



Quick Cuts

International Proteolysis Society Newsletter

QC6 - June 2004

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- Biological Chemistry
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President's Message – IPS concluded 2003 with an outstanding meeting in Nagoya, organized by Professor Shigehiko Mizutani. As you can see from the final report that follows this message, the meeting was attended by scientists from around the world, clearly confirming the “international” in the title of our society. The science presented was state-of-the-art and the wonderful hospitality of the Japanese organizers and their staff was greatly appreciated by all the attendees. Those who presented at the 3rd IPS meeting in Nagoya are reminded that selected manuscripts from the conference will be published in BIOLOGICAL CHEMISTRY, with Hans Fritz organizing this special issue (details below). A major focus of IPS is on the development of young scientists and, again, the 3rd IPS meeting featured travel awards to permit young scientists from many countries to attend and training courses to provide cutting-edge instruction. Two scientists were selected for Honorary Membership: Vito Turk and Koichi Suzuki. Details of their careers are provided following the meeting report. It is very clear from the recitation of their scientific careers that the field of proteolysis has grown from the initial characterization of the molecules by chemical studies in the 70's and 80's to the present situation where the biological roles of proteolytic enzymes are the most important feature. It is also very clear that these two outstanding scientists are masters at communication and networking on a world-wide basis. This is the essence of what IPS can do for its membership. See also the comments on the new Protease Network below.

The next IPS meeting will take place in Quebec City, Canada, from October 15-19, 2005 and will be chaired by Guy Tremblay. Details are provided below.

A major focus of my term as President will be the increase in the membership of IPS. This is essential to insure the future of the society and the biannual meeting. It's really very simple: paying your IPS dues of \$100 anytime between now and the registration deadline for the 4th IPS conference will guarantee you a reduced price registration cost that will more than make up the \$100 investment. In addition, however, you will be helping young scientists attend the meeting and you will be able to take part in special services such as job placement. The Council of the IPS has four elected members from each of the three regions of the world, The Americas, Europe/Africa, Asia/Australia. These individuals, listed below, are your representatives to the society and will be happy to hear your suggestions for new features and services for the IPS, as will I at any time. **Ben M. Dunn, Council Chair** bdunn@ufl.edu

Council of the International Proteolysis Society:

Ben Dunn - Chair of the Council
 Hiroshi Kido - Vice Chair of the Council
 Christian Sommerhoff - Secretary
 Bruce Linebaugh - Treasurer
 Guy Tremblay – ex officio – Chair of 4th IPS General Meeting

Councilors – Europe/Africa	Asia/Australia	Americas
Christian Sommerhoff	Koji Suzuki	Sharon Stack
Christoph Peters	Hiroshi Kido	Bonnie Sloane
Gillian Murphy	Shoichi Ishiura	Jan Potempa
Boris Turk	Rob Pike	Ben Dunn

Email addresses can be found on the IPS website: www.protease.org

Final Report of IPS2003 General Meeting

Dates: November 10th to 13th
 Venue: Hotel Grand Court Nagoya, Nagoya, Japan
 Participants: 420
 Countries: 23

Chairperson: Shigehiko Mizutani Professor, Department of Obstetrics/Gynecology Nagoya
University Graduate School of Medicine
Secretary General: Fumitaka Kikkawa

The meeting had over 420 participants from 23 countries including Europe and North America, Asian countries and Oceania. Most active researchers made presentations about their recent results for their research, and had beneficial discussions with other participants. There were 18 scientific topics, shown below, and two Training Courses for young investigators. Travel Awards were given to 16 young researchers who submitted great abstracts to the IPS council. They will be the future core for IPS members in their own countries. We are looking forward to having further progress in these fields in the next meeting in Canada in 2005.

