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Lay-out

Camilla Boquist/Lådan & Co

Successful Workshop on

New Safe Medicines Faster



Mr Bruno Hansen welcoming the initiative.

On March 15-16, 2000, a Workshop on "New Safe Medicines Faster" was organised with the ultimate goal of increasing safety, efficacy, speed and process capacity for the downstream development of new safe drugs. Representatives from academia, industry and regulatory authorities made a thorough analysis of the key requirements to achieve this aim. The outcome will be presented in a report to the European Commission, as a follow-up to the EUFEPS proposal of July 1, 1999, regarding a new key action: "New Safe Medicines Faster" for the forthcoming 6th Framework Programme for Research and Technological Development of the EU.

Organisation and support

An organising committee with representatives from EUFEPS, EFPIA (European Federation of Pharmaceutical Industries and Associations), regulatory authorities, academia and industries planned the Workshop.



Prof. Ole J. Bjerrum opening the Workshop.

The Workshop was supported by the EU as an Accompanying Measure under Quality of Life in the 5th RTD Framework Programme. Additional sponsorship for the Workshop, including the reception and the dinner, was kindly provided by AstraZeneca (UK), Parmindustria (Italy),

Continued on page 2

Organising Committee:

Prof. G. Alderborn, Uppsala, SE (Academia)
Prof. O. J. Bjerrum, Bagsværd, DK (Novo Nordisk)
Prof. C.-M. Lehr, Saarbrücken, DE (Academia)
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Dr J. Reden, Brussels, BE (EFPIA)
Dr J. Renneberg, Copenhagen, DK (Regulatory)
Prof. J. Vessman, Mölndal, SE (AstraZeneca)



Prof. Trevor M. Jones challenging the audience.

CONTENTS: • New Safe Medicine Faster 1-3 • Candidate selection and drug evaluation 3 • Welcome to EUFEPS 2000 in Budapest 4-5 • Satellite symposium at EUFEPS 2000 4 • Second European Graduate Student Meeting 5 • Executive summary 6 • Conference on Optimising Drug Development 7 • World Conference on Drug Absorption and Drug Delivery 7 • International Pharmaceutical Technology Symposium 7 • Calendar 8

Photos: Philippe Veldeman



Workshop sessions delivering input for future research in drug development.

Novo Nordisk (Denmark), Organon (The Netherlands), Pharmacia & Upjohn (Belgium) and Servier (France).

Workshop participants

Workshop participation was by invitation only, since the organisers wanted to focus on the needs of the pharma industry achieved through a true bottom-up process covering as many European companies as possible. Out of a total of 115 Workshop participants, 75 came from the pharmaceutical industry (representing 36 companies), including CROs, 24 from academia (20 universities and schools of pharmacy), and 5 from European agencies. Also, a number of officials and civil servants of the European Commission attended. The Organising Committee is content with this outcome, and with the number of scientific fields represented by these delegates, although clinical pharmacology was underrepresented in the Workshop.

Workshop structure

To work with a reasonable number of participants seven discussion fora were created. The drug development process was divided into four sessions covering: 1. "How to select candidate drugs faster?", covering discovery

and selection; 2. "How to bring candidate drugs faster into human?", including the preclinical aspects; 3. "How to bring candidate drugs into full-scale production?", covering up-scaling and analytical chemistry; and 4. "How to bring drugs faster to regulatory acceptance?", comprising clinical trials and regulatory demands.

The special aspects of biopharmaceuticals were covered in session 5: "How to bring new biotech molecules into deliverable products?". The importance and expected impact of information technology (IT) were included in session 6: "How will IT be utilised to speed-up the drug development process?". Finally a fresh look was taken at the process *per se* in the session "How to streamline the drug development process from the beginning?", session 6.

Opening and lectures

The Workshop was opened by the President of EUFEPS, *Prof. Malcolm Rowland*, and by the Director of the Quality of Life Programme at the Research Directorate of the European Commission, *Mr Bruno Hansen*. On behalf of Commissioner Busquin, the latter welcomed the initiative and stressed the importance of being in contact with the contributors to future programmes at an early stage.

Distinguished lecturers were invited to set the scene for each of the seven sessions: *Prof. Trevor M. Jones*, Association of the British Pharmaceutical Industry (ABPI) London, UK, was in very fine fettle as he gave the background to the current trends in pharmaceutical industry. He pointed out that the development time, after some years of reduction, is again increasing. This, put against the ever-increasing cost, calls for faster drug development, which he foresaw as the major challenge of the 21st century.

Dr Frank Fildes, AstraZeneca, Macclesfield, UK, also in fighting spirit, emphasised that "more candidates faster are not enough - the quality of the candidates is the key". The winners should be picked earlier by predicting attributes with better data, and earlier attrition, thus avoiding wasted clinical trials. He also argued for a smooth discovery-development transition.

Prof. Staffan Folestad, AstraZeneca, Mölndal, Sweden, underlined the necessity of having a seamless process development with the right analytical tools at hand as real-time direct measurements at line/in line (i.e. better pharmacometrics). Further he saw a future in simulation and modelling of the processes.

