

Pharmacology International

No. 79 December 2012 The semi-annual newsletter from the International Union of Basic and Clinical Pharmacology

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CLINICAL PHARMACOLOGY IN HEALTH CARE, TEACHING AND RESEARCH



About forty years ago the World Health Organization (WHO) brought together a group of experts in clinical pharmacology and therapeutics to define the discipline of clinical pharmacology, and to outline how the use of drugs in the delivery of health care could be improved. In the last four decades, the importance of drug therapy and the face of clinical pharmacology have changed markedly. While clinical pharmacology is confronted with many new problems, we are still dealing with many of the same issues in drug therapy recognized in the 1970s. This new publication aims to set the scene for clinical pharmacology in the early part of the 21st century, building on the concepts from the 1970 WHO report.

The current document is a position paper regarding the roles of clinical pharmacology in health care, teaching and research. It was composed and edited by representatives of the International Union of Basic and Clinical Pharmacology (IUPHAR), the WHO and the Council for International Organizations of Medical Sciences (CIOMS). It is an updated version of a



Continued on page 2...



CLINICAL PHARMACOLOGY IN HEALTH CARE, TEACHING AND RESEARCH

(continued)

recent publication entitled, “Clinical Pharmacology in Research, Teaching and Health Care - Considerations by IUPHAR, the International Union of Basic and Clinical Pharmacology”, first published in *Basic and Clinical Pharmacology and Toxicology (BCPT)* in 2010, Volume 107, pages 531 – 559.

The recent publication contains new chapters of special relevance to global health. Distinguished clinical pharmacologists have written the individual sections, which are designed to address the essential role of clinical pharmacology in health care, teaching and research. The sections then describe the links of the discipline to industry and governments. This document is aimed primarily at decision makers in governments and their health care ministries, primary and secondary health care systems, and pharmaceutical companies. It lays out the many benefits that clinical pharmacology expertise can contribute to the delivery of better health care for all populations.

We gratefully acknowledge financial support for the printing and publication of this paper from:

- The World Health Organization
- The Council for International Organizations of Medical Sciences
- The International Union of Basic and Clinical Pharmacology
- The British Pharmacological Society
- The Swedish Foundation for Clinical Pharmacology and Pharmacotherapy

We also thank the following individuals for their efforts:

- For WHO: Lembit Rägo
- For CIOMS: Gunilla Sjölin-Forsberg
- For IUPHAR: Michael Orme (Liverpool, UK), Folke Sjöqvist (Stockholm, Sweden), and Donald Birkett (Sydney, Australia)

We encourage all pharmacologists and clinical pharmacologists to use the document to demonstrate to decision makers the importance of all aspects of clinical pharmacology in the development and rational use of medicines globally. Please download your free copy from <http://www.cioms.ch/index.php/12-newsflash/222-new-publication-the-role-of-clinical-pharmacology-in-health-care-teaching-and-research> .•

Michael Orme
Folke Sjöqvist
Don Birkett
Editors

IUPHAR

is pleased to announce the formation of the
IMMUNOPHARMACOLOGY
SECTION

Membership is open to pharmacologists, immunopharmacologists, clinical pharmacologists, pathologists, clinicians, and immunologists interested in the interrelationships between the disciplines of pharmacology and immunology, who are affiliated with an IUPHAR member society. In addition, IUPHAR member societies and their sections are eligible for affiliation.

Applications for individual membership or society/section affiliation are to be submitted to the Immunopharmacology Section Secretary. Affiliated societies/sections are entitled to nominate one delegate to the business meetings of the Immunopharmacology Section. For more information, contact the Chair, Prof. Francesca Levi-Schaffer at francescal@ekmd.huji.ac.il or the Secretary, Prof. Mauro Teixeira at mmtex.ufmg@gmail.com.

Immunopharmacology Section Officers and Executive Committee

Chair:	Francesca Levi-Schaffer (Israel)
Vice-Chair:	Hans-Uwe Simon (Switzerland)
Secretary:	Mauro Teixeira (Brazil)
Treasurer:	Ekaterini Tiligada (Greece)
Members:	Stephen Holgate (UK)
	Bernd Gilma (Austria)
	Mario Landys Chovel Cuervo (Cuba)
	Carlo Riccardi (Italy)•

Wellcome Trust, NC-IUPHAR and the British Pharmacological Society team up on the Guide to PHARMACOLOGY

The revolution in genomics and molecular genetics has led to the identification of many novel approaches to the development of new medicines. However, there is an urgent need for an accessible and authoritative online synopsis of the complete landscape of existing and future drug targets, to foster innovative drug discovery and provide an integrated educational tool for academia, industry and the interested public. The IUPHAR Committee on Receptor Nomenclature and Drug Classification (NC-IUPHAR) and its network of over 700 expert scientists act as the scientific advisory and editorial board for the IUPHAR Database (IUPHAR-DB: <http://www.iuphar-db.org>). NC-IUPHAR scientists and collaborators contribute expertise and data on GPCRs, ion channels and nuclear receptors to this authoritative resource for pharmacology.

