most surprising observation to be made about the 1964 Proceedings, however, is the complete absence (so far as I can tell - there is no index) of any reference to solid phase peptide synthesis, which was described by Bruce Merrifield in *JACS* a full year before EPS-7 took place - an omission made good by the welcome given to him at EPS-25.

Any peptide scientist who was not fortunate enough to be able to attend in Budapest in 1998 will want to have a copy of these Proceedings.

R. Epton (Ed.) *Innovation and Perspectives in Solid Phase Synthesis*. Mayflower Worldwide, 1999. ISBN 0-9527011-3-8.

The 5th Epton Symposium took place at Imperial College, London in September 1997. The effluent volume is not really a full Proceedings, because performing delegates were not subject to publishing obligations. But over 80% [57] of the invited and contributed lectures were written up and are published herein, together with most [54] of the poster contributions. The result is a rather useful volume comprising a mix of six-, four- and two-page papers nicely edited to near uniformity, with author and subject indexes. Its full omnibus title "Innovation and Perspectives in Solid Phase Synthesis and Combinatorial Libraries. Peptides Proteins and Nucleic Acids. Small Molecule Organic Chemical Diversity" indicates its scope, but perhaps appears to dilute a little the fact that a very high proportion of what is set out in it is peptide science in one guise or another.

Y Shimonishi (Ed.). *Peptide Science – Present and Future*. Kluwer, 1999. ISBN 0-7923-5271-8.

The 1st International Peptide Symposium was held in Kyoto under the Chairmanship of Yasutsugu Shimonishi, in December 1997. The American, Australian, European and Japanese Peptide Societies were all Sponsors, and China was also represented on the International Liaison Committee. The Proceedings have been edited into an imposing volume with 285 diverse contributions and a good subject index (but no author index). The delay in publication (in Europe) is to be regretted, and occasions at least one minor absurdity: on page 13 Shumpei Sakakibara says “I am optimistic about the total synthesis of GFP [Green Fluorescent Protein] as we have not yet encountered any initial problem ...” – but by the time this optimism was published we already knew and had seen in print (in the Proceedings of EPS-25) that a successful total synthesis had been achieved. Professor Sakakibara goes on to say in closing his presentation “By applying these methods I am certain in general we are able to synthesize an ordinary 100-residue protein within several months, and a 200-residue protein within a year.” An astounding cool generalisation, made possible by a prodigious amount of work. Following after Professor Sakakibara, our then EPS Chairman Dietrich Brandenburg and Professor Shiba reflect on that, and where peptide science is headed, with many thought-provoking observations. The Osaka Protein Research Foundation database now acquires references to papers in peptide science at about 25,000 p.a., for example, and about 2000 peptide syntheses are reported annually (rising). Small wonder that the various Symposia and Proceedings volumes like this one have become an indispensable way of keeping abreast of what is happening in the field on a broad front.

M. Kondo (Ed.) *Peptide Science 1998*. Protein Research Foundation, Osaka, 1999. ISBN 4-88667-335-X.

This volume is the Proceedings of JPS-35, held at Saga City 7-9 October 1998. The publishers have achieved a remarkable feat (no more than their track record in fact, but relatively speaking a remarkable feat all the same) in getting it out ahead of the Proceedings of EPS-25, which preceded JPS-35 by a month. It was even ahead of the Proceedings of IPS-1, which took place in Japan a full year earlier still. It stands on my bookshelf beside its predecessors in upright disciplined uniformity, but there is a change. The titles of previous volumes have all been *Peptide Chemistry 1995*, *Peptide Chemistry 1996* and so on, but the 1998 Proceedings volume is entitled *Peptide Science 1998*, and this is to be the style in future. We note too that the series now has an ISSN (1334-7661) as well as ISBNs for individual volumes. All of which no doubt signals the further expansion of the subject in Japan, which already produces more peptide science per square metre than any other country in the world.

Contributed by the Editor

APS-16

The 16th American Peptide Symposium was held from 4 June - 1 July 1999 at Minneapolis, Minnesota, and was attended by more than 1,100 delegates. Approximately one third of these were from countries other than the United States. The attendees were treated to a superb scientific programme that was structured around the meeting's chosen theme “*Peptides for the New Millennium*”. It consisted of ten plenary and twelve concurrent sessions and no less than 116 oral presentations. In addition, there were more than 800 poster presentations, including those of the Young Investigators' MiniSymposium, and a number of exhibitor workshops as well as formal trade exhibitions. All of these activities, including the Opening Mixer and Symposium Banquet, took place at the Minneapolis Convention Centre. Its size may be gauged by the fact that it simultaneously hosted at least one other similar-sized meeting during the week!

