Clinical Pharmacology in Health Care, Teaching and Research

Clinical pharmacology is the scientific and clinical discipline that involves all aspects of the relationship between drugs and humans. Clinical pharmacologists have as their primary goal improving patient care, directly or indirectly, by contributing to the development of better medicines, and promoting the safe, effective and cost effective use of drugs. More than forty years ago the World Health Organization brought together a group of experts in Clinical Pharmacology and Therapeutics to define and describe the discipline. This resulted in an authoritative report (Clinical Pharmacology. Scope, Organisation, Training. Report of a WHO Study group. World Health Organ. Tech.Rep.Ser 1970;446:5 – 21) published by WHO, defining how the discipline of clinical pharmacology could improve the use of drugs in the delivery of health care.

In the last four decades the importance of drug therapy has changed markedly because of the potency of newer agents, the increase in the number and diversity of drugs, and in the number of diseases that can be treated. Also, the complexity of the health care and the societal milieu in which drugs are used has greatly increased. Clinical pharmacology is now a multidisciplinary science that includes professionals from a wide variety of scientific and clinical disciplines including medicine, pharmacology, pharmacy, biomedical science and nursing. A number of new disciplines originated within clinical pharmacology. Many of these are now formally represented by their own international networks and societies. Examples are the International Society for Pharmacoepidemiology (ISPE), the International Society of Pharmacovigilance (ISoP), and the International Society for Pharmacoeconomics and Outcomes Research (ISPOR).

Recently, a partnership was formed between the World Health Organisation (WHO), the International Union of Basic and Clinical Pharmacology (IUPHAR), and the Council for International Organizations of Medical Sciences (CIOMS) to produce an updated report on the role of clinical pharmacology in modern medicine (“Clinical Pharmacology in Health Care, Teaching and Research” edited by Michael Orme, Folke Sjöqvist and Donald Birkett). While this document refers primarily to the roles of physician clinical pharmacologists, it acknowledges extensively the contributions of other professional groups within the broad discipline of clinical pharmacology.

Groups of distinguished clinical pharmacologists were invited to write the individual sections, which cover the essential roles of clinical pharmacology in health care, teaching and research as well as describing the discipline’s links with industry and governments. The report describes in detail the benefits of clinical pharmacology in delivering better health care for all. The document is aimed particularly at decision makers in governments, primary and secondary health care organizations, and the pharmaceutical industry.

The report, which is published in both electronic and print forms, will be made available to all IUPHAR member societies and other interested individuals and groups.

Don Birkett
Chair, IUPHAR Clinical Pharmacology Division
We welcome nominations by October 31, 2012 for the following positions on the IUPHAR Executive Committee for the period between the international meetings in 2014 and 2018:

- President
- Secretary general
- Treasurer
- First vice president
- Second vice president
- Five (5) councilors

Nominations can be submitted by member societies, individuals, or groups of individuals who belong to an IUPHAR member society. Nominations should be accompanied by brief biographical sketches (1-2 pages) highlighting the achievements of the candidate and other qualifications for office. The nominating material must contain a brief statement as to why this candidate is particularly appropriate for this appointment. Be sure to indicate for which position the candidate is being nominated. Nomination materials should be sent electronically to Professor S.J. Enna, IUPHAR Secretary General, at iuphar@kumc.edu as a single file. Nominations received after October 31, 2008 will not be considered.

The nomination material will be forwarded to the Nominating Committee, which is charged with preparing a slate of candidates for consideration by the General Assembly during the 2014 meeting in Cape Town, South Africa. The Nominating Committee is chaired by Paul Vanhoutte (PMVanhoutte@gmail.com) of Hong Kong, and includes as members Jeffrey Aronson of the UK, Filipo Drago of Italy, Masayoshi Mishina of Japan, and Rick Neubig of the USA.

For the specific duties for each elected position, please consult Section VII. EXECUTIVE COMMITTEE of the IUPHAR Statutes by visiting http://www.iuphar.org/about_statutes.html

For the Nominating Committee,
Professor Paul Vanhoutte
The Association of Pharmacologists of Ukraine (APU) publishes the journal Pharmacology and Drug Toxicology (Farmakologia ta likars'ka toksikologia, ISSN 2227-7943) six times per year. Pharmacologists and toxicologists are invited to submit review and research papers for publication in the journal. Topics covered include:

- mechanism of drug action
- drug efficiency
- drug-drug interactions
- adverse drug reactions
- synthesis and pharmacological/toxicological analysis of physiologically active substances
- pharmaceutics

At the moment, articles received from international investigators are published free of charge. Guidelines for submission of academic articles are published in each issue of the journal and are also available from the Editorial Board. Articles and other items can be submitted electronically via email to farma@t.kiev.ua and info@pharm-tox.org.ua.

Please remember to include in your inquiries or submissions all contact details – full name, professional position, telephone numbers and email address.

We look forward to your contributions!

Ganna Shayakhmetova
Secretary, the Association of Pharmacologists of Ukraine
Hungarian Society for Experimental and Clinical Pharmacology
THE FIRST FIFTY YEARS (1962-2012)

As one of the founding members of the Hungarian Society for Experimental and Clinical Pharmacology and its first Secretary, Prof. József Knoll is uniquely qualified to describe the history of pharmacology in Hungary and the formation of the Society. The Society thanks him for preparing the following narrative.

