

Pharmacology International

No. 69 December 2007 The semi-annual newsletter from the International Union of Basic and Clinical Pharmacology

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The IXth World Conference on Clinical Pharmacology and Therapeutics

July 27 - August 1, 2008 Québec, Canada

The IXth World Conference on Clinical Pharmacology and Therapeutics (CPT2008) is fast approaching. It will be held in Québec City, Canada from July 27th to August 1st, 2008.

A stellar program has been put together by Dr. Patrick du Souich and the Scientific Program Committee. There will be two Plenary Sessions per day presented by distinguished and experienced speakers. The 39 oral symposia will feature outstanding speakers from around the world. Topics include:

- New Insights in Treatment of Pain
- Drug Transport and Metabolism in the Brain
- Towards Quality Use of Medicines
- Traditional Chinese Medicine
- Pharmacogenetic Epidemiology
- Pharmacovigilance
- Geriatric Pharmacology
- Prevention of Left Ventricular Hypertrophy and Cardiac Remodelling
- Pediatric Pharmacology and more...



There will be also a series of industry-sponsored symposia each evening from 18:00 to 20:00. An integral part of the meeting will be an exhibition by commercial and non-profit organizations showcasing innovative products and services.

Abstracts must be submitted at www.cpt2008.org/e_call/call_e.shtml before February 1st, 2008. Notice of acceptance will be sent by March 31st, 2008. Accepted abstracts will be presented at poster sessions that will take place each day with viewing times during lunch and coffee breaks.

The Early Registration Deadline is April 30th 2008. Participants paying before that date will benefit from a reduced registration fee. The on-line form is available at www.cpt2008.org/e_regist/registration_e.shtml. A limited number of partial travel grants are offered to young scientists from low and middle income countries.

CPT2008 will also offer exciting social activities, such as the Opening Ceremony featuring Inuit throat-singing, Huronne-Wendat dancing, and a unique show of forces (!) between French and English. Another event not to be missed is Fun Night on Thursday, August 31st. It will be a colourful evening combining food, refreshments and a circus performance in the tradition of Cirque du Soleil.

Continued on page 2...



Québec City, courtesy of www.bonjourquebec.com

Continued from page 1...

CPT2008 (continued)

Québec City celebrates its 400th anniversary in 2008 with a series of events offering a daring touch of imagination and charm. Participants at CPT2008 will also want to explore the province of Québec, known for its *Joie de Vivre*, or to visit other destinations in Canada.

The meeting website is active and hotel reservations may be made by clicking on www.cpt2008.org/e_accommodation_e.shtml. **It is recommended that participants book early because the 400th anniversary of Québec City is expected to attract many tourists.**

CPT2008 is organized by the Canadian Society for Clinical Pharmacology and the National Research Council of Canada under the auspices of the International Union of Basic and Clinical Pharmacology. This international Conference includes the 5th Canadian Therapeutics Congress (Canadian Society for Clinical Pharmacology, Canadian Association for Population Therapeutics, and Canadian College of Clinical Pharmacy). A number of satellite symposia will be held in Québec City or in nearby centres just before or right after CPT2008 (see page 6).

To learn more about CPT2008, please visit the Conference website at www.cpt2008.org or contact the Secretariat at cpt2008@nrc-cnrc.gc.ca.

We look forward to welcoming you at CPT2008 in Québec City next summer! •

Marc LeBel, CPT2008 Co-Chair

Québec Trivia...

The name comes from the original word "Kébec" which means "where the river narrows" in what language?

Answer on page 35



For your convenience, you may also register on-line at
www.cpt2008.org/e_regist/registration_e.shtml



The IXth World Conference on Clinical Pharmacology and Therapeutics
La IX^e Conférence mondiale de pharmacologie clinique et thérapeutique

July 27 – August 1, 2008
Du 27 juillet au 1^{er} août 2008

Québec City Convention Centre, Québec City, Canada
Centre des congrès de Québec, Québec, Canada

12_S112_00

Registration / Inscription

A. GENERAL INFORMATION / INFORMATION GÉNÉRALE

PLEASE TYPE OR PRINT CLEARLY / VEUILLEZ DACTYLOGRAPHIER OU ÉCRIRE CLAIREMENT

LAST NAME / NOM DE FAMILLE _____ FIRST NAME / PRÉNOM _____

TITLE / TITRE _____

ORGANIZATION / AFFILIATION _____

MAILING ADDRESS / ADRESSE POSTALE _____

CITY / VILLE _____ / STATE / ÉTAT _____

COUNTRY / PAYS _____ POSTAL/ZIP CODE / CODE POSTAL _____

TELEPHONE / TÉLÉPHONE () _____ FAX / TÉLÉCOPIEUR () _____

E-MAIL ADDRESS / ADRESSE DE COURRIEL _____

B. FOR CANADIANS ONLY / POUR LES CANADIENS SEULEMENT

Please indicate below if you are a member of the following organizations / Prière d'indiquer si vous êtes membre des associations suivantes:

- Canadian Society for Clinical Pharmacology / Pharmacological Society of Canada
Société canadienne de pharmacologie clinique / Société de pharmacologie du Canada
- Canadian Association for Population Therapeutics / Association canadienne pour la thérapeutique des populations
- Canadian College of Clinical Pharmacy / Collège canadien de pharmacie clinique

C. REGISTRATION FEES / FRAIS D'INSCRIPTION

	UP TO APRIL 30, 2008 D'ICI AU 30 AVRIL 2008	AFTER APRIL 30, 2008 APRÈS LE 30 AVRIL 2008	
<input type="checkbox"/> Full Participant / Participant	\$775.00 CAD \$	\$875.00 CAD \$	\$ _____
<input type="checkbox"/> *Student / Étudiant	\$350.00 CAD \$	\$450.00 CAD \$	\$ _____

Registration fees include the opening ceremony and welcoming reception, coffee breaks and a copy of the program and abstracts. / Les frais d'inscription incluent la cérémonie d'ouverture et la réception de bienvenue, les pauses-café, une copie du programme ainsi que les résumés.

*The following statement must be completed to register as a student: I certify that I am a student currently working towards a recognized degree. / La section suivante doit être complétée par les étudiants qui sont présentement inscrits dans une institution d'enseignement.

University / Université: _____ Degree / Niveau: _____

Supervisor's Name / Nom du superviseur: _____ Title / titre: _____ Telephone / Téléphone: _____

D. OPENING CEREMONY AND WELCOMING RECEPTION / CÉRÉMONIE D'OUVERTURE ET RÉCEPTION DE BIENVENUE

(included in the registration fee / incluses dans les frais d'inscription)

Sunday, July 27, 2008 / Le dimanche 27 juillet 2008

Additional ticket / Billet additionnel

Cost per ticket / Prix par billet \$50.00 CAD _____ # of Ticket(s) / Billet(s) ____ x ____ = _____ \$

E. FUN NIGHT (includes food, refreshments and entertainment) / SOIRÉE DE DIVERTISSEMENT (incluent la nourriture, des boissons et un spectacle)

Thursday, July 31, 2008 – 19:00 / Le jeudi 31 juillet 2008 à 19 h

Cost per ticket / Prix par billet \$65.00 CAD _____ # of Ticket(s) / Billet(s) ____ x ____ = \$ _____

F. METHOD OF PAYMENT / MODALITÉS DE PAIEMENT (\$CAD)

Total Remittance / Montant total : \$ **0.00**

- Please charge the total amount above to the following credit card: VISA MasterCard American Express

SVP porter le montant total au débit de la carte de crédit suivante :

Name (as it appears on card) / Nom (tel qu'il apparaît sur la carte): _____

Card Number / Numéro de carte: _____ - _____ - _____ - _____ Expiry Date / Date d'expiration : _____ M/M Y/A

Signature: _____ Date: _____

- Cheque (enclosed): Please make cheque payable to the "Receiver General for Canada (CPT 2008)" /
Chèque (inclus): Veuillez libeller le chèque à l'ordre du « Receveur général du Canada, CPT 2008 »

Mail to: Conference Secretariat, CPT 2008, c/o National Research Council Canada, 1200 Montreal Road, Ottawa, ON K1A 0R6 Canada,
telephone: 613 993 -0414 or by fax 613 993 7250.

Par la poste : Secrétariat de la Conférence, CPT 2008, a/s Conseil national de recherches Canada, 1200, chemin Montréal, Ottawa (Ontario)
Canada K1A 0R6, téléphone 613 993 0414 ou par télécopieur 613 993 7250.