Now, with support from the Wellcome Trust, and shared funding from IUPHAR and the British Pharmacological Society (BPS) for three years, we are developing the Guide to PHARMACOLOGY portal (<http://www.guidetopharmacology.org>), which we hope will become a “one-stop shop” for pharmacology. At present, the resource provides access to two databases which each result from many years of curation effort by different, but overlapping, groups of expert contributors: IUPHAR-DB and the BPS Guide to Receptors and Channels database (GRAC: <http://www.guidetopharmacology.org/GRAC>).

A major goal will be to work towards better integration between the GRAC database and IUPHAR-DB, ensuring consistency of overlapping data, while retaining the distinctive focus of each database. In addition, the Guide to PHARMACOLOGY will be expanded to provide quantitative pharmacological information on all of the targets of current prescription medicines and other likely targets of future small molecule drugs, as well as reviews, research guidelines and educational resources.

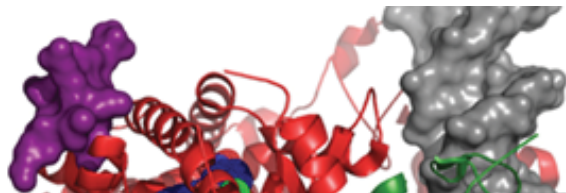
The vision of the Guide to PHARMACOLOGY portal is to provide:

- Rich annotation of each drug target and ligand, together with expert summaries of the properties of each target and receptor family, presented in a concise, user-friendly format;
- An entry point into the pharmacological literature for basic and clinical scientists from other disciplines;
- Guidelines on nomenclature of established and emerging drug targets;
- A catalogue of the key pharmacological tools for the study of each drug target, with accurate quantitative and chemical information from the primary research literature, curated by experts;
- Rigorously curated chemical structures and nomenclature, shared and refined in collaboration with other databases, including endogenous ligands, experimental and clinically used drugs;
- Human-centric data, placed in context with data from commonly used model species, supporting a translational approach to pharmacological research;
- Links to disease information, assisting the selection of targets and drugs for the development of new approaches for the treatment and diagnosis of disease;
- Extensive links from individual targets and drugs to other online resources providing information on genomics, genetics, medicinal chemistry, disease relevance and structural biology;
- A freely available, accurate, regularly updated global resource intelligible to all members of the scientific community.

Please join us in this endeavor! •

Email: enquiries@GuideToPharmacology.org





THE 'ONE STOP PHARMACOLOGY SHOP' FOR INFORMATION ON DRUG TARGETS AND THE SUBSTANCES THAT ACT ON THEM



Created in a collaboration between the International Union of Basic and Clinical Pharmacology and the British Pharmacological Society



- in-depth coverage of the properties of GPCRs, voltage-gated ion channels, ligand-gated ion channels and nuclear hormone receptors, peer-reviewed by NC-IUPHAR, including:
 - ligand affinities
 - transduction mechanisms
 - tissue distribution
 - functional assays
 - gene expression and pathophysiology
 - biologically significant variants
- extensively referenced to primary literature in PubMed and hyperlinked to other databases, e.g. Entrez Gene, Ensembl, OMIM, ChemSpider, HGNC, mouse and rat genome databases
- structures of drugs defined unambiguously with IUPAC nomenclature

- "at a glance" overview of the key properties of over 1600 established or potential drug targets:
 - G protein-coupled receptors
 - ligand-gated ion channels
 - ion channels
 - nuclear receptors
 - catalytic receptors
 - transporters
 - enzymes
- tables provide ready comparison of selective agents and probes (radioligands and PET ligands, where available)
- references are hyperlinked to PubMed and include key reviews providing introductory reading



GABRIELLE M. HAWKSWORTH
1947 - 2012

Gay was a pharmacologist who developed an interest in toxicology. She was a pioneer in her field who cultivated links with the pharmaceutical and toxicological communities both at home and abroad. Her work on *in vitro* drug metabolism using a range of model cell systems was unique in its time. Gay was devoted to her work and loved to enthuse others with her love of the subject.

Gay was born in Yorkshire and always loved returning there to visit her family. She started her professional career at the University of Leeds where she achieved a joint honors B.Sc. in Biochemistry and Bacteriology. From Leeds she moved to St. Mary's Hospital Medical School in London where she worked as a research assistant under Professor R.E.O. Williams and obtained her Ph.D. on 'Metabolic Activities of Intestinal Bacteria'. Gay then spent six months as a Visiting Lecturer at the Universidad del Valle in Cali, Colombia on a collaborative research on a project on nitrosamines and gastric cancer. From there she moved to Norway where she held a Wellcome European Fellowship at the Department of Pharmacology at the University of Bergen working on GC-MS of metabolites of flavoring compounds of plant origin. Gay then moved back to London where she spent two very happy years at the Royal Postgraduate Medical School in the Department of Clinical Pharmacology. It was here that Gay developed her interest and enthusiasm for toxicology and pharmacology which she maintained throughout her career together with the life-long friends she made there.