The Symposium addressed virtually all aspects of peptide research, ranging from peptide design and signal transduction, genomics, therapeutics, engineering, delivery and protein folding and function. Other topics to receive much attention included synthetic methodology and analytical and biophysical methods. Each session was led by two keynote lectures that were followed by a number of shorter presentations. It is difficult (and perhaps invidious!) to list the highlights as there were so many of them. Nevertheless, particularly noteworthy were the reports of expressed protein ligation for the introduction of a variety of

biophysical probes into very large proteins (Tom Muir, New York), use of transgenic sheep for the kilogram scale production of amidated calcitonin peptides (Ian Cottingham, Scotland), development of integrin antagonists (Horst Kessler, Munich), preparation and use of targeted libraries in developing protease inhibitors (Jon Ellman, Berkeley), and the preparation of cyclic prodrugs as a means of delivering peptides across membrane barriers. The final session, "Perspectives for the New Millennium", chaired by Bruce Merrifield, was a both animated and measured debate by a panel of distinguished researchers who proffered their views as to where peptide research would lead in the next decade.

The 1999 recipient of the Merrifield Award was Dr. Daniel H. Rich, the Ralph F. Hirschmann Professor of Medicinal and Organic Chemistry of the University of Wisconsin-Madison College of Pharmacy and Department of Chemistry. This award, known previously as the Alan E. Pierce Award, is the highest honour of the American Peptide Society. Dr Rich described his seminal work over the decades on the design of enzyme inhibitors via peptidomimetics. Dr Dan Veber delivered the Emil Kaiser, Sr., Lecture on his pioneering work on the development of peptide inhibitors of cathepsin K.

The enormous success of the Symposium, given its sheer scale, was testament to the outstanding organisation by the co-chairs, George Barany and Gregg Fields, and their tireless teams of sub-committees. Preparation of the Symposium proceedings is now well underway for publication in mid-2000. Many details of the Symposium including the scientific program and over 1000 photos taken during the week may be accessed on its excellent web site on:

<http://www.chem.umn.edu/16aps/welcome.html>

This site will be maintained for at least a further twelve months.

The week concluded with the Symposium Banquet, at which formal announcements were made regarding APS-17/IPS-2, to be co-chaired by Richard Houghten and Michael Lebl in San Diego 9-14 June, 2001.

Contributed by John D Wade

SELF-ASSEMBLING PEPTIDE SYSTEMS

One of the major drivers in biological research is the establishment of structures and functions of the 100,000 or so proteins in our bodies. Each has a characteristic 3-dimensional structure, highly "ordered" yet "disordered"! This structure is essential for a protein's function and, significantly, it must be sustained in the competitive and complex environment of the living cell. It is now being recognised that when a cell loses control, proteins can self-assemble into more complex supermolecular structures such as the amyloid fibres and plaques associated with the pathogenesis of prion (CJD) or age-related (Alzheimer's) diseases. This is a pointer to the wider significance of the self-assembling properties of polypeptides. It has long been known that, in silk, polypeptides are assembled into β -sheet structures which impart to the material its highly exploitable properties of flexibility combined with high tensile strength. But only now emerging is the recognition that peptides can self-assemble into a wide variety of non-protein-like structures, including fibrils, fibres, tubules, sheets and monolayers. These are exciting observations and the potential for materials and medical exploitations is very wide-ranging. Over 80 scientists from Europe, USA, Japan and Israel, met 1-6 July 1999 in Crete (with support from major sponsors ARO, ERO, DARPA, NIH, NSF, ONR, Ellison Medical Foundation, Aviv Foundation, Novartis, Corning and the European Peptide Society) to discuss the prospects in the areas of biology, medicine and materials science and engineering.

The opening talk was given by the sprightly Nobel Laureate Carleton Gajdusek, who re-visited his discovery of infectious protein conformational diseases. This was complemented by the present perception of amyloid structures described by Chris Dobson of Oxford University. Surprisingly, alogous protein self-assembly processes can also influence the transfer of genetic information and organism development, as outlined by Susan Lindquist of University of Chicago. Other highlights included material science and engineering, e.g. creative peptidomimetics that undergo interfacial assembly and mineralisation as a route to composite materials, as described by Jeff Kelly of Scripps Institute; novel hybrids of block copolymer with peptide ligands by Sam Stupp of Northwestern University; the enormous potential for exploitation of peptide materials by Dan Urry of University of Minnesota; new peptide scaffolds for tissue engineering by Shuguang Zhang of MIT. The exciting underlying fundamental science was evident in the description of the influence

of molecular structure on the folding of peptides by Ted Atkins, University of Bristol, and in the role of peptide chirality in stabilising fibril and fibre-like polymer structures, discussed by Amalia Aggeli of University of Leeds. Alexander Rich of MIT took us back to 1955 when he and Crick made a structural model of collagen with steel plates.

