

ISAC E-News

March 2008

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XXIV International Congress: Cytometry in the Age of Systems Biology

➤ PARALLEL AND POSTER SESSIONS

Bob Murphy and John Nolan
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The selection process for Parallel Session oral presentations at the upcoming ISAC Congress is complete! Nearly 250 papers and abstracts were submitted for 102 speaking slots.

Some of these were full papers, submitted in response to the first ever Call for Proceedings Papers. More than thirty papers were received, reviewed through the normal Cytometry reviewing process, and then subjected to a second round of review by the Organizing Committee. Twelve papers were selected to be featured in the April or May issue of Cytometry as well as in oral presentations at the Congress. Those presenters also received complimentary conference registration.

More than 210 abstracts were submitted for Parallel Session oral presentations. Each abstract was reviewed and scored by five different members of the Congress Program Committee that were assigned based on the reviewing members' areas of expertise (> 1000 reviews total!). Reviewers rated abstracts on a scale of 1 (outstanding) to 5 (poor), and provided comments on each. The abstracts were ranked by average raw score, as well as by average Z score (to take into account differences in reviewer styles). The top ~25% of abstracts by score were put into parallel sessions. This was easy, as these were unanimously the best abstracts. The next ~25% were then used to fill out the parallel sessions. This was more difficult, since the reviewers sometimes had mixed opinions. At this level, program balance and session coherence were important considerations. The final acceptance rate for oral presentations was approximately 40%.

Overall the abstract quality was quite high. Many very good abstracts were not accepted due to the large number of submissions and the limited number of speaking slots. All of these were offered poster presentations, and most have accepted. While some authors will understandably be disappointed at not being chosen for an oral presentation, we are happy that most have chosen to take advantage of the more interactive poster presentation format. Nearly 300 additional abstracts were submitted for poster presentation only, and Late-Breaking Poster Abstracts will continue to be accepted through early April. See the Congress Web site for more details.

The number and quality of submissions reflects the tremendous interest in our field and should contribute to an excellent Congress!

Keep watching the ISAC web site for additional new and exciting information:
<http://www.isac-net.org/Congress2008/>

➤ CONGRESS SUPPORT REACHES NEW RECORD

Corporate sponsorship of the ISAC Congress reached a new level this year, with total sponsorship exceeding \$120,000. The sponsors include:

Diamond:	Beckman Coulter
Gold:	Applied Cytometry, Becton Dickinson, Invitrogen
Silver:	Accuri Cytometers, Amgen-CBSS, Cytex Development, Cytopeia, Spherotech, Thermo Scientific, BioLegend, Thermo Fisher

Bronze: De Novo Software
Student Travel: CytoAnalytics
Core Managers Workshop: Becton Dickinson
Opening Reception: Beckman Coulter

Sponsorship opportunities are still available! Visit <http://www.isac-net.org/Congress2008/> for more information.

ISAC is very grateful to all of these sponsors who make our exciting Congress possible!

ISAC 2008 Elections

Maria Pallavicini, Past President and Chair, ISAC Nominating Committee
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The ballot for the ISAC 2008 Council elections is now available. ISAC members who are eligible to vote in the elections received an email with instructions on voting. If you did not receive an email, please contact ISAC Executive Director, Lauren Rowland at lrowland@isac-net.org or 301-634-7454.

Available positions and the candidates for each position are:

President-Elect

Paul Smith
Janos Szollosi

Secretary

Lori Krueger
John Nolan
Laura Teodori

Biological Councilor (3 openings)

Tim Bushnell
James Freyer
Gerald Gregorie
Patrice Petit
Andreas Radbruch
Henning Ulrich

Clinical Councilor (2 openings)

Markus Barten
Ilesh Jani
Zofia Maciorowski
Shasiz Pervaiz
Gregor Rothe
Vince Shankey

Technical Councilor (1 opening)

Ger van den Engh
Michal Kozubek
Bob Leif
Gopal Pande

Election results will be announced at the May 19th ISAC Business Meeting in Budapest Hungary.

Thank you to all those individuals who agreed to run and to the membership for voting and participating in this important process.

News From ISAC Headquarters

Laureen Rowland, Executive Director
lrowland@isac-net.org

- We currently have 1138 members - in 2006 (another Congress year) at the end of February, we had 1063.
- The updated ISAC database is still with the programmers. Once this project is completed, the official membership list at Headquarters will agree with the membership list provided to members via the web site.
- The member handbook is progressing well. The new membership listing will be up to date and some additional final reports will be included. It is scheduled to be published in March.
- President Paul Robinson has asked Maria Pallavicini to chair the Development Committee. This committee will be charged with identifying and reviewing new mechanisms for funding ISAC.
- A preliminary suggestion has been made that at least one permanent observer from South America and Asia be included in Council meetings to represent these areas. No formal action has been taken pending more discussion.

