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The half-yearly newsletter from the International Union of Pharmacology

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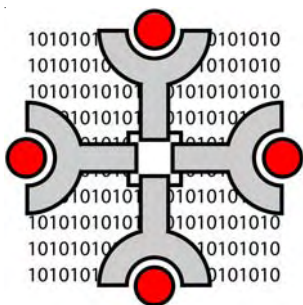
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NC-IUPHAR Online Receptor Database

Prof Michael Spedding,
Chair - IUPHAR Committee on Nomenclature

Pharmacology is at a crucial point, because for the first time we have 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 because the task of annotating sequence for function is a task for pharmacologists, in conjunction with our other scientific partners. Receptors are the site of action for many of the currently available drugs and the definition of the majority of the receptors in genome is eagerly awaited. The IUPHAR receptor list is a step forward.

To this end, NC-IUPHAR has established close links with the Human Genome Organisation (HUGO), which attributes gene names; the International Union of Pure and Applied Chemistry (IUPAC), to standardise correct use of drug

names; and the International Union of Biochemistry and Molecular Biology (IUBMB) to collaborate on receptor-related enzyme nomenclature.

In addition to the publication of the new classifications for ion channels, NC-IUPHAR is launching the **IUPHAR Receptor Database** in 2003. This fully relational database will eventually contain the data published in the two previous receptor compendia, as well as essential links to accompanying information, such as sequences, chemical formulae and references, which are not easily presented in paper format. The database will be regularly

(continued on page 5)

Congratulations to the winners of the **Young Investigator Awards**, presented during the *XIVth International Congress of Pharmacology*:

1st Place: Lori Birder of the University of Pittsburgh
"Role of VR1 in mechonosensitive as well as chemosensitive mechanisms in the urinary bladder"

2nd Place: Arthur Christopoulos of the University of Melbourne
"Allostericmodulator effects on M2 muscarinic acetylcholine receptor trafficking"

3rd Place: Anthony Kanai of the University of Pittsburgh
"Identification of a neuronal nitric oxide synthase in cardiac mitochondria using electromechanical detection"

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The Road to China: Four Years, Four Missions!

After the General Assembly held in San Francisco, the missions for the next four years are very clear for the Officers, and indeed for the whole Executive Committee of IUPHAR.

WE NEED TO CONTINUE to support and expand the activities of our Nomenclature Committee (NC-IUPHAR), as it has made a major impact in the last decade and has become the foremost activity of the Union. In particular, we need to complete our receptor database, and make it available to all pharmacologists, including our members from emerging countries. We want this access to be free to them, so that they can benefit from the most up-to-date information for their research and teaching.

WE HAVE TO PERSEVERE on the road opened by the previous Executive to make the Union, and the meetings that it sponsors accessible to all, irrespective of their level of personal income. Hence, not only the dues but also the registration fees will become adjusted to the actual buying power of our members. This may require a continued, and enormously appreciated financial effort from our richer member societies, but it is imperative that our productions and events are within reach of all pharmacologists of the planet.

WE HAVE TO STRENGTHEN, in absolute transparency to our members, the financial situation of the Union, as it remains fragile. Hence, each member of IUPHAR should help us make the World Congresses in Brisbane (2004) and Beijing (2006) not only outstanding in science, but also in attendance. We have to find ways to sponsor even more travel awards than in the past, given to young investigators in particular if they come from emerging countries. In addition, each one of us has to consider the ways of augmenting

Corporate Membership to the Union in his/her part of the world.

WE HAVE TO PURSUE the goal to maintain all aspects of Pharmacology, whether basic or clinical, together as one strong scientific discipline that cannot be either replaced or fractionated. Hence, each one of us has to contribute whenever possible to the activities of our Division and our established or newly formed Sections. These are the Officers' major goals, and indeed our four major missions for the four years to come. We are convinced that we will achieve them *en route* to Beijing.

- Prof Paul M. Vanhoutte,
President of IUPHAR

Join IUPHAR in the magnificent city of Beijing...