Dr Brian White-Guay, Merck Sharp & Dohme (Europe) Inc., Brussels, Belgium, focused on the regulatory process as a bottleneck and suggested various improvements to modify the requirements, thus enhancing the efficiency, the transparency and quality standards.

Prof. Fritz Bühler, European Centre for Pharmaceutical Medicine, Basel, Switzerland, advocated a holistic approach involving European consortia: university-pharma industry-regulators working together, with data collection and analysis networks. To facilitate the clinical trials surrogate endpoints and biomarker validation were of utmost importance.

Dr Alistair Shearin, Price Waterhouse Coopers, London, UK, also stressed the current imbalance due to the long and costly developmental phase. Further he showed the power of the IT solution, if implemented throughout the drug developmental process. Also, he foresaw how simulation based on public databases of clinical data could reduce development time.

Fronting the session, *Prof. Daan Crommelin*, Utrecht University, The Netherlands, underlined the fact that better drug delivery was a big issue for biotech products. Also, he promoted the importance of delivery routes other than injection for pharmaceutical proteins.

The Workshop Sessions

Since faster drug development calls for *New Strategies, *Research and innovation, *New techniques, methodologies and processes, *Strengthened academic research and training, and *Flexible regulatory authorities, each Workshop Session was asked to frame its inputs with these issues in mind.

The seven parallel groups worked enthusiastically under the chairmanship of the invited lecturers, and after three hours of hard work, all groups delivered very useful material. Through the rapporteurs (the members of the Organising Committee, supplemented by *Prof. S. Frøkjær*, Copenhagen, Denmark, and *Prof. A. Grahnén*, Uppsala, Sweden) the material was presented in a plenary session with well-structured overheads, and the contents were further elucidated and discussed.

The outcome

Overall, it was considered realistic to conclude that the “New Safe Medicines Faster” proposal could form the basis for a new key action in the forthcoming 6th RTD Framework Programme, because drug development has: *Well-defined deliverables for the citizens, *Interfaces with many scientific areas, *Bottlenecks to be addressed, *The need for pan-European collaboration, *Job generation potential, *Room for start-ups and small and medium size enterprises (SMEs) and *Links to topics of the former EU programmes.

Besides this, a wealth of concrete research topics for the key action was identified and brought forward. These lists of topics, methodologies and techniques will in the coming months be further substantiated and discussed in subgroups and networks created during the Workshop. After final editing by the Organising Committee, a report will be delivered to the Commission, before the summer holidays.

General conclusions

- A key action on “New Safe Medicines Faster”, will fulfill a real need.
- High frontload implies downstream bottlenecks.
- Joint effort with the regulatory agencies is needed – right from the beginning.
- IT: integration is necessary for truncation of the development process.
- Training and education is as important as research.
- Centres of Excellence, public databanks and databases are needed.
- The initiative is taking shape and beginning to impact.

Future actions

In the closing session *Prof. Ole J. Bjerrum* described the future actions necessary to drive the proposal to successful completion. First of all continuous support is needed from all members organised under the EUFEPS umbrella. Therefore, if any reader of this article also wants to contribute to the initiative, their help will be most appreciated. They can join EUFEPS’ “New Safe Medicines Faster” mailing list, by contacting the EUFEPS Secretariat, and get involved in the description of the wanted research topics and/or be active as opinion leader and ambassador for the proposal. For the address of the EUFEPS Secretariat, see front page.

Conclusion

The Workshop laid a solid foundation for future work on promoting a key action on “New Safe Medicines Faster” within the EU’s 6th RTD Framework Programme. Only through massive EU funding will it be possible to create platforms where the necessary collaboration between regulatory agencies, academia and industry can take place to introduce the essential changes in the drug development process. It should be remembered that without such a transformation the high frontload of new drug candidates cannot reach its ultimate target - namely the patients.

Let the final words at the Workshop also be our motto: “Plan and act as if the New Safe Medicines Faster program were real, and your dreams will come true”.

Prof. Ole J. Bjerrum
Workshop Chair

Candidate selection and drug evaluation

Distillation of meetings

In 1998, two international meetings were convened to review the current science of drug development and the potential opportunities to optimise the process. These were: AAPS, ACCP, ASCPT, FDA Symposium on Clinical Pharmacology: Optimising the Science of Drug Development, and the 5th EUFEPS Conference on Optimising Drug Development: Fast Tracking into Human. A distillation of these conferences, entitled Optimising the Science of Drug Development: Opportunities For Better Candidate Selection and Accelerated Evaluation In Humans, is published in the June 2000 issue (Vol.10/4) of the European Journal of Pharmaceutical Sciences.

Driving forces

It is not new to readers of this Newsletter that drug discovery, lead candidate selection, and preclinical development are undergoing rapid changes, driven, in part, by scientific advances in many areas, but also by fierce competition and economic forces. As a result, the pressure to accelerate drug discovery and development is increasing. Not only providing better therapeutic agents with lower risk, but also identifying failures faster, and providing a more economical and informative development programme.