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GABRIELLE M. HAWKSWORTH
1947 - 2012
(continued)

Gay was ambitious and in 1976 she moved to a Lectureship at the University of Aberdeen where, together with Dr. Harold Barber, also a recent appointment in Aberdeen, she promoted pharmacology and toxicology within the Medical School on the Foresterhill campus. She was promoted rapidly through Senior Lecturer, Reader and finally, Professor of Molecular Toxicology. Never one to stand still, Gay had two sabbaticals at the National Institutes of Health in Bethesda, USA; one in the Laboratory of Chemical Carcinogenesis at the National Cancer Institute and one in the Laboratory of Developmental Pharmacology.

Science was a great love of Gay's and she was never happier than when she was surrounded by students. Postgraduates and undergraduates alike were encouraged to think "big" and work out problems. Gay expended an enormous amount of effort in support of her students. She supervised almost 50 research students in Aberdeen, including 31 Ph.D. students. She brought out the best in her students and this will be part of her legacy to pharmacology and toxicology. One of Gay's early achievements was to establish, together with the late Professor Jim Petrie, the M.Sc. in Clinical Pharmacology. This M.Sc. continues to be successful today and attracts students from around the globe.

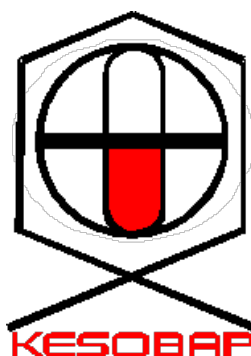
In addition to her day job, Gay worked tirelessly for other agencies and societies. She was highly committed to the British Toxicology Society and served as General Secretary for four years and as President for two years and was, until recently, the Special Editions Editor. She contributed for many years to a number of committees including the Medicines Commission, the Herbal Medicines Advisory Committee and was an expert member on the Advisory Committee for Pesticides (ACP). The ACP is an independent scientific committee which provides advice to Ministers and last year the United Kingdom Minister of State for the Environment announced the appointment of Professor Gay Hawksworth as the new Chair of this highly influential Committee. She contributed to the British Pharmacological Society, to IUPHAR, ISSX and IUTOX both attending and presenting at meetings and serving on committees. She was instrumental in obtaining the 2014 EUROTOX conference for Edinburgh.

Gay was generous with her time and was always interested in other people to whom she acted as a mentor, listener, colleague and friend. She loved to travel and was a regular visitor to USA and Australia as well as the sunnier climes of Europe. In addition, Gay believed in helping others so was a member of Soroptimist International of Great Britain and Ireland (SIGBI). Gay was a Past President of the Aberdeen Club and also Regional President for North East Scotland, where her interests were helping girls and women develop their skills and talents.

Bringing on the next generation of scientists was always a priority for Gay so her students always found her door open. Gay was willing to challenge their results and ideas. Gay's legacy will live on through both her students and her published work. Gay was one of the world's enthusiasts. She enjoyed all that she did and undertook everything with a positive attitude and a will to succeed. We, and the field of toxicology and pharmacology, are all diminished by her passing. She is greatly missed. •

IUPHAR WELCOMES KENYA

INTRODUCING KeSoBAP



It is with great pleasure and a sense of belonging that we introduce the newest member to join IUPHAR. The Kenyan Society for Basic and Applied Pharmacology (KeSoBAP) was registered in 2009 with the Attorney General Chambers as a non-political, non-profit, non-religious and non-racial organization. This action represents the culmination of efforts by Profs. Paul Mbugua and Anastasia Guantai to form a society to promote pharmacology in Kenya.

Governed by the Societies Act of the Republic of Kenya, the objectives of the Society are:

- (a) to foster, promote, encourage, develop and support teaching and research in basic and applied pharmacology,
- (b) to promote communication and cooperation between societies, organizations and industries with similar interests,
- (c) to create forums to present and exchange ideas,
- (d) to liaise with the government and local authorities in the event of emergencies, epidemics and other health related needs,
- (e) to be proactive in the development of young scientists in basic and applied pharmacology through training and needs driven innovative research,
- (f) to form, if and when necessary, branches to promote the Society's activities in the Republic of Kenya,
- (g) to create a medium for community outreach and interaction so as to break the barriers that hinder effective utilization of health knowledge and resources,
- (h) and to do all such things which are or may be deemed incidental to achievements of the Society's objectives.

Membership to the Society is available to any person who is, or has been, engaged in the teaching, research or practice of pharmacology and related sciences. Society membership is subject to the approval of the Management Committee and payment of a subscribed fee. Membership is automatically renewed by paying the annual subscription fee not later than the 31st day of every January.

The founder interim officers, duly elected during the inaugural Annual General Meeting, were Anastasia N. Guantai, PhD (Chair); Peter M. Waweru, PhD (Vice Chair); Paul M. Mbugua, PhD (Secretary General); Jessicah O. Wesongah, PhD (Assistant Secretary); George O. Osanjo, PhD (Treasurer); and Charles G. Githinji, PhD (Assistant Treasurer). A Management Committee oversees the daily operations of the society and consists of the above named office bearers plus three members at large elected during the Annual General Meeting. The Management Committee is granted the power to appoint subcommittees as it deems necessary to further the goals of the Society.