Scientific Topics and Invited Speakers:

Special Lecture:

Chairperson: Sadaaki Iwanaga (Kaketsuken, Japan)
Lecturer: Shigekazu Nagata (Osaka Univ., Japan)
Chairperson: Shigehiko Mizutani (Nagoya Univ., Japan)
Lecturer: Pierre Corvol (INSERM U36/College de France, France)

Honorary Lecture:

Chairperson: Marianne Jochum (Univ. Munich, Germany)
Lecturer: Vito Turk (Josef Stefan Inst., Slovenia)

◆ Pathophysiology of infection and Inflammation

Hans Fritz (Germany); Hiroshi Kido (Japan); Jan Potempa (Poland); Kenji Yamamoto (Japan);
Heiko Herwald (Sweden); Olaf Schneewind (USA)

◆ ADAM Family

Atsuko Sehara (Japan); Hideaki Nagase (UK); Roy Black (USA); Judy White (USA);
Higashiyama Shigeki (Japan); Marcos Milla (USA)

◆ Proteases in Apoptosis

Hiroshi Maeda (Japan); Guy Salvesen (USA); Ryosuke Takahashi (Japan);
Martin Renatus (Switzerland); Monica Driscoll (USA)

◆ Structure and Function on Proteases

Wolfram Bode (Germany); Tadashi Yoshimoto (Japan); Manuel Than (Germany);
Christian Sommerhoff (Germany); Rainer Friedrich (Germany); Hanne Rasmussen (Denmark);
Ed Sturrock (South Africa)

◆ Proteases in Reproduction and Development

Lois Salamonsen (Australia); Shingo Fujii (Japan); Thomas Curry (USA);
Guying Nye (Australia); Hiroshi Fujiwara (Japan)

◆ Membrane Associated Proteases

Anthony Turner (UK); Judith Bond (USA); Qingyu Wu (USA); David Nanus (USA);
Chikao Morimoto (Japan)

◆ Carcinogenesis, Angiogenesis and Metastasis

Motoharu Seiki (Japan); Bonnie Sloane (USA); Charles Craik (USA); Raghu Kalluri (USA);
Johanna Joyce (USA); Shijie Sheng (USA); Ikuo Yana (Japan)

◆ Protease Inhibitors, Therapeutics and Drug Design

Yoshiaki Kiso (Japan); Ben Dunn (USA); Daniel Rich (USA); Ernesto Freire (USA);
Alexander Wlodawer (USA); Hans-Ulrich Demuth (Germany); Motohiko Kometani (Japan)

◆ Lysosomal Enzymes and Endosome-Autophagosome-Lysosome System

Boris Turk (Slovenia); Eiki Kominami (Japan); Christoph Peters (Germany); Dieter Bromme
(USA); Ulf Brunk (Sweden); Yoshinori Ohsumi (Japan); Takashi Ueno (Japan)

◆ **Ubiquitin-Proteasome System**

Jennifer Rivett (UK); Keiji Tanaka (Japan); Peter Kloetzel (Germany); Aaron Ciechanover (Israel); Kazuhiro Iwai (Japan); Shigeho Murata (Japan)

◆ **Proteases and inhibitors in Cardiovascular System**

Teruhiko Toyooka (Japan); Kirk Knowlton (USA); Tomie Kawada (Japan); Yoshio Uehara (Japan); Catherine Llorens-Cortes (France); Christian Deschepper (Canada)

◆ **Insulin-regulated Aminopeptidase and its Family**

Susanna Keller (USA); Masafumi Tsujimoto (Japan); Siew Yeen Chai (Australia); Tomo Saric (Germany); Masafumi Tsujimoto (Japan)

◆ **Proteases and Protease Inhibitors in Plants**

Claudio Sampaio (Brazil); Masaru Tanokura (Japan); Maria Luiza Oliva (Brazil); John Gatehouse (University of Durham); Judy Callis (USA)

◆ **Thrombosis, Hemostasis and Vascular Biology**

Bjorn Dahlback (Sweden); Koji Suzuki (Japan); David Motto (USA); Takashi Morita (Japan); Tetsuhito Kojima (Japan); Alvin Davis III (USA)