Time Heure	Monday, July 28 Le lundi 28 juillet	Tuesday, July 29 Le mardi 29 juillet
07:30 – 18:00	Registration 07:30 – 18:00	
08:30 – 09:30	Salon 200 AB Plenary I: Progress in Cancer Treatment: Molecular Targets	Salon 200 AB Plenary III: Innovations in the Treatment of Dyslipemias
09:30 – 09:45	Coffee Break	
	Stream 1: New Therapeutic Approaches	
09:45 – 12:15	S01 New Anticancer Drugs and Cancer Treatment in the 21st Century	S09 New Approaches in the Treatment of HIV Infection
	Stream 2: From Fundamental to Clinical Pharmacology	
09:45 – 12:15	S02 Drug Hypersensitivity: Insights into Pathophysiology and Therapy	S10 Personalised Medicine: Pharmacogenetic Possibilities and Economic Realities
	Stream 3: Medicines and Society	
09:45 – 12:15	S03 Drugs in Sport	S11 Pharmacology Teaching in the Undergraduate Medical Curriculum: Is it Necessary?
	Stream 4: Clinical Pharmacology in Special Populations	
09:45 – 12:15	S04 Pediatric Clinical Pharmacology at the Dawn of a New Era	S12 Antidepressants in Pregnancy and Lactation
		S13 Challenges in African Pharmacology
12:15 – 14:00	Lunch / Poster Presentations	
14:00 – 15:00	Salon 200 AB Plenary II: Nanomedicines: Entering the Mainstream	Salon 200 AB Plenary IV: Innovations in Analgesia
15:00 – 15:15	Coffee Break	
	Stream 1: New Therapeutic Approaches	
15:15 – 17:45	S05 New Insights in the Treatment of Pain	S14 Eicosanoid Receptors in Disease: Targets for Therapy
	Stream 2: From Fundamental to Clinical Pharmacology	
15:15 – 17:45	S06 Drug Transport and Metabolism in the Brain: Potential Roles in Clinical Pharmacology	S15 Serotonin Receptors: Pharmacogenetics and Clinical Implications
	Stream 3: Medicines and Society	
15:15 – 17:45	S07 Towards Quality Use of Medicines	S16 Pharmacovigilance: New Approaches and Old Risks
	Stream 4: Clinical Pharmacology in Special Populations	
15:15 – 17:45	S08 The Ethics of Drug Research	S17 Drug Utilisation in ICUs
18:00 – 20:00	Sponsored Symposia Pfizer Industrial Symposium Oxford Outcomes Industrial Symposium Lilly Industrial Symposium	Sponsored Symposia CORD/Bayer Industrial Symposium Merck Frosst Industrial Symposium

Prière de noter que l'horaire pourrait être légèrement modifié dans le Programme final.

Please note that the schedule may vary slightly in the Final Program.

Continued on page 5...

CPT2008 Program Excerpt

(see www.cpt2008.org for full details)

Time Heure	Wednesday, July 30 Le mercredi 30 juillet	Thursday, July 31 Le jeudi 31 juillet	Friday, August 1 Le vendredi 1 ^{er} août	
07:30 – 18:00	Registration 07:30 – 18:00		Registration 07:30 – 12:00	
08:30 – 09:30	Salon 200 AB Plenary V: Antioxidants: Disease Prevention, Therapeutic Agents or the Epitome of Uselessness	Salon 200 AB Plenary VII: Prescribing for Pregnant Women: The Facts and the Fears	Salon 200 AB Plenary IX: Contribution of Pharmacogenomics to Improved Outcomes of Drug Therapy: Focus on the Latest Developments	
09:30 – 09:45	Coffee Break			
Stream 1: New Therapeutic Approaches				
09:45 – 12:15	S18 Targeting Cellular Signalling: Clinical Relevancy	S27 Endothelial Dysfunction as a Therapeutic Target	S35 Prevention of Left Ventricular Hypertrophy (LVH) and Cardiac Remodelling: Beyond Blood Pressure Reduction	
Stream 2: From Fundamental to Clinical Pharmacology				
09:45 – 12:15	S19 Mechanism-based PK-PD Modeling – From Pharmacology to Clinical Practice	S28 Safety and Efficacy of Herbal Medicines	S36 Brain Imaging and Clinical Pharmacology: Scientific Innovation in Future Drug Development	
Stream 3: Medicines and Society				
09:45 – 12:15	S20 Cancer Pharmacogenomics	S29 Pharmacogenetic Epidemiology	S37 Better Access to Essential Medicines: Update on Recent Developments	
	S21 Academic Drug Trials – An Endangered Species due to Bureaucracy and Costs?		S38 Pharmacoepidemiologic Studies as a Decision Support Tool for Regulatory Agencies, Physicians, and Patients	
Stream 4: Clinical Pharmacology in Special Populations				
09:45 – 12:15	S22 Better Medicines for Children	S30 Geriatric Pharmacology	S39 Ethnic Differences in Drug Therapy	
12:15 – 14:00	Lunch / Poster Presentations		Salon 200 AB 12:15 – 13:15 Closing Ceremony Plenary X: Future of Research in Pharmacology	
14:00 – 15:00	Salon 200 AB Plenary VI: Malaria Chemotherapy – In Search of Magic Bullets	Salon 200 AB Plenary VIII: Public Health Implications of Research Utilizing Pharmacovigilance Databases	<h3 style="margin: 0;">Plenary Speakers</h3> <p style="margin: 0;">Theresa M. Allen</p> <p style="margin: 0;">David Clark</p> <p style="margin: 0;">Sérgio Ferreira</p> <p style="margin: 0;">Jacques Genest</p> <p style="margin: 0;">Barry Halliwell</p> <p style="margin: 0;">Lionel D. Lewis</p> <p style="margin: 0;">Laura Magee</p> <p style="margin: 0;">Salvador Moncada</p> <p style="margin: 0;">Stephen A. Ward</p> <p style="margin: 0;">Richard M. Weinshilboum</p>	
15:00 – 15:15	Coffee Break			
Stream 1: New Therapeutic Approaches				
15:15 – 17:45	S23 Clinical Pharmacology & Therapeutic Role of New Generation Antiepileptic Drugs	S31 Progress in Immunopharmacology		
Stream 2: From Fundamental to Clinical Pharmacology				
15:15 – 17:45	S24 Transporters: Relevance to Drug Disposition and Disease	S32 Clinical Relevance of Nitric Oxide (NO) and its Inhibitors		
Stream 3: Medicines and Society				
15:15 – 17:45	S25 The Use of Quality Indicators in Therapeutics. Does it Improve Drug Prescribing?	S33 Paying for Medicines – What is a Fair Price?		
Stream 4: Clinical Pharmacology in Special Populations				
15:15 – 17:45	S26 Drug Abuse and Dependence: The New Science for an Old Problem	S34 Traditional Chinese Medicine (TCM): A Global Approach		
18:00 – 20:00	Sponsored Symposia Xceleron Industrial Symposium Brogan Industrial Symposium			



Québec Trivia...

The Ursulines of Québec monastery, the oldest institution of learning in North America for women, was established in what year?

Answer on page 35



CPT2008 SATELLITE MEETINGS

The 12th International Workshop on Glucuronidation
Québec City, Canada

July 24th - 27th, 2008

www.pharmacogenomics.pha.ulaval.ca/sgc/ugt_workshop

Chair: Chantal Guillemette

Population PKPD Modelling: A One
Week Hands-on NONMEM Workshop
Université Laval

Québec City, Canada

July 21st - 25th, 2008

www.emf-consulting.com

Instructors: Eliane Fuseau, Mathilde Marchand and Marc-Antoine Fabre, from EMF Consulting



Place Royale, courtesy of www.cpt2008.org

Pharmacology Education

Dartmouth College

Hanover, USA

July 25th - 26th, 2008

Co-chairs: Jean Gray and David Nierenberg

Pediatric Pharmacology Satellite

Establishing an International Collaborative Network in

Pediatric Pharmacology

The Hospital for Sick Children

Toronto, Canada

July 25th - 26th, 2008

Co-chairs: Gideon Koren and Michael Rieder

CPT2008 SATELLITE MEETINGS (continued)

Pharmacology of Pain
Université de Montréal
Montréal, Canada
July 26th, 2008
Co-chairs: P. Beaulieu, D. Lussier,
and M. Ware

Anapharm's Second Symposium:
Current Issues Related to Clinical Research
Hôtel Delta Québec
Québec City, Canada
July 26th, 2008
Chair: Mario Tanguay

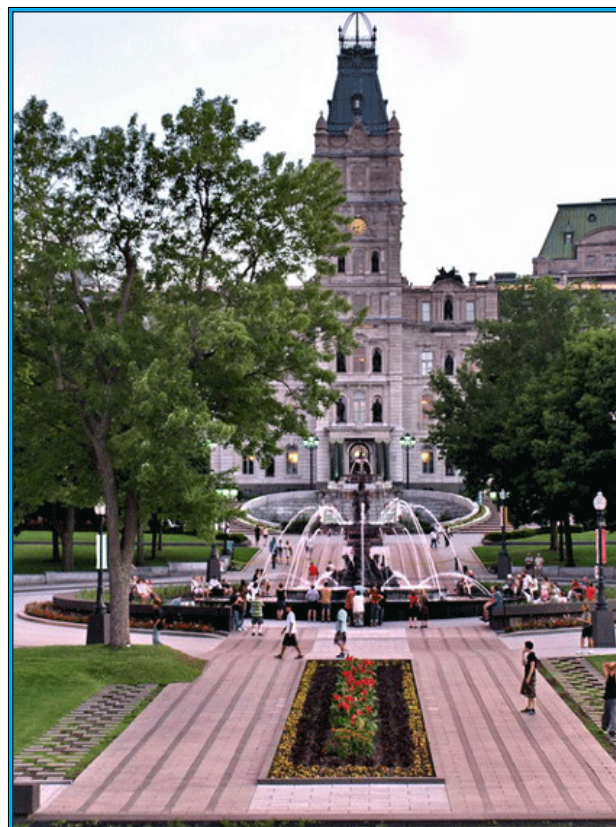
Developmental Origins of Pharmacological Heterogeneity
Queen's University
Kingston, Canada
July 25th, 2008
Chair: Kanji Nakatsu
For information: nakatsuk@queensu.ca

Approaches to International Comparison
of Drug Utilization
Québec City, Canada
July 26th, 2008
Chair: Ingrid Sketris

Safety and Efficacy of Natural Health Products
New Approaches to Old Question
Complementary and Alternative Medicines
CARE Program at University of Alberta
Université Laval
Québec City, Canada
July 26th, 2008
Chair: Sunita Vohra



*Fontaine de Tourny (Tourny Fountain)
Courtesy of Pierre Coulombe*



*Parliament Building for the Province of Québec
Courtesy of Pierre Coulombe*

To post your satellite meeting, please contact the Conference Secretariat at cpt2008@nrc-cnrc.gc.ca . For updated listings please visit www.cpt2008.org/e_satellite/satellite_e.shtml.