History

Pharmacology first began in Hungary as part of the medical faculty of the Pazmany Peter University, which was established in 1769 in Budapest. In 1872, pharmacology became an independent department, a mere 23 years after Buchheim’s first pharmacological department in Dorpat. At that time, of course, Hungary was a substantial power together with Austria. It held significant influence, as well as being in the German sphere. The pharmaceutical industry in Hungary was established at the end of the nineteenth century. The main company was Chinoin (now linked to Sanofi) but later came Gedeon Richter, then Wander (now EGIS, linked to Servier), and so on. Vitamin C was first produced here by Chinoin. Some of the first sulphonamides, as well as many other drugs, were also produced here, making pharmaceuticals among Hungary’s leading industrial achievements.

The situation in Hungary was complicated when the communists took over in 1948. The laboratories in the university departments were very poorly equipped and had virtually no money to buy anything. Scientists couldn’t travel outside the country, with the only contact between them being on a personal level. The Hungarian Physiological Society, the classic society for our work, was approximately 40 years old at that time. They held an annual meeting during which all the research workers in the field met and discussed their problems because it was the only place to gather. Because of the tendency to make socialism independent of capitalism, new journals were organized. The Acta Physiologica Hungarica was established in 1950. An emphasis was on publishing in English, although articles were also accepted in French, German and Russian. Our library received some of the Western journals, albeit late. But we tried to keep up with developments in the scientific world and worked very hard. Although there was a sense of isolation within Hungary, our enthusiasm for the science kept us motivated.

Prof. Béla Issekutz was the first chairman of the Department of Pharmacology at the University of Szeged. From 1939 until 1962 he served as the Head of the Department of Pharmacology at Semmelweis University in Budapest. Prof. Issekutz realized that pharmacologists needed to collaborate with industry. He was very interested in the practical aspects of drug research, being one of the first to realize the importance of structure-activity-relationship studies in drug development. In 1948, with the financial aid of the Hungarian Academy of Sciences, Prof. Issekutz established a highly regarded laboratory for synthetic chemistry.

Continued on page 5...
In 1949, after I passed my examination in pharmacology, Prof. Issekutz (photo at left) invited me to work in his department. I remained there throughout my career. Although it was not an ideal setting for research, it was probably the best time of my life due to the fantastic activity and enthusiasm in the department. The well established Hungarian Academy of Sciences had been newly reorganized for political considerations, which meant they received and distributed funds. So, even I, as a medical student, obtained some support from the academy, almost the same amount as a young MD would have received after qualifying. The Academy’s efforts to encourage research were successful in bringing young people to the department. The older generation had been lost in the war or had left Hungary. This was the case for some of the best neuroscientists and leading personalities, such as Albert Szent-Györgyi, who discovered Vitamin C while working in Szeged. He left Hungary in 1950.

After the 2nd World War the development of pharmacology was revolutionary. For example, 1950 to 1960 was the golden decade for central nervous system pharmacology. It witnessed the development of MAO inhibitors, phenothiazines, tricyclic antidepressants, uptake inhibitors, etc. These discoveries brought into being the science of neuropsychopharmacology, which altered attitudes about behavior and psychiatric disorders. This was only one of the breakthroughs in pharmacology that increased human life expectancy and well-being.

Formation

Pharmacology in Hungary was highly respected. As elsewhere in Europe, it was considered part of physiology. Prof. Issekutz, along with other leaders in pharmacology at that time, was very much against establishing independent national pharmacological societies. They wanted to keep it combined with physiology. I held a quite different view. With some support from the president of the Academy of Sciences, I was instrumental in changing the status quo by helping establish the Hungarian Pharmacological Society (MFT) in 1962. Prof. Issekutz served as the first president. I was the first general secretary and later the president from 1967 until 1983. I was awarded the life honorary president title in 1983. The Hungarian Pharmacological Society was among the first to join IUPHAR. Later I became a councilor for IUPHAR and then a first vice-president.

Lifetime Honorary Presidents:
1967-1979 Béla Issekutz
1984- József Knoll

MFT Presidents:
1962 - 1966 Béla Issekutz
1967 - 1983 József Knoll
1984 - 1990 Károly Kelemen
1991 - 1996 László Szekeres
1997 - 2002 E. Sílvester Vizi
2000 - 2001 Gyula Papp
2002 - 2004 Csaba Farsang
2004 - 2006 János Szolcsányi
2006 - 2008 Péter Kovács
2009 - Zsuzsanna Fürst
President-Elect Ádám Vas

Zsuzsanna Fürst, Current MFT President

Continued on page 6...
MFT 50th Anniversary (continued)

The MFT received financial support from industry to reach our goals, primarily to address the problem of isolation of our members from international science. The political atmosphere in Hungary changed in the mid-1960s allowing more openness. Within a few years, members of our society began to participate in international congresses and symposia and were able to visit the leading pharmacological departments in the universities and research institutions in the west.