◆ **Calpaine; Structure, Biology and Pathophysiology**

Darrel Goll (USA); Koichi Suzuki (Japan); Peter Friedrich (Hungary); Nektarios Tavernarakis (Greece); Hiroyuki Sorimachi (Japan); Shirley Gil Parrado (Germany)

◆ **Aspartic proteinases and Sedolisins**

Kohei Oda (Japan); Daniel Rich (USA); Ben Dunn (USA); Jovita Marcinkeviciene (USA); James McCarthy (USA); Kenji Takahashi (Japan)

◆ **Neurodegenerative Disorders**

Shoichi Ishiura (Japan); Kenji Yamamoto (Japan); Magnus Abrahamson (Sweden); Jordan Tang (USA); Makoto Higuchi (Japan); Yasuo Ihara (Japan); Shigetsugu Hatakeyama (Japan)

◆ **Hot topics of Proteases and Protease Inhibitors**

Motowo Nakajima (Japan); Taro Hayakawa (Japan); Jim Travis (USA); Nobuhiko Katunuma (Japan); Benedict Kessler (USA)
James Mckerrow (USA) Konstantin Kandror (USA) Matthew Bogyo (USA)

Training Courses:

Hisaaki Taniguchi (Tokushima Univ., Japan) “Mass spectrometry-based proteomics”
Jun Hirabayashi (Japan) “Lectin-based glycoproteomics”

Koichi Suzuki and Vito Turk - Honorary Members of the International Proteolysis Society

On the occasion of the 3rd General Meeting of the International Proteolysis Society (IPS) in Nagoya, Japan, November 10 - 13, 2003, Koichi Suzuki, Japan and Vito Turk, Slovenia were awarded Honorary Memberships of the IPS in recognition of their lifelong successful engagement in research on cysteine proteases and their inhibitors.

Koichi Suzuki got his Ph.D. in Biochemistry at the University of Tokyo in 1967. An unusually productive research on Calcium-activated neutral proteinase (CANP), the calpains, and their inhibitors, the calpastatins, was the basis of his outstanding scientific career. He started working on these molecules in the mid-70's when his student, Soichi Ishimura, got his Ph.D. degree for his dissertation work on calpains. Koichi Suzuki's scientific output was especially successful after he had been appointed Research Director of the Department of Molecular Biology and Professor at the Tokyo Metropolitan Institute of Medical Sciences in the early 80's and of the Tokyo University Institute of Molecular and Cellular Biosciences in the early 90's. His research on calpains and calpastatins opened a new dimension in proteolysis in as much as these molecules are involved in trafficking to certain cellular compartments to fulfill their special intracellular functions. The introduction of molecular biology to the calpain/calpastatin field by Koichi Suzuki opened the door to the identification and characterization of the multi-domain character of these molecules with their various functions and

activation mechanisms for which the tertiary structure elucidation in collaboration with Wolfram Bode brought about the essential mechanistic background. We also owe Koichi Suzuki the discovery of the tissue-specific calpains. Of course, Koichi Suzuki was also involved in numerous strategic activities in university and governmental panels to promote research in the protease/inhibitor field to the benefit of all "proteolysis fans". Lastly, not least, in 1994 he organized a very successful conference in the proteolysis field as President of the International Committee on Proteolysis. After retirement (2000) Koichi Suzuki became Director of the Tokyo Institute of Gerontology and 2003 of the New Frontiers Research Laboratories of Toray.

