Presidential Address

One year of my presidential term has passed. By tradition, now is the time to summarise important EUF EPS issues. However, I will also touch on the EUFEPS environment, with which we have so many varied interactions.

European pharmaceutical industry under pressure

The success of the European pharmaceutical industry influences the wellbeing of all pharmaceutical scientists, irrespective of whether they are employees of the academic, regulatory or industry sector. All three are strongly interlinked. During the last decade, Europe has lost its attractiveness as a prime location for pharmaceutical research and development. The trend is to move drug research to the USA. Southeast Asia is an attractive area for development and production, resulting in a lower number of pharmaceutical jobs in Europe. At the same time, the innovative part of the pharmaceutical industry is receiving less revenue; it is introducing fewer new medicines and losing patent protection on others. The industry has also been set back by several withdrawals of drug candidates, late in the development phase, or even after launch.

This makes life difficult for organisations like EUFEPS, who depend on income from activities with the participation and support of the pharma industry (please see EUFEPS Income below).

Openings through New Safe Medicines Faster

It is noteworthy that EUFEPS realised, as early as 1999, that the European pharma industry could face future difficulties, and took some initiatives against them. EUFEPS directly addressed the European Commission to raise interest in promoting a strong science base for pharmaceutical research and development, which is a prerequisite for regulatory acceptance of more effective techniques in the drug development processes. This endeavour took place under the heading New Safe Medicines Faster. There was impact in the sixth Framework Programme (FP6, 2002-2006), where, for the first time in the history of the Commission, money in the range of hundreds of millions of Euros was allocated to research dedicated to pharmaceutical development. Today, we hear even stronger signals from the Commission. Now, they seem to be prepared to re-establish European leadership within the pharmaceutical sciences, through further, massive support for the research community, perhaps in the range of 1 billion (1000 million) Euros during the 7th Framework Programme. According to the Commission, this could happen through establishment of Pharmaceutical Technology Platform(s), on which the many stakeholders in drug development would interact to ease introduction of new, innovative medicines to the market. EUFEPS is engaged, as an organiser and coordinator of the preparatory work for such technology platforms. A Workshop will take place on April 20-21, 2005, back to back with the 3rd World Conference on Drug Absorption, Transporters and Delivery, in Barcelona, Spain. The purpose of the Workshop is to discuss the objectives for such technology platforms; how they can be created, operated, financed and maintained.

E U R O P E A N  F E D E R A T I O N  f o r  P h a r m a c e u t i c a l  S c i e n c e s   D e c e m b e r  V o l  1 3  N o 4  2 0 0 4

Ole J. Bjerrum
Financial support has been obtained through the current FP6.

Moreover, EUFEPS is consortium member of another integrated project application, called: “Innovative Medicines for Europe”, with a potential budget of 14 million Euros. The European Commission believes that better education and training should be an integrated part of the plan to establish European leadership for development of innovative drugs. For this reason, it will support education and training initiatives, to ensure that there are researchers equipped with the right skills.

EUFEPS has roles as an active partner, representing pharmaceutical science and expertise, as well as a communicator of wishes and needs of pharmaceutical scientists, so that the technology platforms becomes a ‘win-win’ for those involved.

The European dimension
As a truly European organisation, EUFEPS can interact with and represent the whole area. This takes through collaboration, coordination and cooperation. However, it will only be successful if it is done with respect for national and regional identities, at both organisational and individual levels. By engaging heavily in the PharmSciFair, on June 12-16, 2005, in Nice, France, we hope to have significantly contributed to a new structure. This conference should have enough critical mass to be a true reflection of the pharmaceutical sciences in Europe, combined with the attributes of national and regional societies.

