

# Pharmacology International

No. 89 December 2017 The semi-annual newsletter from the International Union of Basic and Clinical Pharmacology

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## WCP2018 KYOTO

18<sup>th</sup> WORLD CONGRESS OF BASIC AND CLINICAL PHARMACOLOGY

July 1 (Sun) - 6 (Fri), 2018

Kyoto International Conference Center,  
Kyoto, Japan

**Pharmacology for the Future**  
Science, Drug Development and Therapeutics

*Following our previous announcement in June, the Organizing Committee of the WCP2018 is pleased to share the latest information on the Congress. We sincerely look forward to welcoming you at WCP2018 in Kyoto.*

## Call for Abstracts

**Abstract Submission is now available at [www.wcp2018.org](http://www.wcp2018.org)**  
**Submission Deadline: December 14, 2017**

### General Guidelines

- In principle, accepted abstracts shall be presented as posters, and only a limited number of requests for oral presentation will be granted. Please note that your preferred presentation format may not necessarily be granted, and the final judgement rests with the Scientific Program Committee.
- The body of abstracts should contain a maximum of 350 words and must be in English.
- The abstract should be constructed with clear paragraphs for background, methods, results, conclusions.
- One image (figure, table, chart or illustration) can be attached to the abstract.
- Acceptable data formats: JPG, GIF, PNG. Maximum file size: 5MB, 600(w) x 800(h) pixels.
- 2-3 keywords should also be provided that best describe the abstract's content.
- The first author must present his/her presentation.
- The first author must complete pre-registration when submitting an abstract.
- Abstracts must be submitted via the congress website.
- Notification of abstract acceptance will be sent to the first author no later than March 30, 2018.
- The Scientific Program Committee reserves the right to reject any abstract that it considers not to be appropriate in relation to the congress criteria.

### Congress Bursaries & IUPHAR Young Investigator Awards

When you submit your abstract, please indicate that you would like to apply for the Congress Bursaries and/or IUPHAR Young Investigator Awards. There will be a question in the online form asking if you would like to apply for the grants or not. It is possible to apply for both Congress Bursaries and the IUPHAR Young Investigator Awards.

For more information, please visit the WCP2018 website at [www.wcp2018.org](http://www.wcp2018.org)

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## Registration

Registration is now available at [www.wcp2018.org](http://www.wcp2018.org)

Early Bird Registration Deadline

March 30, 2018

Regular Registration Deadline

May 31, 2018

## Registration Fees

	Early Bird Registration	Regular Registration	On-site Registration
Regular	JPY 40,000	JPY 45,000	JPY 50,000
Student	JPY 10,000	JPY 10,000	JPY 10,000
Accompanying Person	JPY 15,000	JPY 15,000	JPY 15,000

## Scientific Program

THEME *Pharmacology for the Future  
-Science, Drug Development and Therapeutics-*

**40** Lectures

### ■ Opening Lecture



Cancer Immunotherapy  
**Tasuku Honjo, M.D., Ph.D.**  
Kyoto University, Japan

Sunday, July 1, 2018 16:00 - 17:00



### ■ Plenary Lecture



Recent Progress in  
iPS Cell Research and Application  
**Shinya Yamanaka, M.D., Ph.D.**  
Kyoto University, Japan

Monday, July 2, 2018 11:15 - 12:15



Optogenetics  
**Karl Deisseroth, M.D., Ph.D.**  
Stanford University, USA

Tuesday, July 3, 2018 11:15 - 12:15



The Cardiovascular Effects of  
Peptidase Inhibition  
**Nancy J. Brown, M.D.**  
Vanderbilt University Medical Center,  
USA

Wednesday, July 4, 2018 11:15 - 12:15



Drug Development as an Outcome of Integration  
of Basic and Clinical Pharmacology  
**Adam Cohen, M.D., Ph.D.**  
Center for Human Drug Research, The  
Netherlands

Thursday, July 5, 2018 11:15 - 12:15

### ■ Tang Prize Lecture



Genome Engineering: Technologies  
and Applications  
**Feng Zhang, Ph.D.**  
McGovern Institute for  
Brain Research, USA

Tuesday, July 3, 2018 17:00 - 18:00



Towards a Molecular Understanding  
of Drug Action at GPCRs  
**Bryan L. Roth, M.D., Ph.D.**  
University of North Carolina at  
Chapel Hill, USA

Wednesday, July 4, 2018 17:00 - 18:00

and 33 Cutting Edge Lectures

Continued on page 3...

## ■ Pharmacology, Translational Medicine and Drug Discovery

<b>Makoto Suematsu</b>	Japan Agency for Medical Research and Development, Japan
<b>Isao Teshirogi</b>	Japan Pharmaceutical Manufacturers Association, Japan
<b>Garret A. Fitzgerald</b>	University of Pennsylvania, USA
<b>Pierre Meulien</b>	Innovative Medicines Initiative, Belgium



85 Symposia

Oral Sessions

Poster Sessions

Luncheon Seminars

## ◆ Venue

Kyoto International Conference Center (ICC Kyoto)  
Takaragaike, Sakyo-ku, Kyoto 606-0001 Japan  
Phone: +81-75-705-1229 Fax: +81-75-705-1100  
<http://www.icckyo.or.jp/en/access/>



## ◆ Visa

Japan operates a visa-waiver program for 67 countries and regions (information from Japan's Ministry of Foreign Affairs, last revised December 2014). Travelers on short-term stays for the purpose of attending a conference, tourism, etc. from these countries do not require a visa to enter Japan. For those who require a visa to enter Japan, the congress secretariat will prepare the necessary documents for the participants' visa applications.

## ◆ Accommodation

With a long history as the leading tourist city in Japan, Kyoto offers over 20,000 rooms in the central area, with everything from economic youth hostels and budget hotels to first class city hotels and traditional Japanese style inns "Ryokan." WCP2018 offers preferential rates to the delegates for the duration of the Congress. Accommodation booking is now available through the WCP2018 website at [www.wcp2018.org](http://www.wcp2018.org)

## ◆ Exhibition and Sponsorship Opportunities

WCP2018 offers societies, pharmaceutical firms, biotechs, not-for-profits and corporations the opportunity to share with the Congress participants information about products and services of interest to the pharmacological community. Specific details to sponsor a seminar, exhibit a booth or become a Congress sponsor may be viewed at [www.wcp2018.org/sponsors-and-exhibitors/index.html](http://www.wcp2018.org/sponsors-and-exhibitors/index.html).

## ◆ Satellite Symposia

## ■ Brain Mapping and Therapeutics

(As of September, 2017)

Date and time : Friday, June 29, 2018 13:30 - 17:30  
Venue : Korean Brain Research Institute, Daegu, Republic of Korea

## ■ Systems Pharmacology and Artificial Intelligence Based on Real World 'Big' Data

Date and time : Friday, July 6, 2018 14:00 - 17:30  
Venue : Kyoto University Clock Tower Centennial Hall, Kyoto, Japan

## Plus

(Symposium themes are tentative ; Venues and dates to be advised)

- Receptor Structure Changes the Pharmacology Paradigm (Incorporating the 10th Adrenoceptor Symposium)
- G Protein-Coupled Receptor Satellite Symposium
- Pediatric Pharmacology
- Educating Scientists and Healthcare Professionals for 21st Century Pharmacology
- Regulating cell homeostasis: from small molecules (drugs, O<sub>2</sub>, ROS, and NO) to ion channels, receptors, and systems
- World Histamine Symposium 2018 "Expanding Histamine Research"

For more information, please visit the WCP2018 website at [www.wcp2018.org](http://www.wcp2018.org)

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## ◆ What to Do in Kyoto

*Experience the destination! The Organizing Committee plans to offer you several opportunities for you to experience Japanese culture. Items with a ★ are planned for tours/excursions or cultural experiences in the venue. More details will be announced on the WCP2018 website when they become available. Also, there will be a Travel Desk on-site at the conference to provide tourism information.*



### Shopping

Kyoto is not all temples and shrines; it is a wonderful place to shop for traditional Japanese arts and crafts as well as modern items. There are two main shopping districts in Kyoto: The Kyoto Station area and the traditional "downtown" area of Kyoto running along Shijo-dori Street. Kyoto Station has a lot of shops right inside and underneath the station building, as well as vast electronics and camera emporiums. Shijo-dori Street features several large department stores, hundreds of smaller shops and the famous food market, Nishiki Market.