Vito Turk obtained his Ph.D. in Chemistry at the University of Ljubljana in 1961. Starting his scientific career at the Department of Radiology in the early 60s, he initially worked on aspartic proteases, primarily cathepsin D. The "golden years" for a most successful research output on cysteine proteases and their inhibitors started in 1971 when Vito Turk became head of the Department of Biochemistry (and Molecular Biology later on) and Professor of Biochemistry and Enzymology at Ljubljana University (1976). They were filled up with numerous contributions on newly discovered proteases/inhibitors (e.g. cathepsin S and several cystatins including stefin A), novel primary and tertiary structures, new insights on enzymatic and inhibition mechanisms at the molecular level, cloning procedures for the production of recombinant proteases/inhibitors, and finally the elucidation of functional roles of these proteases and their inhibitors in physiology and pathology. In his Honorary Lecture presented at the IPS Conference Vito Turk gave an impressive overview on the outstanding successful output of the research done in his Department, which is - since 1996 when Vito Turk became Director of the entire Institute Josef Stefan - very productively continued by his sons, Boris and Dusan. For the outstanding scientific achievements Vito Turk and his coworkers and colleagues in "his" Department have been awarded numerous national and international Awards and Honors until today, e.g. the Heyrovsky Silver Medal of the Czechoslovakian Academy of Science, "Diplôme d'Honneur" from FEBS, membership of the European Academy, the Engineering Academy in Moscow and an EMBO Membership.

The history of Vito Turk's engagement in institutional activities in the protease/inhibitor field goes back to the early 80's when he became President of the European and subsequently of the International Committee on Proteolysis, where colleagues with similar scientific interest aimed to promote progress in the field. Vito Turk's restless engagement with scientific goals, his management capabilities and his open-minded character led him to become elected or appointed to international tasks such as Chairman of the Executive Committee of FEBS and IUBM and Secretary General of FEBS, besides being a member of numerous Editorial Boards.

Another important contribution that Vito Turk made to the international protease/inhibitor community was establishing several conference series, which subsequently became well known, such as the Portoroz Conferences in 1980, the Winter Schools (together with Hans Fritz) in 1981 and the BRDO Conferences in 1987. These very attractive international meetings periodically cover a broad spectrum of up-to-date research in the proteolysis field.

All in all, both Koichi Suzuki and Vito Turk have outstanding merits in the protease/inhibitor field and deserve the Honorary Membership of the IPS

Affiliation with Biological Chemistry

As announced in QC4, IPS has a special association with **Biological Chemistry**. This will involve an increase in the number of manuscripts published in the area of proteolysis but not require IPS members to take out a subscription. Selected manuscripts from the IPS Conference in Nagoya will be published in Volume 385, No 5 (May) and 6 (June) of Biol. Chem. General manuscripts from IPS members can be submitted at any time. Further details are available at

http://www.deGruyter.de/rs/272_3059_DEU_h.htm

The journal is available online. Hans Fritz is an Executive Editor of the journal. New members of the editorial board include Boris Turk and Christian Sommerhoff.

4th IPS General meeting, October 19-25, 2005

IPS has a general meeting every two years, starting with the first IPS conference on Mackinac Island, Michigan in the USA, organized by Bonnie Sloane and Guy Salvesen. The second general meeting was in Freising, Germany, organized by Hans Fritz and Marianne Jochum and Wolfram Bode. The third meeting, described above, was in Nagoya, Japan, and organized by Shigehiko Mizutani. In each case, an extensive group of local and international organizers was involved. The 4th IPS General Meeting will take place in October 2005 in Quebec City, Canada and will be organized by Guy Tremblay and a distinguished group of scientists from Canada, with assistance from the Council and others. Details will be available shortly. A website has been established, www.fmed.ulaval.ca/IPS2005 but is still under construction. You should copy this website address from here, and paste it into your web browser, then bookmark it as a “favourite”, and check it frequently over the coming months for new additions. During the 2004 Gordon Conference on Proteolytic Enzymes and Their Inhibitors at Colby-Sawyer College, New Hampshire, July 4-8, about 2/3 of the IPS Council will meet with Guy Tremblay to complete the initial planning steps. The next issue of Quick Cuts will give the website details. The 4th General Meeting of the IPS will build on all our experiences with the first three meetings and will feature a wide spectrum of the finest science in this field. While there are many specialty meetings (see listing below), the IPS General Meeting is the optimal place to see the whole range of the world of proteolysis. Attendance at this meeting will provide you with an unprecedented advantage in planning for future experiments, collaborations, and scientific directions. As if that were not enough, the chance to visit Quebec City and enjoy the hospitality of that wonderful city should not be missed !!