There was spirit of excitement about the Workshop indicative of an important new endeavour. The emerging perception is that of a new class of materials set to become commercially viable early in the 21st century. This stems from the opportunities for processing by the self-assembly route combined with the fact that, just as in the case of proteins, functionality can be designed into the self-assembled structures. They can be made responsive to pH change, mechanical forces, temperature, pressure, electro-chemical potential, electrical and magnetic fields, and light. They can function as sensors and actuators and can act as molecular motors capable of interconverting energies (*vis-à-vis* metabolism). They can even be programmed for biodegradation! Extraordinary and widely exploitable properties. Particularly in view of the exceptional thermal stability of peptides (up to 350°C). Nor are production costs insurmountable. Large-scale production by the fermentation or transgenic plant or animal routes, at the ton level if needed, are already being developed. Projected costs are as low as a few euros per kilogram. Applications in tissue engineering, biomedical devices, industrial fluids and personal care products are all under development. Could these new materials become the wonder polymers of the 21st century?

The Workshop was charged with a vibrant atmosphere as may be expected of this newly developing interdisciplinary area. As Francis Crick best put it "In Nature, hybrid species are usually sterile, but in science the reverse is often true. Hybrid subjects are often astonishingly fertile, whereas if a scientific discipline remains too pure it usually wilts". It was so successful that it has already been agreed to hold a second Workshop in the summer of 2001, at the same venue - The Capsis Hotel at Aghia Pelagia, Crete, Greece.

*Contributed by Amalia Aggeli and Neville Boden,
Centre for Self-Organising Systems, The University of Leeds
and
Shuguang Zhang,
Centre for Biomedical Engineering, MIT, USA.*

2nd BULGARIAN PEPTIDE SYMPOSIUM

A group of about 75 people attended the 2nd Bulgarian Peptide Symposium held in Panitchishte, a resort in the Rile National Park, located about 80 kilometres south of Sofia, 8-10 October. All the participants were from Bulgaria, except me, attending on behalf of the Society. The language used was Bulgarian, but I had the assistance of a very kind young researcher who tried a sort of simultaneous translation.

The Symposium coincided with the jubilee of two outstanding Bulgarian chemists – Professor Dr L Mladenova Orlinova and Professor Dr B Aleksiev. The opening lecture was presented by Professor Aleksiev, a former national representative of Bulgaria on the EPS Council, entitled "Investigations on the venom of the Bulgarian snake (*Vipera ammodytes*)". This was followed by my own lecture on "Some examples of glycopeptide synthesis". The 13 oral communications and the 17 poster presentations dealt essentially with the isolation and activity of natural peptides, structure-activity relationship studies and physiological studies on bioactive peptides, peptidomimetics, modified amino acids, structure elucidation and analysis of peptides, mechanism of enzymatic synthesis of peptides and isolation of enzymes. Several companies and institutions contributed to the finances of the Symposium, which was also supported by the Society. It is encouraging for the future that a large number of young, enthusiastic researchers attended the meeting. BPS-3 is scheduled for two years hence.

*Contributed by Raniero Rocchi,
with additional information from
Ljubomir Vezenkou, Chairman BPS-2*

MISCELLANEOUS NEWS IN BRIEF



Norbert Sewald

- Norbert Sewald has moved from Leipzig to a Chair of Organic and Bioorganic Chemistry at the University of Bielefeld. Peptide science will continue at Leipzig, however, as Annette Beck-Sickinger is to be Hans-Dieter Jakubke's successor there.
- Selected contributions presented at the Ringberg Conferences have been collected and published as a Festschrift in honour of Erich Wunsch to mark his 75th birthday. For details see the New Publications Notices.
- The French Peptide and Protein Group (GFPP) had a very successful one day meeting devoted to chemical ligation in Paris on 21 September 1999, with Bob Ramage, Keith Rose and Tom Muir as visiting lecturers. Organisation was by Oleg Melnyk and Dominique Lelièvre; around a hundred people attended.
- The Editor's brief EPS Newsletter report on EPS-25 has been handsomely republished in *Biokémia* [Quarterly Bulletin of the Hungarian Biochemical Society] 1999 (Szeptember), p68, thus incidentally ensuring that the Rudinger acyl azide preserved by Shumpei Sakakibara has entered the proper scientific literature.
- Professor Takayuki Shioiri (Faculty of Pharmaceutical Sciences, Nagoya City University) received the Japanese Peptide Society Award at the 36th Japanese Peptide Symposium held in Kyoto on October 21-23, in recognition of his work on "Synthetic Studies of Biologically Active Peptides of Aquatic Origin involving Unusual Amino Acids". At the same Symposium, Dr. Koji Nagata (Biotechnology Research Center, University of Tokyo) received the Japanese Peptide Society Award for Young Scientists in recognition of his work on Bombyxin, an insulin-like brain peptide of the silkworm. The 37th Japanese Peptide Symposium will be held 18-20 October 2000 in Nagoya, Japan. For details, contact Professor Takayuki Shioiri, Faculty of Pharmaceutical Sciences, Nagoya City University, Tanabe-dori, Mizuho-ku, Nagoya 467-8603, Japan. Fax +81-52-834-4172; e-mail shioiri@phar.nagoya-cu.ac.jp.