### Sake and Japanese whisky ★

Kyoto sake brewers are gathered in Fushimi district where the pure water nurtures delicious rice and produces excellent sake. Kyoto sake is classed as a more sweet style.

Kyoto is also known for its world-class whisky production. Award-winning whisky Yamazaki Single Malt is made in Yamazaki, where Suntory built its first whisky distillery in the country in 1923. Located in the outskirts of Kyoto, Yamazaki's water quality remains legendary even today.



### Zazen (seated meditation) ★

Zazen is the essence of the Zen practice. It is said that through Zazen, one can be unified with the cosmos, surpassing the human ego. There are several temples that offer Zazen classes in English. The Zen priest will guide you in practicing Zen meditation and provide a lesson on the significance of Zen in Japanese culture.



### Kimono/Yukata ★

Although kimono are the best-known article of Japan's traditional dress, Japanese people usually wear kimono only on special occasions, on account of the complicated rules regarding how to wear a kimono, and the difficulties faced when dressing yourself in one. However, in the summer, Japanese often wear a simpler type of kimono known as the "Yukata." Kimono and yukata are similar, yet kimono are made of silk, while yukata are made of cotton. The yukata is the most casual type of kimono for summer use. It is easier to wear than other varieties. Why not enjoy the Kyoto summer in a yukata?



### Traditional Crafts ★

Kyoto is a city of exquisite craftsmanship and home to the largest number of local traditional crafts in Japan. The development of Kyoto traditional industries with their own special techniques played a great role in shaping its unique culture. Nishijin weaving, Yuzen dyeing, Kyo-yaki and Kiyomizu-yaki ceramics, lacquerware, Japanese umbrellas, fans or tabi socks – even today, Kyoto traditional crafts are indispensable to Japanese arts such as the tea ceremony, flower arrangement and Noh theatre, as well as to the modern Japanese lifestyle.



### Enjoy Kyoto's scenic nature ★

Kyoto has been a place of scenic natural beauty since ancient times with little changing over the centuries. Nature can be found everywhere in Kyoto, from the spectacular mountain scenery of Arashiyama, swaying bamboo grove of Sagano, exciting Hozu river boat ride, to the endless tunnel of torii shrine gates that wind up the mountain in Fushimi. If you are interested in hiking, you may wish to take an outing to the sacred mountain Hiei-zan or Kurama on the northern outskirts of Kyoto. Enjoy visits to these well-known temples nestled on the slopes of the mountains, making for an energetic trek. A cable car or bus can take you up part of these mountains.

# IUPHAR Pharmacology Education Project

A free learning resource to support education and training in the pharmacological sciences



Pharmacology

Clinical  
pharmacology

The IUPHAR Pharmacology Education Project provides resources to enhance pharmacology knowledge across many disciplines, with expert-created content and curated links to supporting resources, including drugs and targets in the Guide to Pharmacology.”

Drugs

Therapeutics

## [www.pharmacologyeducation.org](http://www.pharmacologyeducation.org)

Please contribute content to this growing resource by visiting the website or email [admin@pharmacologyeducation.org](mailto:admin@pharmacologyeducation.org)

For more information, contact John L. Szarek, PhD, CHSE,  
PEP Co-Director at [jszarek@tcmc.edu](mailto:jszarek@tcmc.edu)

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## IUPHAR Pharmacology Education Project

Home

About

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Clinical Pharmacology

Drugs

Therapeutics

Resources

### The Editorial Board members of the **Pharmacology Education Project**

will lead a symposium at WCP2018

**on Monday, July 2<sup>nd</sup> at 4:10 p.m.**

*Introducing the IUPHAR Pharmacology Education Project*

[www.PharmacologyEducation.org](http://www.PharmacologyEducation.org)

(S11-10 in the scientific program)

The purpose of this session is to introduce the Pharmacology Education Project in more detail including...

... resources available,

... navigating the site,

... using the resources in teaching,

... and how to contribute.

Members of the Editorial Board will each address an aspect of the site then introduce themselves to the congress participants. The speakers and their topics are:

#### **From idea to reality**

by Simon Maxwell

#### **Taxonomy and structure of the Pharmacology Education Project website**

by John L. Szarek

#### **Pharmacology teaching materials for resource poor countries**

by Leszek Wojnowski

#### **Navigating the Pharmacology Education Project: Using the materials in teaching**

by Elizabeth Davis

#### **The Pharmacology Education Project: An international effort**

by Chay-Hoon Tan

Register for WCP2018 at <http://www.WCP2018.org>

*Are you hiring?*

[www.PharmacoCareers.org](http://www.PharmacoCareers.org)  
**IU PHAR**CAREER CENTER

Enter

**WCP2018**

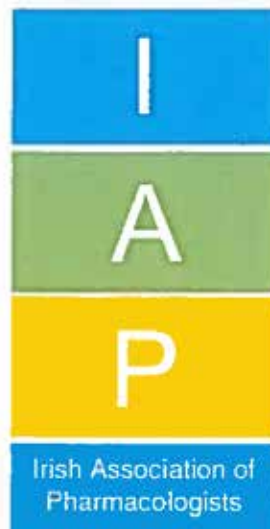
as the coupon code  
to receive a 30% discount  
on all pharmacology career  
employer products during 2018!



# Welcome to the newest IUPHAR Member Societies!



Founded in 1974, the mission of the Malaysian Society of Pharmacology and Physiology (MSPP) is to advance the science, teaching, and ethics in the fields of physiology and pharmacology, to promote integration with other professionals, and to be an avenue for public awareness on the use and misuse of drugs. The Society is a non-profit professional organization and its activities include sponsoring an annual conference, teaching courses and workshops.



The objectives of the Irish Association of Pharmacologists (IAP) are to promote basic and clinical pharmacology research on the island of Ireland; provide a forum for exchange and collaboration for scientists working in pharmacology and therapeutics, and allied disciplines in both research and industrial contexts; offer an effective forum for lobbying; and establish IAP as a member of international associations so as to provide members with international forums and contacts in order to promote research, development and international collaboration. Initiated in the 1990s to organize annual meetings, the members formalized the entity in 2016 as an unincorporated association.





## IUPHAR/BPS Guide to PHARMACOLOGY

# AN EXPERT-CURATED KNOWLEDGEBASE OF DRUG TARGETS AND THEIR LIGANDS

### Future Meetings

In 2018, we have two exciting local meetings planned. Our annual Nomenclature Committee (NC-IUPHAR) meeting will be held in Edinburgh from May 18<sup>th</sup> – 20<sup>th</sup>, 2018 to coincide with the British Pharmacological Society supported meeting on May 17<sup>th</sup>, entitled *Pharmacology Futures 2018* – celebrating 250 years of pharmacology at the University of Edinburgh (<http://bit.ly/2fBHjzu>). During October 1<sup>st</sup> – 2<sup>nd</sup>, 2018 we will host the British Pharmacological Society Focused Meeting on *Immunopharmacology: Challenges, Opportunities and Research Tools* in Edinburgh. The meeting will include 6 - 8 themed symposia/sessions with invited speakers and, based on submitted abstracts, selected oral and poster presentations. Prizes will be awarded for the top scoring young investigators. The focus will be on new concepts and developments in immunity, inflammation and infection, as related to pharmacology, and how these areas can be exploited in drug discovery. More details will become available soon so please monitor <http://www.guidetopharmacology.org> or sign up to receive our communications so you'll receive the latest news as it is released.