Increased integration needed

Advances in a whole host of technologies, together with a much better understanding of the way in which compounds are handled by the body and how they act to produce their effects, will facilitate the better and more rational design of new therapeutic agents and their preclinical and clinical testing. However, pressure on resources and time demands ever more efficient approaches. To meet this challenge, the authors of the Report believe that increasing integration of information from all phases of drug selection and development, through the application of modelling and simulation methodologies, will be needed.

Journal information

If you are not yet a subscriber to the European Journal of Pharmaceutical Sciences, consult the Journal Website: www.elsevier.nl/locate/ejps



Workshop delegates listening to distinguished lecturers setting the scene for the one and a half days workshop on “New Safe Medicines Faster”.

Welcome to EUFEPS 2000 in Budapest!

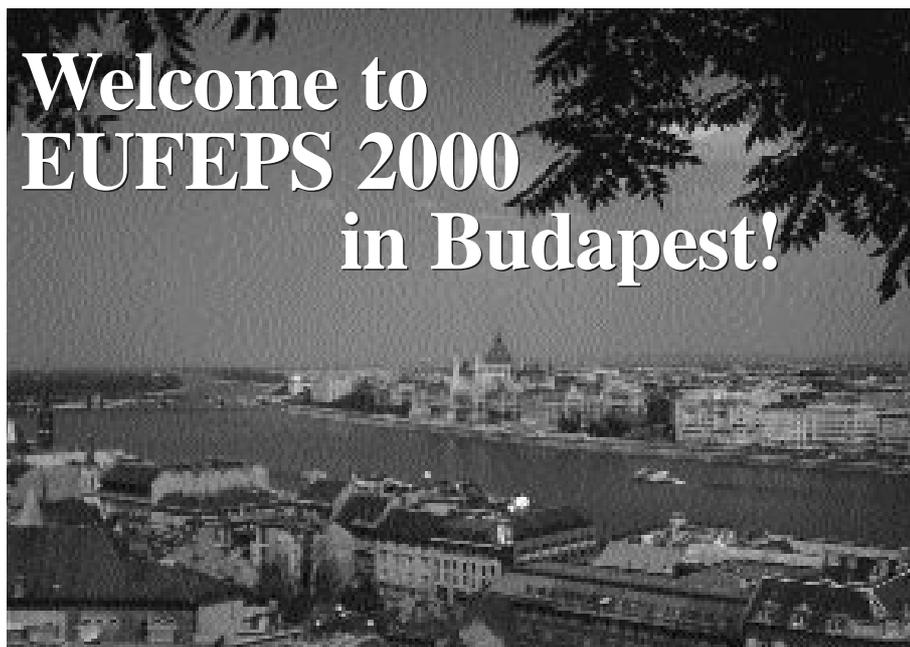


Photo: Hungarian Tourist Board

Saturday – Tuesday • September 16-19 • 2000

Welcome to EUFEPS 2000 in Budapest, the heart of Central Europe, where our Hungarian colleagues have arranged an outstanding meeting to inform and entertain delegates. This major opportunity for networking among colleagues across the pharmaceutical sciences can be found at a Congress with something for everybody: a range of up-to-the-minute Short Courses on topical issues, plus a Scientific Programme featuring Mini-Symposia, review sessions and posters covering all major issues in drug discovery, development and regulation – plus a Social Programme like no other.

Enjoy Budapest

The Congress will start with the Welcome Reception and Congress Banquet in the elegant National Gallery of Art - with a feast of gastronomic delicacies and fine Hungarian wines. This will be followed by an adventurous evening River Boat Party for all, with dinner on the Danube – plus a range of visits to the most famous venues in Budapest and Lake Balaton for accompanying persons. The whole meeting will be closed with a marvellous “Puszta Show” where you are guaranteed an evening to remember plus dinner and wines in typical Hungarian style in the countryside outside Budapest.

Science in focus

The Scientific Programme will kick off with Plenaries from *Bernard Testa* on “Optimisation of Lead Compounds”, *Ruth Duncan*

on “Polymer Therapeutics – Targeting Drugs and Genes to Tumours,” *Prof Wetzel* on “High Throughput Screening and Molecular Diversity for Drug Discovery” with a final paper from *Giovanni Gaviraghi* on “Glycine Receptor Antagonists.”

From Sunday afternoon through to Tuesday mid-day 4 Mini-Symposia will cover “New Perspectives in Natural Product Chemistry,” “Modelling during Drug Development,” “Material Science and Drug Design” and finally “Genome based Drug Therapy”- all presented by outstanding international scientists.