Structure and Activities

Within MFT are sections in experimental pharmacology, medicinal chemistry, biochemical pharmacology, clinical pharmacology and toxicology. While a new area of research, we realized the vital importance of clinical pharmacology in enhancing drug development in Hungary. We convinced leaders in the Ministry of Health, and in the pharmaceutical industry, to sponsor the establishment of a Clinical Pharmacological Network in the best university clinics. This network was critical in catalyzing developments which helped Hungarian clinicians contribute to multicenter clinical studies. In 2002 the society name was changed to the Hungarian Society for Experimental and Clinical Pharmacology to reflect the importance of clinical pharmacology within the discipline.

The MFT organized international congresses in Budapest, with six symposia each during 1974, 1976, 1979 and 1985. The proceedings appeared in six individual volumes published by the Hungarian Academy of Sciences. After 1979 Pergamon Press assumed producing the volumes. These meetings were supported by the Hungarian pharmaceutical industry.

In the late 1980s, the state support from the Academy and the Ministry of Health, as well as from the pharmaceutical industry, began to decline. The decreased funding brought major changes to our society. Pharmacology in Hungary, which had a very well developed history and strong backing from the pharmaceutical industry began to falter.

The Drug of the Year Award (plaque at right) was founded by our Society in 1997 to recognize the contributions and achievements of industry. The awardee must meet several scientific (new mechanisms, fewer side effects, fewer interactions, etc.), economic and clinical criteria as evaluated by an independent Expert Committee. The winner is selected by secret ballot of the Society Executive Committee.

Continued on page 7...
The Drug of the Year Awards

<table>
<thead>
<tr>
<th>Drug (generic)</th>
<th>Company</th>
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<tr>
<td>Zocor (simvastatin)</td>
<td>Merck Sharp &amp; Dohme (1996)</td>
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<tr>
<td>Zyprexa (olanzapin)</td>
<td>Lilly (1997)</td>
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<td>Kaldyum (kalium chloratum)</td>
<td>Egis (1998)</td>
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<tr>
<td>Mesulid (nimesulid)</td>
<td>Sanofi-Synthelabo/Chinoin (1998)</td>
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<td>Durogesic (fentanyl)</td>
<td>Janssen-Cilag (1999)</td>
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<td>Reductil (sibutramin)</td>
<td>Knoll (2000)</td>
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<tr>
<td>Xalatan (latanoprost)</td>
<td>Pharmacia (2001)</td>
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<tr>
<td>Fosamax (alendronat)</td>
<td>MSD (2002)</td>
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<td>Mabthera (rituximab)</td>
<td>Roche (2003)</td>
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<tr>
<td>Plavix (clopidogrel)</td>
<td>Sanofi Synthelabo (2003)</td>
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<td>Keppra (levetiracetam)</td>
<td>UCB Magyarország Kft. (2005)</td>
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<tr>
<td>Ezetrol (ezetimib)</td>
<td>MSD Hungary Kft (2006)</td>
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<tr>
<td>Avastin (bevacizumab)</td>
<td>Roche (2007)</td>
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<tr>
<td>Spiriva (tiotropium)</td>
<td>Boehringer-Ingelheim (2007)</td>
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<tr>
<td>Xarelto (rivaroxaban)</td>
<td>Bayer Hungária Kft. (2010)</td>
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<tr>
<td>Pradaxa (dabigatran etexilate)</td>
<td>Boehringer Ingelheim (2011)</td>
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Most recently, the 10th Congress of the European Association for Clinical Pharmacology and Therapeutics (EACPT) was convened on June 26-29, 2011 at the Budapest Congress and World Trade Center (pictured at left). The Congress was organized by EACPT and the MFT, with the professional help of the MOTESZ Congress Bureau.

The Congress was distinguished by the Patronage of the Minister of Human Resources of the Hungarian Government and the President of the Hungarian Academy of Sciences. Under the theme From Drug Research to Therapy for the Benefit of Patients, the Congress hosted 42 sessions, seven symposia and two workshops covering a wide range of topics in clinical pharmacology in three and a half days. Over 700 registrants from 56 countries had the opportunity to listen to four plenary speakers and 150 oral presentations. More than 300 posters were exhibited at the Congress.

Continued on page 8...
It was our pleasure to host the ASCPT Symposium for the first time in the history of EACPT Congresses. The Congress also hosted symposia and workshops by the British Pharmacological Society, the International Federation of Associations of Pharmaceutical Physicians, IUPHAR and Gedeon Richter Plc (the main sponsor of the event). Sir Colin Dollery received the EACPT Lifetime Achievement in Clinical Pharmacology Award. There was also time to relax and enjoy the Hungarian culture and cuisine. The congress was in every aspect a real success.

Closing Thoughts

It is important to remember that Hungary is still in a state of delicate transition with heavy burdens from the past. Nevertheless, Hungary is now member of the European Union and, fortunately, a free country, which is the most important. It allows the MFT to participate in international activities while building a strong cadre of pharmacologists within Hungary.

József Knoll (at right)
Lifetime Honorary President
Hungarian Society for
Experimental and Clinical Pharmacology

Some memorable moments from conferences organized by MFT.
The first pharmacology laboratory in Taiwan was founded in 1921 by Prof. T. M. Tu, who received his Ph.D. from Kyoto University and was the first Taiwanese Professor in Medicine. He assigned the research projects on opium, snake venom and Chinese herbs to the research students and assistants in his laboratory. Over 40 scientists received their Ph.D. degrees under Dr. Tu’s supervision. His students, C. Y. Lee and C. C. Chang, discovered and studied bungarotoxin from *Bungarus multicinctus* snake venom [Snake Venoms, Handbook of Experimental Pharmacology, Vol. 52 (Edited by C.Y. Lee), photo at left]. Bungarotoxin has been an important research tool in neuropharmacology.