Another focus for 2018 is the World Congress of Basic and Clinical Pharmacology in Japan. This quadrennial congress provides an opportunity for pharmacologists from around the world to come together in Kyoto during July 1<sup>st</sup> – 6<sup>th</sup>. NC-IUPHAR has invited Dr. Bryan Roth ([http://www.wcp2018.org/program/bio/bryan\\_l\\_roth.html](http://www.wcp2018.org/program/bio/bryan_l_roth.html)) to deliver the IUPHAR Analytical Pharmacology Lecture, which he has titled *Towards a Molecular Understanding of Drug Action at GPCRs*. We look forward to that greatly. The NC-IUPHAR Deputy Chair, Arthur Christopoulos ([http://www.wcp2018.org/program/bio/cel\\_04.html](http://www.wcp2018.org/program/bio/cel_04.html)), will deliver a Cutting Edge Lecture titled *GPCR Allostery and Bias in Modern Pharmacology: Structural, Pharmacological and Clinical Implications*. We also have a number of symposia organized and delivered by members of NC-IUPHAR, including *Computational Pharmacology, Databases and Drug Discovery* by David Gloriam, Christopher Southan and Adam Pawson, which will explore the benefits of *in silico* approaches for pharmacology; *Biased Agonism at G Protein-coupled Receptors: The Promise and the Challenges* by Anthony P. Davenport; and *New Controllers of Inflammation: What Are the Hottest Targets?* by Francesca Levi-Schaffer. Please visit <http://www.wcp2018.org/program/index.html> to mark the dates and times on your diary.

### Guide to IMMUNOPHARMACOLOGY (GtoImmuPdb)

We are now 24 months into the Wellcome Trust funded project to extend GtoPdb into the arena of immunopharmacology in order to produce a Guide to IMMUNOPHARMACOLOGY (GtoImmuPdb;

<http://www.guidetoimmunopharmacology.org>). May 2017 saw the launch of beta-release v1.0 (<http://bit.ly/2vWHEp5>), for which details were also provided in the last newsletter (June 2017). Beta-release v1.0 was followed by beta-release v2.0 in August 2017 (<http://bit.ly/2eH2GAE>).

During the summer of 2017 we undertook user-testing, which helped to identify aspects of design and navigation that needed improvement, and features that users would like to see implemented as we move towards deployment. In response to previous user feedback we will also look at developing a graphical-based navigation system, in the first instance for browsing cell type and process data. We are always eager to hear from users about their experience of GtoImmuPdb, so please don't hesitate to contact us ([curators@guidetopharmacology.org](mailto:curators@guidetopharmacology.org)) with any comments and feedback.

### Publications

The IUPHAR/BPS Guide to PHARMACOLOGY database (GtoPdb) team and collaborators have recently published an article entitled *Is systems pharmacology ready to impact upon therapy development? A study on the cholesterol biosynthesis pathway in the British Journal of Pharmacology* assessing the potential impact of systems pharmacology on therapy development. To realize the full potential of databases of pharmaceutical drugs/targets and of cellular mechanisms in health/disease, we must combine results from both to predict new multi-drug therapies. The article is available at <http://onlinelibrary.wiley.com/doi/10.1111/bph.14037/full> and describes the serious current obstacles to such prediction, but that introducing new systematic practices would facilitate this opportunity. The team is also working on a number of publications expected to appear during late 2017. The list includes our biennial database publication in *Nucleic Acids Research*, a write-up of the SynPHARM project, a *Current Protocols in Bioinformatics* invitation, a paper on the Resource Description Framework (RDF) project, as well as invitations from the American Chemical Society journal, *ACS Omega*, and *ChemMedChem*. ●

We look forward to another year of progress in 2018!

Guide to PHARMACOLOGY database team  
Edinburgh, Scotland



**IUPHAR Clinical Pharmacology in Developing Countries Subcommittee  
of the Clinical Pharmacology Division  
and the  
Medicines Utilization Research in Africa (MURIA) Group  
co-organized the**

**Third Training Workshop on  
Drug Utilization Research in Africa**



The IUPHAR Subcommittee on Clinical Pharmacology in Developing Countries continues to partner with the Medicines Utilization Research in Africa (MURIA) group to advance drug utilization research in Africa and to promote sustainable Rational Uses of Medicines (RUM) through trainings, workshops, networking and cross national research (1-6). The third edition of the annual Training Workshop and Symposium on Drug Utilization (DU) Research in Africa organized and facilitated by the two groups took place June 26<sup>th</sup> through 28<sup>th</sup>, 2017 at the University of Namibia in Windhoek, Namibia. This year the theme was ‘Medicines Utilization Research in Africa influencing patient care and policy’ (7).

The meeting attracted over a hundred participants from countries ranging across Africa, Europe and North America, including Botswana, Brazil, South Africa, Swaziland, Namibia, Tanzania, Zimbabwe, Zambia, Kenya, Nigeria, Italy, the United States, and the United Kingdom. The opening ceremony on Monday morning, June 26<sup>th</sup> in the main auditorium of the University of Namibia Health Sciences Campus kicked off the three-day workshop. The event was graced by the University of Namibia management team, represented by Dr. Kalumbi Shangula (Assistant Pro Vice Chancellor – Health Sciences Campus), Prof. Tim Rennie (Associate Dean – School of Pharmacy), Prof. Peter Nyarango (Dean – Faculty of Health Sciences) and Prof. Frednard Gideon (Pro Vice Chancellor – Academic Affairs). Important dignitaries, such as Ms. Jo Lomas, the British High Commissioner to Namibia, were also in attendance.

In his welcome address, Prof. Shangula expressed his delight in seeing delegates from several countries come together in Windhoek to exchange knowledge and work together towards improving the use of medicines in Africa. He was particularly pleased that the issue of ‘Maternal to Child Transmission of HIV’ was among the many topics covered by the speakers. He recounted the challenges faced by the Namibian health authorities in putting together the health programme now considered one of the most successful in the country. Prof. Rennie deplored the widespread misuse of antibiotics, which has contributed to the prevalence of anti-microbial resistance (AMR) on the continent as well as in other parts of the world (8-13). He also commended the workshop organisers for including undergraduate and postgraduate students’ presentations in the program. While welcoming the delegates to Namibia and the University of Namibia in particular, Prof Nyarango also lent his voice to the urgent need to address

the problem of AMR, as well as making medicines affordable while working on developing novel antimicrobials. Thereafter, Prof. Gideon officially declared the workshop opened. He advocated advancement strategies such as increased networking among the participants, soliciting academic and industrial collaborations for better training and research, seeking opportunities for sponsored doctorate degree programmes in AMR and MURIA and, in partnership with government, academia and industry, creating sensible policy statements and guidelines on various aspects of drug utilization in Africa.



*The opening ceremony*

*Continued on page 12...*

## Third Training Workshop on Drug Utilization Research in Africa (continued)

Subsequently, Mr. Francis Kaleemera, of the University of Namibia and a member of the local organizing committee, and Prof. Brian Godman, from Karolinska Institutet, introduced the parallel introductory and advanced workshop sessions. The Introductory DU workshop, anchored by Prof. Ilse Truter, from Nelson Mandela Metropolitan University, covered a general introduction to DU research. The coursework described the methodologies of Anatomical Therapeutic Chemical (ATC)/defined daily dose (DDD) systems, qualitative DU research and an introduction to statistical techniques applicable to drug utilization research, which was taught by Ms. Marike Cockeran of North-West University. The Advanced DU group was further divided into two tracks. One advanced workshop featured a hands-on session on statistics and advanced analysis facilitated by Ms. Cockeran as well as presentations on developing and implementing quality indicators for studies by Prof. Godman (below).