Furthermore, through establishment of discipline-oriented European Networks, like the two ‘hot topics’ in 2004, “Safety Sciences” and “Process Analytical Technology (PAT)”, we hope to combine the strengths of Europe and to reinforce Europe’s competitive edge. This all shows that EUFEPS is there to create excellence, putting emphasis on progressive fields in the pharmaceutical sciences. At the global level, EUFEPS will represent Europe in the Pharmaceutical Science World Congress 2007 in Amsterdam, The Netherlands, where it will do its best towards a successful conference.

EUFEPs Committees
The Executive Committee, which has the overall strategic and financial responsibility for EUFEPS can start new initiatives but is not always geared to handle all aspects of them. For this reason, a series of Advisory Committees has been established.

The Committee on Industrial Relations (CIR) took on the responsibility for a workshop on “Safety Sciences”, together with the Committee on Training and Education (CTE), in April this year. The outcomes influenced the Commission’s initiative on the same issue. We hope to see the topic in the fourth call of FP6, which will be published in May 2005. A “Network on Safety Sciences” is already being established.

It has also been very encouraging to follow the progress of the Committee in Academic Research Relation (CARR). CARR has formulated a position paper, entitled: “Contribution of academic research to drug discovery and development: Current status and future opportunities”, which immediately after its completion was sent to the European Commission. It has been published in vol. 24 of the European Journal of Pharmaceutical Sciences.

The Committee on Training and Education (CTE) has a new chairman and is in position to take care of the increased demand for advanced training courses from industry, regulators and the European Commission (in preparation of the seventh framework programme). EUFEPS has earlier responded to industry demands by establishing the postgraduate training course on “High-throughput Drug Metabolism/Disposition”. Further courses in, for example, “In vivo Pharmacology” are in the pipeline. Where mutual interest exists or arises such courses will be organised with our Member Societies.

EUFEPs Income
The income to keep EUFEPS going as an organisation is based on membership fees and royalties. However, this is not enough to keep a Secretariat afloat. It is an acknowledged fact that without a Secretariat to;
• execute initiatives of the Executive Committee
• organise the congresses and conferences
• coordinate and keep the EUFEPS Committees at work
• support the networks

Do rally around EUFEPS
Together we are and can be stronger. Such strength will be needed to change the current situation for drug development in Europe. Based on our efforts to build EUFEPS as the most important scientific organisation vis-à-vis drug research and development in Europe, there is much potential – ahead of us. Especially the planned activities in the seventh Framework Programme, which probably will be followed by activities on the national level as well, call for an active, strong EUFEPS. The same is true for the PharmSciFair concept and the Pharmaceutical Science World Conference in 2007. To follow up on these opportunities and to find a viable solution for the present economic situation, a presidential conference of EUFEPS Member Societies will be proposed during spring 2005.

EUFEPs has come a long way – please help it to succeed.

Ole J. Bjerrum
EUFEPS President
In accordance with the recommendations made by EUFEPS in its New Safe Medicines Faster initiative, BioSim will focus on the development of in silico simulation models of cellular, physiological and pharmacological processes in order to combine a deeper understanding of the biological phenomena with a more rational utilization of the available information. The benefits to the industry will be a shorter and less costly drug development process and a gradual reduction of the need for laboratory animals. Patients will benefit from the earlier marketing of new and more effective drugs, and the reduced economic risks may allow the industry to develop drugs for rare diseases or for special groups of patients.

With its 26 academic partners and 9 small and medium sized enterprises, the BioSim network commands a wide range of biomedical expertises, ranging from genomics and bioinformatics over biochemistry, cell biology, and endocrinology to neurology, physiology and cardiology. The network also collaborates with hospital departments that perform experimental treatments of cancer, depression, and various forms of tremor. At the same time, the network involves some of Europe’s leading experts in pharmacokinetics, computer simulation, and complex systems theory. Together, these competencies form the basis for a noteworthy effort in the emerging area of Systems Biology. The challenges are to integrate the various fields of expertise and to establish a close collaboration with the regulatory authorities and the large pharmaceutical industries.