XV World Congress of Pharmacology 2006
Beijing, China
2-7 July 2006
www.cnphars.org



One of the biggest challenges facing Pharmacology today is to promote the vitality and growth of our discipline. As individuals, we must constantly “reinvent” ourselves to maintain our scientific vitality. In fact, one of the best aspects of a scientific career is the constant challenge of exploring new ideas. I am convinced that IUPHAR also needs to be constantly reinvented. We should be proud of our traditions, but we can never be satisfied with the status quo.

The Receptor Nomenclature project, NC-IUPHAR, exemplifies an outstanding contribution from IUPHAR. This is the type of project that can only be organized effectively at an international level. In the next year, we anticipate that the receptor database will start to be available on-line, and this will be an important contribution to the strength of Pharmacology.

A Message from the Secretary-General

The International Union of Pharmacology is, above all, a union of pharmacology societies. Thus, a major emphasis of IUPHAR must be on addressing the needs of our national and regional members. One primary goal of IUPHAR is to strengthen our discipline around the world. IUPHAR meetings will continue to include topics of international import and be more accessible to scientists from around the world. A new initiative will reduce registration fees at IUPHAR meetings for scientists from developing countries, and we will continue to encourage organizers to make bursaries available. The IUPHAR Section on Teaching is also in the process of developing materials to promote effective teaching of Pharmacology; increasingly we hope to make this information available on the world wide web.

Another challenge for IUPHAR is to increase the involvement of younger pharmacologists in IUPHAR activities. In part, this is essential to developing IUPHAR leadership for the future. The Executive Committee has made special efforts to appoint younger pharmacologists to key committees, including NC-IUPHAR. It is also our belief that activities of IUPHAR sections and the Division of Clinical Pharmacology should involve many more pharmacologists at an early point in their career. To this end, the IUPHAR Executive Committee is currently in the process of establishing several new sections. In the coming years we will continue to facilitate the activities of sections and the Division.

It is a great honor to be Secretary-General of IUPHAR. I look forward to a very productive four years working with all the members of IUPHAR!

Dr Sue Piper Duckles,
University of California, Irvine



ICSU: The International Council for Science

William R Fleming, Past President of IUPHAR and Representative to ICSU, 2002-2004

ICSU's origins date to 1899 when representatives of several National Academies of Science formed the International Association of Academies. Out of that developed in 1931 an International Council of Scientific Unions (ICSU) to include a large number of scientific unions and national members. In 1998 the name of the organization was changed to the International Council for Science. The acronym ICSU was retained because of its broad recognition.

"ICSU plays an essential role in aiding international science."

Today, ICSU has two types of full (voting) memberships:

- (1) 98 national scientific members, such as national academies of science (i.e., interdisciplinary organizations) and
- (2) 26 disciplinary scientific unions, including IUPHAR.

According to its mission statement, the role of ICSU is to:

- identify and address major issues of importance to science and society by mobilizing the resources and knowledge of the international scientific community;
- promote the participation of all scientists, irrespective of race, citizenship, language, political stance or gender in the international scientific endeavor;
- facilitate interactions between scientific disciplines and between scientists from 'developing' and 'developed' countries;

- stimulate constructive debate as an authoritative independent voice for international science and scientists.

The governing structure of ICSU includes:

1. A permanent staff of 12 professional-level individuals, including:
 - Thomas Roswell, Executive Director
 - Carthage Smith, Deputy Executive Director
 - Tish Bahmani Fard, Assistant Executive Director
2. An Assembly with one representative from each full member. To achieve equity between the voting power of unions relative to the more numerous national members, each national member has one vote and each union member has as many votes as the number of national members divided by the number of union members, currently approximately 4. The Assembly meets every 3 years, most recently in Rio de Janeiro, Brazil (2002) and next in China (2005). Various associate and affiliate groups can send representatives to the Assembly, but these representatives have no vote. The representatives of the unions and national members also meet approximately 18 months prior to each Assembly. From those meetings come recommendations for consideration by the assembly.
3. An Executive Board, elected at each Assembly for 3-year terms. These include the President, the Past President (who serves for 18 months after his term as President ends), the