IUPHAR WELCOMES KENYA

(continued)

African Journal of Pharmacology and Therapeutics

A Journal for Research in Basic and Applied Pharmacology

During the inaugural Annual General Meeting on January 14th, 2011, it was agreed that the society should focus on a flagship project to promote the scientific, technical and professional stature of the Society. Hence was born the idea of launching the journal, *African Journal of Pharmacology and Therapeutics* (AJPT: http://www.uonbi.ac.ke/journals/kesobap/Home_Page.htm), the official publication of KeSoBAP. Scientists and healthcare professionals of international reputation were recruited to the Editorial Advisory Board. The resulting constituents are drawn from the USA, Zimbabwe, Canada, Ghana, South Africa, the World Health Organization and Kenya. The board serves as the oversight committee, which provides external quality assurance, lending international credibility to the Journal. The first issue of AJPT was published in March, 2012 and is now available in an open access online version as well as print subscriptions. For further information, please contact the journal staff at journal.ajpt@uonbi.ac.ke.

Since its inception, KeSoBAP has actively created networks and linkages contributing to capacity building and information dissemination. The Chair, Prof. Guantai, was an invited participant in the IUPHAR Summit held in Cairo, Egypt during March, 2009. During those deliberations KeSoBAP became an active partner in the IUPHAR Integrated Organ Systems Pharmacology (IOSP) Initiative for Africa. The goals of the IOSP courses are to rekindle and re-emphasize the unique role of *in vivo* animal and organ systems research in innovative research and development, to train young pharmacologists in ethical research involving laboratory animals, and *in vivo* experimental techniques that involve the use of animal models. As the program strives to stem the loss of skills and trained personnel in integrative organ systems pharmacology, it dovetails well with the objectives of KeSoBAP.

Drs. Jesca Wesonga, Faith Okalebo, Charles Githinji, Peter Waweru and Mr. Daniel Karume represented KeSoBAP during the IOSP workshop on CNS drug discovery held at the University of Potchefstroom in South Africa in September, 2009. They brought home not only wonderful memories, but beneficial experiences to share with their colleagues. We express our thanks to Prof. Tiaan Brink and the entire workshop team for their hospitality.

The Society thereafter hosted an IOSP workshop on toxicity testing in Nairobi in May, 2010 with IUPHAR financial support from grants awarded by the International Council for Science and the American Society for Pharmacology and Experimental Therapeutics. The workshop instructors included three staff members of the Institute of Primate Research (IPR), Kenya and IUPHAR was represented by Drs. Gabrielle Hawksworth and David Bylund, who also served as workshop facilitators.

Continued on page 10...

IUPHAR WELCOMES KENYA (continued)



A group photograph of the international and local facilitators

The 19 participants from six African countries were either pursuing or held post graduate specialization in pharmacology and/or toxicology, or a closely related field, and worked in a teaching or research institution.



A group photograph of the workshop participants

The objective of the Nairobi IOSP workshop was to equip young pharmacologists with knowledge and practical skills in *in vivo* toxicological investigations involving the use of animal models. The lectures, site visits, and laboratory sessions were conducted by local and internationally renowned toxicologists. The curriculum included basic concepts, such as an introduction to the IOSP initiative and the International Union of Toxicology (IUTOX); proposal development and scientific writing; experimental design principles; safety pharmacology; and ethical issues in *in vivo* studies.

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IUPHAR WELCOMES KENYA

(continued)



A demonstration of using microtome to make tissue sections for histological examination

The hands-on training in specific skills focused on good animal husbandry and handling techniques; quality control in *in vitro* systems and animal models for toxicological investigations; GLP and toxicity testing; challenges in the regulatory requirements for acute toxicity testing; acute and chronic toxicity of different compounds; hematological and biochemical tests on animal blood, urine and CSF; histological examination of animal tissues; organ harvesting; tissue fixation; and microtome use. In post-meeting evaluations, the participants highly rated the contents and format of the workshop.

Most recently, KeSoBAP participated in the 5th All Africa Pharmacology Congress (see page 13) held in Accra Ghana in July, 2012. With an eye to the future, KeSoBAP is currently organizing a May, 2013 workshop on scientific writing, entitled *Excellence in Pharmacology Research and Practice*. Please contact us for additional information.

KeSoBAP is currently the only society representing pharmacology, clinical pharmacology and toxicology in East Africa, therefore, we look forward to being a key player in the 2014 Congress of Basic and Clinical Pharmacology (WCP2014) in Cape Town, South Africa. KeSoBAP will endeavor to foster collaboration with other societies and organizations with common objectives at the regional and international levels thanks, in part, to our affiliation with the Pharmacology for Africa Initiative (PharfA). Having now joined the IUPHAR family of societies, we look forward to participating in and contributing to the many IUPHAR endeavors on behalf of the discipline. •

Anastasia Guantai
Chair, KeSoBAP

(photograph at right)





2013 Anniversaries

IUPHAR congratulates the following member societies:

American Society for
Pharmacology and Experimental Therapeutics
1908 - 2013

Finnish Pharmacological Society
1948 - 2013

Israel Society for Physiology and Pharmacology
1963 - 2013

Argentine Society for Experimental Pharmacology
1968 - 2013

Iranian Society for Physiology and Pharmacology
1968 - 2013

Philippine Society of
Experimental and Clinical Pharmacology
1978 - 2013

Serbian Pharmacological Society
1978 - 2013

Chilean Society of Pharmacology
1978 - 2013

European Society for
Developmental, Perinatal and Pediatric Pharmacology
1988 - 2013