The medicines agencies of Sweden, Holland, Spain and Denmark are partners in the BioSim network. From the industrial side, however, only Novo Nordisk A/S is a partner. This is mainly a result of the relatively complex rules for the use of knowledge and for the protection of intellectual property rights in a network as large as BioSim. Several other large pharmaceutical companies collaborate with individual network partners in order to solve specific problems in connection with the development and testing of drugs, and the network is eager to extend this kind of interaction. BioSim will also engage in a wide range of educational activities including the training of Ph.D. students, specialized courses for industrial and regulatory experts, and communication with the public to explain the limitations and potential benefits of biosimulation.

Our scientific efforts will be devoted to the development of detailed and specific models of a wide range of intracellular phenomena for different cell types. The idea is to simulate the involved biological processes and regulatory mechanisms as truthfully as possible. This approach requires a close collaboration between experimentalists and modellers, and more than half of the academic partners, therefore, have significant experimental activities. The model is used as a vehicle to check the consistency of the established hypotheses, to interpret the obtained experimental data, and to define new critical experiments. At the same time the model is continuously challenged with respect to its ability to predict the outcome of experiments under conditions not previously examined. In this way, the model can gradually accumulate knowledge from experiment to experiment.

Among BioSim’s projects are studies of pancreatic hormone release, protein phosphorylation in human fat cells, flux control and energy metabolism in striated muscle cells, calcium-induced calcium release and activation of smooth muscle cells, nephron pressure and flow regulation, cardiac arrhythmia, mental disorders and sleep-wake cycles. We shall also consider the function of new anti-cancer molecules, drug absorption and metabolism, and insulin-glucose regulation in connection with the treatment of diabetes. Finally, a significant effort will be devoted to the building of virtual human populations of relevance to pharmacokinetic studies.
Executive Report

December 2004

Optimism into turbulence

The first half of 2004 went very well, including a well attended EUFEPS conference on drug transporters in Copenhagen and a fully subscribed course on high-throughput drug metabolism in Amsterdam. Furthermore, the mid-term assessment of the EUFEPS Strategic Plan 2002-2006 was ready for discussion and approval at the Council Meeting and Open Forum in October, in conjunction with the EUFEPS 2004 Congress.

In early July, the early-bird registrations to EUFEPS 2004 and the submitted abstracts predicted good attendance, although a little lower than for the Stockholm Congress, two years earlier. In Spring 2004, it had been decided that the EUFEPS Conference Series on Optimising Drug Development (regularly in the beginning of December in Basel) should address drug safety issues. This topic, later to become even hotter, generated an excellent preliminary programme from committed experts. After the summer holidays, when industry would normally provide most of its congress registrations, not much happened. Rumours suggested that travel restrictions were being decisively implemented in the pharmaceutical industry. Phone calls from industry people, cancelling participation in committee meetings, fuelled concerns about what might happen. Immediately, we started to reduce bookings in Brussels as much as possible; contracts were renegotiated and stretched to their limits. Eventually, in Brussels, both the Satellite and Congress programmes as well as the speaker contributions were excellent, exhibitors were positive and delegates were pleased with the organisation – but total attendance became less than half that projected from the previous ten plus years of experience.

If Brussels failed to gain attendance from industry, what would happen with the December 2004 Conference in Basel? Could we cancel it at short notice, to save what could be saved? We were aware that several attendees and speakers, probably including those from far away, had already bought their tickets to save money and ease travel reimbursement for the organiser. Around 25 funding partners and four satellites in Pharma and Biotech (April; May; June; October) were being decisively implemented in the pharmaceutical industry. Phone calls from industry people, cancelling participation in committee meetings, fuelled concerns about what might happen. Immediately, we started to reduce bookings in Brussels as much as possible; contracts were renegotiated and stretched to their limits. Eventually, in Brussels, both the Satellite and Congress programmes as well as the speaker contributions were excellent, exhibitors were positive and delegates were pleased with the organisation – but total attendance became less than half that projected from the previous ten plus years of experience.