Guided Tours

Saturday, July 26th - Friday, August 1st
Cost varies by tour package

Old Québec Tours, a local sightseeing service, offers tour packages from a booth located close to the Registration Desk at the Conference site. A wide range of tours are offered at various times with bilingual guides. Tours will depart from and return to the Québec City Convention Centre or the participants' hotels. It is recommended tours be purchased in advance by visiting www.toursvieuxquebec.com or immediately upon arrival at the Conference.



Offerings include:

Rendez-vous with History: Experience history first hand through the European charm of the first French settlement in North America.

Countryside Tour: Travel back in time to rural Québec and enjoy the view along the 40 kilometers of Chemin du Roy to Sainte-Anne-de-Beaupré as you pass through the traditional villages of rural Québec.

City & Countryside Tour: Combining the above two tours is the ideal way to see just what Québec City and the area have to offer.

Deluxe Tour: Experience the charm of the magnificent natural and historical site of Montmorency Falls coupled with the Rendez-vous with History tour.

City Tour and Changing of the Guard: We pick you up at your hotel to witness Changing of the Guard (weather permitting), a traditional military ceremony (admission fee included) coupled with the Rendez-vous with History tour.

Québec City, by Land & by Sea: Treat yourself to a unique combination of the Rendez-vous with History tour and a cruise along the St. Lawrence River.

Whale Watching: To discover the whale kingdom, we take one of the most beautiful roads of the province towards Charlevoix and its enchanting sights and landscape. A naturalist guide helps you learn about the beluga and finback whale environment.

Whale Watching Sporting Cruise: A sensational excursion to stimulate your senses, in a zodiac, what else? Experience these marine mammals and the elements up close and personal.

Opening Ceremony and Welcome Reception

Sunday, July 27th at 17:30

Free to registrants

The Opening Ceremony will be held at the Québec City Convention Centre.

It will unfold in a gala atmosphere in which brief opening remarks will be punctuated by cultural offerings that will feature the meeting of four cultures.

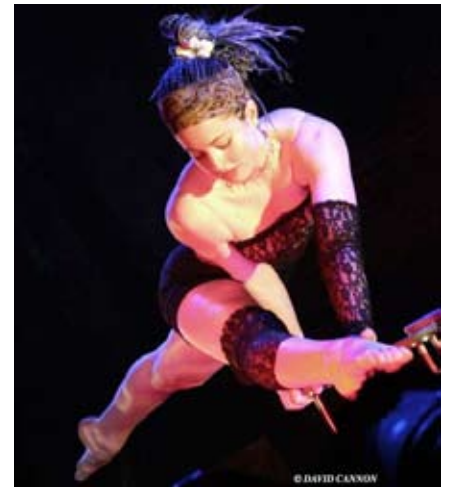
It will be a one-time event where four cultures will meet: Inuit, Huronne-Wendat, French and English. A welcoming reception will follow in the exhibition area. The welcoming reception is included in the registration fee. An additional ticket for a traveling companion is \$50.00 CAD.

Fun Night

Thursday, July 31st at 19:00

Ticket Cost: \$65.00 CAD

After an exciting day, why not get together for a colourful evening combining exquisite fine food, refreshments and a performance of the highest artistic values with circus arts in the tradition of Cirque du Soleil? Tickets must be purchased in advance.



Courtesy of David Cannon

*The **Closing Ceremony** will be held on
Friday, August 1st from 12:15 to 13:15.*

To book your activities please visit

www.cpt2008.org/e_social/socactivities_e.shtml



*Château Frontenac Hotel: Purported to be the most photographed hotel in North America
Courtesy of www.toursvieuxquebec.com*

Meetings and Encounters

For thousands of years, Québec has been a natural meeting place for encounters great and small; historic and contemporary; encounters between Europe and North America, First Nations and settlers, France and England amid the confluence of a mighty river and a chain of mountains, of fresh and salted waters, of Upper and Lower Town, of venerable old stones and modern glass walls. This succession of encounters has left its mark on Québec City and on its landscape, architecture, culture, economy, population and lifestyle. Today we celebrate the founders' choice to establish Québec City here where so many memorable meetings and encounters are made possible.

400th Anniversary Events Sampling

Visit www.monquebec2008.com for the full list of events and details.

- A** ESPACE 400^e offers the Promenade, the Ephemeral Gardens and the waters of bassin Louise as a backdrop for these special events:
- June 3rd to October 19th** **Passengers Exhibition** - A colossal exhibit tracing the passage of the some 5 million people who have been a part of Québec.
- June 20th to July 29th** **The Image Mill** - You will be amazed by the largest outdoor architectural projection ever created.
- July 24th to 31st** **International Challenge of Seamanship** at the baie de Beauport et fleuve Saint-Laurent - A nautical event marked by friendly international competition among more than 15 Gig crews.
- B** Musée national des beaux-arts du Québec (National Museum of Fine Arts) celebrates 75 years showcasing Québec artists from the 17th century to now:
- June 5th to October 26th** **The Louvre in Québec City** - A thematic exhibition highlighting the diversity and quality of the collections of the Louvre's different departments.

Continued from page 10...



C l'Observatoire de la capitale (the Capital Observatory) is 31 stories tall offering fabulous views of Québec:

July 3rd to October 31st **Québec vue par Kedi. 400 ans de passion** (Québec views by Kedi: 400 years of passion) - This exhibit of original photography span Eugen Kedi's career paying homage to one of Québec's artistic ambassadors.

D Engramme Gallery is a self-run artists' centre promoting original printmaking:

July 1st to 31st **Landscape of the Soul: 400 Points of View of Québec City** - A fabulous mosaic of 400 original miniature prints from all of the world will be on display.

Continued on page 12...

Continued from page 11...

E The **Association Forestière Québec Métropolitain** (Forest Association of Metropolitan Québec) will provide guided tours of urban forests in the Québec City area in conjunction with a photography contest. Bring your camera!

F **Place au théâtre (Theatre Place) at Place-Royale plaza:** June 22nd - Sept. 7th Actors will transform the Place-Royale plaza into a stage and invite the public on a wild journey every Thursday, Friday, Saturday, and Sunday.

Off the map

The **Loto-Québec Firework Competition** is held in Montmorency Falls Park, 10 minutes north of downtown Québec City. Visit www.lesgrandsfeux.com/en for directions and details.

July 30th & August 2nd Competitions will begin at 9:30 p.m.

Festivent is a hot air balloon festival held in Lévis, across the St. Lawrence River:

August 1st - 3rd **Magic Nights of the 400th Anniversary** event launches hot air balloons of all shapes and colors from the Plains of Abraham (Québec) and Parc Champigny (Lévis) at 9:30 p.m.

Québec Trivia...

What are the average high and low temperatures during the month of July?

Answer on page 35





SPONSORSHIPS AND EXHIBITION SPACE

CPT2008 is the next in a 4-year cycle of international conferences concerned with clinical pharmacology and therapeutics. The meeting's focus will be on recent major development in drug-related research ranging from pharmacy to medical practice and from molecules and biotechnology to population health.

The new knowledge and experience presented at the meeting will be shared by approximately 2,500 attendees from universities, clinical practice, industry, and government.

CPT2008 will highlight the direction of drug research for the next 10-15 years, and will provide excellent opportunities to foster drug development. Brand and corporate awareness for participating companies will be raised with researchers, practitioners, policy makers, pharmaceutical scientists and clinical pharmacologists of the future.

We invite you to support this prestigious conference and receive numerous promotional benefits for your organization and to display your products. For more information on sponsorship and exhibit opportunities please visit the CPT2008 website:

www.cpt2008.org/e_sponsor-ex/sponlist_e.shtml

Or contact the Secretariat at cpt2008@nrc-cnrc.gc.ca .

CPT2008 TRAVEL AWARDS

Financial Assistance for Select Young Scientists from Low and Middle Income Countries

To encourage young scientists to participate in this Conference, the organizers have established a travel assistance program. The program is offered to young scientists resident in lower and middle income countries as defined by the World Bank.

For this program, a limited number of awards will be made available to qualified candidates as partial travel support to attend the Conference. There will be 75 travel grants of \$1,000.00 CAD each. Awards will be granted based on financial need and scientific merit of submitted abstracts.

February 1st, 2008: Deadline for Application
March 15th, 2008: Notification of Acceptance or Rejection
April 30th, 2008: Registration Deadline

Please visit
www.cpt2008.org/e_call/call-grant_e.shtml
for more information.



VISA REQUIREMENTS

Entry Formalities for Canada



Flag of Canada

Visitors from countries other than the U.S. must have a valid passport, and a visa may be required. For a letter of invitation, e-mail the Conference Secretariat at cpt2008@nrc-cnrc.gc.ca.

U.S. born citizens should have a passport or a birth certificate plus photo I.D.; citizens require naturalization certificates with photo I.D.; permanent residents (who are not citizens) need the alien registration card (green card).

For additional information regarding entry formalities, you can consult the nearest Canadian embassy, high commission, consulate, customs agent, your travel agent or visit the website for Citizenship and Immigration Canada at www.cic.gc.ca or call +1-819-994-2424.

**You should allow a minimum
of 30 days for visa delivery.**

CPT2008 CALL FOR ABSTRACTS

Authors are invited to submit an abstract in English to be considered for a poster presentation at the Conference. Abstracts may be submitted via Internet only. There is no paper form to complete or mail. Faxed and mailed submissions will not be considered.