IPS membership

To all those who have renewed your membership in the International Proteolysis Society, thank you. For those who have not yet renewed, **your IPS membership lapsed at the end of 2003**. This message is a reminder to encourage you to renew your membership! The membership form and details of where to send it are on the website <http://www.protease.org> or you can contact Bruce Linebaugh (blinebau@med.wayne.edu) with payment details. The dues are \$100 (\$40 for members in training) for 2 years.

Benefits of membership include **significantly** reduced registration for IPS meetings, eligibility to apply for travel awards, voting privileges in IPS meetings, and receipt of QuickCuts.

Travel awards

Providing travel assistance to young scientists to enable them to attend the IPS meeting is an important feature of the work of the society. As it is about 17 months before the 4th meeting, it is already not too early to begin planning for your applications for support. However, do not send anything at this time. A number of travel awards (up to \$1000) will be available for the 4th IPS meeting in Quebec City:

- selection will be based on the quality of science in the submitted abstracts
- preference will be given to members in training (i.e., graduate students and post-docs)

Only members of IPS are eligible to apply.

In future issues of Quick Cuts, we will announce the dates for the application process. At that time, please send a short case for support to bdunn@ufl.edu with a copy of your abstract by the abstract deadline (to be established). The deadline will be set early enough so that we can make decisions,

which will permit the young scientists to make travel plans. All applications will be submitted by email and those selected will be notified by email.

Nominations Honorary Membership of IPS

Nominations are invited for Honorary Membership of the Society. Candidates should have an extensive record of research in the area of proteases/protease inhibitors, be current members of IPS (as of 1 October 2004) and be currently active scientists. Please send nominations and a short case for support (2-3 lines) to bdunn@ufl.edu by 1 September, 2005. Voting will be by email in September/October for current members of IPS only.

IPS council

The term of several of the members of IPS council (4 years) will end at the Quebec City meeting in October 2005. Nominations are therefore invited for new members of council. Two new members will be elected for each of the three areas (EUROPE/AFRICA, THE AMERICAS, AUSTRALASIA).

Candidates should work in the area of proteases/protease inhibitors and be current members of IPS (as of 1 September 2005). It is hoped that nominees will be able to attend the 4th IPS meeting in Quebec City so that the newly elected members will be able to participate in the meetings of IPS council. Please send nominations to bdunn@ufl.edu by 1 October, 2004. Voting will take place at the 4th IPS meeting in Quebec City and will be for current members of IPS only.

Upcoming Protease Meetings

- ◆ **Calpains in Agriculture, Health and Disease. A FASEB Summer Conference**
 - <http://src.faseb.org/>
 - Tuscon, Arizona
 - June 12-17, 2004
 - Organizers: Tom Shearer, Neil Forsberg (Neil.Forsberg@orst.edu)

- ◆ **Gordon Research Conference on Proteolytic Enzymes and Their Inhibitors**
 - <http://www.grc.uri.edu/programs/2004/protenz.htm>
 - Colby Sawyer College, New Hampshire
 - July 4-9, 2004
 - Organizers: Nancy Thornberry (nancy_thornberry@merck.com), Roy Black

- ◆ **4th International Conference on Cysteine Proteinases and their Inhibitors**
 - <http://bio.ijs.si/conf/p2004.html>
 - Portoroz, Slovenia
 - September 11-15, 2004
 - Organizers: Vito Turk, Boris Turk, Marco Dolinar
 - Contact E-mail address for inquiries: (P2004@IJS.SI)

- ◆ **Third Asian Pacific Congress on Thrombosis and Hemostasis**
 - <http://www.apcth2004.org/>
 - Bangkok, Thailand
 - October 14-16, 2004
 - Congress President: Saengsuree Jootar