The regular lecture sessions will be accompanied by exactly matching Poster Sessions – with an expert review at the start

of each topic: “Regulatory, Validation and other Issues” (*Bass*), “Strategies for Drug Design and Development” (*Breimer*), “Key Issues in Drug Analysis” (*Berridge*), “Chiral Issues in Drug Analysis” (*Lindner*), “Physicochemical Aspects of Drug Action” (*Valkó*), “Issues in PK/PD and Toxicology” (*Jusko and Doehmer*), “New concepts in Dosage Form Design” (*Kristensen*) and “Challenges in Natural Product Chemistry and Phytotherapy” (*Dingermann*).

Hot topics

Two “Hot Topics” will be the focus of heated discussions on Monday evening: “New Safe Medicines Faster” chaired by *Ole Bjerrum* following the highly successful Brussels meeting targeted on EU Framework 6 funding (see report on pages 1-3) – and “New Developments in Alzheimer’s Disease – Focus on Inflammation” chaired by *Ernst Mutschler*. In addition, the annual Symposium of the “International Excipients Council” will be held within EUFEPS 2000 on Monday and features “The Prion Issue – Where do we stand?” (*Trouvin*), “Case Study of a New Excipient” (*de Jong*), “Development of a Prion Test” and “Mutual Inspections on Starting Materials in EU/USA” (*Fairchild*) plus several other topics.

Training courses

The widest range of Training Courses ever mounted in the pharmaceutical sciences in Europe will be held on Saturday 16 September covering: “Assessment of Oral Absorption” (*Tukker, Dressman, Lehr, Lennernäs and Efthymiopoulos*), “Chiral Solutions in Pharmaceutical Research” (*Clark, Fell*), “Solid-state strategies for

SATELLITE SYMPOSIUM AT EUFEPS 2000

Saturday • September 16 • 2000 • 10.00-17.00

This full-day Satellite Meeting will review the outcomes of the FDA proposals for validation of bioanalytical methods, as discussed in Washington in January 2000. The principal FDA recommendations will be reviewed and critiqued by a panel of outstanding leaders in this field. These will include *Dr Iain McGilveray* (Ottawa, Canada), *Dr Steve Pleasance* (Glaxo-Wellcome, Stevenage, UK), a

representative from the FDA and chaired by *Dr Howard Hill* (Huntingdon Life Science, UK). This important meeting will focus on the implications of this new FDA legislation, and related topics, for pharmaceutical research and development in Europe. Further details at the EUFEPS Website: www.pharmweb.net/conference/eufeps2000.html

enhancing oral delivery of poorly soluble drugs" (*Forbes, Bogentoft*) and "Pharmaceutical Applications of Capillary Electrophoresis in Research and Development" (*Clark, Crommen and Gazdag*). In addition, *Danhof* and *Jusko* will present their celebrated short-course on "PK/PD Modelling" on Tuesday afternoon and Wednesday morning 19-20 September.

BIOVAL Satellite

Also on Saturday 16 September the Satellite Symposium, BIOVAL 2000, will review and critique the outcomes of the FDA consultation process on the proposed Guidelines for Validation of Bioanalytical Methods – participation by major European Industrialists, chaired by *Dr Howard Hill* with *Iain McGilveray* and an FDA representative will bring a major European focus on this vital regulatory area.

Equipment and services

A major Exhibition of Scientific Equipment and Services accompanies EUFEPS 2000 – come along and see the latest for yourself. This will be held in the Congress Center right next door to the Congress Novotel Hotel – an excellent place to stay near downtown Budapest. There will be the widest range of accommodation to suit all budgets – from inexpensive pension to well known international style hotels.

All are invited

All scientists working in any area of the pharmaceutical sciences are invited to participate in EUFEPS 2000, the major international pharmaceutical event in Europe this year. It is not too late to send in an abstract for a Poster Presentation (which will be given prime time in the programme) – the guidelines for abstracts are available on the EUFEPS website. Further information on the programme and registration details can also be obtained by visiting the Website at: www.pharmweb.net/conference/eufeps2000.html

Come and join us at EUFEPS 2000 – where you can be sure of a warm and wonderful Hungarian welcome – and where you will probably meet many of your friends.

Prof. Szabolcs Nyiredy,
President EUFEPS 2000
Prof. Tony Fell,
Chair EUFEPS CCC

Meeting Report



– an Unqualified Success

Graduate students from pharmaceutical schools in all corners of Europe gathered in Frankfurt on March 3-5, 2000, to participate in the Second European Graduate Student Meeting. The meeting was jointly organized by the German Pharmaceutical Society (DPHG) and EUFEPS and was also cosponsored by the International Society of Pharmaceutical Technology (APV).

Many involved

More than 180 young participants presented and discussed their work and latest research results. Thanks to the dedication of *Prof. Dingermann, Prof. Schubert-Zsilavecz, Dr. Ilse Zündorf* and the entire crew of coworkers from the local pharmaceutical institutes, the meeting went off smoothly without a hitch.

Outcome reported

Projects from every pharmaceutical discipline, from medicinal chemistry through pharmaceuticals, natural products, biotechnology and pharmacology to the history of pharmacy were professionally presented in more than 40 oral communications and about 110 posters. Few other conferences have so clearly reflected the interdisciplinary nature of pharmaceutical research. The wide variety of topics was accentuated by presentation of the oral communications in alphabetical order according to the name of the first author, rather than grouping them thematically.