**The deadline for submission of abstracts is
February 1st, 2008 at
www.cpt2008.org/e_call/call_e.shtml**

Submitting authors are asked to select the most appropriate stream (*i.e.* theme) from the following list:

1. New Therapeutic Approaches (*e.g.* molecular therapeutics, new drugs)
2. From Fundamental to Clinical Pharmacology (*e.g.* genetics and genomics, bioinformatics, drug transporters, drug metabolism, pharmacodynamics, pharmacokinetics/modeling, clinical trials)
3. Medicines and Society (*e.g.* safe medication practice, drug informatics, pharmacoepidemiology, pharmacoeconomics, drug policy research, drug research and international health, ethical issues in pharmaceutical research, modern teaching)
4. Clinical Pharmacology in Special Populations (*e.g.* elderly, pediatrics, developing countries)

Update your Curriculum Vitae!

**CPT2008 Job Fair
begins**

June 2nd, 2008

NO COST to Job Seekers

**2 MONTHS FOR THE PRICE OF 1
for Employers**

<http://careers.iuphar.org>

FAST FACTS

Conference Information:
July 27th - August 1st, 2008
www.cpt2008.org



Flag of Québec City

Early Registration Deadline:
April 30th, 2008
www.cpt2008.org/e_regist/registration_e.shtml

Abstract Submission Deadline:
February 1st, 2008
www.cpt2008.org/e_call/call_e.shtml

Visa Information
Apply now
www.cic.gc.ca or call +1-819-994-2424

Accommodations:
Earlier is better but not after June 16th, 2008
www.cpt2008.org/e_accommodation/accommodation_e.shtml

Tourist Links:
Something for everyone
www.monquebec2008.com
www.bonjourquebec.com
www.travelcanada.ca

Guided Tours:
Book in advance or upon arrival
www.toursvieuxquebec.com



Flag of Québec Province

Airport Information:
Aéroport International Jean-Lesage (YQB)
www.aeroportodequebec.com

Québec Trivia...

In 1944, Allied Leaders (including Churchill, King, and Roosevelt) met in which 2 famous buildings to plan the D-Day Landings?
Answer on page 35



NC-IUPHAR IN 2008

CHALLENGES FOR PHARMACOLOGY FROM RECEPTOR NOMENCLATURE TO THE IMPACT OF HETEROMULTIMERS

Summary

NC-IUPHAR is a committee which issues guidelines for receptor and ion channel classification, and which classifies the major receptor and ion channel systems in the human genome. All of these data are freely available on the web (www.iuphar-db.org). NC-IUPHAR is not an exclusive committee but a group of dedicated pharmacologists who donate time for the cause of modern pharmacology. More than 50 subcommittees are involved in this effort, with input welcome from any interested scientist in the field.

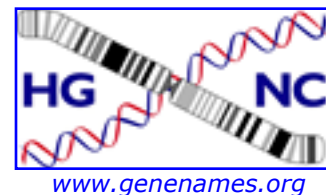
The International Union of Basic and Clinical Pharmacology Committee on Receptor Nomenclature and Drug Classification has the mission of:

1. issuing guidelines for receptor and ion channel classification,
2. classifying the major receptor and ion channel systems,
3. facilitating the interface between the discovery of new sequences from the Human Genome Project and the designation of the derived proteins as functional receptors and ion channels, as well as the receptor polymorphisms which are functionally important,
4. establishing and maintaining a website with access to data on all known receptor systems, and making the information freely available to scientists throughout the world.

Pharmacology is at a crucial point because of the available access to sequences for almost all of the receptors in the human genome. This is a unique opportunity to make a rare definitive scientific statement as the task of annotating sequence for function is the work of pharmacologists. Receptors are the site of action for many of the currently available drugs and a designation by homology of the majority of the receptors in the genome is now possible. Furthermore, pharmacology, the study of the interaction of chemical substances with living organisms, is a crucial discipline because of the need to discover new drugs and the increasing awareness of what harm some chemicals do to our environment.

NC-IUPHAR has created a list of all the G-protein-coupled receptors, voltage-gated ion channels, and nuclear receptors. Soon it will unveil information on the ligand-gated ion channels known to be in the human genome, including relevant data on their rat and mouse homologues. This database (www.iuphar-db.org) details the pharmacology associated with these proteins, as proposed by NC-IUPHAR subcommittees.

NC-IUPHAR has established working relationships with the Human Genome Organisation (HGNC), which is responsible for gene names, the International Union of Pure and Applied Chemistry (IUPAC), which standardises drug names, and the International Union of Biochemistry and Molecular Biology (IUBMB), which is responsible for enzyme nomenclature. As detailed below, NC-IUPHAR has especially close links with the British Pharmacology Society (BPS) and the American Society for Pharmacology and Experimental Therapeutics (ASPET). However, we also need YOU (!) to provide feedback, interactions and potential new directions. Because of its limited funds, NC-IUPHAR relies on scientists donating their time in accomplishing its goals. NC-IUPHAR is not an elite club, but rather a group



NC-IUPHAR 2008: CHALLENGES FOR PHARMACOLOGY (CONTINUED)

of dedicated individuals with an abiding interest in pharmacology. We welcome comments and suggestions for future directions. Please contact the chair, Michael Spedding at michael.spedding@fr.netgrs.com or the database chair, Tony Harmar at tony.harmar@ed.ac.uk, or the NC-IUPHAR editor, Eliot Ohlstein at eliot_h_ohlstein@gsk.com to learn more.

CURRENT STRATEGY

NC-IUPHAR is now composed of over 50 subcommittees on receptor and ion channel nomenclature, with each subcommittee having between 6 and 20 international experts in the field. In some cases a single scientist may be asked to provide information on receptors for which there is unequivocal evidence supporting a functionally important site with a straightforward classification scheme. In other cases important new initiatives are addressed by working groups which explore and develop possible future directions for the committee, and for receptor pharmacology. For example, while the possibility that different receptors may form heterodimers may markedly change the pharmacology of a given class of compounds, the significance of these changes remains unclear. The working group will debate, for example, the criteria that must be fulfilled to show that the changes exist. A group of experts, chaired by Jean-Philippe Pin, has reviewed this particular topic and issued guidelines with respect to this issue (see Jean-Philippe Pin, Richard Neubig, Michel Bouvier, Lakshmi Devi, Marta Filizola, Jonathan A. Javitch, Martin J. Lohse, Graeme Milligan, Krzysztof Palczewski, Marc Parmentier, Michael Spedding. (2007). International Union of Basic and Clinical Pharmacology. Recommendations for the recognition and nomenclature of G protein-coupled receptor heteromultimers. *Pharmacological Reviews*. 59, 5-13; <http://pharmrev.aspetjournals.org/cgi/content/full/59/1/5>).

A high priority for NC-IUPHAR has been unravelling the complexities associated with establishing a consistent nomenclature for the plethora of multi-subunit receptors and ion channels. An entire issue of *Pharmacological Reviews* (<http://pharmrev.aspetjournals.org/content/vol55/issue4>), edited by Bill Catterall, George Chandy and George Gutman, was devoted to addressing this challenge in the context of **voltage-gated ion channels**. The NC-IUPHAR subcommittees have proposed nomenclature for the major ion channel families which is, for the most part, consistent with the recommendations for receptor nomenclature. It is anticipated that **ligand-gated ion channels** will be fully classified and the databases of ligand- and voltage-gated ion channels will be complete by the end of 2008.

PHARMACOLOGICAL
REVIEWS

<http://pharmrev.aspetjournals.org>

NC-IUPHAR 2008: CHALLENGES FOR PHARMACOLOGY (CONTINUED)

The list of non-sensory **7-transmembrane receptors** (7-TMRs) in the human genome, divided into their main structural classes by Steve Foord, is a major step forward, as there remain few others left to be discovered. Gordon Shepherd is maintaining a database of all the sensory 7-TMRs. An Evolving Pharmacology Committee, chaired by Anthony Davenport, is being formed to ascribe changes in the status of 7-TMRs (orphan receptors) so the NC-IUPHAR web site has a special section for evolving receptor designations.

Vincent Laudet has overseen the gathering of information on 48 **nuclear hormone receptors** resulting in an edited compendium that was distributed to all participants at the XVth World Congress of Pharmacology (IUPHAR 2006) in Beijing. Published in *Pharmacological Reviews* at the end of 2006 (<http://pharmrev.aspetjournals.org/content/vol58/issue4>), this information will form the basis of the nuclear hormone receptor database, the next goal for the database team following the completion of the ion channel databases.

As resources are limited, activities must be prioritized. For this reason the classification of **receptors linked to tyrosine kinase** (TKRs) is not yet completed. Contributions on this topic are welcome.

ORIGINS OF NC-IUPHAR

NC-IUPHAR was formed in 1987 at the Xth International Congress of Pharmacology, with Sir Colin Dollery playing a key role in the initiation of this program. In 1989 the IUPHAR Executive Committee named Paul Vanhoutte as chairman of a revised and enlarged committee. This committee energetically expanded its activities and the number of subcommittees to 33, eventually producing the first official compendium in conjunction with the XIIIth International Congress of Pharmacology in 1998. After Dr. Vanhoutte was elected president of IUPHAR in 2002, Robert Ruffolo served as chairman of NC-IUPHAR from 1998-2002 with Michael Spedding serving as Secretary. Dr. Spedding assumed the chair in 2002. The database has been overseen by Anthony Harmar in Edinburgh, UK.

MEMBERSHIP

The current members of NC-IUPHAR are listed at www.iuphar.org/nciuphar.html. The committee is composed of scientists with established reputations in receptor and ion channel research. A range of disciplines and areas of expertise are represented by this group, including pharmacology, molecular biology, signal transduction, electrophysiology, structure-activity relationships, and drug discovery/development. Each member is a liaison officer with a subgroup of the committee. NC-IUPHAR meets every six months. At each gathering there is a particular theme (ion channel classification, receptor databases, etc.) and a review of the progress of the various subcommittees. The NC-IUPHAR members liaise with the subcommittees, communicating general recommendations from the committee and reporting back on proposed changes in nomenclature, or on the discovery of new receptors. There are also several corresponding members who deal with specific issues, or who provide regional representation.