The second track of the advanced workshop featured instruction by Ms. Alessandra Ferrario, of the London School of Economics, on available data sources and pharmaco-epidemiology methodologies and applications with emphasis on use of data on import, procurement and local production of drugs for DU research. Prof. Johanita Burger, North-West University, then explained the use of claim databases followed by an introduction to patient level databases by Prof. Godman. The advanced groups thereafter came together with Andy Gray, University of KwaZulu-Natal, leading the workshop on research proposal writing while Ilse Truter and Margaret Oluka from University of Nairobi, subsequently made presentations on qualitative research in DU studies followed by a questions and answers session. The first day of the meeting was rounded off with an outdoor informal dinner for interested participants (at right).



*Continued on page 13...*



## **Third Training Workshop on Drug Utilization Research in Africa (continued)**



*The University of Namibia in Windhoek graciously hosted the MURIA workshop participants.*

The second day, June 27<sup>th</sup>, 2017 was dedicated to research presentations and updates on DU activities within various countries. The day opened with welcome remarks by the Chief Pharmacist of Namibia followed by presentations on:

- ‘Development of Horizon Scanning Activities and Its Implications for Africa’ by Roberta Joppi, Mario Negri Institute of Pharmacology Research
- ‘Managed Entry Agreements and Pricing Considerations for Medicines across Countries- Building on the European Experience’ by Ms. Ferrario
- ‘An Innovative Web-based Pharmaceutical Information Dashboard Enhances Evidence-based Decision Making in ART Pharmaceutical Services in Namibia’ by Mr. Wuletaw Churfo, Namibia Ministry of Health and Social Services
- ‘Feedback from Zimbabwe, Botswana and South Africa on the On-going Cross-national Antibiotics Point Prevalence Studies’ by Dr. Sekesai Zinyowera, Zimbabwe Ministry of Health and Child Welfare, Prof. Natalie Schellack, Sefako Makgatho Health Sciences University, and Dr. Bene Paramadhas, University of South Africa - Pretoria
- ‘Completed and On-going Studies in Nigeria on Antimicrobials and Non Communicable Diseases’ and ‘Promotion of Drugs and Therapeutics Committees’ jointly presented by Drs. Olayinka Ogunleye and Joseph Fadare
- ‘Feedback on DU Action Plans from Kenya’ by Prof. Oluka

Of particular interest in this session was ‘Update on Good Practices of DU Studies in Countries from the Latin America and African Regions’ presented by Prof. Maribel Salas, a member of the International Society of Pharmacoepidemiology Board. She described a joint project undertaken by the International Society of Pharmacoepidemiology and MURIA towards enhancing good practices and the quality of DUR in these regions. The afternoon session featured oral presentations on antimicrobial utilization by conference participants including ‘Strategies to Improve Antibiotic Prescribing and Dispensing in Africa’, the MURIA Positioning Statement proposed by Prof. Schellack and Prof. Anastasia Guantai, University of Kenya, which further stimulated discussions on inappropriate uses of antimicrobials and some potential solutions. The poster sessions and abridged oral presentations, mostly by students, was concluded with a presentation by Prof. Truter on ‘Dispensing Patterns of Anti-migraine Agents with a Focus on Seasonal Variations in Prescribing in South Africa’ (7).

## Third Training Workshop on Drug Utilization Research in Africa (continued)

The final day, June 28th, 2017 continued the oral presentations with:

- ‘Pediatric Antiretroviral Treatments in Namibia’ by Mr. Greatjoy Mazibuko
- ‘Insulin Prescription Errors in a Public Tertiary Hospital in Kenya’ by Prof. Guantai
- ‘Predictors of Adherence to Oral Antihypertensives among Patients in Ghana by E. Sarkodie, University of Health and Allied Sciences, and a similar study from primary health care setting in South Africa and Namibia by Enos Rampamba, Sefako Makgatho Health Sciences University, and Maria Maija Nashilongo, University of Namibia, respectively
- ‘Quality of Anticoagulation with Warfarin at a Tertiary Hospital in Botswana’ by Julius Mwita, University of Botswana
- ‘Access to Medicines for Children in Nigeria Reporting an Exploratory Study on the Quality of Oral Essential Cardiovascular Medicines and Diuretics’ by Samuel Orubu, University College London



In total, the meeting featured over 35 oral and over 30 poster presentations (above) and ended with a consensus session on future directions for the group including potential cross national studies, publication strategies and funding sources. Working groups were constituted for the various areas of research interests. The participants reported that the meeting was highly interactive and impactful with improved quality of presentations as compared to the previous workshops. The speakers are recognized for their time and efforts in making the workshop successful. Participants departed Windhoek in high spirits looking forward to next MURIA Group meeting in 2018 at the same venue. ●

Acknowledgements: Drs. Ogunleye and Fadare want to thank IUPHAR for the financial support they received to participate in the workshop.

Olayinka O. Ogunleye

Joseph O. Fadare

Lars L. Gustafsson (Chair: [devcountries@iuphar.org](mailto:devcountries@iuphar.org))

Clinical Pharmacology in Developing Countries Subcommittee

Additional contributors: Brian Godman, Amos Y. Massele

## Third Training Workshop on Drug Utilization Research in Africa (continued)



*The participants enjoyed the networking opportunities offered by the workshop.*

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## **A MODEL FOR MENTORING IN CLINICAL PHARMACOLOGY TWO NIGERIAN CLINICAL PHARMACOLOGISTS VISIT KAROLINSKA INSTITUTET**

Dr. Olayinka Ogunleye, a Consultant Physician and Clinical Pharmacologist at Lagos State University College of Medicine and its Teaching Hospital, and Dr. Joseph Fadare, also a Consultant Physician and Clinical Pharmacologist at Ekiti State University College of Medicine and its Teaching Hospital, are both from Nigeria. Recently, they were hosted by the Clinical Pharmacology Division at the Karolinska Institutet and Karolinska University Hospital in Stockholm, Sweden, for mentoring and training during a two-week visit October 14<sup>th</sup> through the 28<sup>th</sup>, 2017. The experience was organized and hosted by Prof. Lars L. Gustafsson, the Co-Chair of the IUPHAR Subcommittee for Clinical Pharmacology in Developing Countries, together with Assoc. Prof. Georgios Panagiotidis, the Head of the Division of Clinical Pharmacology at Karolinska Institutet, and Prof. Marja-Liisa Dahl, the Head of the Clinic at Karolinska University Hospital at Karolinska Institutet. The visit marked the launch of the Karolinska Institutet as an IUPHAR Mentoring Center in Clinical Pharmacology (<http://www.iuphar.org/index.php/clinical-division/mentoring-centers>).

Olayinka and Joseph first met Prof. Gustafsson at the 2014 World Congress of Basic and Clinical Pharmacology in Cape Town, South Africa where they shared with him their interests in strengthening clinical pharmacology in education, research and clinical services in Nigeria. Since then they have collaborated in many activities related to the IUPHAR Subcommittee for Clinical Pharmacology in Developing Countries. Prof. Gustafsson has been passionately committed to clinical pharmacology development in Africa so has used his long record of collaborative works in training and research across Africa to mentor and support Olayinka and Joseph for the past three years.

The overall objectives of the visit were to interact with the staff members in both academic and clinical units in Stockholm to learn how specialists in clinical pharmacology can organise a program built on a tight collaboration between academic, educational and clinical services. During their two weeks on campus, Olayinka and Joseph interacted with over thirty senior and junior staff members with expertise in all major areas of training, research and clinical service related to clinical pharmacology. Their extensive clinical pharmacology curriculum included presentations about the organization of academic and clinical tasks, undergraduate training and specialization program, drug information services, drug analytical services and therapeutic drug monitoring, pharmacogenomics, as well as drug and therapeutic committee organization and services. In addition, they were exposed to pediatric clinical services, pharmacoepidemiology and drug utilization research,

*Continued on page 17...*



## A CLINICAL PHARMACOLOGY MENTORING EXPERIENCE AT KAROLINSKA INSTITUTET (continued)

pharmacovigilance, clinical trial organization, clinical pharmacology tasks at the national Swedish Medical Products Agency, the Swedish network for development of medicines for children, and the development and research in Clinical Decision Support Systems using Knowledge Databases.