Additionally all abstracts that were not orally presented were introduced and discussed at a special poster discussion ses-

sion on Sunday morning. For those who were unable to attend the meeting, access to the abstracts is still available at the following Website address: www.biozentrum.unifrankfurt.de/DPHG/Doktagung2000/doktorandentagung.html

New Orleans rhythms and tunes

On Saturday evening the participants took a break from the scientific discussions to enjoy the music of Lampel's Jazz Orchestra, an eight man jazz band, who put everyone in a party mood with their New Orleans-style rhythms and tunes. This event was made possible by the contributions of numerous sponsors, most of whom also sent representatives to the meeting.

Continuity secured

Most participants agreed: The Second Frankfurt meeting was again an unqualified success and has set the stage for further international graduate student meetings. Based on a decision of the executive committees of DPHG and EUFEPS, the local organisers agreed to make Frankfurt's Biocentre the home of this annual event. This will ensure not only continuity but also further development of this meeting. Without a doubt, the exchange of ideas and opinions among graduate students throughout Europe should strongly be encouraged. All European graduate students are therefore cordially invited to participate in the Third European Graduate Student Meeting, which will take place next year from February 23-25, 2001, in Frankfurt.

EXECUTIVE SUMMARY

June 2000

The first Executive Committee meeting of the year took place on March 17-18, 2000, at the Hotel Le Plaza in Brussels, immediately following on from the Workshop on "New Safe Medicines Faster" (see pages 1-3). The President expressed his satisfaction with the great success of that two-day workshop, sponsored by the European Commission. The Workshop must be considered as an important landmark in the history of EUFEPS.

Part of the first executive day was devoted to a joint meeting with the Committee on Industrial Relations (CIR), a very active EUFEPS subcommittee, with which a joint meeting is now becoming an annual tradition. Also, the Executive Committee met with Prof. Meindert Danhof from the Leiden-Amsterdam Center for Drug Research (LACDR) to share some views on the organisation of classes and short courses.

Finance

The accounts for the year 1999 have been approved by the Authorised Auditor. Revenues, which significantly exceeded expenditure, helped to make up for the losses in 1998. The accumulated assets, balanced for currency changes, increased by EUR 24488, by the end of 1999. However, about half of the increase was caused by a decrease in the exchange rate SEK to EUR as of December 31, 1999. Concerning the revenues, financial management accounted for more

than EUR 12000 and the 6th EUFEPS Conference in Basel 1999 was a financial success. Major adverse deviations from the budget on the income side was due to insufficient contributions from membership fees. In 1999, fees from membership constituted only 25 % of total revenues, as compared with 62 % in 1996 and 36 % in 1997. Concerning expenses we are now seeing savings in the costs for mailing and shipping. Also, the costs for the Council Meeting in 1999 came out less than expected, which reflects the courtesy shown by the Slovenian Pharmaceutical Society in Portoroz.

Membership

The Slovak Society of Pharmaceutical Sciences has resumed their EUFEPS membership, which was welcomed by the Executive Committee. With the merger of the UK Association for Pharmaceutical Scientists (UKAPS) and the Science Group of the Royal Pharmaceutical Society of Great Britain (RPSGB) now becoming effective, EUFEPS at the start of the new Millennium comprises 24 Member Societies in 22 countries.

The formation of a Committee for Membership Management (CMM) is being discussed. A primary objective is, of course, to increase the Individual and Corporate Memberships, but it is also tasked with encouraging members to be more actively engaged in EUFEPS activities. Another objective is to expand the membership diversity so that it

truly reflects all the disciplines encompassing the pharmaceutical sciences in Europe.

European Journal of Pharmaceutical Sciences (EJPS)

The journal continues to improve, and the flow of manuscripts is satisfactory. The EUFEPS' royalty income from the journal, albeit still small, increased by 50 % in 1999.

Prospective developments

The minds of the members of the Executive Committee have already started to focus on the upcoming Council Meeting, with elections, amendments of the Statutes and the mid-term assessment of the Strategic Plan. Amendments of the statutes are related to decisions made at the previous Council Meeting, e. g. the expansion of the Executive Committee and the ex officio status of the Secretary General/Treasurer. New models for distribution of delegates making up the EUFEPS Council are also being considered.

Next meeting

The next Executive Committee meeting took place in Leiden, May 20-21, 2000, in conjunction with the symposium entitled "Mechanism-Based Pharmacokinetics and Pharmacodynamics", in honour of Prof. Douwe D. Breimer.

Prof. Björn Lindeke
Secretary-General & Treasurer.