In Memoriam MARC RODRIGUEZ

Marc Rodriguez passed away on August 17, 1999. Marc was a very nice colleague, as well as a wonderful chemist devoted to peptide and peptidomimetic chemistry for more than 15 years. He received his PhD degree in 1983 in the laboratory of Professor JL Imbach under the supervision of Jean Martinez, at Montpellier University, France. During his PhD thesis, his interest was focused on the synthesis of various amino acid and peptide nitrosourea derivatives which showed high activity as oncostatic compounds. After a postdoctoral fellowship with Professor Murray Goodman at the University of California at San Diego, he joined in 1982 the group of Jean Martinez at the "Centre CNRS-INSERM de Pharmacologie-Endocrinologie" in Montpellier as an INSERM Research Associate. There he has been involved in the synthesis of peptide and pseudopeptide chemistry. In collaboration with Professor Jean Martinez, he demonstrated that non-hydrolysable peptide bond surrogates could be used successfully to convert neuropeptides including gastrin and cholecystokinin into more stable molecules with antagonist or highly potent agonist activities. In 1992, he moved to Glaxo Research Institute (Research Triangle Park, USA) as a Visiting Scientist where he successfully developed novel and potent peptide inhibitors of src SH2 domain. In 1994, he returned to France where he was appointed head of the R&D Department at the French Peptide Company Neosystem (SNPE Group), Strasbourg, France. He has authored and co-authored about 100 scientific papers in the field of peptide chemistry.

Contributed by Jean Martinez

In Memoriam GILLES A. GACEL



Professor Gilles A. Gacel, Dean of the Pharmaceutical Science Faculty in the Jules Vernes University of Picardie, in Amiens (North of France), died suddenly on April 13th after a massive heart-attack, a few months short of his fiftieth birthday. Professor Gacel was a researcher, a teacher and an administrator who cared passionately about his work.

Gilles A. Gacel was born on August the 7th 1949, in Paris. During his studies, he met his wife, Danièle, now also a pharmacist and they had a daughter Céline, who is 16. When he finished his studies, Gilles Gacel was interested in analytical and structural organic chemistry. His first results were obtained, at the University René Descartes-Paris V, in the use of Lanthanides for the attribution of complex structures through NMR analysis. Then, Gilles Gacel enjoyed a successful career both as a teacher and a researcher. He rapidly oriented his research toward the chemistry of neuropeptides and was a pioneer in the field of enkephalin structure-activity relationships. With B.P. Roques and M.C. Fournié-Zaluski, he designed enzymatically stable enkephalin agonists highly specific either for μ or δ opioid receptor subtypes, involved in antinociceptive and behavioral processes. His name is associated with the development of μ ligands like TRIMU 4 and 5 and with δ ligands like BUBU, DSLET, DTLET.

He also made an important contribution to the design of radiolabelled and enzymatically stable analogs of the neuromodulator cholecystokine CCK8, which served as models in order to analyse the central CCK-B receptor.

Gilles Gacel inspired a great number of pharmaceutical chemists to work on the synthesis of peptides and peptidomimetics. He was member of the American Peptide Society and from 1984 to 1993, of the board of the "Groupement français des peptides et des protéines". In 1988, he was appointed Professor of Organic Chemistry, in Amiens. There, he set up new research programs in the Biomolecule Research Group (EA 2629), and was working in the field of biomolecules metabolism especially on the proteasic activity of thermolysin.

In 1993, he was elected as Dean of the Pharmaceutical Science Faculty and was reelected in 1998. He led his Faculty with great enthusiasm and vitality and was very much appreciated by the professional staff of pharmacists as well as by local administrations and the drug industry as a whole. He was also a member of the Regional Comitee of Pharmacists. Furthermore, he was quickly accepted and greatly appreciated by all students in his Faculty.

His scientific contribution was recognized by the award of several scientific prizes and in 1997, he was made a "Chevalier des Palmes Académiques". Professor Gilles Gacel was a very pleasant and popular colleague who was able to create a dynamic work environment.

We will all miss him.