NC-IUPHAR 2008: CHALLENGES FOR PHARMACOLOGY (CONTINUED)

SUBCOMMITTEES

NC-IUPHAR subcommittees are responsible for establishing the classification system for a particular receptor and are charged with forming consensus amongst the experts in the field. Subcommittee chairs are asked to propose a list of experts as members who cover a broad range of disciplines. The composition of the subcommittee must be ratified by NC-IUPHAR to ensure adequate representation of the field. Dedicated scientists interested in being appointed to a subcommittee should contact Dr. Spedding. The chairman of each subcommittee plays a critical role coordinating the actions of the subcommittee, organising meetings, and finalising documents. The subcommittee meets to establish consensus on classification and to ensure that the NC-IUPHAR guidelines are met. The subcommittee activities are vital to the success of this initiative.

PUBLICATIONS

The recommendations of the various subcommittees are published in *Pharmacological Reviews* after ratification by NC-IUPHAR. Revisions appear in the compendia. Occasionally, editorials in other specialty journals are published to ensure widespread dissemination of the information. Eliot Ohlstein is editor for NC-IUPHAR.

In the past, NC-IUPHAR has also convened a meeting of the editors of the major pharmacology journals to communicate its recommendations and to assess the feedback from the various NC-IUPHAR user-groups.

THE IUPHAR RECEPTOR DATABASE

The IUPHAR Receptor Database was developed initially using funds from an educational grant from Incyte Genomics, and subsequently from the International Council of Scientific Unions (ICSU). The database is located at the University of Edinburgh, and is overseen by Anthony Harmar and the curators, Rebecca Hills and Martin Jones. The database is now maintained by a joint initiative with the British Pharmacological Society (BPS).

PARTNERSHIP BETWEEN NC-IUPHAR AND THE BPS

The British Pharmacological Society (BPS) has generously agreed to support the IUPHAR receptor database. Data will also be available for the BPS Guide to Receptors and Channels (GRAC: <http://intl.emboj.org/bjp/journal/vgrac/ncurrent>), which is a very different but complementary product. These represent detailed online resources of key



<http://www.bps.ac.uk>

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NC-IUPHAR 2008: CHALLENGES FOR PHARMACOLOGY (CONTINUED)

information on drug targets. Similar working relationships have been established to obtain information from a network of international experts. The Edinburgh Office has experience in searching the literature, liaising with contributors as required, and in distilling information from the database into succinct summaries as used in GRAC and in the compendia published in *Pharmacological Reviews*. Thus, there are significant advantages to the BPS and NC-IUPHAR in having the Edinburgh team work on behalf of both organisations. In this respect, John Peters is both an editor of GRAC and a member of NC-IUPHAR.

PARTNERSHIP BETWEEN NC-IUPHAR AND ASPET

The American Society for Pharmacology and Experimental Therapeutics (ASPET) has been a long-time supporter of NC-IUPHAR and has made major contributions to IUPHAR activities over the many years. ASPET has published NC-IUPHAR articles in *Pharmacological Reviews* and the last two compendia on voltage-gated ion channels and nuclear receptors at no charge to the Union. We wish to acknowledge the dedication of the *Pharmacological Reviews* staff in accomplishing these objectives and for their generous donation of time and effort on behalf of NC-IUPHAR.




<http://aspet.org>

FUTURE DIRECTIONS

It is exciting that pharmacology should be in such a pivotal position in designating function to so many sequences in the human genome. Furthermore, the multitude of factors between a published genomic sequence and an assigned receptor function in a given tissue (epigenetics, alternative splicing, messenger RNA editing, polymorphisms, the combinatorial nature of subunit association) ensures plenty of work for NC-IUPHAR long into the future. The practical implications of the new pharmacology are immense, particularly for drug discovery where the magnitude of the variables affecting drug response are only now becoming fully appreciated. As much needs to be done, NC-IUPHAR can use all of the help it can get from motivated and interested scientists. Please don't hesitate to contact us if you would like to participate in this exciting adventure. •

Michael Spedding, Chair, NC-IUPHAR Committee
Anthony Harmar, Chair, NC-IUPHAR Database
Eliot Ohlstein, NC-IUPHAR Editor
Anthony Davenport, Chair, Evolving Pharmacology

Québec Trivia...
*Which Nobel Laureate (in Literature) was
born in Lachine, Québec in 1915?*
Answer on page 35





Highlight:
**A Centennial of Science with the Swedish Society for
Pharmacology, Clinical Pharmacology and Therapeutics**

The Swedish Society for Pharmacology, Clinical Pharmacology and Therapeutics held its first regular meeting in October, 1907. Initially, the Society was a section of the Swedish Society of Medicine, an organization representing the Swedish medical profession. The first members of what would become the Swedish Society for Pharmacology were physicians with a special interest in chemistry and pharmacology, and pharmacists. Among the first issues discussed by the group were problems associated with drug nomenclature, analytical methods, and the properties and quality of various herbal preparations. In the early 1910s, there was much concern about "humbug medicines", and how their use could be restricted - an issue which has remained unchangingly important!

From 1914-1919, Adolf Rising was chairman of the section. Dr. Rising pioneered scientific collaborations with the emerging Swedish drug industry. He was also the founder of Astra Pharmaceuticals, now merged with Zeneca to form AstraZeneca.

From 1930-1950 the Section often represented the Society of Medicine in developing new legislation pertaining to Swedish pharmaceuticals.

In 1954, the new chairman, Börje Uvnäs, reinvigorated the group, organizing a number of meetings with lectures and discussions. Visiting pharmacologists from many countries were frequently invited lecturers. Several members of the Section took an active part in organizing the first World Congress of Pharmacology, which was held in Stockholm in 1961. Some years later, Börje Uvnäs was elected the first president of the International Union of Pharmacology (IUPHAR).

The number of clinicians in the Section markedly increased in the 1960s and 1970s. This paralleled the rapid development of clinical pharmacology in Sweden. Numerous meetings and symposia were arranged in collaboration with other Sections within the Medical Society, and the Pharmacology Section developed the tradition of presenting a scientific program each year at the General

The Korean Society of Pharmacology is 60 Years Old



The Korean Society of Pharmacology celebrated its 60th anniversary this year. We are very proud of the growth of the Society over the decades. The success of the organization has been fueled by a dedication to the field and the generous support of the members. The Society has been an important vehicle for fostering and broadcasting the scientific achievements of its members, and in facilitating the establishment of long-lasting friendships and scientific collaborations. The Society sponsors annually a symposium in the spring, a conference in the autumn and a workshop in winter.

As we celebrate our past with this important milestone, we look forward to the future and the promise of more exciting progress in the field. Formal ceremonies will be held during the 60th annual meeting of the Korean Society of Pharmacology on November 6th and 7th, 2008 in conjunction with a special international conference organized especially for the occasion. This conference follows in the tradition of the Korean-Japanese symposia held since 1982 and the hosting of the 9th Asian Pacific Pharmacology symposium in BEXCO in Busan in 2003. We take pride in such undertakings as they illustrate the international importance of the Society and its role in fostering research in pharmacology worldwide. Other major events planned for the coming year include a merger of the *Korean Journals of Pharmacology* and *of Physiology*, and the preparation of a publication describing the accomplishments of the Society during its first 60 years. •

In Chul Shin, Secretary-General, Korean Society of Pharmacology



Continued from page 22...

100 Years of Swedish Pharmacology (continued)

Assembly. In the following decades, this expanded into a yearly Spring Symposium, which allowed for Swedish pharmacologists and clinicians to partake in informal and stimulating discussions about basic and clinical pharmacology, pharmacotherapy and pharmacoepidemiology. These gatherings also included social activities and skiing.

Today, the Swedish Society for Pharmacology, Clinical Pharmacology and Therapeutics has approximately 140 members, from academia, clinical medicine and industry. It continues to arrange seminars and conferences in various areas of pharmacology, to promote and develop teaching skills and materials, and to provide pharmacological expertise for the Swedish Medical Society and the international community. •

Ellen Vinge, Secretary, 2006 - 2009

Ernst Brodin, Past Chairman, 2003 - 2006

Carl-Olav Stiller, Chairman, 2006 - 2009

Swedish Society for Pharmacology, Clinical Pharmacology and Therapeutics

The Latvian Society of Pharmacology Celebrates 35 Years

The Latvian Society of Pharmacology (LSP) celebrated its 35th anniversary on April 27th, 2007. A seminar-type meeting was organized for all active members, pharmacologists-pensioners and Honorary Members.

Founded under the guidance of Prof. Modris Melzobs, he also served as the first President. Although it is a comparatively new society, the LPS has had a turbulent history. While during the first two decades of its existence under soviet occupation, scientific contacts and exchange of ideas across the iron curtain were discouraged, since 1991 Latvian scientists have been able to participate fully in research worldwide.

Presently there are three centres in Latvia devoted to pharmacological research: the University of Latvia, the Latvian Institute of Organic Synthesis, and the Riga Stradins University. During the 1970s research was focused on peptide pharmacology, with studies conducted on angiotensin, bradykinin, enkephalins, and substance P, whereas during the 1990s focus has shifted to melanocortins and their receptors. Currently, neuroprotective mechanisms and neuroprotectants, with particular emphasis on drugs capable of regulating mitochondrial processes, are investigated at the Department of Pharmacology (Head, Prof. Vija Klusa), Faculty of Medicine University of Latvia, while cardioprotectants are a major research interest at the Laboratory of Pharmaceutical Pharmacology, Latvian Institute of Organic Synthesis (Head, Dr. Maija Dambrova).