(continued on page 10)

Database *continued*

updated and the data from the ion channel compendium will be incorporated in the second phase of development. The IUPHAR Receptor Database is housed at the European Bioinformatics Institute, where it was developed through an academic collaboration with SWISS-PROT. They have experience of building comprehensive and fully relational databases and host the IUPHAR-RD on their powerful international servers. One of the most significant aspects of the IUPHAR-RD will be the facility for the subcommittees to have private working space, through which members can interact and submit new data for fast processing.

The database will change the way we work at NC-IUPHAR, giving the capability to access sequences, chemical formulae, bioassay data and literature that cannot be reproduced in our paper publications. This will be a unique and widely accessible repository of pharmacological knowledge. However, these data will take some time to charge, so please be patient with the present draft.

In the first instance, the data used in the database is that published in the 2000 edition of the IUPHAR Compendium of Receptor Characterization and Classification but this will then be rapidly expanded.

The development of the database has been supported by a major educational grant from Incyte Genomics, for which NC-IUPHAR is very grateful.

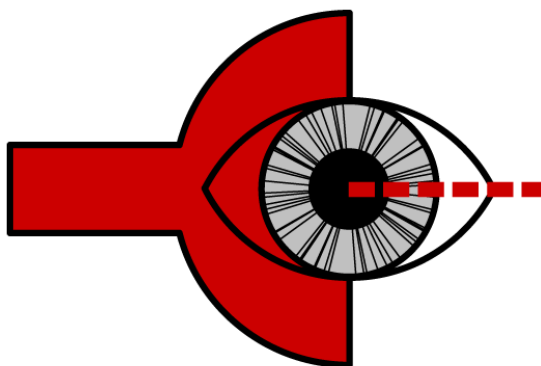
NC-IUPHAR is addressing novel ways of maintaining its efficiency in a changing world in which receptor sequences from genomic databases represent crucial information for the design of new drugs, and also for the recognition of hitherto unsuspected endogenous ligands.

The rapid extension of crystal structures is changing drug discovery and the characterisation of the sites for drugs. Molecular modelling is becoming more predictive and we will establish a working group on this topic.

NC-IUPHAR now has a unique opportunity to be proactive, because we have available to us, via committee members, a curated list of all the

GPCRs, ion channels and nuclear receptors in the human genome. This is a unique tool for pharmacologists (indeed for all scientists involved in receptor research) and we believe it should fundamentally change the way in which we work. ■

Watch the IUPHAR website
www.iuphar.org
for a link to the
NC-IUPHAR Receptor Database.



July 2004, 4 - 9

15th International Symposium

on Microsomes and Drug Oxidations: Chemical Biology in the Postgenomic Era - New Approaches and Applications

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Makoto ENDO

I have been involved in studies of movement of calcium ions in muscle cells since my discovery of “calcium-induced calcium release” in the late 1960s. I must confess that at that time I thought myself more a



physiologist than a pharmacologist, but since then I have been more and more interested in pharmacology. Recently we have been examining calcium-releasing effects of antihyperlipidemic drugs, statins and clofibrates, and whether or not they are related to their rare but serious side effect,

rhabdomyolysis. Pharmacology should be open, and I believe that what any of our members think *is* pharmacology. The important thing is that we should try to study essential phenomena, which would contribute to the advancement of pharmacology, such as aiding the discovery of new drugs.

William FLEMING

Fleming, as Past President, remains a member of the new Executive Committee. He retired as Professor and Mylan Chair of Pharmacology and Toxicology at West Virginia University in 1999. Throughout his career, his research has centered around the mechanisms by which muscle cells and neurons adapt to chronic changes in activity. Recently, that interest has concentrated on the adaptation of neurons to chronic opioid administration. Studies in Dr. Fleming’s laboratory have established that an important mechanism of the development of tolerance to and dependence upon opioids is the decrease in activity and density of sodium-potassium pump sites in neuronal membranes. A deeply felt concern of Fleming is the essential role of integrative pharmacology in training, education of health professionals and drug development. The great strides of molecular biology present wonderful opportunities in pharmacology. Nevertheless, these advances must not be allowed to obscure the vital role of integrative

pharmacology. Fleming believes that molecular and integrative pharmacology must support each other and that this mutual support and respect will flourish best when they co-exist in the same department and in the same laboratory. This philosophy was a driving principle in his own research and career as an academic chair.