Contributed by Christiane Garbay

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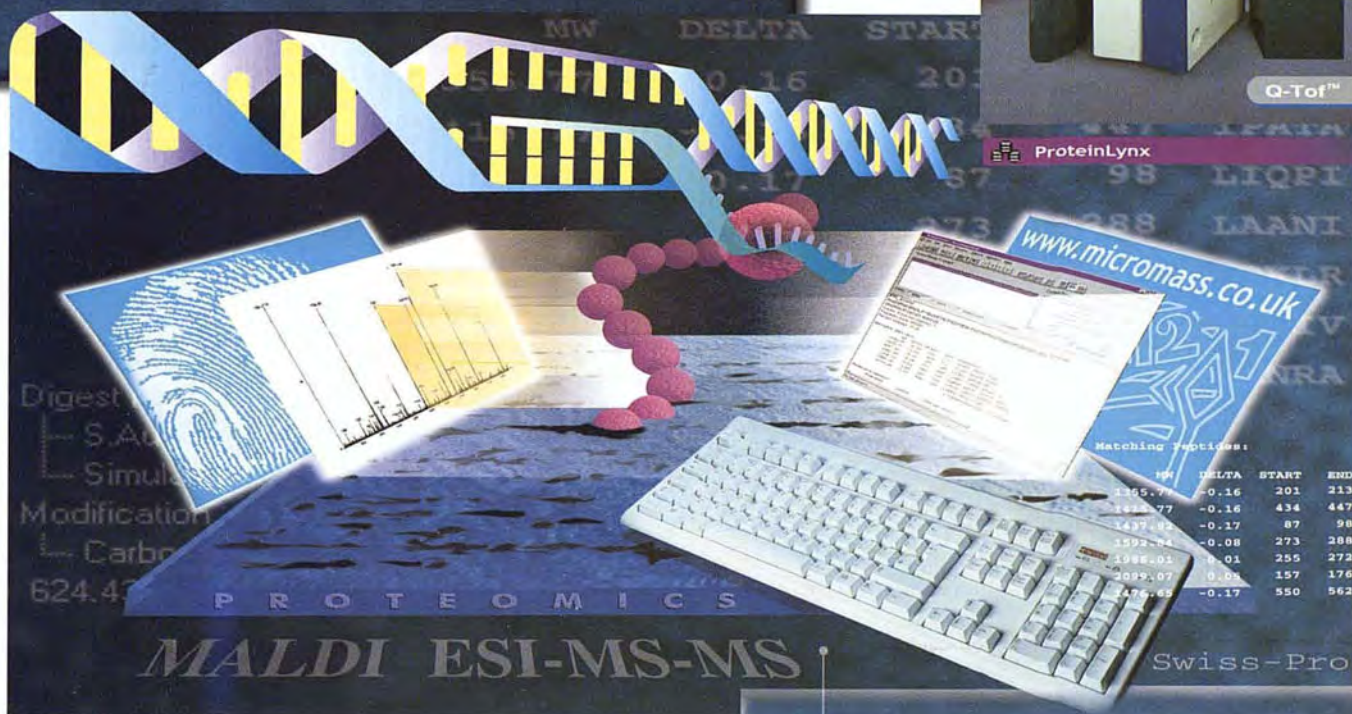
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EPS-26 MONTPELLIER SEPTEMBER 2000 REMINDER



Place de la Comédie
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Hopefully this reminder is actually completely superfluous, but our biennial Symposia are so much the core of our activities that it seems worthwhile to make it. Contact details can be found in the Calendar of Society Meetings.

NEW PUBLICATION NOTICES

Information has been received on the following new books, journals, conference proceedings etc. which may be of interest to Members. Notices will be repeated in a future issue if it is necessary to correct them or desirable to provide fuller information. Suggestions for future entries in this section should be sent to the Editor, who will welcome them: full data should be provided, including the ISBN or ISSN. Listing here does not preclude a subsequent review in the Newsletter or the *Journal of Peptide Science*.

BIOACTIVE PEPTIDES IN DRUG DISCOVERY AND DESIGN: MEDICAL ASPECTS

Biomedical and Health Research, vol. 22.
Ed. J Matsoukas and T Mavromoustakos.
IOS Press, Amsterdam.
ISBN 90 5199 4257 7.

CHEMISTRY AND BIOLOGY OF SERPINS

Ed. FC Church, DD Cunningham, D Ginsburg, M Hoffman and SR Stone.
378pp, 1998. Kluwer.
ISBN 0-306-45698-2.

CHEMOKINES

Chemical Immunology, vol. 72.
Ed. A Mantovani.
xii + 208pp, 1999. Karger.
ISBN 3-8055-6861-4.

ENCYCLOPEDIA OF CONTROLLED DRUG DELIVERY

Ed. E Mathiowitz.
Two vols. Wiley.
ISBN 0-471-14828-8.

FRONTIERS OF PEPTIDE SCIENCE

Proceedings of APS-15.
Ed. J Tam and PTP Kaumaya.
1000pp, 1999. Kluwer.
ISBN 0-7923-5160-6.

FUTURE ASPECTS IN PEPTIDE CHEMISTRY

Selected contributions presented at the Ringberg Conferences, 1993 and 1997.
Ed. W Voelter and G Fischer.
Collection Symposium Series Volume 1, 1999.
ISBN 80-86241-03-3.