Since 1998 the LPS has invited pharmacologists and other specialists from Latvia and around the world to join the Latvian Society of Pharmacology as Honorary Members. These Honorary Members are scientists with whom we collaborate, or who have contributed material support to the Society. At the awards ceremony new Honorary Members are presented an Honorary Member certificate, their curriculum vitae and photograph are placed in a special Honor Book and they are awarded the Oswald Schmiedeberg Medal (see photograph at right). Professor



The Oswald Schmiedeberg medal

Continued on page 25...

Québec Trivia...

The Québec City "Chronicle-Telegraph" is the oldest English newspaper in North America, having been in business since what year?
Answer on page 35



Continued from page 24...

LSP Celebrates 35 Years (continued)

Schmiedeberg was born in Latvia. The medal was designed by the outstanding Latvian artist Janis Strupulis.

At present there are 27 Honorary Members of the LPS, with two from the USA, four from Sweden, two from Denmark, three from Germany, one from Finland, three from Lithuania, three from Estonia, and nine from Latvia.

We are grateful to Prof. Heinz Lullmann (Germany), Prof. Niels Thorn (Denmark), Drs. Peteris Alberts, Jarl Wikberg, and Sven Ove Ogren (Sweden), and the many others who helped the Society during a time of severe financial difficulties in the early 1990s. Thanks to their efforts, Latvian scientists were invited to work in laboratories abroad until the situation stabilized. We are also very indebted to Drs. Rita Petriceka and Aivars Ramans (USA) for providing to the Society over the years subscriptions to *Trends in Pharmacological Sciences* and *Trends in Neurosciences*. We are are thankful to our colleagues from Estonia, Profs. Lembit Allikmets and Alexander Zharkovsky, for their long-term collaborations, and to the Latvian colleagues from the Joint Stock Pharmaceutical Company GRINDEX (Valdis Jakobsons), the Latvian Institute of Organic Synthesis (Profs. Ivars Kalvins, Edmunds Lukevics, Gunars Cipens, Gunars Duburs) and many others.



New Honorary Members Anti Kalda (left) and Helgi Birgir Schioth (right) accompany President Vija Klusa (center) following their induction into the Society.

Two new Honorary Members, Profs. Anti Kalda from Estonia and Helgi Birgir Schioth, from Sweden, were inducted into the Society at the anniversary meeting (see photograph at left). Good friends and collaborators, they presented some very interesting results from their studies during the meeting. Another highlight of the meeting was a review by the President of the Society of the accomplishments over the past 35 years.

We are happy to report that an increasing number of students are joining our laboratories, and are enthusiastically participating in IUPHAR and EPHAR congresses and conferences. •

Vija Klusa, President, Latvian Society of Pharmacology

2008 Anniversaries IUPHAR congratulates the following member societies:

Finnish Pharmacological Society
1948 - 2008

Israel Society for Physiology & Pharmacology
1963 - 2008

Iranian Society of Physiology & Pharmacology
1968 - 2008

Serbian Pharmacological Society
1978 - 2008

Philippine Society of Experimental
& Clinical Pharmacology
1978 - 2008

European Society for Developmental,
Perinatal, & Pediatric Pharmacology
1988 - 2008

European Association for Clinical
Pharmacology & Therapeutics
1993 - 2008



"I FOUND MY DREAM JOB!"
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In Memory of John J. Burns



Dr. John J. Burns, a legend in pharmaceutical industry research and an outstanding scientist in his own right, died on July 29th, 2007. Born in Flushing, New York, USA on October 8th, 1920, he was a graduate of Queens College with a BS degree in 1942 and from Columbia University in 1950 with a PhD degree. During World War II, he served in the US Army where he was assigned to a research group developing new anti-malaria drugs.

During his years as Vice President and Director of Research at Burroughs Wellcome and Hoffmann La Roche, Dr. Burns supported basic research more than any other pharmaceutical executive, both within his company as well as in the academic community. One of his most significant

contributions was the establishment of the Roche Institute of Molecular Biology. This institute, which earned a worldwide reputation for outstanding research, is one of Dr. Burns' legacies. His view that great basic research would always lead to practical results was confirmed when a collaboration between the Roche Institute and Genentech led to the development of important drugs and, many years later, to Roche owning a controlling interest in this major biotechnology company.

In his earlier years Dr. Burns conducted research and was the author of several hundred original reports. He did much of the early pioneering work on the biosynthesis and metabolism of vitamin C (ascorbic acid). He demonstrated that ascorbic acid is formed in the rat by the following steps: glucose or galactose \rightarrow D-glucuronolactone \rightarrow L-gulonolactone \rightarrow L-ascorbic acid, then demonstrated that man, monkey and the guinea pig lacked the ability to metabolize gulonolactone to ascorbic acid, explaining why these species require ascorbic acid to prevent scurvy. Dr. Burns found that the half-life of ascorbic acid was 4 days in guinea pigs compared to about 18 days in man. The longer half life of ascorbic acid in humans explains why they require a much longer time to develop scurvy than the guinea pig.

Dr. Burns' fundamental studies in the area of drug metabolism helped explain the multiple actions of certain agents. His studies identified metabolites with high biological activity that later were used for the treatment of various diseases. Dr. Burns showed that phenylbutazone is converted in man to two major metabolites. One product is formed by the introduction of a phenolic group in the para position of a benzene ring (Metabolite I), and the other by the introduction of an alcohol group on the butyl side chain (Metabolite II). Metabolite I has the potent antirheumatic and sodium-retaining effects of phenylbutazone whereas Metabolite II possesses little sodium retaining and antirheumatic properties but is considerably more potent as a uricosuric agent. These two metabolites explain the antirheumatic, sodium-retaining and uricosuric activities of phenylbutazone. Metabolite I (oxyphenbutazone, Tandearil) has been used clinically as a potent antirheumatic agent in acute gout and rheumatoid arthritis. A sulfoxide metabolite (sulfinpyrazone) of a thio-ether derivative of phenylbutazone is a potent uricosuric agent used for the treatment of chronic tophaceous gout. Sulfinpyrazone was identified by Dr. Burns as a urinary metabolite of the thio-ether derivative of phenylbutazone. The extensive studies by Dr. Burns and his associates on the metabolism and pharmacological activities of phenylbutazone and its analogs markedly enhanced our knowledge of the pharmacology of these compounds and were among some of the earliest to demonstrate that drugs may produce active metabolites.

Continued on page 28...

JOHN J. BURNS (continued)

As part of his research on phenylbutazone, which was published in the *American Journal of Medicine* in 1954, Dr. Burns compared the antiinflammatory action of phenylbutazone with the steroid cortisone and observed the similarity in mechanism of action between the two. He coined the term "nonsteroidal antiinflammatory" to describe phenylbutazone. This descriptor is now commonly used to classify drugs such as Motrin, Aleve and Celebrex.

Dr. Burns did pioneering research on species differences in the rates and pathways of metabolism of phenylbutazone, oxyphenbutazone, ethylbiscoumacetate, meperidine and ascorbic acid. The results of these studies emphasized the difficulties involved in extrapolating drug metabolism data from one species to another. He also performed pioneering research on individual variations in human drug metabolism. He found a greater than 10-fold variation in the rate of metabolism of ethyl biscoumacetate (Tromexan) among different human subjects and about a 4-fold difference in the rates of metabolism of phenylbutazone. There are now many examples of drugs that are metabolized at different rates in different patients with clinically important consequences.

Dr. Burns found that administration of several drugs such as Chloretone and barbiturates, as well as polycyclic aromatic hydrocarbons, stimulates the metabolism of glucose and galactose via the glucuronic acid pathway to glucuronic, gulonic and ascorbic acid. He went on to show that drugs that stimulate ascorbic acid biosynthesis also enhance liver microsomal drug metabolism.

Dr. Burns was the first to demonstrate the clinical importance of microsomal enzyme induction. He provided early evidence that enzyme induction decreased the action of drugs in both animals and man and demonstrated that chronic administration of some agents stimulates the drug's own metabolism, decreasing its toxicity. These studies have had an important impact on both the interpretation and design of chronic toxicity tests. Studies by Dr. Burns also revealed the utility of microsomal enzyme induction and inhibition for determining whether the pharmacologic activity resides in the parent compound and/or a metabolite.

In addition to his fundamental research, Dr. Burns made enormous contributions to pharmacology and toxicology in the United States and abroad by his leadership roles in the American Society for Pharmacology and Experimental Therapeutics, the International Union of Pharmacology, the American College of Neuropsychopharmacology, the Committee on Problems of Drug Safety of the National Academy of Sciences, as a Senior Consultant to the Pharmacology-Toxicology Program of the National Institute of General Medical Sciences, and as a consultant to many other groups. Dr. Burns was elected to membership in the National Academy of Sciences in 1975.

Continued on page 29...

CLINICAL PHARMACOLOGY & THE RATIONAL USE OF DRUGS

A Trans-European Mobility Scheme for University Studies (TEMPUS) project involving Sweden, Egypt and the World Health Organization held its closing Workshop in Cairo, Egypt on December 2nd and 3rd, 2007. Over the past three years intensive cooperation has been taking place between Swedish clinical pharmacologists and Egyptian hospital doctors as well as University staff members to raise awareness about the importance of Clinical Pharmacology as a discipline towards rationalizing drug prescribing.

The chief Egyptian counterpart, Prof. Mohamed Ibrahim, who was recently appointed as a member of the Clinical Division of IUPHAR, sadly passed away suddenly at the end of October. The Cairo Workshop was therefore chaired by Prof. Mohamed Khayyal, Cairo University. The Swedish side was represented by Profs. Folke Sjöqvist and Anders Rane, Karolinska Institute.