If Brussels failed to gain attendance from industry, what would happen with the December 2004 Conference in Basel? Could we cancel it at short notice, to save what could be saved? We were aware that several attendees and speakers, probably including those from far away, had already bought their tickets to save money and ease travel reimbursement for the organiser. Not succeeding in Basel would nearly empty EUFEPS’ rather limited funding reserves. It hurt, but we cancelled it. Not doing so would have been worse. This is because EUFEPS, as a non-profit federation under the Swedish tax regulation, must not build up substantial reserves. Ideally, income during one year should balance expenses during the same year.

Many would consider this to be risky business. Yes, it is, but it has worked, rather nicely ever since the inauguration of EUFEPS in 1991. Attractive event programmes, successful applications for EU support of new initiatives and generous support of the EUFEPS Secretariat from the Swedish Pharmaceutical Society/Academy of Pharmaceutical Sciences have all contributed to successful years. For how much longer, you may wonder… as long as European pharmaceutical sciences unite their forces, the EUFEPS President argues in his Presidential Address (see pages 1-2 of this Newsletter).

Will industry travel restrictions continue at the level of the second half of 2004? Probably not. “Wisdom brings success”.

Council and progress

Of course, the EUFEPS Council and the Executive Committee were concerned about the projected outcome of the 2004 Congress, as they met in the weekend prior to it. Other concerns included how to manage cash-flow and necessary upfront investments for 2005 and 2006 activities, particularly, if the Basel Conference would also fail financially. On the other hand, never before has it been so clear to all that financial strengths are needed to advance the pharmaceutical sciences and represent the pharmaceutical scientists, in joint and coordinated efforts.

Positive reports

Positive reports to the Council included;
• Substantial progress with the current Strategic Plan
• Individual Membership up 25 % over the last two years
• A new contract with the European Commission on how to establish a “technological platform” for drug development in Europe
• Good progress in establishing networks for Safety Sciences and in Process Analytical Technology
• A new BBBB Conference series (Balaton; Baltic; Bled; Besorus)
• Around 25 funding partners and four professional congress organisations collaborating to establish the Pharmaceutical Sciences Fair and Exhibition (PharmSciFair) scheduled for June 2005, coordinated by EUFEPS. Together, they will provide attractive scientific programme; excellent meeting facilities; exhibition know-how and experience; delegate accommodation; and a social programme. You must be there!

In Council and Open Forum discussions, several suggested that European scientific collaboration should be further strengthened through EUFEPS including;
• increased collaboration with the European Commission, if possible
• new, coordinated training and education initiatives
• better coordination of major scientific events and more joint activities. The organisational model developed by APGI and EUFEPS for the “Optimising Drug Delivery and Formulation” series was said to be a good example.

Current Executive Committee

Council elected three new members to the Executive Committee. They are: Professor Daan Crommelin (University of Utrecht, The Netherlands), Dr Per From (former General Manager of AstraZeneca, Södertälje, Sweden) and Dr Hilda Köszegi-Szalai (Head Quality Evaluation and Control, National Institute of Pharmacy, Hungary).

Other elected members of the Executive Committee, currently, include (elected one year ago): Professor Theo Dingermann (University of Frankfurt, Germany); Dr Chris Doherty (AstraZeneca UK); Professor Rodolfo Paoletti (University of Milan, Italy) and Professor Dominique Duchêne (Paris-Sud University, France), Immediate Past-President.