Prof. C. Y. Lee’s dedication to the Taiwanese scientific community was tremendous. In addition to guiding the Department of Pharmacology in the National Taiwan University (NTU) to success, he also made significant contributions towards organizing pharmacologists in Taiwan. The Chinese Pharmacological Society was founded on Feb. 20, 1982. It was renamed the Pharmacological Society in Taiwan in 2001. The Society now has more than 600 members drawn from all areas of biomedical sciences.

Prof. C. Y. Lee served as the first President and Dr. Che-Ming Teng was the first Secretary General of the Society from 1982 to 1988. During the next 24 years, the Society was led by the following Presidents / Secretary Generals:

C. C. Chang / W. M. Fu (National Taiwan University, 1992-1996)
C. M. Teng / W. W. Lin (National Taiwan University, 1996-2000)
M. H. Yen / C. C. Wu (National Defense Medical Center, 2000-2004)
W. C. Chang / K. S. Hsu (National Cheng Kung University, 2008-2012)

Continued on page 10...
Between 1983-1985, a joint conference was held annually involving the Pharmacological Society in Taiwan and the Chinese Physiological Society. In 1985, two more societies, Biochemistry and Clinical Biochemistry, joined this group. The conferences were then renamed The Joint Annual Meetings of Biomedical Societies. This collaborative meeting is entering its 27th year in 2012. It is the most important meeting for the biomedical community in Taiwan. The Pharmacological Society in Taiwan also confers awards to young scientists and graduate students under the sponsorship of the C. Y. Lee Foundation and C. M. Tu Foundation, respectively.

The Society also hosted in Taipei the 8th Southeast Asian / Western Pacific Regional Meeting of Pharmacologists on November 1st - 5th, 1999. There were more than 600 attendants, including approximately 300 from abroad, at this five-day meeting. The success of the meeting demonstrated our strength in pharmacological research, helped to improve our relations with other countries, and allowed cooperation with scientists from more than 20 countries. We will be hosting the 14th Southeast Asian / Western Pacific Regional Meeting of Pharmacologists in 2020. We welcome the pharmacologists from around the world to visit Taipei for this event.

Wen-Chang Chang
Taipei Medical University
President, Pharmacological Society in Taiwan

http://www.pharmacology.org.tw
The Saint Petersburg Symposium was the sixth in this series of international symposia devoted to the study of mechanisms of cell and tissue damage as well as to the pharmacological protection against this injury in the gastrointestinal (GI) tract. The first symposium was held in 1986 in Germany. The subsequent three were in the United States and the fifth in Ukraine. Thus, this sixth symposium in Russia was the 25-year jubilee of the inaugural symposium.

Traditionally, most of the participants in this series of symposia have been leading experts in the field. The sixth symposium continued this tradition by inviting keynote speakers and renowned scientists from 12 countries: Canada, Croatia, Denmark, Hungary, Japan, Norway, Poland, Russia, Sweden, Ukraine, the United Kingdom, and the United States. The symposium was attended by about 100 scientists, including 49 international participants. The largest international contingents were from the United States and Japan. A large number of students and staff members of the local Pavlov Institute of Physiology and other scientific institutions of St. Petersburg also attended.

The president and main organizer of this symposium was Prof. Ludmila Filaretova, an internationally known scientist at the Pavlov Institute. She chaired the local organizing committee and interacted with the symposium international advisory board, which included Profs. T. Brzozowski (Poland), S. Okabe and K. Takeuchi (Japan), S. Orrenius (Sweden), S. Szabo and Y. Tache (USA).
Before the symposium opening, there was a six-hour tour of the laboratories (above left) and private apartment (above right) of the famous physiologist, Ivan Pavlov. About a century ago in St. Petersburg, Dr. Pavlov discovered the conditional reflex and many functions of the GI tract. His laboratories, where he worked from 1890 until 1936, were almost intact, including the mysterious “tower of silence”. The visitors viewed the famous posthumous monument to Pavlov’s dog and a film containing original footage of Pavlov’s life and his laboratory experiments.

During the official opening of the meeting, Prof. Filaretova noted that this jubilee symposium brought together three generations of scientists: the few who founded this series of symposia, those who successfully continued it, and the young generation who will develop it further still. A special lecture was presented by Prof. S. Szabo, who reviewed the current state of mechanisms and pharmacologic modulation of gastroprotection, as well as the initial discovery of gastric cytoprotection by prostaglandins by the late André Robert, who was also one of the founding fathers of these symposia. This was followed by a plenary lecture by Prof. K. Zhyvotovsky, from the laboratory of Prof. S. Orrenius, another founder of this symposium series, on the mechanisms and involvement of apoptosis in the pathogenesis of GI diseases.

Plenary lectures were also delivered by Prof. S. Okabe on the cytoreductive effect of acetic acid on mouse cancer and Prof. D. Chen on the importance of bench-to-bedside-and-back concept in GI pharmacology.