Notably, the historical overview and importance of how to establish and sustain high quality research, teaching and services in clinical pharmacology were discussed with emeritus professor, Folke Sjöqvist. He is the founder of the Department of Clinical Pharmacology at the Karolinska Institutet, the first in Sweden, and has played a major role in the development of the discipline globally. Olayinka and Joseph had the privilege to present a joint seminar to the division on under- and postgraduate education and training in clinical pharmacology in Nigeria. Olayinka and Joseph also met a number of research students at the division who shared with us integral aspects of their research projects. There were regular feedback sessions and reflections with the hosts plus time was scheduled to offer us a glimpse of Stockholm outdoor life.



L→R: Joseph Fadare, Folke Sjöqvist, Lars Gustafsson, and Olayinka Ogunleye

Olayinka and Joseph had the opportunities to interact with Prof. Michael Spedding (IUPHAR Secretary General), Dr. Darrell Abernethy (Chair, IUPHAR Clinical Division) and Prof. Guilherme Kurtz (Chair, IUPHAR Pharmacogenetics and Pharmacogenomics Section) during two Skype meetings. They conveyed their recommendations for further strengthening clinical pharmacology in teaching, research and services through the Clinical Pharmacology Mentoring Centers and through global health and pharmacogenomics research. At the conclusion of the visit, Olayinka and Joseph, together with Prof. Gustafsson and Assoc. Prof. Jaran Eriksen, also of the Karolinska Institutet Division of Clinical Pharmacology, evaluated the activities completed during the visit and agreed on an action plan for continued collaborations between Olayinka and Joseph's institutions and the Karolinska Institutet Division of Clinical Pharmacology.

The two weeks were highly interactive, productive and had a great impact on both of us. We are indeed grateful for this opportunity. An immediate next step is to present our impressions to our colleagues in Nigeria and to institute possibilities for a clinical pharmacology mentoring center in Nigeria, supported by Karolinska Institutet and IUPHAR. ●

Olayinka O. Ogunleye  
Joseph O. Fadare  
Members, IUPHAR Subcommittee for Clinical  
Pharmacology in Developing Countries





# GI iU PHAR

## Gastrointestinal Section

helps the

### Medical Faculty of University of Zagreb Celebrate its Centennial in Zagreb, Croatia on June 8-10, 2017

The IUPHAR Gastrointestinal (GI) Pharmacology Section was pleased to accept an invitation from Profs. Predrag Sikiric and Sven Seiwerth to organize a special meeting to celebrate the century of continuous efforts that the Medical Faculty at the University of Zagreb has invested in education and science as the first and the oldest medical faculty in Croatia. The Croatian Gastroenterological Society and the Croatian Surgical Society were also major contributors to the celebratory meeting by organizing symposia. On June 8<sup>th</sup>, 2017 the participants were cordially



welcomed by Marijan Klarica (at left), Dean of Medical Faculty University of Zagreb. Damir Boras (at upper right), Rector of University of Zagreb, described the significance of the University of Zagreb within the region and, in particular, the contributions of the Medical Faculty over the past 100 years. Duan Chen (at right), Chair of the IUPHAR GI Pharmacology Section, offered his congratulations on behalf of the Section and IUPHAR.



International experts highlighted the latest advances and challenges in the field (see next page). At the conclusion of the scientific sessions, the meeting delegates (below) participated in a traditional ceremony organized by the Catholic Faculty of Theology at the University of Zagreb.



Continued on page 19.

# IUPHAR Gastrointestinal Pharmacology Section in Zagreb (continued)

## Program Highlights

### June 8th

- Repurposing the endoscopic injection of Botulin toxin A for the treatment of obesity  
Duan Chen (Norway)
- Critical role of vitamin D3 in Helicobacter pylori eradication in stomachs  
Chi Hin Ho (Hong Kong, China)
- Role of sulforaphane in protection of GI mucosa against H.pylori- and NSAID-induced oxidative stress  
Akinori Yanaka (Japan)
- Adaptogens and gastric cytoprotection: molecular mechanisms  
Kavita Gulati (India)
- Stress, anxiety and gastric mucosal integrity: a pharmacological analysis  
Arunabha Ray (India)
- Big anniversaries in 2017: 100 years of Zagreb University, 110 years of Hans Selye & 80 years of his first stress articles  
Sandor Szabo (USA)
- From Selye to Robert to stable gastric pentadecapeptide BPC 157  
Predrag Sikiric (Croatia)
- Gastroprotective effect of remote ischemic preconditioning: involvement of glucocorticoids  
Ludmila Filaretova (Russia)
- Ulcer research in light of clinicians: hopes and realities  
Gyula Mozsik (Hungary)
- The effect of inhibitors of endocannabinoid deactivation on gastric and intestinal mucosal lesions, ulceration  
Klara Gyires (Hungary) Gyires K., Lázár B., Zádori Z.S.,
- The effects of chronic cyclooxygenase-2 inhibition in the gastrointestinal tract of rats  
Zoltan Zadori (Hungary)
- Fistula and other tissues healing by the Croatian Surgical Society  
Zarko Rasic (Croatia), Marko Sever (Croatia), Robert Klicek
- BPC 157, duodenocolic and rectovaginal fistulas  
Marko Sever (Croatia)
- BPC 157, colocutaneous fistulas  
Robert Klicek (Croatia)
- Internal fistulas: BPC 157 and vesicovaginal fistulas healing  
Domagoj Rasic (Croatia)
- BPC 157, NO-system, diclofenac toxicity and massive small bowel resection  
Nermin Lojo (Croatia)
- Internal fistulas: BPC 157 heals enterovesical fistulas in rats  
Tihomir Grgic (Croatia)
- BPC 157 induced liver regeneration after 70% hepatectomy in rats  
Dalibor Crvenkovic (Croatia)
- BPC 157, heterotopic ossification, fracture in rats  
Neven Starcevic (Croatia)
- BPC 157, glaucoma, sick eye in rats  
Tamara Kralj (Croatia)
- BPC 157 and adhesion formation  
Lidija Berkopic (Croatia)

### June 9th

- Animal model of esophagitis  
Koji Takeuchi (Japan)
- Acetic acid ulcer-its history and recent progress  
Susumu Okabe (Japan)
- Visceral hypersensitivity and enteric mast cells  
Jackie Wood (USA)
- Fat to FAT in GI disease  
Ki-Baik Hahm (Korea)
- Obesity and experimental colitis. Role of exercise, myokines and products of adipose tissue  
Tomasz Brzozowski (Poland)
- The role of AIEC in Crohn Disease  
Gaetano Iaquinto (Italy)
- Nerve-cancer cell crosstalk as a new concept in cancer biology and a potential therapeutic target  
Chun-Mei Zhao (Norway)
- GI and safety issues with NSAIDs: Critical analysis of current data  
Kim Rainsford (UK)
- Hydrogen sulfide as an important component of the gastrointestinal mucosal barrier  
Marcin Magierowski (Poland)
- Fecal microbiota transplantation: New insight  
Peter Konturek (Germany)
- Molecular physiology and pharmacology of epithelial transport processes in ameloblasts leading to dental enamel formation – evidence for bicarbonate secretion  
Gabor Varga (Hungary)
- BPC 157 as right remedy for NSAID-induced GI damages  
Ki-Baik Hahm (Korea)
- The novelty of BPC 157: Challenges & opportunities  
Sandor Szabo (USA)
- BPC 157 pathways  
Sven Seiwerth (Croatia)
- Coagulation disorders in nonalcoholic fatty liver disease  
Lucija Virović Jukić (Croatia)
- Cytokines and adipokines in nonalcoholic fatty liver disease  
Dominik Kralj (Croatia)
- Adipocytokines and colonic adenomas  
Sanja Stojsavljević (Croatia)
- Treatment options in nonalcoholic fatty liver disease: state of the art  
Marko Duvnjak (Croatia)