Conference and course topics, 2005

EUFEPS will be organising or actively supporting the following;
• Expert Meeting: Drug Safety (March)
• World Conference: Drug Absorption, Transport and Delivery: Clinical Implications (April);
• Training Course: High-throughput Drug Metabolism/Disposition (April);
• Training Course: Quality Management in Pharma and Biotech (April; May; June; October)
Training Course: Research Models in Integrative Pharmacology (September);
Conference Series: 1st BBBB Conference on Pharmaceutical Sciences (September);
Conference Series: Optimising Drug Delivery and Formulation: Evaluation of Drug Delivery Systems – Issues and Perspectives (November);
Training Course: Advanced Drug Targeting (November);
Conference Series: Optimising Drug Delivery and Formulation: Evaluation of Drug Delivery Systems – Issues and Perspectives (November);
Conference Series: Optimising Drug Development – topic to be selected (December).

For detailed information about these events, consult the EUFEPS Online at: www.eufeps.org or contact the EUFEPS Secretariat.

Forthcoming Executive Meetings
The Executive Committee also met on December 4-5th, 2004, in Paris. Finance and implementation of strategy issues were high on the agenda. The Executive will meet next on February 25-26th, 2005, in London, and on April 16-17th, 2005, in Barcelona, which will be in conjunction with the 3rd World Conference on Drug Absorption, Transport and Delivery, on April 18-20, 2005, and the PharmTech Platform Workshop, on April 21-22, 2005, funded by the European Commission.

The Council decided that the next Council Meeting and Open Forum should be held in Siófok (on Lake Balaton) Hungary, on September 25, 2005, at the 1st BBBB Conference, on September 26-28th, 2005. Also, should financial issues call for it, an extra Council would be held in conjunction with the PharmSciFair, on June 12-17th, 2005, in Nice, France.

Additional Committees
Professor Sefaan de Smedt (University of Ghent, Belgium) is new chairman of the Committee on Training and Education (CTE).

The CTE met with members of the Executive Committee, at the EUFEPS 2004 Congress, in Brussels and plans to meet next in June 2005 in Nice.

The Committee on Academic Research Relations (CARR), chaired by Professor Patrick Couvreur (Paris-Sud University) also met with the Executive Committee in Brussels. A position paper, authored by CARR, on “Contribution of academic research to discovery and development of medicines: current status and future opportunities” was published in the European Journal of Pharmaceutical Sciences Vol 24 (2005) 245-252.

The Committee on Industrial Relations (CIR), chaired by Dr Leo de Leece (Octoplus, Leiden, The Netherlands) met in September 2004 in Leiden, and will meet again in 2005 in January and in September, in Brussels.

The Committee on Awards and Prizes (CAP), chaired by the EUFEPS Past-President, Professor Dominique Duchêne, was busy, last year, preparing for awards to be presented at EUFEPS 2004 (see table). Additional awardees will be selected in 2005.

Name of the Prize: Awarded to:
Segré Prize Inaki F Trocóñiz, University of Navarra, Pamplona, Spain
Best Paper Award Anette Bauer-Brandl, University of Tromsø, Norway and her two colleagues German L Perlovich and Sergey V Kurkov, Institute of Solution Chemistry, Russian Academy of Sciences, Ivanovo, Russia
Gunilla Englund, University of Uppsala (BMC), Uppsala, Sweden and her six colleagues from same institution, Jan Taipalensuu, Håkan Melhus, Helena Brändström, Ann-Cathrin Svensson, Per Artursson and Andreas Kindmark
NSMF Award Geoffrey T Tucker and Amin Rostami, University of Sheffield, Sheffield, UK
Young Investigator Poster Award Dimitrios Spyridis, University of Thessaloniki, Thessaloniki, Greece and his three colleagues from same institution, E.A. Rekka, P.T. Eleftheriou, P.N. Kourounakis
Valentine Wascotte, UCL, Brussels, Belgium and her three colleagues from the same institution, M.B. Delgado-Charro, R.H. Guy, V. Preat
Hans Wolfgang Schramm, Graz Karl Franzens University, Graz, Austria and his eight colleagues from the same institution K. Raunegger, C. Hödl, W.S.L. Strauss, R. Sailer, O. Kunert, C. Seger, R. Steiner, E Haslinger

For more information on the EUFEPS events, please visit the website www.eufeps.org or contact the EUFEPS Secretariat.
SYSTAT 11

The Fastest Track To Reliable Results

Achieving New Levels of Analytical Power and Speedy Results

With SYSTAT 11, you'll spend more time on the results of your research, and less time getting to them. Originally developed by a renowned researcher, statistician and expert on data visualization, SYSTAT excels at meeting the challenges of experimental data. Twenty years of delivering highly reliable results have made us the most trusted statistical software package for scientists, researchers and statisticians.