European Association for
Clinical Pharmacology and Therapeutics
1993 - 2013

Pacific Rim Association for Clinical Pharmacogenetics
1993 - 2013

MEETING REPORT



5th All Africa Congress of Basic and Clinical Pharmacology

Accra, Ghana, 11-13 July 2012

SAFE AND EFFECTIVE MEDICINES FOR AFRICA

Promoting training, research and medicines therapy towards attaining the millennium development goals



Pharmacologists from Africa met for the first time in 20 years in Accra, Ghana, for a historic 5th All Africa Congress of Basic and Clinical Pharmacology (ACP2012), under the auspices of the Pharmacology for Africa Initiative (Phar/A). The meeting was hosted by Dr. Alex Dodoo as the Chair (photograph at left). ACP2012 was attended by about 120 delegates from across the African continent as well as participants from the USA, Netherlands and Iran. In attendance were the presidents of the four IUPHAR member societies in Africa, including Prof. Helen Kwanasie (WASP/SOAP – West Africa), Prof. Anastasia Guantai (Kenya); Prof. Mohamed Khayyal (Egypt) and Prof. Tiaan Brink (South



Some of the participants in the 5th All Africa Congress in Basic and Clinical Pharmacology
Seated L→R: Helen Kwanasie, Anastasia Guantai, Douglas Oliver, Martha Gyansah Lutterodt (Chief Pharmacist of Ghana), Mohamed Khayyal, Tiaan Brink, Alexo Dodoo, and Richard Glover.
Standing: The delegates sponsored by South Africa

Continued on page 14...

5th All Africa Congress of Basic and Clinical Pharmacology (continued)

Africa). Dr. Richard Glover represented the International Council of Science Regional Office for Africa (ICSU ROA). ICSU-ROA has been an important supporter of the PharfA activities for several years. The World Health Organization (WHO) Collaboration Centre for Pharmacovigilance in Accra was also a partner in the ACP2012.



The program promoted “Safe and Effective Medicines for Africa” with the subtheme of “Promoting training, research and medicine therapy towards attaining the millennium development goals”. The scientific program consisted of 10 plenary speakers and 10 sessions (some presented in parallel) with more than 40 individual podium presentations. Over 25 posters (photograph at left) were also presented.

Pharmacology
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The Congress presentations included a wide variety of interesting topics, such as *Drug Therapy in Cardiovascular Disease; Advances in the Treatment of Malaria; Promotion and Effective Medicines for Africa; Educational approaches; Rational Use of Medicines; Drugs for Neglected Parasitic Infections; Safety, Quality and Efficacy of Traditional Medicines in Africa; Drug Metabolism and Transport; Advances in Management of STDs; Challenges in the Treatment of Tuberculosis; Pharmacology Education, Advancing Effective Postgraduate Training in Pharmacology in Africa; Therapeutic Challenges in Maternal and Pediatric Healthcare*. The role of the pharmaceutical industry in Africa was also debated.

The congress provided an excellent opportunity to interact with delegates from the different African states, which stimulated discussions about issues of mutual interest while offering a means of consolidating international relationships.



Andrew Walubo (at right) explaining an idea to Anastasia Guantai.
Continued on page 15...

5th All Africa Congress of Basic and Clinical Pharmacology (continued)



Young investigators participated not only in the podium sessions, but as presenters. Training and education sessions addressed both undergraduate and postgraduate studies in pharmacology.

The first General Assembly for the Pharmacology for Africa (PharfA) was held during ACP2012. The PharfA timeframes for the next four years and activities, such as training workshops, collaboration and expert exchange, were discussed and established. The next All Africa Congress of Basic and Clinical Pharmacology will be held in 2016. The following will serve on the PharfA Management Committee until 2016:



Andy Gray (at right) introduces Mohamed Khayyal.

- Prof. Douglas Oliver, representative to IUPHAR and PharfA Chair until the next General Assembly scheduled to be held in Cape Town during the 17th World Congress of Basic and Clinical Pharmacology in July, 2014
- Prof. Mohamed Khayyal, President of the Egyptian Society for Applied Pharmacology and Therapeutics
- Prof. Anastasia Guantai, President of the Kenyan Society for Basic and Applied Pharmacology
- Prof. Tiaan Brink, President of the South African Society for Basic and Clinical Pharmacology
- Prof. Helen Kwanashie, President of the West African Society of Pharmacology
- Prof. Andrew Walubo of South Africa
- Prof. Eric Omogbai of Nigeria
- Dr. Richard Glover of the International Council for Science – Regional Office for Africa

In summary, the 5th All Africa Pharmacology Congress in Accra and its satellite workshops on Integrative and Organ Systems Pharmacology (IOSP) and Pharmacovigilance (see page 12) were most successful, leaving the participants with high enthusiasm for future PharfA events. This is indeed a success story and milestone event for Africa. •