## IUPHAR Gastrointestinal Pharmacology Section in Zagreb (continued)

### Program Highlights (continued)

June 10th

Sleep and GERD: An eye opening experience

Ronnie Fass (USA)

GERD management: –It is time for a paradigm shift

Ronnie Fass (USA)

Rare GI diseases in Primary Health Care – mystery or hysteria

Hrvoje Tiljak (Croatia)

Helicobacter pylori infection: who should we test and how should we treat it

Marco Romano (Italy)

Guanosine attenuates inflammation in a DNBS-induced colitis rat model by modulating inflammatory cytokines and reducing oxidative stress

Maria Grazia Zizzo (Italy)

Mid gut infection in honeybees. Stable gastric pentadecapeptide BPC 157 in honeybee (*Apis mellifera*) therapy, to control *N. ceranae* invasions in apiary conditions

Ivana Tlak Geiger (Croatia)



The next day, the IUPHAR GI Section meeting participants (above) were special guests at the terrace restaurant of the Andrija Štampar Institute of Public Health. Its renowned public health library collection is one of the jewels of the University of Zagreb.

Even though course examinations were approaching, the local students were more than happy to assist with hosting the international and regional guests and attend the featured presentations. We thank the many people who made possible this event and those who have helped established the Medical Faculty at the University of Zagreb as a leader in research and teaching. ●

Predrag Sikiric

Professor, Medical Faculty at the University of Zagreb

and

Duan Chen

Chair, IUPHAR GI Pharmacology Section





The Latvian Society of Pharmacology was established in 1972 and its first president was Professor Modris Melzobs, MD. From 1994 to 2012 the Society was led by Professor Vija Kluša, MD, PhD, and since 2012 by Professor Baiba Jansone, PhD. Pharmacology in Latvia has evolved into one of the leading scientific disciplines and Latvian pharmacology is recognized internationally. The main scientific areas include molecular pharmacology, neuropharmacology, neuroinflammation, the role of mitochondria and animal models in various diseases, mesenchymal stem cell pharmacology, peptide research, studies on natural products, drug discovery, particularly the search for novel compounds capable of halting neurodegenerative, cardiovascular and endocrine diseases.

The pharmacological community in Latvia unites specialists from academia and institutes, such as: the University of Latvia, Rīga Stradiņš University, the Latvian Institute of Organic Synthesis, and the Latvian Biomedical Research and Study centre, as well as pharmaceutical companies, such as JSC “Grindeks”, “Biolat”, SIA “Rigvir” and others. Active research scientists, industry specialists and students of life sciences represent about 50 active members of the Society (below).



*Society members in December, 2016*

Society members Ruta Muceniece, Maija Dambrova, Baiba Jansone, Una Riekstiņa, Jolanta Pupure, Līga Zvejniece, Elīna Makarova, Baiba Švalbe and Marina Makrecka-Kuka have been awarded the L’Oréal-UNESCO Fellowships for Women in Science. Professors Kluša, Muceniece and Dambrova are full members of the Latvian Academy of Sciences, and Dr. pharm. Edgars Liepiņš is a corresponding member of the Latvian Academy of Sciences. Professor Jansone provides scientific expertise to the Committee on Herbal Medicinal Products, and Associate Professor Riekstiņa to the Committee for Advanced Therapies at the European Medicines Agency.

## The Latvian Society of Pharmacology Celebrates 45 Years

(continued)

Recently, the Department of Pharmacology of the Faculty of Medicine of the University of Latvia moved to the newly constructed campus named the “House of Nature” (at right). It is equipped with state of the art research equipment for *in vivo* (behaviour and memory experimental studies of neurodegenerative



diseases in rodents etc.), *ex vivo* and *in vitro* experiments, and modern conference auditoria and seminar rooms. The researchers of the Laboratory of Pharmaceutical Pharmacology at the Latvian Institute of Organic Synthesis, headed by Professor Dambrova, and the Latvian Biomedical Research and Study Centre, which focuses on *in vivo* cancer studies, have also recently acquired new facilities.

The Latvian Society of Pharmacology organizes biannual meetings and international conferences to disseminate recent achievements in pharmacology, awards Honorary Members, and commemorates outstanding Latvian pharmacologists. As an example, in 2014, the Society held a meeting commemorating the would-be 90<sup>th</sup> birthday of Professor Agris Ķīmenis (1924-1994), who was from 1963 to 1987 the first head of the Laboratory of Pharmacology at the Latvian Institute of Organic Synthesis. He supervised screening of new substances at the rate of about 1 000 compounds per year and oversaw pre-clinical investigation of original drugs, such as the anticancer drug Fturafur, the cardioprotectant Mildronate (*Meldonium*), the myorelaxant Dioxonium, and the antihypertensive Foridone, among others.



Commemorative meeting of the members of the Latvian Society of Pharmacology in honour of the would-be 90th birthday of Agris Ķīmenis, November 2014.



# The Latvian Society of Pharmacology Celebrates 45 Years

(continued)

In 2017, the Latvian Society of Pharmacology celebrates its 45<sup>th</sup> anniversary. To commemorate this event, members of the Society organize the 2<sup>nd</sup> International Conference in Pharmacology entitled 'From Cellular Processes to Drug Targets' (ICP2017RIGA; <http://www.icp2017riga.lu.lv>) that took place at the campus of the University of Latvia "House of Nature" in Riga on October 19-20.



### **The 2nd International Conference in Pharmacology "From Cellular Processes to Drug Targets" (ICP2017RIGA)**

*Shyam Sunder Chatterjee (Germany), Vladimirs Pilipenko (Latvia), Ingolf E. Blasig (Germany), Gunars Duburs (Latvia), Malle Kuum (Estonia), Dieter Willbold (Germany), Vija Kluša (Latvia), Baiba Jansone (Latvia), Stephen P.H. Alex-ander (UK), Ago Rincken (Estonia), Rosel Blasig (Germany), Inga Kadish (USA), Liga Zvejniece (Latvia), Staņislavs Jankovskis (Latvia), Emilio Clementi (Italy), Jurgis Ramanauskas (Lithuania), Thomas van Groen (USA), Ruta Muceniece (Latvia), Augustas Pivoriūnas (Lithuania), T. Vanaveski (Estonia), Una Riekstiņa (Latvia), Anti Kalda (Estonia), Maija Dambrova (Latvia), Mojca Kržan (Slovenia).*

We welcomed conference participants from several different countries, many of whom experienced Riga, the capital of Latvia, for the first time. An exciting European city with a medieval Old Town, Riga boasts the highest concentration of Art Nouveau (*Jugendstil*) architecture (below) in the world. Therefore, UNESCO has designated the Historic Centre of Riga as a World Heritage Site. The Conference program highlighted the newest findings in



pharmacology, bringing together all the active and honorary members of the Society, as well as academicians, industry specialists, doctors, students of life sciences, and internationally based scientists in a creative scientific atmosphere that promoted new collaborations. This conference was particularly auspicious because the members of the Latvian Society of Pharmacology commemorated Professor Modris Melzobs on the occasion of the 90<sup>th</sup> anniversary of his birthday. Professor Melzobs served as the inaugural president of the Society from 1972 until 1994.

Continued on page 24...