Download a Free trial copy

www.systat.com/products/SYSTAT
Europe +49.2104.9540
France N° vert 0800.90.37.55
info.europe@systat.com

"Systat has put a tremendous effort into developing version 11. I've compared many statistical software packages, and the reason that I have stayed with SYSTAT over time is because of its excellent combination of hardcore statistics, exploratory graphics, and ease-of-use."

Pete Raimondi, Marine Ecologist, University of California, Santa Cruz, USA

At a glance

An immense library of exploratory, confirmatory and predictive statistical methods

- ANOVA
- Bootstrapping
- Canonical and set correlations
- Classification and regression trees
- Cluster analysis
- Conjoint analysis
- Correlations
- Correspondance analysis
- Crosstabs & measures of association
- Descriptive statistics
- Design of experiments
- Discriminant analysis
- Factor analysis
- Fitting distributions
- General Linear Model
- Hypothesis testing
- Linear regression
- Logistic regression
- Loglinear models
- MANOVA
- Missing value analysis
- Mixed regression
- Monte Carlo
- Multidimensional scaling and perceptual mapping
- Nonlinear regression
- Nonparametric tests
- Partially ordered scale analysis (POSAC)
- Path analysis (RAMONA)
- Power analysis
- Probability calculator
- Probit
- Quality analysis
- Random number generators
- Repeated measures
- Robust regression
- Signal detection
- Smooth module
- Spatial statistics
- Survival analysis
- Test Item analysis
- Time series
- Two stage least squares

For our complete line of software visit us at www.systat.com
Revolution in Science Driving Process Analytical Technology

The EUFEPS Congress 2004 – New Safe Medicines – Towards Mechanistic Prediction – in Brussels had a theme devoted to Process Analytical Technology (PAT), running over two and a half days including two late afternoon work-shop sessions. The ten invited speakers represented academia and industry in a 5:5 ratio. About 40 people participated. The idea of the theme was to concentrate on the science behind PAT and how this could drive industrial applications to obtain more robust processes.

Roger Benson, ABB gave an introductory lecture describing benchmarking between pharmaceutical and other top performing industries regarding production efficiency and showed that the pharmaceutical industry is far behind. PAT developed during the research and development of a new product should be one obvious tool to gain increased understanding, control and production output. One cannot afford not to use it. Hans Leuenberger, University of Basel highlighted the great opportunity that FDA has opened up regarding the PAT Initiative, bringing science into “the art of formulation” and getting acceptance for quality control based on fundamental understanding of critical process steps. For instance, the knowledge of powder technology is very important and at present rather low. New technology research is one key for the ability to resolve future problems. Surface response methodology is a relevant example.

Don Clark, Pfizer described a number of PAT techniques and successful applications such as NIR for investigation of crystal size, and blending uniformity, FT-IR for in-process control of APIs, Raman for polymorphs, UV/VIS for vessel cleaning and acoustics for on line testing. Raman Microscopy, Laser Focused Beam Reflectance (FBRM), X-ray microtomography and NMR for off-line testing, mainly for imaging purposes. Kevin Roberts, University of Leeds showed how crystallisation could be followed in closed systems and how the crystal growth process and polymorphic transformation could be investigated by spectroscopy (ATR – FTIR, Ultrasonic Spectroscopy, X-ray and 2D techniques). David Rudd, GSK, talked about “Drug substance production - applications of PAT” and mentioned the importance of an interface between R&D and Production. PAT should be a measure that you can react to in order to steer your production in the right direction. A number of techniques and applications were demonstrated such as MID IR, IR, ATR UV (Attenuation reflectance UV) and Raman demonstrating the use in production with at line and portable constructions.