The remaining two days of scientific programming included five sections with oral presentations and one poster session each day, including a short discussion of each poster report. Based on the originality and importance of the data presented in posters, the Best Poster award was given to investigations from Semmelweis University.

The main sessions focused on the mechanisms of NSAID-induced tissue injury with presentations by Profs. J. Wallace on the distinct pathogenesis and prevention of...
St. Petersburg Meeting (continued)

NSAID gastropathy and enteropathy; K. Takeuchi on the role of PG receptor EP4 in development and healing of NSAID-induced intestinal damage; H. Satoh on the dual control of duodenal mucosal protection by COX1 and COX2; H. Matsui, T. Mizushima and B.A. Callingham. In the session on stress and its dual actions on the GI tract, the main presentations were by Profs. Y. Tache, J.D. Wood, and L. Filaretova, while the presentations on novel insights into the mechanisms of GI mucosal injury and protection were by Profs. S. Szabo, R. Hunt, K. Gyires, O. Zayachkivska and A. Yanaka. The two major sessions on advances in GI pharmacology featured presentations by Profs. T. Brzozowski, P. Sikiric, Y. Nagasaki and Drs. C.M. Zhao, A. Kawabata, G. Tolstanova and D. Zelena.

Funding for the symposium was provided by the Department of Biological Sciences, the Saint Petersburg Scientific Center of the Russian Academy of Sciences, the Russian Foundation for Basic Research, the IUPHAR GI Section, the Russian pharmaceutical company, TNK Silm, and Ajinomoto, a Japanese company.

The symposium abstracts and selected original articles will be published in the Journal of Physiology and Pharmacology, while invited review articles will appear in a book tentatively titled Cell/Tissue Injury and Cytoprotection/Organoprotection in the Gastrointestinal Tract: Mechanisms, Prevention and Treatment, edited by Profs. L. Filaretova (St. Petersburg, Russia) and K. Takeuchi (Kyoto, Japan). It will be published by Karger of Basel, Switzerland.


Sandor Szabo
University of California
Irvine and VA Medical Center
Long Beach, CA, USA

and

Ludmila Filaretova
Institute of Physiology
Russian Academy of Sciences
St. Petersburg, Russia
First Latin American Workshop on Pediatric Pharmacology Research
(Jornada Latinoamericana de Investigacion en Farmacologia Pediatrica)
Buenos Aires, October 28th, 2011

The first Latin American Workshop on Pediatric Pharmacology Research was held in Buenos Aires on October 28th, 2011. It was organized by the IUPHAR Section of Pediatric Clinical Pharmacology, and the Pediatric Research Subcommittee of the Argentine Pediatrics Society (Sociedad Argentina de Pediatría, “SAP”). The workshop, the first of its kind in the region, received the sponsorship of the Panamerican Health Organization (PAHO), the Latin American Pediatric Research Society (Sociedad Latinoamericana de Investigacion Pediatrica, “SLAIP”), Drugs for Neglected Diseases initiative (DNDi), Pfizer, the Argentine Pediatrics Society, IUPHAR, and the Global Research in Pediatrics initiative (GRIP), which is funded by the EU 7th Framework Program.

Over 100 people attended the meeting, including pediatricians, pharmacists, nurses, biochemists and other health professionals. Most attendees were affiliated with universities and teaching hospitals or worked in the pharmaceutical industry. The participants (some of which are pictured below) came from many regions in Argentina, and neighboring Latin American countries (e.g., Brazil, Chile).
Presentations featured both local and international speakers, all experts in the field of pediatric clinical pharmacology. The central sessions were comprised of a lecture on developmental clinical pharmacology by Dr. Gideon Koren (above left) from the University of Toronto (Canada), a widely recognized expert and pioneer in this field, and an overview on pediatric medicines initiatives around the world by Dr. Kalle Hoppu (above right) from the University of Helsinki (Finland) and chair of IUPHAR’s Section of Paediatric Clinical Pharmacology. Dr. Isabela Ribeiro from DNDi (Brazil) presented an overview of research on neglected pediatric diseases. Several other talks explored issues ranging from teaching needs in pediatric clinical pharmacology to regulatory aspects of pediatric research in the region. Practical aspects of pediatric studies were also discussed by local experts.

A significant interest in pediatric clinical pharmacology research was noted in the discussions and among the informal talks during the coffee breaks and lunch. Participants’ reviews of the workshop were universally positive, with most attendees requesting similar meetings in the future. The participants also offered their suggestions of potential topics to be considered. This idea is currently under discussion with the Argentine Society of Pediatrics and IUPHAR. It is hoped that this fruitful experience can be repeated in the future.

Besides the invaluable opportunity to listen to international and local experts discuss key topics in pediatric clinical pharmacology, this meeting afforded participants the chance to network with other health professionals interested in the area. These encounters will undoubtedly lead to future collaborations and teaching initiatives, which will help further the field of pediatric clinical pharmacology in Latin America.