Douglas Oliver and Tiaan Brink

PharfA Chair

President, South African Society for Basic and Clinical Pharmacology

MEETING REPORT

Integrative Organ Systems Pharmacology
Central Nervous System Pharmacology
Abuja, Nigeria
July 5 – 7, 2012

Pharmacovigilance
Communication & Crisis Management Public Health:
A Focus on Patient Safety
Accra, Ghana
July 9 – 10, 2012



Pharmacology for Africa (Phar/A), under the auspices of IUPHAR, recently held the second series of African training workshops in July 2012, in Accra, Ghana and Abuja, Nigeria (participants pictured above). The workshops were pre-congress activities to the 5th All Africa Congress for Basic and Clinical Pharmacology (ACP2012), held in Accra, Ghana. The first series of courses focussing on Integrative Organ Systems Pharmacology (IOSP) training were hosted in South Africa (2009), Kenya (2010) and Egypt (2010). IUPHAR and Phar/A have twice been recipients of €30,000 grants from the International Council for Science (ISCU) to sponsor these workshops. The ISCU Regional Office for Africa (ISCU ROA) has been instrumental in the successful applications for the ICSU grants. Support for these initiatives has also been provided by the American Society for Pharmacology and Experimental Therapeutics.

IOSP – Abuja, Nigeria



The IOSP training conducted in Nigeria and arranged by Prof. Helen Kwanasie (photograph at left), addressed the area of Central Nervous System Pharmacology. About 40 students participated during the 3-day theoretical (10 sessions) and practical training (10 sessions). Topics covered during the IOSP workshop included *Experimental protocol planning; Ethics; Care of research animals, Animal handling and routes of administration; Tissue isolation and handling; Animal models in CNS;*

Continued on page 17...

Integrative Organ Systems Pharmacology and Pharmacovigilance Workshops

(continued)

Assessment of CNS function in intact animals; Stereotaxic implantation of electrodes for EEG recording; Brain mapping techniques; Forced swim test; Open field test; Sedatives, Analgesics, Anti-inflammatory drugs; Animal euthanasia; Electric shock and convulsions; Data handling, and Report writing. The practical sessions were presented as a combination of demonstrations, group work (photograph below) and individual student practice.



For the first time, a pharmacology workshop on the African continent was conducted using the e-conferencing facility of Adobe Connect®. The training lectures were presented directly from the Pharmacology Division at the North-West University, Potchefstroom Campus in South Africa, via the e-conferencing facility of Adobe Connect® to Abuja, Nigeria. Profs. Douglas Oliver and Tiaan Brink, with assistance from a PhD student, Ms.



Lilly Mokoena (photograph at left), presented the students in Abuja with interactive talks on topics such as safe, efficacious and quality medicines, IOSP principles, experimental protocol design, and ethics. This unique training approach using internet facilities opens an array of future opportunities for capability building and continuing professional development on the Africa continent.

Integrative Organ Systems Pharmacology and Pharmacovigilance Workshops

(continued)

Pharmacovigilance – Accra, Ghana



This two-day workshop, organized by Prof. Alex Dodoo (photograph at left), consisted of eleven interactive sessions focusing on communication and crisis management to ensure patient safety. More than 50 students and healthcare professionals (photograph above), including pharmacists and regulators, participated. The workshop

covered pertinent subjects, such as *Principles of effective communication; Targeting communication to improve public health and patient safety, Health literacy, Risk management; Drug scares; Common problems in public health and pharmacovigilance; Crisis communication, Live interviews; Role of the media; and Reporting back.*

The practical sessions consisted of scenario-based group discussions (photograph below) offering useful approaches for communicating health and drug information



during patient interviews. While the workshops were characterised by lively debate and discussions, it was clear that managing effective pharmacovigilance strategies and planning requires unique and in depth skills to ensure patient safety.

The two workshops held in West Africa demonstrated that students are clearly eager to learn and constructively contribute to the activities and discussions. The

Continued on page 19...

Integrative Organ Systems Pharmacology and Pharmacovigilance Workshops

(continued)



*Some of the delegates who participated in the Accra, Ghana workshop on Pharmacovigilance -
Communication & Crisis Management Public Health: A Focus on Patient Safety*

participants agreed that the peer interactions and discussions were important elements of the workshops. The application of e-learning training technologies utilized during the Abuja workshop was a milestone event in distance learning for pharmacology and will be widely applied in the future. The continuation of these workshops is considered to be critical for the future of pharmacology on the Africa continent. The participants expressed keen interest in the next series of courses in conjunction with the 17th IUPHAR World Congress of Basic and Clinical Pharmacology to be hosted in Cape Town, South Africa in 2014. •

Douglas Oliver
Chair
PharfA

and

Tiaan Brink
President
South African Society for Basic and Clinical Pharmacology



Upcoming Events

January

45th Annual Meeting of the Indian Pharmacology Society and International Conference on Navigating Pharmacology towards Safe and Effective Therapy

Where: Nagpur, India
When: January 5 - 7, 2013
Website: <http://www.ipsnagpur2012.org/>

March

Annual Meeting of the American Society for Clinical Pharmacology and Therapeutics

Where: Indianapolis, Indiana, USA
When: March 6 - 9, 2013
Website: <http://www.ascpt.org/Meetings/FutureAnnualMeetings/tabid/6705/Default.aspx>