The workshop acclaimed the efforts and success of the National Health Service and other State hospitals involved in the primary phase of the project, where Drug Therapeutic Committees (DTCs) have been formed and proven effective in rationalizing drug prescribing. It was decided to expand and consolidate formation of DTCs in other hospitals. Continuous support by the Egyptian Ministry of Health, the Egyptian Society of Pharmacology, and Karolinska Institute have been pledged

The European Commission explains, "The Tempus programme funds cooperation projects in the areas of curriculum development and innovation, teacher training, university management, and structural reforms in higher education. It puts special emphasis on the mobility of academic and administrative staff from higher education institutions, both from the European Union and the partner countries. Established in 1990 following the fall of the Berlin Wall, Tempus has been renewed four times. The fourth phase of the programme is currently being developed. The European Commission continues to consider higher education as a priority for its co-operation activities with the countries surrounding the European Union. The Tempus programme, with its strong focus on institution-based university co-operation, will therefore be continued over the period 2007 to 2013." •

Mohamed T. Khayyal, Councilor, IUPHAR Executive Committee

*WHO, Swedish and Egyptian flags
courtesy Google Images*

Continued from page 28...

JOHN J. BURNS (continued)

While directing research at Burroughs Wellcome and at Hoffmann La Roche, Dr. Burns was instrumental in the discovery and/or development of Levodopa, Rocaltrol, Accutane, Limbitrol, Versed, and Interferon.

Dr. Burns served as Adjunct Professor of Pharmacology at the Weill Medical College of Cornell University. He also was a scientific advisor to a number of biotech companies. He was a member of the Institute of Medicine, of the Herbal Pharmacology Delegation to the People's Republic of China, and of the Panel on Chemistry & Health of President Nixon's Scientific Advisory Committee. He also served on the Steering Committee of the National Academy of Sciences/Institute of Medicine that developed the National Strategy for AIDS. In 1987, he was awarded Honorary Membership in the Japanese Pharmacology Society and in the same year received an Honorary Doctor of Science degree from Queens College. •

Allan H. Conney and Ronald Kuntzman

Upcoming Events

January

Pharmacology Kona 2008 sponsored by the Western Pharmacology Society and Australasian Society of Clinical and Experimental Pharmacologists and Toxicologists

Kona, Hawaii, USA
January 27-31, 2008

www.westernpharmsoc.org

February

New Landscapes for Life Sciences: Biology Meets Engineering sponsored by the Union of Swiss Societies for Experimental Biology

Lausanne, Switzerland
February 6-7, 2008

<http://usgeb2008.epfl.ch>

March

European College of Neuropsychopharmacology Workshop on Neuropsychopharmacology for Young Scientists in Europe

Nice, France
March 6-9, 2008

www.ecnp.eu/emc.asp?pageId=592

49th Annual Meeting of the German Society for Experimental and Clinical Pharmacology and Toxicology

Mainz, Germany
March 11-13, 2008

www.dgpt-online.de

High Throughput Pharmacology sponsored by the British Pharmacological Society

Hatfield, UK
March 17-18, 2008

www.bps.ac.uk/site/cms/contentCategoryView.asp?category=258

Québec Trivia...

The Montmorency Falls, located just north of Québec City, are how much taller than Niagara Falls?

Answer on page 35



Upcoming Events

JANUARY

MO	7	14	21	28	
TU	1	8	15	22	29
WE	2	9	16	23	30
TH	10	17	24	31	
FR	4	11	18	25	
SA	5	12	19	26	
SU	6	13	20	27	

April

Annual Meeting of the American Society for Clinical Pharmacology & Therapeutics

Orlando, Florida, USA

April 2-5, 2008

www.ascpt.org/annualmeeting2008/index.cfm

FEBRUARY

MO	4	11	18	25
TU	5	12	19	26
WE	6	13	20	27
TH	7	14	21	28
FR	8	15	22	29
SA	2	9	16	23
SU	3	10	17	24

MARCH

MO	31	3	10	17	24
TU	4	11	18	25	
WE	5	12	19	26	
TH	6	13	20	27	
FR	7	14	21	28	
SA	1	8	15	22	29
SU	2	9	16	23	30

Experimental Biology '08 & American Society for Pharmacology and Experimental Therapeutics Centennial Celebration

San Diego, California, USA

April 5-9, 2008

www.eb2008.org

MAY

MO	5	12	19	26	
TU	6	13	20	27	
WE	7	14	21	28	
TH	8	15	22	29	
FR	2	9	16	23	30
SA	3	10	17	24	31
SU	4	11	18	25	

JUNE

MO	30	2	9	16	23
TU	3	10	17	24	
WE	4	11	18	25	
TH	5	12	19	26	
FR	6	13	20	27	
SA	7	14	21	28	
SU	1	8	15	22	29

RGS Proteins Colloquium (satellite to Experimental Biology '08)

San Diego, California, USA

April 4-5, 2008

www.aspet.org/public/meetings/RGS_08.htm

Recent Advances in Muscarinic Receptor Pharmacology and Therapeutics (satellite to Experimental Biology '08)

San Diego, California, USA

April 4-5, 2008

www.aspet.org/public/meetings/Muscarinic_08.htm

2008 International Conference on Pharmacogenetics: A joint conference with the 14th Annual Meeting of the Pacific Rim Association for Clinical Pharmacogenetics (PRACP)

Bexco, Busan, Republic of Korea

April 9-12, 2008

www.pgx2008.org

Immunopharmacology 2008 sponsored by the Cuban Society of Pharmacology

Varadero, Cuba

April 9-22, 2008

www.scf.sld.cu/impharmacology08/impharmacology08.htm

Nicotinic Acetylcholine Receptors 2008 sponsored by the Wellcome Trust Conference Center/Genome Campus

Hinxton, near Cambridge, UK

April 23-26, 2008

<http://firstcontact.hinxton.wellcome.ac.uk>

OCTOBER

MO	6	13	20	27	
TU	7	14	21	28	
WE	8	15	22	29	
TH	9	16	23	30	
FR	1	8	15	22	29
SA	2	9	16	23	30
SU	3	10	17	24	31

June

5th International Endothelial Derived Hyperpolarising Factor (EDHF) Symposium:

Endothelium, Vasoactive Factors and Inflammation sponsored by the Finnish**Pharmacology Society**

Tempere, Finland

June 24-27, 2008

www.edhf2008.org/index.shtml

NOVEMBER

MO	3	10	17	24	
TU	4	11	18	25	
WE	5	12	19	26	
TH	6	13	20	27	
FR	7	14	21	28	
SA	1	8	15	22	29
SU	2	9	16	23	30

DECEMBER

MO	1	8	15	22	29
TU	2	9	16	23	30
WE	3	10	17	24	31
TH	4	11	18	25	
FR	5	12	19	26	
SA	6	13	20	27	
SU	7	14	21	28	

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

Meeting Announcements

SEROTONIN CLUB 2008 July 17th - 20th, 2008 in Oxford, UK

The 7th International Meeting of the Serotonin Club will be held July 17-20th, 2008 in Oxford, England, as a Satellite to the EPHAR meeting in Manchester. The meeting venue will be Keble College, which is in the heart of the city, directly opposite the University Museum and University Parks, and a gentle stroll away from the Sheldonian theatre, Bodleian Library, covered market, and the historic pubs of St. Giles. The college provides state-of-the-art conference facilities and modern accommodations in idyllic surroundings. Meals will be taken in the magnificent Dining Hall, which is one of the largest and most impressive at the University.

Oxford is very well linked with Manchester, London and all the main airports, making it a convenient venue for both UK and international delegates. Both the train and bus stations are within walking distance, or a short taxi journey, of the college.

The scientific organising committee has advanced plans for an exciting programme of cutting edge preclinical and clinical serotonin research. Full details regarding the meeting programme, registration, abstracts and bursary applications are available at www.serotoninclub.org. Please register and submit your abstract at the Oxford Meeting registration site www.epharm2008.org.

Welcome to Serotonin Club 2008 in Oxford! •

Sheryl Beck, Treasurer



Meeting Announcements (continued)

IMMUNOPHARMACOLOGY 2008

April 19th - 22nd, 2008 in Varadero Beach, Cuba

*1st International Workshop of Immunopharmacology,
5th International Workshop of Inflammation and Pain,
1st International Workshop of Neuroimmunology, and
1st International Symposium of Cytochrome P450 Pharmacology*

On behalf of the Organizing Committee and the Cuban Society of Pharmacology, we encourage your active participation at this joint meeting to be held in Varadero Beach, Cuba, April 19th - 22nd, 2008. Besides hearing the latest in advances in immunopharmacology, you will enjoy the natural beauties of Varadero Beach and the warmth and hospitality of the Cuban people. •

For more details please visit:

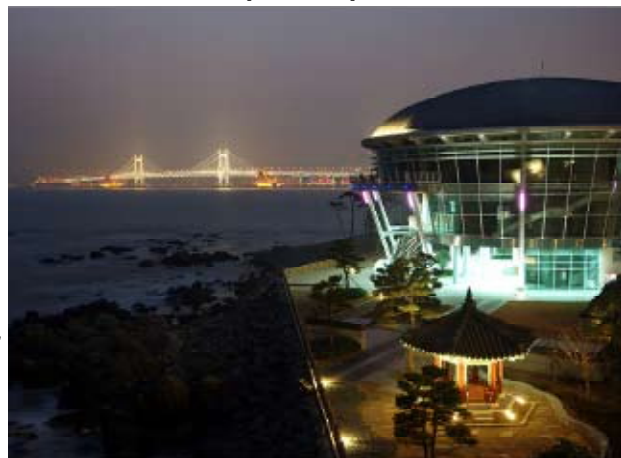
www.scf.sld.cu/impharmacology08/impharmacology08.htm

Gabino Garrido, Scientific Committee

2008 INTERNATIONAL CONFERENCE ON PHARMACOGENOMICS

April 9th -12th, 2008 in Busan, Korea

The 2008 International Conference on Pharmacogenomics will be held in Busan, Republic of Korea, on April 9-12, 2008 and hosted by the Korean Pharmacogenomics Research Network (KPGRN), the Pacific Rim Association for Clinical Pharmacogenetics (PRACP), and the Pharmacogenomics Research Center (PGRC) at Inje University. This is the 5th international conference on pharmacogenomics organized by KPGRN and PGRC since 2004. The 2008 Conference will be a joint symposium with the 14th annual meeting of PRACP. The Conference Organizing Committee has arranged an outstanding scientific program in close collaboration with the Pharmacogenetics Research Network (PGRN), USA. Prof. Michel Eichelbaum will open the conference with the Plenary Lecture entitled "*Pharmacogenomics in the Translational Research and Personalized Medicine*". The distinguished Plenary Lectures will be delivered by Dr. Lawrence J. Lesko ("*Successes in Pharmacogenomics: Progress to Date and Future Opportunities*"), Prof. Siegfried Kasper ("*Integrated Approach in the Treatment of Depression and Anxiety Disorder*") and Prof. Dan M. Roden ("*Pharmacogenetic Approaches to the Study of Abnormal Cardiac Rhythm*"). A major theme is translational research, with an emphasis on ways to bridge the gap between molecular discoveries and clinical therapeutics.