Facundo Garcia Bournissen
Servicio de Parasitología y Chagas
Hospital de Niños “R Gutierrez”
MEETING REPORT

Pharmacogenomics of Psychoactive Drugs
4th International Congress of Psychopharmacology
Antalya, Turkey, November 25, 2011

On the occasion of the 4th International Congress of Psychopharmacology in Antalya from November 23-26, 2012, the IUPHAR Section of Pharmacogenetics/genomics co-organized a symposium on “Pharmacogenomics of Psychoactive Drugs” together with the Turkish Association for Psychopharmacology, represented by Prof. Feyza Aynacioglu, from the University of Istanbul. The support of IUPHAR contributed significantly to realizing the symposium within this international meeting.

The symposium covered different aspects of pharmacogenetics as it pertains to drug efficacy, behaviour and safety. The session was co-chaired by Profs. Feyza Aynacioglu and Ingolf Cascorbi. The first highly interesting talk, “Role of polymorphic drug transporters in treatment resistant depression”, was given by Prof. Tanja Brückl (photo at right), of the Max Planck Institute of Psychiatry in Munich, Germany. This group, led by Dr. Markus Uhr, identified venlafaxine to be a substrate of P-glycoprotein and reported a genetic variant in the ABCB1 efflux transporter associated with the efficacy of antidepressants.

Prof. Adrian Llerena (photo at left) from the University of Extremadura, Badajoz, Spain gave an exciting presentation on the “Relationship between pharmacogenetic traits and personality”, with a special focus on CYP2D6.

Finally, “Genetic causes of hypersensitivity to antipsychotics - the clozapine story” delivered by Prof. Ingolf Cascorbi (photo at right) from the Christian Albrechts University Kiel, Germany, outlined a multicenter study identifying markers in the HLA-DQB1 locus that are strongly linked with the risk of clozapine-induced agranulocytosis.

The IUPHAR Section on Pharmacogenetics/genomics wishes to acknowledge and thank the Turkish Association for Psychopharmacology for organizing this exciting meeting.

Ingolf Cascorbi
Chair, IUPHAR Pharmacogenetics/genomics Section
5th ALL AFRICAN INTERNATIONAL CONGRESS ON BASIC AND CLINICAL PHARMACOLOGY, 2012

DATE: 11-13 JULY 2012
VENUE: LA PALM ROYAL BEACH HOTEL, ACCRA, GHANA
THEME: “SAFE AND EFFECTIVE MEDICINES FOR AFRICA”

SUB-THEME: Promoting Training, Research and Medicines Therapy Towards Attaining the Millennium Development Goals

This congress will bring together pharmacologists, medical practitioners, pharmacists, biochemists, nurses, microbiologists, toxicologists, regulators, public health experts and stakeholders from all over the continent and beyond.

PRE-CONFERENCE WORKSHOP 1: CNS PHARMACOLOGY
Date: 5 - 7th July, 2012
Venue: National Institute for Pharmaceutical Research and Development (NIPRD) District, Abuja, Nigeria

PRE-CONFERENCE WORKSHOP 2: COMMUNICATION AND CRISSES MANAGEMENT IN PUBLIC HEALTH: A FOCUS ON PATIENT SAFETY
Date: 9 - 10th July, 2012
Venue: La Palm Royal Beach Hotel, Accra, Ghana
Dear colleague,

I cordially invite you to attend the first EACPT Summer School on Education to be held in Amsterdam from 23-25 August 2012. This 3-day Summer School is being organized because the curricula in medicine, pharmacy and nursing are changing rapidly on the basis of new insights regarding education. This could be seen as a threat to the current teaching of pharmacology, clinical pharmacology and therapeutics, but it can also be an opportunity to strengthen it. Together with experts in these fields, we want to share the new knowledge and expertise regarding teaching methods and the way students learn with you and your colleagues. You, too, will be an expert when you return to your faculty after these 3 days. Furthermore, together with you and all the participants, we want to create a network of PCPT teachers under the umbrella of the EACPT and its education subcommittee. So, if you are interested, please preregister at our website in order to be sure you can attend this unique Summer School – the number of participants is limited!

Prof. Theo PGM de Vries MD PhD, chairman of the organizing committee

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Search over 1,200 career possibilities available in pharmacology and the related disciplines or create a personal job alert to be notified of new jobs that match your criteria. Be available for your next career opportunity, visit www.PharmacoCareers.org, where employers search for pharmacology professionals.
General Information

Piazza Cittadella.

There are Parcheggio Arena, Via M. Bentegodi, 8 and Cittadella Parking.
The nearest paying car parks to Palazzo della Gran Guardia are provided by APT buses that run every 20 minutes, leaving from Vicolo San Silvestro, 6 - 37122 VERONA.

The area near Palazzo della Gran Guardia is “Z.T.L. Verona Centro”; distance: 4Km from motorway A22 (Brennero-Modena): exit Verona Nord, then take "tangenziale" for ‘Verona Centro.’

Traffic signs ‘Centro’; distance: 4Km from motorway A4 (Milano-Venezia): exit Verona Sud, follow the "tangenziale" to the Arena. Palazzo della Gran Guardia on foot (about 15 minutes) or by bus n. 11, 12, 13.

From "Verona Porta Nuova" railway station, you can get to the airport to the railway station “Verona Porta Nuova”, which is 2 Km far from the Arena (www.aeroportoverona.it).