## The Latvian Society of Pharmacology Celebrates 45 Years

(continued)



In honour of Dr. Oswald Schmiedeberg, the founder of experimental pharmacology, the Latvian Society of Pharmacology established the Oswald Schmiedeberg's medal (above) that is presented to new Honorary Members at the Society organized conferences. Johann Ernst Oswald Schmiedeberg (1838-1921) was born near Talsi in Latvia and his grandparents were Latvians. Oswald Schmiedeberg studied medicine in Tartu (then called Dorpat) in Estonia, where he received in 1866 his Doctorate in Medicine. In 1868 he was appointed as a lecturer in pharmacology at the University of Tartu. Furthermore, in 1872 as professor of pharmacology in Strasbourg he began building a world-famous pharmacological institute. Dr. Schmiedeberg was particularly interested in the pharmacological action of the alkaloids muscarine, nicotine and digitalis glycosides. He published over 200 articles and books. During his leadership more than 150 pharmacologists were trained in Strasbourg. Notably, the journal of the German Society of Experimental and Clinical Pharmacology and Toxicology, *Naunyn-Schmiedeberg's Archives of Pharmacology*, was named in his honor. Dr. Schmiedeberg's school attracted many of the brightest scientists of the day. As one example, Professor Hans Cäsar Amsler from Switzerland headed the newly established Institute of Pharmacology in Riga from 1921 to 1940.

Since 1998, the Latvian Society of Pharmacology has awarded the Oswald Schmiedeberg's medal to 34 Honorary Members (see next page), which includes pharmacologists and other specialists from Latvia and abroad, for their important contributions to the field of pharmacology in Latvia, or for facilitating the development of the pharmacology education and research in Latvia.

The Latvian Society of Pharmacology highly values the outstanding contributions of all Honorary Members because not only have they facilitated the development of pharmacology within Latvia but they established and prioritized the importance of excellent and lasting international collaborations. They are all our good friends and their support cannot be overestimated.

On October 19, 2017, the new Honorary Members congratulatory ceremony of the 2nd International Conference in Pharmacology, the Oswald Schmiedeberg's medal was awarded to Associate Professors Inga Kadish, PhD, and Thomas van Groen, PhD, of the University of Alabama at Birmingham, USA. Both have accepted

# The Latvian Society of Pharmacology Celebrates 45 Years

(continued)

## Honorary Members of the Society

### 1998

Pēteris Alberts (Sweden/Latvia)  
Liisa Ahte (Finland)  
Lembit Allikmets (Estonia)  
Shyam S. Chatterjee (Germany)  
Jens S. Schou (Denmark)  
Guna Jākobsone (Latvia)  
Valdis Jākobsons (Latvia)  
Edmunds Lukevics (Latvia)  
Algis Mickis (Lithuania)  
Michael Noeldner (Germany)  
Sven Ove Ögren (Sweden)  
Rita Petričeka (USA)  
Jurgis Ramanauskas (Lithuania)  
Aivars Uldis Ramāns (USA)  
Niels A. Thorn (Denmark)  
Jarl Wikberg (Sweden)

### 1999

Skaidrīte Ģērmāne (Latvia)  
Modris Melzobs (Latvia)

### 2001

Ivars Kalviņš (Latvia)  
Alexander Zharkovsky (Estonia)  
Gunārs Duburs (Latvia)

### 2005

Jānis Stradiņš (Latvia)  
Heinz Lüllmann (Germany)  
Gunārs Čipēns (Latvia)  
Povilas Gaidelis (Lithuania)

### 2007

Anti Kalda (Estonia)  
Helgi Schiöth (Sweden)

### 2012

Boris Z. Simkhovich (USA)  
Edwin Zvartau (Russia)  
Laura Della Corte (Italy)  
Sergei B. Seredenin (Russia)  
Raimo Tuominen (Finland)  
Stefan Chłopicki (Poland),  
Vilmantė Borutaitė (Lithuania)

### 2017 (photograph at right)

Vija Zaiga Kluša (Latvia)  
Inga Kadish (USA)  
Thomas van Groen (USA)

pharmacologists from Latvia into their laboratories, helping to facilitate the transfer of the research knowledge to Latvia. Oswald Schmiedeberg's medal was also presented to Professor Kluša, the president of the Latvian Society of Pharmacology from 1994 until 2012. She served as the head of Laboratory of Peptide Molecular Pharmacology and Biology 1978 to 1987 then the Laboratory of Pharmacology at the Latvian Institute of Organic Synthesis 1987 to 1998, before she founded and headed the Department of Pharmacology of the Faculty of Medicine of the University of Latvia (1998-2017). For her achievements in science and founding a School of Pharmacology at the University of Latvia, Professor Kluša received in 2013 the Three Star Order, which is the highest Latvian Republic Award.

The Latvian Society of Pharmacology has been affiliated with the Latvian Academy of Sciences since 1997. In 1994, the Latvian Society of Pharmacology joined the IUPHAR and in 2010 the Federation of European Pharmacological Societies (EPHAR).

Since joining the European Union in 2004, pharmacologists from Latvia have had the opportunity to receive various international grants, including the European Regional Development Fund, European Social Fund, the Norwegian Financial Mechanism funding, *etc.* Latvian pharmacologists have firmly established collaborations with international partners from countries such as Sweden, USA, Estonia, Norway, Lithuania, Canada, Italy, and Portugal as well as continuing cooperation with local industry, *e.g.*, JSC "Grindex", JSC "Olainfarm", SIA "Rigvir", "Silvanols" and "Biolat". The members of the Latvian Society of Pharmacology are pleased to have had opportunities to collaborate with research partners from other countries and in other fields beyond pharmacology, such as biomedicine, pharmacy, and medicinal chemistry. More detailed information about recent research achievements in pharmacology in Latvia is available in a 2016 *Pharmacological Research* Special Issue entitled "Countries in focus: Pharmacology in the Baltic States" (Jansone *et al.*, 2016). ●

Baiba Jansone

President, Latvian Society of Pharmacology

[baiba.jansone@lu.lv](mailto:baiba.jansone@lu.lv)

### Reference

Jansone *et al.*, (2016) Special issue entitled 'Countries in focus: Pharmacology in the Baltic States'. *Pharmacological Research*, Volume 113, Part B, 721-832.



L→R: Thomas van Groen (USA), Vija Zaiga Kluša (Latvia), Maja Dambrova (Latvia), Inga Kadish (USA) and Baiba Jansone (Latvia)

# Upcoming Events

## January

### **Winter Meeting of the Norwegian Society of Pharmacology and Toxicology**

January 25 - 28, 2018 in Beitostølen, Norway

<http://nsft.net/nsfts-vintermote-2018>

## February

### **84th Annual Meeting of the German Society for Experimental and Clinical Pharmacology and Toxicology** with the 3rd German Pharm-Tox Summit, a joint meeting with the Association of Clinical Pharmacology

February 26 - March 1, 2018 in Göttingen, Germany

<http://www.gpts-kongress.de>

### **50th Annual Conference of the Indian Pharmacological Society**

February 15 - 17, 2018 in Mumbai, India

<http://www.indianpharmacology.org/7/Annual-Conference.html>

## March

### **119th Annual Meeting of the American Society for Clinical Pharmacology and Therapeutics**

March 21 - 24, 2018 in Orlando, Florida, USA

<http://www.ascpt.org/ASCPT-2018-Annual-Meeting>

## April

### **10th Congress of Toxicology in Developing Countries (CTDC10) organized by the International Union of Toxicology**

April 18 - 21, 2018 in Belgrade, Serbia

<https://www.iutox.org/ctdc.asp>

### **Annual Meeting of the American Society for Pharmacology and Experimental Therapeutics** in conjunction with Experimental Biology 2018

April 21 - 25, 2018 in San Diego, California, USA

<http://www.aspet.org>

## May

### **Joint meeting of the Canadian Society of Pharmacology and Therapeutics, Canadian Chapter of Controlled Release Society and Canadian Society for Pharmaceutical Sciences**

May 22 - 25, 2018 in Toronto, Canada

<https://pharmacologycanada.org>

## June

### **Annual congress of the French Pharmacology Society**

June 12 - 14, 2018 in Toulouse, France

<https://pharmacol-fr.org/congres-sfpt>

## July

### **IUPHAR 18th World Congress of Basic and Clinical Pharmacology**

July 1 - 6, 2018 in Kyoto, Japan

<http://www.wcp2018.org>

To include your events here, please e-mail the details to [iuphar@kumc.edu](mailto:iuphar@kumc.edu).