Volunteers Solicited for Committee Assignments

All ISAC members interested in serving on one of the ISAC Standing Committees or Task Forces beginning in May 2008 are encouraged to contact Bob Murphy (murphy@cmu.edu) by April 1, 2008. The Committees and Task Forces and their current memberships are listed on the ISAC web site (<http://www.isac-net.org/content/view/572/42>)

Education Subcommittee

➤ NEWS FROM THE DIRECTOR OF EDUCATIONAL PROGRAMS

Francis Mandy, Director of Educational Programs
fmandy@rogers.com

Considerable effort is being invested to make the various ISAC educational materials catalogued and synchronized so we know what we have, where it is and how it can be made available to the membership in a convenient way.

Efforts are well on the way to get renewal for American Society for Clinical Pathology (ASCP) approval for continuing medical laboratory education programs (CMLE) credits. This will assure that you will accumulate some valuable educational credits while attending lectures between sampling some goulash and hot salami with the local unforgettable palinka.

There have been some deliberations of intellectual property issues related to presentation materials at tutorials. We are considering a novel solution. The idea is to use the "Creative Commons" formula to deal with this issue. In essence, the author retains the right to use the material while ISAC can integrate it into a product that may be used for revenue generating activity. These concepts no doubt will be further developed as time goes on.

So let me close by suggesting that the educational value of the 2008 Congress will match the spectacular experience that the country has to offer. "After all Hungarians are just the same as anybody, just that they are a bit more so".

Membership Services Committee (MSC)

Laura Teodori and Zofia Maciorowski, co-chairs, Membership Services Committee
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The MSC has been busy with the XXIV International Congress in Budapest. A great deal of effort has been dedicated to our young scientist participants in order to assist them financially and scientifically. A workshop on Scientific Professional Skills has been organized on Tuesday evening from 8 to 10 pm. We on the MSC consider our students and young scientists to be of utmost importance for the future of ISAC. This workshop is geared towards them and is the first time the International Congress has held a workshop of this kind. Faculty for the workshop includes many successful ISAC members and researchers; for example, ISAC's President, Past President, future President and our Cytometry editor. Topics to be presented and discussed include preparing successful grant applications (US and Europe), short term mobility funding for students, what a journal looks for in a paper, and how to prepare and deliver scientific presentations. Unfortunately, we don't yet have a sponsor for something to eat, but we are still hoping someone will step forward and provide some good Hungarian goulash and beer for our workshop participants. We are hoping for a huge crowd so don't forget to register.

Substantial travel funds have been specifically earmarked to help students come to Congress. We have had many requests from young scientists all over the world who want to present their work at the meeting, and we are doing our best to support them.

We also selected the President's Award for Excellence and the Exceptional Student Award finalists, a very difficult choice among the many excellent abstracts submitted.

A page now exists on the Congress site especially devoted to students. Please visit it at <http://www.isac-net.org/Congress2008/studentinformation.php>

For the first time we have a special fund to provide assistance for ISAC members from Central and Eastern European countries to attend the ISAC Congress in Budapest. We want as many of them as possible to be able to have the opportunity to attend this Congress in their corner of the world.

We have set up a service for interpreters in order to help ISAC international attendees get the most out of Congress activities as well as to interact with exhibitors and vendors.

An expert's corner will be also organized during the Congress. A message board will be set up in the ISAC Booth where anyone will be able to ask a question on a subject with which they need help, and it will be open for all attending experts to answer. Details will be posted on the Congress web site.

We are currently updating the funding opportunities for young fellows link, please visit <http://www.isac-net.org/content/view/693/137/>

This is the last E-News article of our co-chairmanship as we end our term at the Congress in May. We would like to thank our committee and sub-committees members: Lisa Rice (USA), Margit Balasz

(Hungary), Gulderen Demirel (Turkey), Arvinder Sing (India), Dario Coletti (Italy), Uriel Trahtemeberg (Israel), and Zachary Pinkus (USA) for their contribution of ideas and their deep involvement, motivation and hard work. We also would like to thank our advisors: Awatar Krishan, Zbigniew Darzynkiewicz, Scott Cram, Paul Robinson and Robert Murphy, who generously supported us very much. Finally, co-chairing this committee has been very exciting for us. We have been lucky to be able to work together and whatever we have been able to accomplish has been due to being part of a great team.

Data Standards Task Force

James C. S. Wood, Chair, ISAC Standards Committee
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The MIFlowCyt (Minimum Information about a Flow Cytometry Experiment) Specification has been adopted by ISAC by a unanimous vote of ISAC Council. MIFlowCyt is a specification of the minimum information required to record, report, and interpret a flow cytometry experiment. The Data Standards Task Force (DSTF) will use it as the basis for the development of current and future cytometry data standards. It can be accessed at www.isac-net.org.

Also on the ISAC website, the DSTF presents to the ISAC membership three proposals that are components of the Analytical Cytometry Standard (ACS) data standard which is under development. Currently the posted proposals are Gating-ML, Network Common Data Form (NetCDF), and ZIP format for the data containers and are now available on the web for review and comment by ISAC membership. Further information is available on the website. We encourage ISAC members to participate in the forum discussion regarding the proposals. After the general review period, the Standards Committee will review the discussions and comments to decide whether the proposed components need further work by the DSTF or if they are ready for approval by ISAC Council.