Michael Ulmschnider, Roche Pharmaceuticals gave an overview of analytical tools and methods used in drug product development. For example, quantification of water in freeze-dried products and chemical imaging of whole tablets evaluated by means of chemometrics. Jukka Raantanen talked about “Science behind PAT in control of manufacture of drug products” looking at the granulation process and measuring water content to find a reliable end point of the mixing and drying. Svante Wold, Umeå University/ Umetrics Inc.&AB gave a presentation on “PAT, chemometrics, and risk minimization”. The quality of the data, the building of multivariate models and the understanding of how to interpret the results are fundamentals to make chemometrics the powerful and necessary tool that it is for PAT. With adequate data, from the whole process and all equipment used, physical, chemical and engineering risks can be kept under control.

Staffan Folestad, AstraZeneca talked about “PAT sensors and mechanistic models: towards the ultimate in science based processing”. PAT must start during the research and development phase as 50% of the production cost is locked in before Phase III starts. Examples were given, such as time-resolved NIR spectroscopy as one type of research to better understand the transmission measurement of solid tablets and in silico simulation of high shear mixing for granulation processing by a novel mechanistic population balance modelling. Finally Reg Mann, Manchester University, Visual Centre for Process Tomography demonstrated some examples of how to visualize what happens in a mixture or a process for example by having a number of electrical resistance sensors around a vessel. Applications on bioreactors were shown.

The first workshop was chaired by Fritz Erni, Novartis Pharma, and discussed “PAT – What is missing /what is needed.” It was concluded that the understanding of the fundamental processes is at a low level. There is a need to share information between industry, academia and equipment suppliers. Tools are needed to study the chemical and physical properties of the pure drug substance (purity, polymorphs, particulate properties) as well as of the final product (microstructure). Robust measurement systems are required and possibilities to transfer the data that exist into information. Define first what to measure and then look for the tools!

The second workshop chaired by Peter York, Bradford University was about “Building a European PAT Science Network”. It was realised that pharmaceutical manufacturing operations are inefficient and costly and there will be a need for people who can contribute to innovation, cutting edge scientific knowledge and the best quality management and so respond to the challenges of new discoveries. In spite of various existing networks, it was concluded that a new network stimulating the PAT science in academia and industry in Europe would be welcome, in order to address the future needs.

The network should be under the EUFEPS umbrella and administration. The steering team was suggested to be the organising committee of the present meeting. Post meeting, the committee was strengthened with more representation from academia. Steering team: Peter York (Bradford University), Chair Staffan Folestad (AstraZeneca) Fritz Erni (Novartis Pharma) Anna-Maria Tivert (AstraZeneca) Menno van der Waart (Organon) Hans Leuenberger (Basel University) Anders Rasmussen (Chalmers Univ. Gothenberg) Hans H Lindén (EUFEPS) The participants at the meeting were asked to give in their cards to be registered as a network member and EUFEPS was asked to administer the list. The first action for the team has been to apply for support from the EU Commission 6th Framework programme to arrange a future seminar and also to make PAT a subject within the 7th EU Framework to support future activities and strengthen the PAT science in Europe. A network site at the EUFEPS Online (www.eufeps.org) will be established.