European College of Neuropsychopharmacology (ECNP) Workshop on Neuropsychopharmacology for Young Scientists in Europe followed by ECNP Consultation Meeting

Where: Nice, France
When: March 7 - 10 and 10 - 12, 2013
Website: <http://www.ecnp.eu/emc.asp?pageId=315>

April

Experimental Biology '13, cosponsored by the American Society for Pharmacology and Experimental Therapeutics

Where: Boston, Massachusetts, USA
When: April 20 - 24, 2013
Website: <http://aspet.org/meetings.aspx>

4th GPCR Colloquium, a satellite meeting to Experimental Biology '13, sponsored by the American Society for Pharmacology and Experimental Therapeutics

Where: Boston, Massachusetts, USA
When: April 24- 25, 2013
Website: <http://www.aspet.org/Meetings/GPCR2013>



Upcoming Events

June/July

14th Biannual European Society for Developmental Perinatal & Pediatric Pharmacology (ESDPPP) Congress

Where: Salzburg, Austria
When: June 4 - 7, 2013
Website: <http://www.esdppp.org/salzburg-2013.191474.en.html>

13th International Congress of Toxicology (ICTXIII)

Where: Seoul, Korea
When: June 30 - July 4, 2013
Website: <http://www.ict2013seoul.org>

European Association of Clinical Pharmacology and Therapeutics (EACPT) Summer School organized by the British Pharmacological Society

Where: Edinburgh, United Kingdom
When: July 4 - 6, 2013
Website: <http://www.bps.ac.uk/meetings/139ba11a3ad>

12th Southeast Asian Western Pacific Regional Meeting of Pharmacologists hosted by the Chinese Pharmacological Society

Where: Shanghai, China
When: July 9 - 13, 2013
Website: <http://www.ascept.org/AsiaPacificFederationofPharmacologists.aspx>

International Narcotics Research Conference partly sponsored by the British Pharmacological Society

Where: Cairns, Australia
When: July 14 - 18, 2013
Website: <http://www.dccconferences.com.au/inrc2013>

37th Congress of the International Union of Physiological Sciences

Where: Birmingham, UK
When: July 21 - 26, 2013
Website: <http://www.iups2013.org>

To include your IUPHAR member society events here, please e-mail the details to iuphar@kumc.edu.



Maximize the value of your hiring budget -
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to pharmacologists!



BPS BRITISH PHARMACOLOGICAL SOCIETY
Today's science, tomorrow's medicines

RCPE Royal College of Physicians of Edinburgh

Edinburgh
4-6 July 2013

EACPT Summer School 2013, Edinburgh

The programme will consist of keynote presentations on all aspects of clinical pharmacology by invited expert speakers, workshops, poster presentations, free communications and social events. There will be a strong interactive element and the opportunity for delegates to network with the speakers. Bursaries will be available.

Keynote speakers:
Adam Cohen, Centre for Human Drug Research, Leiden
Garret FitzGerald, University of Pennsylvania
Sir Michael Rawlins, NICE
Sir Kent Woods, MHRA

Confirmed speakers:
Amrita Ahluwalia, Barts and the London School of Medicine and Dentistry
Jeff Aronson, University of Oxford
Nick Bateman, Royal Infirmary of Edinburgh
Morris Brown, University of Cambridge
Jamie Coleman, University of Birmingham
James Dear, University of Edinburgh
Michael Eddleston, University of Edinburgh
Gary Ford, Newcastle University
Aroon Hingorani, University College London
Simon Maxwell, University of Edinburgh
Tom MacDonald, University of Dundee
Patricia McGettigan, Barts and the London School of Medicine and Dentistry
Ken Paterson, University of Glasgow
Munir Pirmohamed, University of Liverpool
Phil Routledge, Cardiff University
Donald Singer, University of Warwick
John Thompson, Cardiff University
David Webb, University of Edinburgh
Martin Wilkins, Imperial College London
Ian Wilkinson, University of Cambridge

For more information or to register your interest please contact:
t: +44 (0)207 239 0176 e: meetings@bps.ac.uk w: www.bps.ac.uk

Registration opens in November

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SAVE THE DATE!



CALL FOR PAPERS

International Narcotics Research Conference 2013

14-18 July 2013

Pullman Cairns International

Cairns, Australia



The INRC Annual Meeting features all aspects of opioid research from cellular signaling, molecular biology and medicinal chemistry through addiction research and pain management. Since 1969, the INRC meeting has been a unique forum where scientists, clinicians and pharma share the latest information about the key questions in opioid research. The 44th annual meeting in Cairns is a great chance to get together with colleagues old and new, and learn about the latest and greatest findings in the opioid world.