MEET THE NEW EXECUTIVE COMMITTEE

Mohamed T. KHAYYAL

My interest in Pharmacology started at a very early stage in my life, when still as a school boy, my father, who was at that time head of the Pharmacology Department at the University of Alexandria, used to take me with him at weekends to visit the department and see experiments on laboratory animals. During those days, I met several eminent pharmacologists, one of whom was John Gaddum, who at the time worked with my father on acetylcholine. I grew up loving the subject and developing a keen interest in research as well as enjoying international relationships and keeping good contacts with them.

I started my real academic career in London with Prof. Gladwin Buttle, who supervised my Ph.D. degree at the “Square”. He emphasized the necessity of choosing a subject, which would be of benefit to me when I go back to Egypt. He asked me to work on schistosomiasis, an endemic disease in Egypt, of which I knew hardly anything at the time, nor did he himself.... so I was sent to train a while to the Wellcome laboratories in Euston Road under the supervision of Dr. Owen Standen. After returning to Egypt, I continued my research into the chemotherapy of the disease for over 10 years. My objective was to try to reduce the toxicity of



antischistosomal drugs without affecting their activity. One of the main organs affected by the disease is the liver, so I gradually shifted my attention to the liver, then to inflammatory processes, inflammatory mediators, and finally to asthma. More recently I became involved in phytopharmacology and the anti-hypertensive action of drugs.

The biggest challenge in teaching pharmacology in Egypt and other Third World countries is the increasing number of students admitted to University and the lack of adequate teaching facilities. It is also of great importance to guide and to encourage younger scientists to open up to the world and to improve their standards by trying to publish in international journals and to attend international meetings.

By joining the Executive Committee, I feel privileged to be able to serve the cause of this prestigious Union. One of the prime duties that I would like to accomplish during my term of office is to promote better interaction between IUPHAR and national Societies from our part of the world. I am hoping to revive the ailing Union of African Societies of Pharmacology (UASPHAR), which has been dormant for quite some time.

It is also my objective to improve attendance of scientists from Arab and African countries at IUPHAR meetings. A big step has been already achieved in the last meeting in Paris, when my proposal to reduce registration fees for participants from Third World countries at future IUPHAR Conferences was widely approved. Under such favourable conditions, I am hoping to encourage many

pharmacologists from our part of the world to participate at the next IUPHAR World Conference in Beijing, 2006.

There is still no consensus of opinion regarding the practice of Clinical Pharmacology world wide. It is hoped to hold a Workshop in Cairo next year for Arab and African countries dealing with that subject under the auspices of IUPHAR and WHO. I shall be in touch with Prof. Folke Sjoqvist,



Chairman of the Clinical Pharmacology Section of IUPHAR, to plan and organise for this Workshop.

The teaching of Pharmacology itself is now changing from lecture based teaching to problem solving, but the real problem is to try to change the attitude of the teaching staff to achieve universally accepted norms. IUPHAR may be able to help in this respect by organising local seminars to introduce new teaching modalities. ■

Gabrielle HAWKSWORTH

As Chairman of the Section of Drug Metabolism, I was involved in running Workshops on Drug Metabolism and Toxicity in developing countries. I feel strongly that IUPHAR should continue to support these activities. For relatively modest sums, a lot more can be achieved in terms of networking and motivating young scientists, by holding workshops in developing countries, than can be achieved by supporting one or two scientists to attend a large international meeting. IUPHAR should consider having a list of experienced lecturers who would be prepared to contribute to such workshops.