From "Valerio Catullo Airport in Verona-Villafranca", which is 12 Km far from Palazzo della Gran Guardia. A fly bus service is provided by APT buses that run every 20 minutes, leaving from Vicolo San Silvestro, 6 - 37122 VERONA.

Meeting Venue

Sala Convegni - Palazzo della Gran Guardia
Piazza Bra - Verona

Participation

Only 150 attendees will be admitted to participate in the Meeting on a “first come, first served” basis.

Official Language

The meeting will be run in English.

CME (Continuing Medical Education) - Only for Italian participants

CME accreditation will be requested to the Ministry of Health for a maximum of 150 medical doctors (specialties: Metabolic Diseases and Diabetology, Endocrinology, Internal Medicine, Geriatrics).

Provider ECM

Servizio Sviluppo per la Professionalità e l’Innovazione - Azienda Ospedaliera Universitaria Integrata - Verona, Dott.ssa Viviana Olivieri.

How to Register

In order to register, participants are kindly requested to fill in the attached Registration Form. After filling it, the form should be sent by fax to the Organizing Secretariat COGEST M. & C. (fax 0039 045 597265). Also it is possible to visit the website www.cogest.info (section Agenda congressi/iscrizioni on-line) and make the on-line registration.

Scientific Committee

Garret A. FitzGerald
Professor of Medicine and Pharmacology, Institute for Translation Medicine & Therapeutics, University of Pennsylvania, Philadelphia, USA

Pietro Minuz
Professor of Medicine, University of Verona, AOUI Verona, Italy

Carlo Patrono
Professor of Pharmacology, Catholic University School of Medicine, Rome, Italy

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Clinical Pharmacology, University of London, Editor-in-Chief British Journal of Clinical Pharmacology, United Kingdom

Giampaolo Velo
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Director of Clinical Pharmacology Unit, AOUI Verona, Italy

Organizing Secretariat

COGEST M. & C. Srl
Vicolo San Silvestro, 6 - 37122 VERONA
Tel. 045 597940 - Fax 045 597265
E-mail: cogest@tin.it - www.cogest.info

Meeting Venue

Sala Convegni - Palazzo della Gran Guardia
Piazza Brà - Verona
The International Society of Pharmacovigilance (ISoP) invites you to visit http://www.ISoP2012.org/registration to register (in US dollars) for the upcoming 12th ISoP Annual Meeting. Topics include:

- Concepts and methods in pharmacovigilance
- Media, communication and transparency
- Studies in pharmacovigilance
- Ecopharmacovigilance
- EU Pharmacovigilance legislation
- Globalization of drug manufacturing, drug use and drug safety
- Herbal Medicines and ethno-pharmacovigilance
- Pharmacovigilance in neglected parasitic and emerging infectious diseases
- Pharmacogenetics in pharmacovigilance and personalized treatments
- Pharmacovigilance in biologicals
- Pharmacovigilance of women’s medicines and reproductive health
- Pharmacovigilance in special patients groups and settings
- Medication errors and preventable ADRs
- Vaccines pharmacovigilance
- Education and training in pharmacovigilance
- Other pharmacovigilance topics
- Hot topics, late breaking topics

For details about the venue and programme, please visit the website at http://www.ISoP2012.org/event/provisional-programme.

Deadline for Early Registration: August 15th, 2012

Contact the Secretariat at ISoP2012@grupodestinos.com.mx for any queries.

We look forward to welcoming you in Cancun!

The Local Organizing Committee, ISoP 2012
First Announcement

The 2nd World Conference on the Pharmacology of Natural and Traditional Medicines

November 6th to 8th, 2012, Macau, China

Invitation

Dear colleagues,

The Second World Conference on the Pharmacology of Natural and Traditional Medicines, sponsored by the Section on Pharmacology of Natural Products of the International Union of Basic and Clinical Pharmacology (IUPHAR), co-sponsored by Chinese Pharmacological Society (CNPHARS), International Society for Chinese Medicine (ISCM) and University of Macau (UM), will be held from November 6th to 8th, 2012, in Macau, China.

The theme of the conference is “Pushing forward the study of natural and traditional medicines with new ideas and technologies”. The meeting will consist of oral presentation, posters presentations and discussion sessions, all focusing on basic and clinical pharmacological researches as well as on new drug discovery and development based on or related to natural and traditional medicines or ethnomedical resources. The conference will offer a golden opportunity for all delegates and guests to expose and communicate their results, new ideas, new methods and technologies in the pharmacological study of the natural and traditional medicines.

On behalf of the Organizing Committee, we look forward to welcoming scientists from all over the world to get-together in the beautiful city of Macau. We believe that the conference will make a great contribution fostering international communication and collaborations, and boost progress in the field of pharmacological studies and new drug research & development of natural and traditional medicines.

We look forward to welcoming you in Macau.