GRAMICIDIN AND RELATED CHANNEL-FORMING PEPTIDES

Novartis Foundation Symposium 225.
Ed. DJ Chadwick and G Cardew.
ix + 223pp. Wiley.
ISBN 0-471-98846-4.

HANDBOOK OF ENZYME INHIBITORS

Third edition.
H Zollner.
Four vols. Wiley.
ISBN 3 527 30103 8.

HANDBOOK OF PROTEOLYTIC ENZYMES

Ed. AJ Barrett, ND Rawlings and JF Woessner.
xxx + 1666pp, 1998. Academic Press.
ISBN 0120793709.

INNOVATIONS AND PERSPECTIVES IN SOLID PHASE SYNTHESIS

Proceedings of the 5th Epton Symposium.
Ed. R Epton.
See above for bibliographic details and a brief review.

INSULIN ACTION

Ed. AK Srivastava and BI Posner.
200pp, 1998. Kluwer.
ISBN 0-7923-8113-0.

INTEGRATION OF PHARMACEUTICAL DISCOVERY AND DEVELOPMENT. CASE HISTORIES

[Many of the case histories are peptide-related].
Ed. RT Borchardt, RM Freidinger, TK Sawyer and PL Smith.
1998. Kluwer.
ISBN 0-306-45743-1.

NEUROPEPTIDES

Ed. C Sandman et al.
450pp, 1999. NY Acad. Sci.
ISBN 1-57331-224-X.

PEPTIDE SCIENCE 1998

Ed. M Kondo.
See above for bibliographic details and a brief review.

PEPTIDE SCIENCE - PRESENT AND FUTURE

Proceedings of IPS-1.
Ed. Y Shimonishi.
See above for bibliographic details and a brief review.

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PEPTIDES - BIOLOGY AND BIOCHEMISTRY
Proceedings of the 1996 Chinese Peptide
Symposium.
Ed. X-J Xu, Y-H Ye and JP Tam.
284pp, 1998. Kluwer.

PEPTIDES 1998
Proceedings of EPS 25.
Ed. S Bajusz and F Hudecz.
For a review and details see above.

PROTEASES OF INFECTIOUS AGENTS
Ed. BM Dunn.
xvii + 282pp, 1999. Academic Press.
ISBN 0-12-420510-0.

PROTECTIVE GROUPS IN ORGANIC
SYNTHESIS
Third edition.
TW Greene and PGM Wuts.
For a review and details see above.

RENIN-ANGIOTENSIN
Ed. H Ulfendahl and M Aurell.
324pp, 1998. Portland Press.
ISBN 1 85578 104 2.

VIP, PACAP, AND RELATED PEPTIDES
3rd International Symposium.
Ed. W-G Forssmann and SI Said.
750pp, 1998. NY Acad. Sci.
ISBN 1-57331-153-7.

CALENDAR OF SOCIETY MEETINGS

An exhaustive list of meetings relevant to the interests of members used to be given under this heading, but as from January 1999 this list, updated every month, has been printed in the Journal of Peptide Science. It was felt that this would be much more useful to the Peptide Community because of the greater frequency of publication. Organisers of Meetings are asked to continue feeding the Editor with information, however. The Newsletter Calendar now only lists Society Symposia and Small Meetings being arranged under its auspices.

PROTEASE INHIBITORS AND ACTIVATORS:
STRATEGIC TARGETS FOR THERAPEUTIC
INTERVENTION
BS/RSC Protein and Peptide Science Group
International Meeting
17-20 April 2000, Oxford, UK.
*Professor Roger Epton [e-mail
r.epton@mayflower,demon.co.uk]*

7th NAPLES WORKSHOP ON BIOACTIVE
PEPTIDES and
2nd PEPTIDE ENGINEERING MEETING
5-8 September, 2000, Capri, Italy.
Arranged as a Satellite Meeting associated with
EPS-26.
*Co-Chairmen: Professor E Benedetti
[e-mail benedetti@chemna.dichi.unina.it],
Dr S Yoshikawa [e-mail yoshikawa@onri.go.jp]
and Professor C Toniolo.*

26th EUROPEAN PEPTIDE SYMPOSIUM
10-15 September 2000, Montpellier, France.
*Professor Jean Martinez [e-mail
martinez@pharma.univ-montpl.fr].
http://ww2.pharma.univ-montpl.fr/26_EPS*

2nd INTERNATIONAL PEPTIDE SYMPOSIUM
(17th AMERICAN PEPTIDE SYMPOSIUM)
9-14 June 2001, San Diego, California
For more information contact *Eileen Weiler,
e-mail weiler@tpims.org*

7th INTERNATIONAL SYMPOSIUM, SOLID
PHASE SYNTHESIS
18-22 September 2001, Southampton, UK
*Professor Roger Epton [e-mail
r.epton@mayflower,demon.co.uk]*

27th EUROPEAN PEPTIDE SYMPOSIUM
31 August - 6 September 2002, Sorrento, Italy.
*Professor E Benedetti [e-mail
benedetti@chemna.dichi.unina.it].*

28th EUROPEAN PEPTIDE SYMPOSIUM
Early September 2004, Jerusalem.
Professor M Fridkin.