Continued on page 34...



Continued from page 33...

PHARMACOGENETICS 2008 (continued)

The conference will include 11 symposia:

1. Genome Structure and Variation in Pharmacogenomics Research
2. Pharmacogenomics of Drug Disposition
3. Translational Pharmacogenomics (I): Pharmacotherapy in Neuropsychiatry
4. Translational Pharmacogenomics (II): Cancer Chemotherapy
5. Translational Pharmacogenomics (III): Respiratory and Cardiovascular Pharmacotherapy
6. Current Application of Pharmacogenomics in Drug Development & Regulation
7. Pharmacogenomics Based Personalized Pharmacotherapy
8. Confounding Factors of Pharmacogenomics: Ethnicity and Others
9. Pharmacogenomics Research in Asian Countries: Regional to Global Networking
10. New Paradigm of Pharmacogenomics: To be alone or together
11. Mini Session: Translational Research in Pharmacogenetics: Linking the Practice of Ethics with Translation in Biosciences

These presentations, along with those in the workshops, will be made by 44 outstanding speakers from laboratories across the world. More than 600 participants are expected. In addition to the invited speakers, there will be a poster presentation. Travel awards will be provided those who submit the most meritorious abstracts in the poster category.

The scientific program will be complemented by an exciting social program. Busan is the second largest metropolitan area in Korea, with a number of airway and sea routes offering gateways to other countries. Busan is famous for its scenic natural landscapes including a coastline with beautiful beaches, islets and towering mountains. The BEXCO, recognized as one of the most modern and advanced exhibition and convention centers in Northeast Asia, was chosen as the first venue for the 2005 Asia-Pacific Economic Cooperation (APEC) Leaders Meeting due to its amenities and architectural beauty.



The conference will bring together a critical mass of leading investigators, clinicians, government and industry representatives from not only from the Pacific Rim region but all areas of the world, including Europe and North-South America to address emerging challenges and opportunities in pharmacogenomics. The format of the meeting will encourage an open exchange of new ideas and scientific findings while facilitating global research interactions and collaborations. You are strongly encouraged to report your most recent findings on pharmacogenomics/pharmacogenetics. The exciting scientific and social program, and the unique networking opportunities will be of significant interest to all IUPHAR member societies. We hope to see you in Busan, Korea in April 2008!

For details and abstract submission instructions, please visit the conference website at www.pgx2008.org or contact us directly at admin@pgx2008.org or pgrc@inje.ac.kr. •

Jae-Gook Shin, Sang-Goo Shin, Min-Soo Lee, Toshiyuki Someya, and Vural Özdemir on behalf of the Organizing Committee

**THERE ARE 500 JOBS
FROM AROUND THE WORLD
POSTED ON THE
IUPHAR CAREER WEBSITE.**

WHICH ONE IS FOR YOU?

[HTTP://CAREERS.IUPHAR.ORG](http://careers.iuphar.org)

Québec Trivia Answers

Page 2: The name "Québec" was derived from the word, "Kébec", meaning where the river narrows in Algonquin, a Native American tribe.

Page 6: The Ursulines of Québec monastery, a women's learning institution, was established in 1639. The convent was relocated to its present location in Québec in 1642.

Page 12: During July, Québec averages a high temperature of 25°C/77°F and a low temperature of 14.5°C/58°F. The average rainfall for the month is 11.57 cm/4.56 in.

Page 16: In 1944, Allied Leaders met at the Citadelle and nearby Château Frontenac to plan the D-Day Landings.

Page 21: Novelist Saul Bellow was born in Lachine, Québec in 1915. He received the Nobel Prize in Literature in 1976 as well as the Pulitzer Prize for his 1975 book entitled Humboldt's Gift.

Page 25: The Québec City "Chronicle-Telegraph" has been in continuous operation since 1764, making it the oldest English newspaper in North America.

Page 30: The Montmorency Falls are the highest in Québec at about 83 m/272 ft. tall, making them roughly 30 m/98 ft. taller than those at Niagara Falls.

Québec City founder Samuel de Champlain named the falls in honor of Henri II, duc de Montmorency, who served as viceroy of New France from 1620 to 1625.

International Research Funding Opportunity



Investigator Award Program

Established in 1986, the Investigator Award Program supports accomplished assistant professors undertaking their first independent investigations in cancer immunology or general immunology. A four-year grant, the award provides flexibility and a degree of stability during this very challenging period.

As a result of the dramatic and exciting growth in the field of cancer immunology, CRI will designate at least one Investigator Award per round for projects with high relevance to cancer immunology. Applicants must indicate whether they wish to be considered for this Cancer Immunology Investigator Award and, if so, must provide a description of the relevance of their proposed research to cancer immunology. Applications that are not selected for a Cancer Immunology Investigator Award will be placed among the general application pool for consideration.

Eligibility

Candidates for the investigator award must hold a doctoral degree and be a tenure-track Assistant Professor at the time of award activation. CRI has no citizenship restrictions, and research supported by the award may be conducted at medical schools and research centers in the United States or abroad. Please note, however, that CRI does not support research at for-profit institutions.

Award Amount

The Investigator Award provides \$50,000 per year for 4 years. The funds may be used at the recipient's discretion for salary, technical assistance, supplies, or capital equipment. CRI does not provide funds for indirect costs. Payments are made monthly in U.S. currency to the host institution.

Deadline

March 1st, 2008

Please visit www.cancerresearch.org/investigator.html for more details.

*Advancing Immunology.
Conquering Cancer.*



RECEPTOR DATABASE UPDATE

The International Union of Basic and Clinical Pharmacology is pleased to announce an update to the IUPHAR receptor database, freely available online at www.iuphar-db.org. Recent additions to the database include over 140 class A, B and C orphan G protein-coupled receptors (GPCRs), 3 non-signaling 7TM chemokine-binding proteins, new nicotinic acid, free fatty acid and frizzled receptor data and further updates to the bile acid, neuromedin U, neuropeptide S, neurotensin, prolactin-releasing peptide and thyrotropin-releasing hormone receptors.

The IUPHAR receptor database is a freely accessible research tool widely used by academic and pharmaceutical scientists, students, and health-workers, now containing in excess of 215 liganded and 140 orphan GPCRs encoded for by the human genome. Data are gathered from over 300 scientists worldwide and curated by the database team in Edinburgh, Scotland, UK. It is a continually evolving resource with semi-annual updates and improvements.

The database offers a catalogue of current IUPHAR-approved receptor nomenclature and gene names (as well as previous names) with links to other scientific databases for further descriptive and sequence information. Each receptor family has an introductory section and each individual receptor page contains a description of common functional assays, agonists, antagonists and allosteric regulators, signal transduction mechanisms, physiological functions, tissue distribution, functionally important splice variants and polymorphisms, and phenotypes resulting from alteration of gene expression.

IUPHAR's goal is to fully annotate all GPCRs, voltage- and ligand-gated ion channels and nuclear hormone receptors with this detailed molecular, genomic, pharmacological and functional data. Please visit www.iuphar-db.org for more information. •

Rebecca Hills, Curator
Tony Harmar, Database Chair

Editor-in-Chief

Dr. S.J. Enna, Secretary-General

Editorial Board



The IUPHAR Executive Committee serves as the Editorial Board for Pharmacology International. Clockwise beginning in lower left: Drs. Mohamed Khayyal, Petra Thürmann, Sérgio Ferreira, Zhi-Bin Lin, David Webb (added to photo), Sue Duckles, S. J. Enna, Paul Vanhoutte, Salomon Langer, Kim Brøsen, Gabrielle Hawskworth, Masayoshi Mishina, Donald Birkett, Urs Ruegg, and Patrick du Souich

Donald Birkett	Australia	Salomon Langer	Israel
Kim Brøsen	Denmark	Zhi-Bin Lin	PR China
Patrick du Souich	Canada	Masayoshi Mishina	Japan
Sue Piper Duckles	USA	Urs Ruegg	Switzerland
Sérgio Ferreira	Brazil	Petra Thürmann	Germany
Gabrielle Hawskworth	UK	Paul Vanhoutte	PR China
Mohamed Khayyal	Egypt	David Webb	UK



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Dr. Enna's office L→R: Lynn LeCount, S. J. Enna, and Cindy Martin

Contributions:

We welcome contributions from member societies, divisions, and sections. Please submit articles and photographs to iuphar@kumc.edu.

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.