Co-Chair                           Co-Chair
Professor Yong-Xiang Zhang           Professor Yi-Tao Wang

Contact Secretariat: Dr. Ying Zhao, E-mail: zhaoying@imm.ac.cn
Upcoming Events

July

Integrative and Organ Systems Pharmacology 2012 satellite meeting to the 5th All Africa Congress on Basic and Clinical Pharmacology (ACP2012) sponosored by the West African Society for Pharmacology, Pharmacology for Africa (Pharf/A), and the IUPHAR Section of Education
Where: Lagos, Nigeria
When: July 5 - 7, 2012
Contact: Prof. Helen Kwanashie (helenkwanashie@yahoo.com)

Pharmacovigilance 2012 satellite meeting to the 5th All Africa Congress on Basic and Clinical Pharmacology (ACP2012) sponosored by the WHO Collaboration Centre for Advocacy and Training in Pharmacovigilance, the University of Ghana Medical School, Pharmacology for Africa (Pharf/A), and the IUPHAR Section of Education
Where: Accra, Ghana
When: July 9 - 10, 2012
Contact: Dr. Alex Dodoo (alexooo@yahoo.com)

Serotonin Club Meeting: a satellite to the 6th European Congress on Pharmacology (EPHAR 2012)
Where: Montpellier, France
When: July 10 - 12, 2012
Website: http://www.serotoninclub.org

5th All Africa Congress on Basic and Clinical Pharmacology (ACP2012) sponosored by the South African Society for Basic and Clinical Pharmacology
Where: Accra, Ghana
When: July 11 - 13, 2012
Website: http://www.iuphar-africa2012.org

International Ulcer Week 2012 cosponosored by the IUPHAR Section on Gastrointestinal Pharmacology
Where: Tokyo, Japan
When: July 12 - 14, 2012
Website: http://www2.convention.co.jp/jsur2012/en/index.html

6th European Congress on Pharmacology (EPHAR 2012)
Where: Granada, Spain
When: July 17 - 20, 2012
Website: http://www.ephar2012.org

Continued on page 23...
Upcoming Events

August

27th Annual Meeting of the Federation of Societies of Experimental Biology cosponsored by the Brazilian Society of Pharmacology and Experimental Therapeutics
Where: Águas de Lindóia, Brazil
When: August 22 - 25, 2012
Website: http://www.fesbe.org.br/fesbe2012

European Association of Clinical Pharmacology and Therapeutics (EACPT) Summer School on Education organized by the Dutch Society for Clinical Pharmacology and Biopharmacy (DSCPB), EACPT, and the VU University Medical Center (VUmc)
Where: Amsterdam, The Netherlands
When: August 23 - 25, 2012
Website: http://www.eacpt-amsterdam.nl

September

7th International Symposium on Cell/Tissue Injury and Cytoprotection/Organoprotection co-sponsored by the IUPHAR Section on Gastrointestinal Pharmacology
Where: Honolulu, Hawaii, USA
When: September 9 - 11, 2012
Website: http://www.kyoto-phu.ac.jp/cyto2012hawaii/index.html

8th Congress of Toxicology in Developing Countries (CTDC8) by the International Union of Toxicology
Where: Bangkok, Thailand
When: September 10 - 13, 2012
Website: http://www.thaitox.org/8ctdc

Interface Management of Pharmacotherapy Workshop: Promoting Hospital-Primary Care Collaboration for Rational Use of Medicines, co-sponsored by the IUPHAR Clinical Pharmacology Division Subcommittee on Clinical Pharmacology in Less Developed Countries
Where: Stockholm Sweden
When: September 11 - 13, 2012
Apply to: wiselistmeetstockholm@sll.se

Clinical Read-Outs of COX-Isozyme Inhibition
Where: Verona, Italy
When: September 24, 2012
Website: www.cogest.info (Click on “Agenda” in the lower left corner)

Continued on page 24...
Upcoming Events

October

12th Annual Meeting of the Safety Pharmacology Society
Where: Phoenix, AZ, USA
When: October 1-4, 2012
Website: http://www.safetypharmacology.org/am2012/

25th Congress of the European College of Neuropsychopharmacology (ECNP)
Where: Vienna, Austria
When: October 13 - 17, 2012
Website: http://www.ecnp-congress.eu

12th International Society of Pharmacovigilance Annual Meeting - New Landscapes in Pharmacovigilance
Where: Cancun, Mexico
When: October 30 - November 2, 2012
Website: http://www.isop2012.org

November

IV Hospital Week of Clinical Pharmacology organized by the Serbian Medical Association Section for Clinical Pharmacology
Where: Belgrade, Serbia
When: November 15 - 17, 2012
Website: http://www.sld.org.rs/clinicalpharmacology

44th Brazilian Congress of Pharmacology and Experimental Therapeutics
Where: Foz do Iguaçu, Brazil
When: November 6 - 9, 2012
Website: http://www.sbfte.org.br

December

British Pharmacological Society Winter Meeting
Where: London, UK
When: December 18 - 20, 2012
Website: http://www.bps.ac.uk/details/meeting/984911/BPS-Winter-Meeting-London.html

To include your events here, please e-mail the details to iuphar@kumc.edu.
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Dr. Enna’s office L→R: Lynn LeCount, Leigh Ann Arbuckle, Cindy Martin, and S. J. Enna

Contributions:
We welcome contributions from member societies, divisions, sections and committees. Please submit articles and photographs to iuphar@kumc.edu by May 1st or November 1st for inclusion in either the June or December issues.

Membership:
The members of IUPHAR are national, international, and special research interest societies. If you are an individual, please visit www.iuphar.org for additional information on the societies you may be interested in joining.

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