AKABORI MEMORIAL AWARD

This Award, which has kindly been donated by Rao Makineni, is presented in commemoration of Professor Shiro Akabori as the founder of the Japanese Symposia on Peptide Chemistry. The Award will be given once every two years from 2000. There is no restriction as to the nationality, age or position of those nominated. Nominations must be supported by evidence of the distinction of the candidate in research on the chemistry, biochemistry or biology of peptides. The winner will give a lecture at the Japanese Peptide Symposium in the year of the Award. Nominations for the Akabori Memorial Award 2000 should be sent to Dr Yasutsugu Shimonishi, Chairman of the Selection Committee, Japanese Peptide Society, Institute for Protein Research, Osaka University, Yamadaoka, Suita, Osaka 565-0871, Japan. *Closing date for nominations 30 April 2000.*

SOCIETY NOTICES

URGENT REQUESTS FROM THE SECRETARY

YEAR 2000 AWARDS

EPS-26, Montpellier September 2000

All members of the Society are invited to send to the Secretary their nominations for the following Awards. *Closing date for nominations 31 January 2000.*

JOSEF RUDINGER MEMORIAL LECTURE

Sponsored by PolyPeptide Laboratories

This award is presented "in commemoration of Josef Rudinger's role in the foundation of the European Peptide Symposia and of the diverse contributions he made to peptide chemistry." There is no restriction as to the nationality, age or position of those nominated. Nominations must be supported by evidence of the distinction of the candidate in research on the chemistry, biochemistry or biology of peptides.

LEONIDES ZERVAS AWARD

Sponsored by Bachem AG Switzerland

This award is presented "to the scientist who has in the opinion of the Council of the Society made the most outstanding contribution to the chemistry, biochemistry, or biology of peptides in the five years preceding the date of selection." There is no restriction as to the nationality or position of the candidate, but the regulations give preference to *younger* candidates. Nominations must be supported by evidence of the suitability of the candidate, including a *curriculum vitae* and a list of publications (with copies of the most important references).

Send nominations by post, e-mail or fax, to Dr JS Davies, Chemistry Dept., University of Wales, Swansea, Singleton Park, Swansea SA2 8PP (Fax No +44 1792 295747): j.s.davies@swansea.ac.uk by 31 January 2000.

Once received, the nominations will be passed on to the Scientific Sub-Committee, which will select candidates from the nominations, and can if necessary add names to the list. After discussion with the Executive Committee, the Secretary will organise the Council ballot on the nominations.

NEWS ON TRAVEL AWARDS FOR EPS-26

We once again appreciate contributions from Bachem AG Switzerland, and the ESCOM Science Foundation to enable the Montpellier Symposium Organisers to arrange travel bursaries for EPS-26 participants. The Society itself has also allocated a sum of money to the Symposium Organisers to support Travel grants. Applications for all these grants have a deadline of *1 March 2000* and should be made to the Chairman of the Organising Committee at the same time as an abstract is submitted for oral or poster presentation.

The **Bachem Travel Grants** are open to young participants below 35 years of age. Preference will be given to participants who have to travel long distances, and will be restricted to one participant per country, unless funds remain for further allocations. Pre-Doctoral applicants must send a recommendation from their supervisor.

The **ESCOM Foundation Travel Grants** awardees should be 30 years or younger at the time of the Symposium and may be PhD students or young post-docs accepted to give poster or lecture presentations at Montpellier, within the field of biomedical research or related to drug discovery.

The **European Peptide Society Travel Grants** will be administered under the same rules and principles as the Bachem Travel Grants.