I also feel that much can be achieved by closer integration of basic and clinical pharmacology. I am delighted that 2010 will see a joint IUPHAR Congress of Pharmacology and Clinical Pharmacology and hope that in the intervening period pharmacologists, toxicologists and clinical pharmacologists will work closely together developing programmes for the IUPHAR Congresses. Development of the IUPHAR website, and the websites of the Divisions and the Sections, and sharing of Continuing Education Programme material from national societies would widen access to pharmacology educational material, particularly for developing countries. ■



Many thousands of doctors, researchers, health policy-makers and others in about 70 developing countries will gain free access through the Internet to one of the world's largest collections of biomedical literature.

They will benefit from an initiative launched by the World Health Organization and the world's six biggest medical journal publishers, which WHO Director-General Dr Gro Harlem Brundtland has described as "perhaps the biggest step ever taken towards reducing the health information gap between rich and poor countries."

WHO AND TOP PUBLISHERS LAUNCH "ACCESS TO RESEARCH" INTERNET INITIATIVE FOR DEVELOPING COUNTRIES

The "Access to Research" initiative enables accredited universities, medical schools, research centres and other public institutions in the developing countries to gain access to the wealth of scientific information contained in more than 1000 different biomedical journals produced by the six publishers. Until now, subscriptions to these journals, both electronic and print, have been priced uniformly for such institutions, irrespective of geographical location. Many key titles cost more than US\$1500 per year, and the average subscription costs several hundred dollars, putting the journals beyond the reach of the large majority of health and research institutions in the poorest countries.

Last year WHO, working with the British Medical Journal, approached the six biggest medical journal publishers: Blackwell, Elsevier Science, the Harcourt Worldwide STM Group, Wolters Kluwer International Health & Science, Springer Verlag and John Wiley. The aim was to bring them together with the countries concerned to seek a more affordable pricing structure for online access to their international biomedical journals.

The first stage of the initiative will make more than 1,000 of their journals available free or at significantly reduced charges to institutions in those countries. That availability begins today with the opening of the Health InterNetwork website: www.healthinternetwork.net. A second stage will involve similar access at significantly reduced prices for institutions in the other

countries. WHO and the publishers will work with the Open Society Institute of the Soros foundation network and other public and private partners to extend the initiative; for example, through training for research staff, and improving Internet connectivity.

The "Access to Research" initiative is expected to last for at least three years, while being monitored for progress. Decisions about how to proceed with further developments will grow from the precedent it sets, and will be informed by the working relationships which have evolved among the publishers and participating institutions.

The initiative itself is a major aspect of the work of the Health InterNetwork project which was introduced by United Nations' Secretary-General Kofi Annan at the UN Millennium Summit in the year 2000. Led by WHO, the Health InterNetwork aims to strengthen public health services by providing public health workers, researchers and policy makers access to high-quality, relevant and timely health information through an Internet portal. It further aims to improve communication and networking. As key components, the project will provide training as well as information and communication technology applications for public health.

The project is led by Dr Michael Scholtz, Special Representative of the WHO Director-General. He says: "Today sees the beginning of a new way to bridge the digital divide in health, and an important move by the publishers in facilitating the flow of health information, using the Internet."

For further information, contact:

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All WHO Press Releases, Fact Sheets and Features as well as other information on this subject can be obtained on the Internet on the WHO home page at www.who.int.



SCIENTIFIC COMMITTEES

Program Committee

Chair: R.R. Kroes (The Netherlands),
Scientific Secretary: M. Marinovich (Italy),
H. Bolt (Germany), E. Corsini (Italy), C.L.
Galli (Italy), H. Foth (Germany), E. Nelson
(Germany), R. Paoletti (Italy), K. Rydzynski
(Poland)

SCOPE OF THE SYMPOSIUM

The purpose of the meeting is to further the research and knowledge of toxicology at academic, industry, and government levels and to promote European research in the field of toxicology worldwide. The importance of Eurotox and its annual congresses has grown significantly. Toxicology is a global issue and as such must be treated by national governments at the highest level. The role and the potential of European toxicology is in fact very high in light of its impact on public health, the environment and its social implications. The political and economic process of European unification makes the common approach and resolution of toxicological problems concerning human and environmental health mandatory.