Anna-Maria Tivert
Möln达尔, Sweden
**Arden House European Conference 2005:**
Materials Science in solid dosage design and development
March 21-23, 2005, London, UK
**Contact:** Ms J Callanan, Room 304
Royal Pharmaceutical Society of Great Britain
1 Lambeth High Street, London SE1 7JN
Fax +44 20 75722506, Email science@rpsgb.org
www.rpsgb.org/science

**7th Advanced level workshop on pharmacokinetic/pharmacodynamic data analysis**
May 15-19, 2005, Cambridge, UK
**Contact:** Ms J Callanan, Room 304
Royal Pharmaceutical Society of Great Britain
1 Lambeth High Street, London SE1 7JN
Fax +44 20 75722506, Email science@rpsgb.org
www.rpsgb.org/science

**3rd World Conference on Drug Absorption, Transport and Delivery: Clinical Significance and Regulatory Impact**
April 17-20, 2005, Barcelona, Spain
**Contact:** EUFEPS Secretariat
P.O. Box 1136, SE-111 81 Stockholm, Sweden
Email secretariat@eufeps.org , www.eufeps.org

**Challenges in Global Pharmaceutical Product Development: From Excipient Selection to Product Registration**
April 19-20, 2005, Dublin, Ireland
**Contact:** Prof. A. Hanson, Extension Services in Pharmacy, University of Wisconsin
School of Pharmacy, 777 Highland Avenue
Madison, Wisconsin 53705-2222 USA
Fax +1-608-262-2431
www.pharmacy.wisc.edu/esp

**2nd International Symposium on Scientific and Regulatory Aspects of Dissolution and Bioequivalence**
June 3-5, 2005, Athens, Greece
**Contact:** Prof. Panos Macheras, School of Pharmacy, Laboratory of Biopharmaceutics & Pharmacokinetics, University of Athens
GR-15771 Athens, Greece
Fax +30 210 7274027
Email macheras@pharm.uoa.gr

**The Pharmaceutical Sciences Fair**
June 12-17, 2005, Nice, France
**Contact:** EUFEPS Secretariat
P.O. Box 1136, SE-111 81 Stockholm, Sweden
Email secretariat@eufeps.org , www.eufeps.org

**Basic Pharmacokinetics: A one week workshop**
July 10-15, 2005, Arosa, Switzerland
**Contact:** Ms Irene Sung, School of Pharmacy and Pharmaceutical Sciences
University of Manchester
Manchester M13 9PL, UK, Fax +44 161 2738196
Email irenesung-pkworkshops@man.ac.uk
www.pkworkshops(man.ac.uk

**International Educational Course: Pharmacological Treatment of Epilepsy**
September 18-25, 2005, Eilat, Israel
**Contact:** Target Conferences Ltd, PO Box 29041
Tel Aviv 61290, Israel, Fax +972 3 5175155
Email eilat-edu@targetconf.com
www.eilat-aeds.com

**British Pharmaceutical Conference**
September 26-28, 2005, Manchester, UK
**Contact:** Ms J Callanan, Room 304
Royal Pharmaceutical Society of Great Britain
1 Lambeth High Street, London SE1 7JN
Fax +44 20 75722506, Email science@rpsgb.org
www.rpsgb.org/science

**1st BBBB Conference on Pharmaceutical Sciences**
September 26-28, 2005, Siófok, Hungary
**Contact:** BBBB Secretariat, Fax +361 4831465
Email titkarsag@mgyt.hu
www.mgyt.hu

---

**A 2 Day Hands-on Workshop In Vitro - In Vivo Extrapolation**
16th - 17th April 2005
Barcelona Hotel Sants
Barcelona, Spain

This is a comprehensive introduction to extrapolation in vitro data to in vivo studies (e.g. drug clearance and metabolisable drug-drug interactions) with hands on experience using real data. The workshop examples will include assessing the outcomes in patient populations as opposed to single average individuals and provide a guidance on designing clinical studies.

**A 1½ Day Advanced Hands-on Workshop In Vitro - In Vivo Extrapolation**
10th – 11th June 2005
Nice, France

This is an advanced workshop with a focus specific issues related to extrapolation in vitro to clinical data. A variety of different types of PBPK models, parameter sensitivity and MBl are among the topics that are discussed. Hands on experience with real data is used to illustrate the important of compartmental IVIVE.