Next Council Meeting

Date and location

The 2000 EUFEPS Council Meeting will be held in conjunction with the 6th European Congress of Pharmaceutical Sciences, on Sunday afternoon, September 17, 2000, in the Budapest Convention Center, Hungary. For the Congress programme, see e.g. update article on page 4 in this issue, or consult the Congress Website for the Final Programme: www.pharmweb.net/conference/eufeps2000.html

Elections to the Executive Committee

At this Council, there will be elections to the Executive Committee, and Member Societies have been invited to nominate candidates. Four positions are open. Prof. Malcolm Rowland has made his terms, and cannot be

re-elected (he will, however, continue for one more term on the Committee as Immediate Past-President). Dr Anders Grahnén has made two terms. He is eligible for an additional term, but will not be available. Also, Profs. Tony Fell and Atilla Hincal have completed two terms on the Executive Committee.

Strategy and forum

In 1998, the Council agreed on a four-year Strategic Plan for EUFEPS. At the Budapest Council there will be a Mid-term Assessment of the Strategic Plan. In addition, the Executive Committee plans for an "open forum" for Council Members, preceding the Council meeting, at lunchtime on Sunday.

Royal Award

At the occasion of the 25th Anniversary of Prof. Douwe D. Breimer's appointment as Full Professor of Pharmacology at the Leiden University, The Netherlands, and of the establishment of the Douwe D. Breimer Research Foundation, on May 19, 2000, Prof. Breimer, on behalf of her Majesty the Queen, was appointed in the *Order of the Lion of The Netherlands in the class of Knight*. This is the highest civilian order, and it is conferred on people who have rendered outstanding services to the community, often through achievements or efforts springing from exceptional talents that are not primarily aimed at contributing to social progress but which have that effect nonetheless.



Prof.
Douwe D. Breimer

7th EUFEPS Conference on *Optimising Drug Development: Strategies to Assess Drug Metabolism/Transport Interaction Potential • Towards a Consensus*

November 13-15 • 2000 • Basel • Switzerland

Scope and aim

Arising from previous conferences on drug-drug and drug-food interactions organised by AAPS (Arlington, 1999) and EUFEPS (Nuremberg, 1997) is the need to attempt to gain a consensus on the conduct of *in vitro* and *in vivo* studies of metabolic and transport interactions during drug development. Questions to be addressed in this unique discussion forum for scientists from the pharmaceutical industry, regulatory agencies and academic institutions include:

- *What complexities in enzyme kinetics need to be considered?*
- *Can interactions be predicted in silico?*
- *How reproducible are in vitro data and is quality control required?*
- *Microsomes or hepatocytes or both?*
- *Can probe substrates/inhibitors be standardised?*
- *Can predictive pharmacokinetic models be constructed?*
- *What are the decision points for initiating an in vivo study?*
- *Is population PK going to help?*
- *Can clinicians agree on what is important?*

Sessions in programme

Mechanistic Considerations • *In vitro* Assessment • *In vitro* Prediction • *In vivo* Assessment • The Regulatory View • Discussion of Position Statements • Exhibition

Scientific and Planning Committee

G.T. Tucker (Co-Chair) • S.-M. Huang (Co-Chair) • B. Houston (Vice-Chair) • L. J. Lesko (Vice-Chair) • G. Alvan • L. Benet • S. Clarke • B. Clement • U. Fuhr • K. Thummel • S. Wrighton

Venue and exhibition

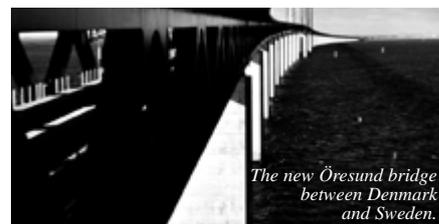
This year's Conference will also be held at the Basel Convention Center, Switzerland, on November 13-15, 2000. For information on how to become an exhibitor at this Conference, contact the EUFEPS Secretariat.

Additional information

For additional information on this Conference, contact the EUFEPS Secretariat, P.O. Box 1136, SE-111 81 Stockholm, Sweden. Tel + 46 8 7235000. Fax +46 8 4113217. Email secretariat@eufeps.org or consult the Conference Website at: www.pharmweb.net/conference/eufeps7.html

World Conference on *Drug Absorption and Drug Delivery*

June 18-20 • 2001
Copenhagen • Denmark



*The new Öresund bridge
between Denmark
and Sweden.*

Scope and aim

Successful drug absorption and target delivery are prerequisites for the optimal treatment of diseases, using both established and novel devices and strategies. To meet the demands of this rapidly developing field of research, this conference concentrates on relevant "hot topics". Emphasis will be on the impact of the new biology, biochemistry including transporters, together with physicochemical and structural properties, on the design and use of drugs with better absorption and delivery characteristics. Routes of administration include oral and as well other extravascular routes.

Chairs and sessions

The Scientific Programme Committee will be headed by Prof. *Hans Lennernäs*, Uppsala, Sweden (Chair). Co-Chairs are: Prof. *Gordon Amidon*, Ann Arbor, MI USA, and Prof. *Yuichi Sugiyama*, Tokyo, Japan., Prof. *Sven Frøkjær*, Copenhagen, Denmark.