- ◆ **6th Workshop on Proteasomes**
 - <http://www.univ-bpclermont.fr/CONGRES/proteasomes>
 - Clermont-Ferrand, France
 - April 24-26, 2005
 - Organized by Yves Briand (Yves.BRIAND@univ-bpclermont.fr) and Didier Attaix
- ◆ **Apoptosis and Immunity**
 - <http://www.apoptosisandimmunity2005.org>
 - Cairns, Australia
 - May 30 - June 4, 2005
- ◆ **SERPINS 2005. 4th International Symposium on Serpin Structure, Function & Biology**
 - <http://www.serpins2005.org/>
 - Cairns, Australia
 - June 5-9, 2005
 - Conference Chair: James Whisstock
- ◆ **IXth International Symposium on Proteinase Inhibitors and Biological Control**
 - <http://bio.ijs.si/conf/brdo05.html>
 - Brdo by Ljubljana, Slovenia
 - June 25-29, 2005
 - Organized by Vito Turk, Boris Turk and Marko Dolinar (brdo.symposium@ijs.si)
- ◆ **IPS2005: 4th General Meeting of the International Proteolysis Society**
 - www.fmed.ulaval.ca/IPS2005
 - Quebec, Canada
 - October 15-19, 2005
 - Conference Chair: Guy Tremblay
- ◆ **Inhibition of Matrix Metalloproteinases: Expanding the Horizon**
 - Email to: truchan@nshs.edu
 - Crowne Plaza Hotel adjacent to Laganardia Airport in New York
 - **October 23-25, 2004**
 - **Chairs:** Robert Greenwald, Stanley Zucker, Jerauld Skotnicki
- ◆ **2005 Gordon Research Conference on Matrix Metalloproteinases**
 - Big Sky Montana
 - August 28-September 2, 2003
 - Contact: Zena Werb, email: mmpgrc@itsa.ucsf.edu

Please send 2004 meeting details to be included in the next issue of *Quick Cuts* and to be added to our web site managed by Christian Sommerhoff (sommerhoff@clinbio.med.uni-muenchen.de)

Avon Foundation-AACR International Scholar Awards in Breast Cancer Research
 Bonnie Sloane, IPS Councilor, Professor and Chair of Pharmacology, Wayne State University School of Medicine, Detroit, Michigan, USA, has been selected as a Host for the Scholar Awards. The program provides two-year career development opportunities in the United States.

Junior faculty candidates from Asia, Latin America, and Eastern Europe are eligible and invited to apply for selection as a visiting scholar in Prof. Sloane's laboratory. For more information, visit http://www.aacr.org/AvonAACR_Awards.asp

For more information, E-mail: bsloane@med.wayne.edu

Application Deadline: August 2, 2004

International Protease Network

David Fairlie of the Institute for Molecular Biosciences, University of Queensland, Brisbane, Australia, Email: d.fairlie@imb.uq.edu.au has created the International Protease Network in order to stimulate new networking opportunities for scientists in our field. Prof. Fairlie and his colleagues began by creating a network for scientists in Australia. This can be viewed at <http://www.protease.net.au/> To expand this to the international level, he has requested that international scientists submit, in a simple format, contact information, a paragraph describing your research, current collaborators, and a short list of publications. Although the site is still under construction, some details are available at <http://www.protease.net/> The International Protease Network will be linked to the IPS website www.protease.org and will provide an expansion of the benefits of membership in IPS. The Council encourages all scientists engaged in studies of proteolysis to contact David and submit your information.

Discount

IBC Life Sciences is offering a 10% discount for IPS members to those who would like a copy of their Protease Inhibitors conference handbook. More information on these conference proceedings can be viewed at <http://www.LifeSciencesInfo.com/2734> or contact Jim Prudhomme (Marketing, IBC Life Sciences) email: jprudhomme@ibcusa.com