Mark Connor and Mac Christie
Co-Chairs INRC 2013

Key Dates

Abstract submissions open
4 February 2013

Registrations open
March 2013

Abstract submissions close
3 April 2013

Early Bird registrations close
10 May 2013

Keynote Speakers

- Professor Arthur Christopoulos from the Drug Discovery Biology Laboratory Monash Institute of Pharmaceutical Sciences – Ligand Bias/Allostery at GPCR
- Professor Bernard Balleine from the Brain & Mind Research Institute The University of Sydney – Opioid Actions in Forebrain Regions
- Professor Graeme Henderson from the University of Bristol – Founders Lecture

Sponsored by:



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www.dcconferences.com.au/inrc2013/



First Announcement

The 12th Meeting of the Asia Pacific Federation of Pharmacologists (12thMAPFP)

July, 2013, Shanghai, China

Invitation

Dear colleagues,

The 12th meeting of the Asia Pacific Federation of Pharmacologists (APFP), sponsored by Chinese Pharmacological Society (CNPHARS), will be held in Shanghai, China from 9 – 13 July, 2013.

The meeting will consist of plenary lectures, invited lectures, symposia, oral presentation, poster presentations and discussion sections, all focusing on basic and clinical pharmacological research as well as on new drug discovery. The meeting will offer a golden opportunity for all delegates and guests to expose and communicate their results, new ideas, new methods and technologies in pharmacology.

On behalf of the Organizing Committee, we look forward to welcoming pharmacologists from the Asia Pacific region and all over the world to get-together in the beautiful city, Shanghai. We believe that the meeting will make a great contribution fostering regional and international communication and collaborations, and boost progress in the field of pharmacology and new drug research.

We look forward to welcoming you in Shanghai.

Co-Chairs

Professor Guanhua Du and Professor Samuel H. H. Chan

Call for abstracts

The Organizing Committee invites abstracts to be submitted by March 31, 2013.

Oral presentation competition of young scientists

The jury will select from the poster session submissions ten abstracts by first authors younger than 37 years of age who have indicated their willingness to participate in the competition. These ten topics will constitute a special oral communications session in the scientific program. The members of the Executive Committee will constitute the jury. The awards will be presented during the closing ceremony of the conference. Investigators under the age of 37 years should indicate their willingness to participate by checking the appropriate box in the Abstract Submission Form.

Excellent poster selection

The jury will evaluate posters during the poster session. Criteria include the level of the research, the poster presenter's ability to answer questions posed by the judges, and the quality of the poster. The poster presenters are encouraged to stand by their poster during the poster session to respond to jurors' questions. The awards will be presented during the closing ceremony of the conference.

<http://www.ASCEPT.org/AsiaPacificFederationOfPharmacologists.aspx>

CAPE TOWN, SOUTH AFRICA

WCP 2014

17TH WORLD CONGRESS OF
BASIC & CLINICAL PHARMACOLOGY

13 - 18 July 2014 • Cape Town International Convention Centre

You are invited...

On behalf of all members of the South African Society for Basic and Clinical Pharmacology (SASBCP) we hereby invite you to attend IUPHAR's **17th World Congress of Basic and Clinical Pharmacology (WCP2014)**, to be held in Cape Town, South Africa from 13-18 July 2014.

With this historic, first ever IUPHAR world congress on the African continent, the organising committee will offer:

- excellent science
- great networking opportunities
- a memorable visit to Cape Town
- ... and a unique South African experience

The SASBCP has existed since 1967, and has grown to a national society that truly serves the pharmacological sciences in South Africa and the African continent. It has become an active international roleplayer, and a strong, competitive scientific community at the tip of Africa. We take pride in fostering pharmacology amongst our young scientists and in promoting pharmacology in the rest of Africa - in particular via initiating and growing the 'Pharmacology for Africa' (PharfA) initiative.

Scope

The theme of the Congress will be "Pharmacology at the cutting-edge". This relevant and contemporary international congress fosters and integrates basic, clinical (therapeutic) and translational fields of pharmacological sciences. It creates a forum to discuss the latest developments in pharmacological sciences, to build collaboration networks, and to get an opportunity to listen to and interact with the world's leading pharmacologists.

WCP2014 will bring together health care professionals, academics, researchers, educators and policy makers from various arenas, including medical, pharmaceutical and other healthcare disciplines, pharmaceutical industry, governmental and non-governmental organisations from around the globe.



The Scientific Programme

An array of topics, presented as plenary lectures, focused conferences, workshops and symposia, will cover, six theme tracks of pharmacology, including:

- Pharmacology of Infectious Diseases and Immunology
- Drugs and the Brain
- Pharmacology of Chronic Diseases of Lifestyle
- Drugs in Oncology
- Regulatory and Translational Pharmacology
- Fundamental Pharmacology

The Scientific Programme Committee invites you to submit a detailed proposal for a session or workshop via the programme page on the congress website. The programme will cover aspects of both basic and clinical pharmacology. The closing date for submissions is 15 November 2012.

www.wcp2014.org

CONGRESS SECRETARIAT: Scatterlings Conference & Events:
Carolyn Ackermann: Telephone: +27 11 463 5085 • Email address: congress@wcp2014.org

Pharmacology International

Published June and December

Editor-in-Chief

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Editorial Board

The IUPHAR Executive Committee serves as the Editorial Board.



Pharmacology
International

December 2012



Published by

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Contributions:

We welcome contributions from member societies, divisions, sections and committees. Please submit articles and photographs to iuphar@kumc.edu at least one month prior to the cover date.

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.

ISSN 1462-9941

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