SCIENTIFIC PROGRAM

The Scientific Program will include: Plenary Lectures, Symposia, Workshops, Debates, Educational Courses and Poster Sessions for submitted papers.

PRELIMINARY LIST OF TOPICS TO BE DISCUSSED DURING THE CONGRESS SESSIONS:

A) BASIC TOXICOLOGY

- Apoptosis and cell regulation
- Stem cells
- Nuclear receptors
- Neurodegeneration
- "Omics" in toxicology
- Genetic susceptibility towards genotoxic agents
- Developmental immunotoxicology
- In vitro methods in toxicology
- Immunotoxicology and immunopathology
- Molecular immunotoxicology

B) DRUG TOXICOLOGY

- "Omics" in drug development
- Is toxicology protocol adequate for drug evaluation?

C) FOOD AND ENVIRONMENTAL TOXICOLOGY

- Molecular epidemiology in occupational toxicology
- Fine particle exposure and adverse health effects
- Conventional and biotech pesticides control
- Risk assessment in food
- Flavourings

- Integrated risk assessment
- Exposure models
- Safety testing of cosmetic ingredients and cosmetic formulations
- Risk assessment in cosmetics

SUBMITTED ABSTRACTS will be accepted for Poster presentations only. Posters can also be focussed on topics different than those listed above.

The Advance Program (with Registration and Abstract Forms) will be mailed in **January 2003**. The deadline for Abstracts submission will be **April 7, 2003**.

SCIENTIFIC - ORGANIZING SECRETARIATS

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EUROTOX 2003

41st CONGRESS OF THE EUROPEAN SOCIETIES OF TOXICOLOGY

Florence (Italy)

September 28 - October 1, 2003

PHARMACOLOGY
International

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June 2003

ICSU

continued

1. President elect (who serves for 18 months prior to assuming the office of President), a Vice President for Scientific Planning and Review, a Vice President for External Relations, a Secretary General and a Treasurer, plus 8 “ordinary” members – 4 from the scientific unions and 4 from the national members. The Executive Board meets twice per year.

The 26 unions which belong to ICSU represent a broad spectrum of physical and life sciences:

- International Union of Anthropological and Ethnological Sciences (IUAES)
- International Astronomical Union (IAU)
- International Union of Biochemistry and Molecular Biology (IUBMB)
- International Union of Biological Sciences (IUBS)
- International Union for Pure and Applied Biophysics (IUPAB)
- International Brain Research Organization (IBRO)
- International Union of Pure and Applied Chemistry (IUPAC)
- International Union of Crystallography (IUCr)
- International Union of Food Science and Technology (IUFoST)
- International Union of Geodesy and Geophysics (IUGG)
- International Geographical Union (IGU)
- International Union of Geological Sciences (IUGS)
- International Union of History and Philosophy of Science (IUHPS)
- International Union of Immunological Societies (IUIS)
- International Mathematical Union (IMU)
- International Union of Theoretical and Applied Mechanics (IUTAM)
- International Union of Microbiological Societies (IUMS)
- International Union of Nutritional Sciences (IUNS)
- International Union of Pharmacology (IUPHAR)
- International Union for Physical and Engineering Sciences in Medicine (IUPESM)
- International Union of Pure and Applied Physics (IUPAP)
- International Union of Physiological Sciences (IUPS)
- International Union of Psychological Science (IUPsyS)
- Union Radio Scientifique Internationale (URSI)
- International Union of Soil Sciences (IUSS)
- International Union of Toxicology (IUTOX)

The current emphases of ICSU are:

1. Science for sustainable development;
2. Energy and sustainable societies;
3. Ensuring global access to scientific data and information;
4. Capacity building for science or strengthening science in developing countries.