BRITISH  
PHARMACOLOGICAL  
SOCIETY



THE UNIVERSITY of EDINBURGH  
Edinburgh Medical School

# *Pharmacology Futures 2018*

## May 17, 2018

### National Museum of Scotland, Edinburgh



*Professor David Webb, President of the British Pharmacological Society and Christison Chair of Therapeutics and Clinical Pharmacology at the University of Edinburgh, highlights a major international meeting taking place next year.*

In 2018, it will be 250 years since the founding of a separate Chair of Materia Medica in Edinburgh. Students at the Edinburgh Medical School were taught about drugs from as early as 1676. At that time, most drugs were effectively herbal remedies extracted from plants and animals, and it was therefore appropriate that the subject was taught by a Professor of Botany. In 1738, however, the first Chair of both Botany and Materia Medica was appointed. At this time, students were expected to know the properties of 250 plants, 60 minerals, various gums and resins, and also extracts of snails, worms and vipers – all used as medicines.

In 1768, Materia Medica was separated from Botany, seeing the founding of what was probably the first Chair in the world of what would become pharmacology. To celebrate this rich 250-year history of pharmacology in Edinburgh and to look forward to the future of the discipline, the British Pharmacological Society is hosting a focused meeting to explore the technologies and skills that will drive drug development over the next 10 to 15 years. The Royal Society of Edinburgh is lending its support to this meeting. Some highlights of the drug discovery and development programme include:

- The role of structural genomics in drug development
- The importance of epigenetics in drug discovery
- The role of stem cells in therapeutics, drug safety pharmacology, and drug discovery
- The use of biomarkers in guiding therapy
- The importance of allosteric drug binding sites for novel drug development
- Trans-institute approaches to drug development for neurological diseases

The University of Edinburgh's Cameron Prize for Therapeutics, founded in 1879, will be awarded to Dame Sally Davies, Chief Medical Officer for England, at this meeting. The event is being hosted at the National Museum of Scotland, so we will be celebrating the long history of pharmacology in Edinburgh amidst diverse collections that journey through Scotland's rich history. We will be making the most of the iconic setting by hosting a drinks reception in the 'Explore Gallery', and dinner in the 'Grand Gallery'.

The full programme, along with a list of the many eminent speakers who will address the meeting, can be viewed and downloaded from [www.bps.ac.uk/pharmacologyfutures2018](http://www.bps.ac.uk/pharmacologyfutures2018). Online registration is now open. Book early to avoid disappointment!



Submit your abstract and register now:

# PHARMACOLOGY FUTURES 2018

Celebrating 250 years of pharmacology in Edinburgh

17 May 2018, National Museum of Scotland, Edinburgh, UK

**Pharmacology Futures 2018 will explore the technologies and skills that will drive drug development over the next 10 to 15 years, with speakers sharing their visions of the future to celebrate 250 years of pharmacology in Edinburgh.**

The University of Edinburgh's Cameron Prize for Therapeutics will be awarded during the meeting.

PhD students and early career researchers\* are invited to submit a scientific abstract showing how their work contributes to the 'Future of Pharmacology'. The best three from each category will be invited to give an oral presentation. Two winners will be selected, one from each category (PhD students and early careers researchers) to receive certificates and prizes of £250. The authors of all other accepted abstracts will be invited to present a poster.



For more information about attending or presenting please contact [meetings@bps.ac.uk](mailto:meetings@bps.ac.uk) or visit [www.bps.ac.uk/pharmacologyfutures2018](http://www.bps.ac.uk/pharmacologyfutures2018)

## Speakers

**How do we make the UK a world leader in drug discovery?**

Professor Chas Bountra, University of Oxford, UK

**Human pluripotent stem cell models for future drug discovery and disease modelling**

Professor Christine Mummery, Leiden University Medical Centre, The Netherlands

**Minding the gap: Linking preclinical studies to the development of novel therapeutics at the National Institutes of Health**

Professor Susan Amara, National Institute of Mental Health, USA

**Drugging transcription: Progress and potential for treating human diseases**

Dr Rab Prinjha, GlaxoSmithKline, UK

**The pharmacology of turning thoughts into local blood flow in the brain**

Professor Mark Nelson, University of Vermont, USA

**The role of biomarkers in translational pharmacology**

Dr James Dear, University of Edinburgh, UK

**GPCR allostery: From theory to medicine**

Professor Arthur Christopoulos, Monash University, Australia

**2017 Cameron Prize for Therapeutics Lecture: Building and maintaining a global response to antimicrobial resistance (AMR)**

Professor Dame Sally Davies, Department of Health, UK

## Chairs

**Professor Sue Fleetwood-Walker**, University of Edinburgh, UK

**Professor Mark Evans**, University of Edinburgh, UK

**Dr Sally Argyle**, University of Edinburgh, UK

**Professor David Wyllie**, University of Edinburgh, UK

**Professor Sir John Savill**, Regius Professor of Medical Science, University of Edinburgh, UK

## Local organisers

**Professor Michael Eddleston**, Professor of Clinical Toxicology, Pharmacology, Toxicology and Therapeutics, University of Edinburgh, UK

**Professor David Webb**, President, British Pharmacological Society and Christison Professor of Therapeutics and Clinical Pharmacology, University of Edinburgh, UK

On behalf of **Professor Mark Evans**, **Dr Gillian Gray**, **Professor John Kelly**, **Dr Dawn Livingstone**, **Dr Emma Morrison**, **Professor David Wyllie** and **Professor Steve Hill**

Pharmacology  
International

December 2017



Early bird registration rate expires: 16 April 2018 Registration deadline: 10 May 2018  
Abstract submission deadline: 02 March 2018 Member bursary deadline: 02 March 2018

Early bird registration fees from £50.

Please visit [www.bps.ac.uk/pharmacologyfutures2018](http://www.bps.ac.uk/pharmacologyfutures2018) to book your place.

\*Early careers researchers: oral communications – for those with up to 7 years' full-time equivalent post-doctoral experience as of May 2018



## The Council for International Organizations of Medical Sciences

# Student Award for Best Scientific Article

CIOMS is pleased to announce the establishment of an annual award of US\$1,500 for the best scientific article published in the areas of pharmacovigilance and research ethics. In the case of research ethics, papers dealing with health-related research involving humans are eligible. The article must have been published in a scientific peer-reviewed journal in English.

**The first award application deadline is 1 March 2018.**

### Eligibility

1. Award applicants/recipients should be medical students from member organizations of the International Federation of Medical Students' Associations (IMFSA). Medical students continuing as PhD students can also be eligible.
2. All students listed as authors of the scientific article applied for the award are equally eligible meaning that the award sum will be distributed between student authors equally.
3. Applications can be submitted for scientific articles that have been published in peer-reviewed scientific journals in English.
4. The applications for scientific articles with student-only authors are given priority. Papers with mixed authorship in which students are co-authors can be considered provided there is enough evidence of the important role of student/s in this work.
5. An individual may not receive more than one CIOMS award in a year, nor may an individual receive more than one award for the same body of work.
6. The applicant **MUST** provide evidence that she/he is a medical student currently enrolled in a medical school.
7. A minimum of three eligible applications are required in an award cycle (usually one year) before the selection committee may select an award recipient(s).

### Award Application Requirements

Submit your application by e-mail to [info@cioms.ch](mailto:info@cioms.ch), including:

1. Short cover letter from the main applicant (applicant who duly represents all the student authors of the article, if more than one) with clear contact data and brief description of the accomplishments, as well as the contact data of the scientific supervisor of the student/s.
2. A copy of the article as it appeared in a peer reviewed journal.
3. A letter from the scientific supervisor in the University supporting the application (recommended but not mandatory)
4. One to two letters of reference. All letters of recommendation may come from the nominee's institution.
5. Nominations should be specific about the achievements.

Additional information can be found at [www.cioms.ch](http://www.cioms.ch).



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