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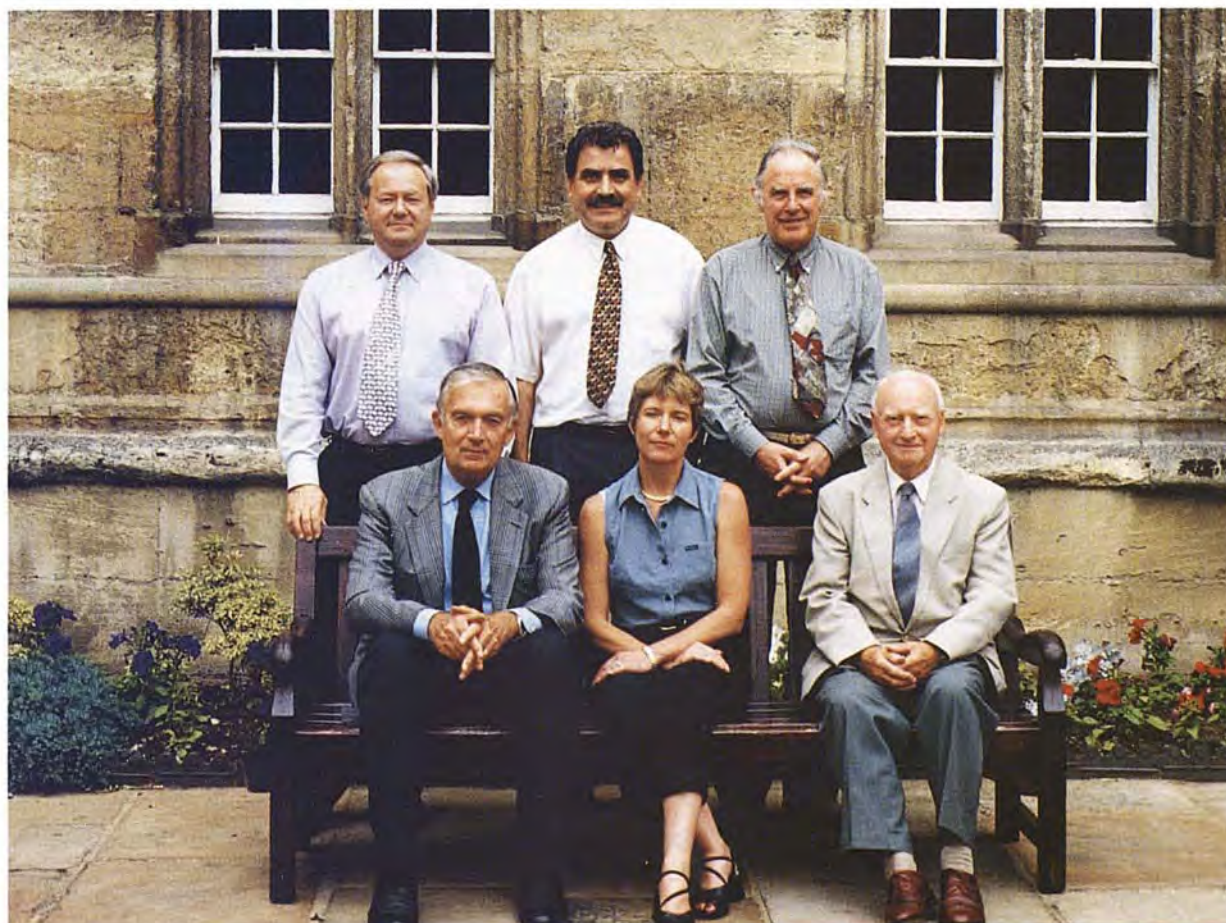
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NEWS FROM THE EXECUTIVE COMMITTEE.

- Membership of the Scientific Sub-Committee until 2002 has been agreed as follows:-
Hélène Gras-Masse (Pasteur Institute, Lille, France) (*Chairperson*).
helene.gras@pasteur-lille.fr
David Andreu (University of Barcelona, Spain).
andreu@admin.qo.ub.es
Sandor Bajusz (Institute for Drug Research, Budapest, Hungary).
h13370baj@ella.hu
Annette Beck-Sickinger (ETH, Zurich, Switzerland).
Annette@pharm.ethz.ch
Anand Dutta (Astra Zeneca Pharmaceuticals, UK).
Anand.Dutta@Alderley.Zeneca.com
- The Executive Committee has accepted that the National Representatives for Slovakia (Dr Stefan Zorad), and Slovenia (Dr Jurka Kidric) will become full Council Members in September 2000, with their first term of office ending in September 2002.
- Organisers of Small Meetings are reminded that there is still a Small Meetings Fund available (able to allocate up to £1000 sponsorship) and can be applied for through the Scientific Affairs Officer, Professor Hélène Gras-Masse (Pasteur Institute, Lille, France). helene.gras@pasteur-lille.fr
- EPS-27 will be held at the Sorrento Palace Hotel, Sorrento, Italy, 1-7 September 2002.
- EPS-28, which will also be IPS-3, will be held in Jerusalem in 2004.



***The Executive Committee Meeting
Oxford July 1999***

Standing: John Jones, Jean Martinez, John Davies
Seated: Raniero Rocchi, Hélène Gras-Masse, Geoffrey Young

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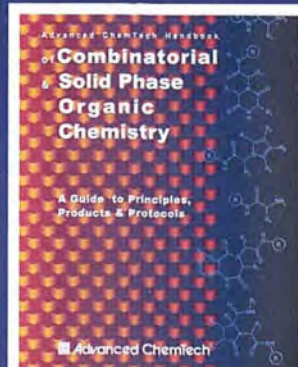
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