Several policy committees play a large role in identifying and working toward the goals of ICSU. These include committees on:

- Scientific Planning and Review (CSPR);
- Governance (CG);

- Finance and Fund Raising (CFF);
- Responsibility and Ethics in Science (SCRES);
- Freedom in the Conduct of Science (SCFCS).

For the Union members, the CSPR is particularly important. It is a major planning committee, it develops the criteria for awarding ICSU grants, and it actually reviews the grant applications and selects the awardees.

Currently, ICSU provides \$800,000 US to \$900,000 US annually for grants. There are two categories of grants: those of \$50,000 to \$100,000, and those of less than \$50,000.

The guidelines are frequently evolving and applicant organizations need to be up to date in the relevant criteria. Important criteria

include scientific quality, relevance to the areas of ICSU grants, and collaborative projects between unions. Only unions can take the lead in applying for ICSU

“ICSU provides \$800,000 to \$900,000 annually for grants.”

grants, although national members may be involved. Approximately 35% of applicants are successful. Some simple math will give an idea of the competitive nature. If the average grant were \$30,000 - \$35,000 in a given year, there could be an average of only one grant per union. If the average grant were \$70,000, there could be only one grant per two union members. ICSU plays an essential role in aiding international science. Thus, it is important for IUPHAR to understand the goals and procedures of its parent body. For more information, refer to the pamphlet, *An Introduction to ICSU*, available from the ICSU office in Paris:

ICSU
51 Boulevard de Montmorancy
75016 Paris
FRANCE
email: secretariat@icsu.org
www.icsu.org

37th South African Pharmacology Congress

On behalf of the South African Pharmacology Society I cordially invite you to participate in the above congress. The aim of the congress is to provide opportunities for the exchange of knowledge with emphasis on trends and developments in the teaching of pharmacology, drug delivery, anti-HIV therapy and general as well as clinical pharmacology. There will be plenary sessions by leading world experts in the above fields. Scientists, clinicians and industrialists are invited to participate in the symposia and poster sessions. This is your opportunity to learn from your colleagues in the environs of beautiful Cape Town.

KEYNOTE SPEAKERS

Paul Vanhoutte (President IUPHAR), France
Ian Hughes, UK
Hans Junginger, The Netherlands
Robin Woods, South Africa

Venue: Graduate School of Business of the University of Stellenbosch, Tyger Valley, Bellville, South Africa. The Waterfront, Cape Point, Table Mountain, Robben Island, Kirstenbosch, the Castle, the Cape beaches and the city of Cape Town are a few of the many attractions within a radius of 60km from the Graduate School of Business. Stellenbosch, Paarl and other towns with their scenic beauty and wine routes are within easy reach.

Climate: The weather in Cape Town is unpredictable in spring, with temperatures varying between 8°C (night) and 26°C (day).

Language: The official language of the congress will be English.

Accommodations: The Bellvista Lodge, adjacent to the Graduate School of Business of the University of Stellenbosch. Arrangements for other accommodation must be made by registrants themselves.

CONGRESS CONVENOR

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KJ Netter (Germany),
F Markwardt (Germany)



2002
W Bowman (UK)



2002
R Pough (USA)
KJ Netter (Germany)



2002
KJ Netter (Germany)
P Du Souich (Canada)



2002
Gan-Zhong Liu (China)
KJ Netter (Germany)
Zhang Jun-Tian (China)

San Francisco, 30 Years Later: Pictures from the 5th World Congress in 1972 and the 14th World Congress in 2002



2002
M Ingelman (Sweden)



1972
P Anitchkov (Russia)



2002
L and D Nebest (USA)



2002
H Birkett (Australia)
P Netter (Germany)
D Birkett (Australia)
the Reidenbergs



1972
F Markwardt (Germany)
J Vane (UK)
A Danycz (Poland)



2002
J Kapitulnik (Israel)



2002
K Racke (Germany)
P Du Souich (Canada)



2002
D Birkett (Australia)
P Netter (Germany)
F Sjoqvist (Sweden)



1972
R Featherstone (USA)
A Danycz (Poland)