Sessions of the Conference include:

- Drug discovery and drug candidate selection
- Regulatory science issues
- Drug transport and drug metabolism
- Dissolution of drugs
- Clinical aspects of drug delivery
- New Safe Medicines Faster: Impact of drug delivery

Information and input

For additional information, as well as suggestions for the Scientific Programme Committee, contact the EUFEPS Secretariat, P.O. Box 1136 SE-111 81 Stockholm, Sweden Tel +46 8 7235000 Fax +46 8 4113217 Email: secretariat@eufeps.org Or consult the Conference Website which will be available, shortly: www.pharmweb.net/conference/absorptiondelivery.html

10th International Pharmaceutical Technology Symposium: *Development and Delivery Challenges of the Next Generation of Drugs*

September 11-13 • 2000 • Istanbul • Turkey

History and focus

The International Pharmaceutical Technology Symposium (IPTS) has been organised by the Pharmaceutical Technology Department of the Faculty of Pharmacy, Hacettepe University, Ankara, every two years since 1982. The next Symposium in the series will focus on development and delivery challenges of the next generation of drugs, with emphasis on the industrial and regulatory responses. Also, there will be an exhibition of laboratory equipment etc. Co-sponsors of the Symposium are: APCI, EUFEPS, FIP Foundation, IEIS, the Nagai Foundation and TUBITAK.

Date and location

The Symposium will be held on September 11-13, 2000, in the Grand Hotel Tarabya, at the Bosphorus, Istanbul – where two continents meet, and the major part of the Turkish Pharmaceutical Industry is located.

Additional information

Department of Pharmaceutical Technology, Faculty of Pharmacy, Hacettepe University, TK-06100 Ankara, Turkey. Tel: + 90 312 310 15 24. Fax: + 90 312 310 09 06 or + 90 312 311 47 77. Email huetb-e@tr-net.net.tr Website www.ipts.hacettepe.edu.tr



**Clinical Drug Development
for the New Millennium: Impact of the
Biological Revolution**

August 31 – September 2, 2000, Rosenön
Stockholm, Sweden

Contact: The Swedish Academy of
Pharmaceutical Sciences
PO Box 1136, SE-111 81 Stockholm, Sweden
Fax +46 8 205511

Email jenny.hagberg@swepharm.se
or Website www.swepharm.se

IPORSIP - 2000

September 6-8, 2000, Istanbul, Turkey

Contact: IPORSIP –2000, Istanbul University
Pharmaceutical Technology, Dali 34452, Beyazit
Istanbul, Turkey, Fax +90 212 5134222
Email iporsip@turk.net

The British Pharmaceutical Conference

September 10-13, 2000, Birmingham, UK

Contact: Dr J A Clements, Room 403, Royal
Pharmaceutical Society of Great Britain
1 Lambeth High Street, London SE1 7JN, UK
Fax +44 171 5820397

Email jholmes@rpsgb.org.uk

**6th European Congress of Pharmaceutical
Sciences and Short-Courses**

September 16-19, 2000, Budapest, Hungary

Contact: EUFEPS 2000 Secretariat, PO Box 11
HU-2011 Budakal-sz, Hungary
Fax +36 26 343195
Email eufeps2000@mail.matav.hu

**IV Spanish-Portugese Conference on
Controlled Drug Delivery**

September 17-20, 2000, Vitoria, Spain

Contact: Begonia Calvo, Pharmaceutical
Technology Dept., Faculty of Pharmacy
University of the Basque Country
P.o de la Universidad, 7, ES-01006 Vitoria, Spain
Fax +34 945 013040
Email knpcaheb@vc.ehu.es

**8th Annual Meeting of European Society of
Pharmacovigilance**

September 21-23, 2000, Verona, Italy

Contact: Prof. G.P. Velo, Clinical Pharmacology
Unit, Policlinico Borgo Roma
University of Verona, IT-37134 Verona, Italy
Fax +39 045 581111, Email esop@sfm.univr.it

**International Symposium
on Tumor Targeted Delivery Systems**

September 25-27, 2000, Bethesda, Maryland, USA

Contact: Controlled Release Society
1020 Milwaukee, Ste. 335, Deerfield
IL 60015, USA Fax +1 847 8087073
Email info@controlledrelease.org

Tabletting Technology

October 11-13, 2000, Cambridge, UK

Contact: Dr J A Clements, Room 403, Royal
Pharmaceutical Society of Great Britain
1 Lambeth High Street, London SE1 7JN, UK
Fax +44 171 5820397
Email jholmes@rpsgb.org

**IUTOX – Risk Assessment Summer School –
RASS VIII**

September 30 – October 8, 2000, Alicante, Spain

Contact: Birgitta Lewander, Malmfors
Consulting AB, Västmannagatan 48
SE-113 25 Stockholm, Sweden
Fax +46 8 301133

Email malmfors.consulting@ebox.tninet.se

**ESCP 29th European Symposium
on Clinical Pharmacy – New Technologies,
Pharmacists and Patients**

October 11-14, 2000, Basel, Switzerland

Contact: ESCP International Office, Theda
Mansholtstraat 5 b, NL-2331 JE Leiden
The Netherlands, Fax +31 71 5722431
Email office@escp.nl

AAPS Annual Meeting

October 29-November 2, 2000, Indianapolis, IN, USA

Contact: AAPS, 2107 Wilson Boulevard
Suite 700, Arlington, VA 22201, USA
Fax +1 703 2439650, Email aaps@aaps.org

**Intermediate Level Workshop on
Pharmacokinetic/Pharmacodynamic Data
Analysis: A hands-on course using WinNonlin**

November 5-9, 2000, Horsley Towers, UK

Contact: Dr J A Clements, Room 403
Royal Pharmaceutical Society of Great Britain
1 Lambeth High Street, London SE1 7JN, UK
Fax +44 171 5820397
Email jholmes@rpsgb.org.

**8th International Congress
on Ethics in Medicine**

November 5-9, 2000, Beer-Sheva, Israel

Contact: 8th Congress on Ethics, Peltours-Teium
Congress Organisers, POB 52047
Jerusalem 91520, Israel, Fax +972 2 6481305
Email teumcong@netmedia.net.il

**7th EUFEPS Conference
on Optimising Drug Development:
Strategies to Assess Drug
Metabolism/Transport Interaction Potential –
Towards a Consensus**

November 13-15, 2000, Basel, Switzerland

Contact: EUFEPS Secretariat, PO Box 113
SE-111 81 Stockholm, Sweden
Fax +46 8 4113217
Email secretariat@eufeps.org

**V Congress of the Spanish Society
of Pharmaceutics and Pharmaceutical
Technology**

February 4-6, 2001, Valencia, Spain

Contact: Departamento de Farmacia y
Tecnología Farmacéutica, Facultad de Farmacia
Avda. Vicente Andrés Estellés s/n, ES-46100
Burjassot, Valencia, Spain, Fax +34 963 864 911
Email matilde.merino@uv.es

3rd European Graduate Student Meeting

February 23-25, 2001, Frankfurt/Main, Germany

Contact: Prof. Theo Dingerman, Institute for
Pharmaceutical Biology, Biozentrum
Marie-Curie-Strasse 9, DE-60439
Frankfurt/Main, Germany
Fax +49 69 79829662
Email dingerman@em.uni-frankfurt.de

Clinical Trials – A methodologic perspective

May 7-10, 2001, Lunteren, The Netherlands

Contact: Ms Astrid van Alst, Dept of
Epidemiology&Biostatistics/252, University
Medical Centre Nijmegen, PO Box 9101
NL-6500 HB Nijmegen, The Netherlands
Fax +31 24 3613505

Email a.vanalst@mie.kun.nl

**4th International Symposium
on Solid Oral Dosage Forms**

May 13-15, 2001, Malmö, Sweden

Contact: The Swedish Academy of
Pharmaceutical Sciences, PO Box 1136
SE-111 81 Stockholm, Sweden, Fax +46 8 205511
Email jenny.hagberg@swepharm.se
Website www.swepharm.se

**World Conference
on Drug Absorption and Drug Delivery**

June 18-20, 2001, Copenhagen, Denmark

Contact: EUFEPS Secretariat, PO Box 1136
SE-111 81 Stockholm, Sweden
Fax +46 8 4113217

Email secretariat@eufeps.org
Website www.pharmweb.net/conference/
absorptiondelivery.html

**Controlled Release Society
28th International Symposium on Controlled
Release of Bioactive Materials**

June 23-27, 2001, San Diego, CA, USA

Contact: Controlled Release Society, 1020
Milwaukee, Ste. 335, Deerfield, IL 60015, USA
Fax +1 847 8087073

Email info@controlledrelease.org

9th International Congress of Toxicology

July 8-13, 2001, Brisbane, Australia

Contact: Intermedia Convention & Event
Management, PO Box 1280, Milton, QLD 4064
Australia, Fax +61 733 691512
Email ictix2001@im.com.au

**13th International Symposium
on Microencapsulation**

September 5-7, 2001, Angers, France

Contact: Prof J.P. Benoit, School of Pharmacy
University of Angers, 16, Boulevard Daviers
FR-49100 Angers, France, Fax +33 2 41735853
Email microencapsulation@med.univ-angers.fr

**5th Congress of the European Association
for Clinical Pharmacology and Therapeutics**

September 12-15, 2001, Odense, Denmark

Contact: Kim Broesen, Institute of Public
Health, Clinical Pharmacology, University of
Southern Denmark, Winsloewsparken 19
DK-5000 Odense, Denmark, Fax +45 65 916089
Email k-brosen@cekfo.sdu.dk

6th International ISSX Meeting

October 7-11, 2001, Munich, Germany

Contact: N.Holahan, ISSX, 9650 Rockville
Pike, Bethesda, Maryland 20814-3998, USA
Email nholahan@issx.org