FCS 3.0 is the current data file format recommended by ISAC and about to be updated. At the request of industry representatives, the DSTF has begun the process of adding some much needed corrections and additions to FCS 3.0. You will hear more about these efforts in the coming months.

Finally, there will be a Data Standards Workshop at ISAC XXIV in Budapest, Hungary. Members of the ISAC Data Standards Task Force (DSTF), Flow Informatics and Computational Cytometry Society (FICCS), and the Bioinformatics Standards for Flow Cytometry Consortium have been preparing several proposals for new data standards in cytometry. During this workshop these efforts will be briefly presented, with a focus on open discussion on the implications of these developments with software and hardware vendors as well as researchers. We will try to identify potential bottlenecks, find solutions to address identified needs and discuss future directions of the data standardization effort.

ISAC Core Managers Task Force

Derek Davies
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Work is progressing on the update of the Core Managers section of the ISAC website. Comments and input are welcome from ALL ISAC members. If you log in to the Members Only section of the ISAC website, the links are posted on the right hand side. We are aiming to include all the information that new and current

Core Facility managers need. Ultimately anecdotes from Labs in all geographical areas would be useful. Please email any suggestions or contributions to the Chair of the Task Force (derek.davies@cancer.org.uk).

If you are planning to attend the ISAC Congress in Budapest this May, there will be a special Core Managers workshop running from 7:30 pm - 10:00 pm on Tuesday 20th May. Keep an eye on the Congress website for the final agenda.

Also at the Congress, there will be a tutorial aimed at new Core Managers entitled "Managing a Cytometry Core Facility: A Grass Roots Approach". This will be run by Joanne Lannigan and Alan Saluk. This will take place on Saturday 17th May and pre-registration will be required.

Affiliated Society News

ISAC welcomes its newest affiliated society

➤ IRISH CYTOMETRY SOCIETY

Dr. Alfonso Blanco, President, Irish Cytometry Society
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As the user base for Flow Cytometry in Ireland has significantly expanded over the last few years and is expected to grow at an increasing rate, it was decided to create a society to discuss issues such as equipment, applications and research, and to facilitate networking within the flow community. Hence, the Irish Cytometry Society (ICyS) was set up in May 2005. The range of applications within this science is very broad, and this society provides a network for those who use these technologies in areas as diverse as immunology, cancer, cell biology, drug development, zoology, botany, microbiology, marine research, etc. This has led to improved exchange of knowledge, applications and ideas within the field.

The ICyS serves as an important resource not only for the users but also the reagent and instrumentation companies as it allows them to keep abreast of activities and developments within the scientific community. We have approached all the major relevant companies to help us to establish and develop this exciting new network.

So far three annual meetings have taken place:

- The Inaugural Meeting (May 20th 2005; UCD – Conway Institute of Biomolecular and Biomedical Research, Dublin) was a series of talks and presentations on different techniques and fields which showcase flow cytometry's potential. At the end of this meeting, the Irish Cytometry Society was founded.
- The Second Meeting (January 30th 2006; UCD – Conway Institute of Biomolecular and Biomedical Research, Dublin) allowed all participants the opportunity to introduce themselves and their groups, as well as to describe their labs, main applications and projects etc; along with relevant guest speakers.
- The Third Meeting (February 23rd 2007; UCD – Conway Institute of Biomolecular and Biomedical Research, Dublin) served to discuss various aspects of flow cytometry and confocal microscopy, and how these two allied, parallel technologies are increasingly becoming powerful tools for biological research.

Since the Society's inception, we have developed a mailing list which has proven very useful for those who have an instrument breakdown, problems with particular consumables or reagents, or any other general cytometry-related issues.

We have a web page (<http://irishcytometrysociety.blogspot.com/>) where one can find information about our society, with information and summaries of meetings, courses and job positions in Ireland and the UK, as well as useful links to ICyS-related web sites.

Elected officers are: Alfonso Blanco (UCD), President; Barry Moran (TCD), Vice-President; Sergio Anguissola (RCSI), Secretary.

Meeting Reports

➤ GLIIFCA 16 - REPORT

Mary Paniagua and Ryan Duggan, Co-Secretaries, GLIIFCA
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The Great Lakes International Imaging and Flow Cytometry Association (GLIIFCA) held its 16th annual meeting September 28-30, 2007 at the Hilton Windsor, in Windsor, Ontario, Canada. The annual GLIIFCA meeting provides a welcoming venue to practitioners of cytometry and image analysis from all specialties and at all levels of expertise, as well as providing for excellent networking opportunities and a dose of fun. The format, which includes presentation of a range of topics to suit a variety of participant interests, was on display again at this meeting to the benefit of the 118 registrants. The program committee was led by Tim Bushnell (President) with Paul Wallace and Michael Sramkoski. The meeting was generously supported by 24 vendors.

Program elements included the following symposia and speakers:

- Industrial Science Symposium (organizers Karen Domenico and Tom Sawyer)—this format featured brief talks from eight vendors highlighting the latest developments in technology from probes to software to instrumentation.
- Clinical Cytometry—speakers Maurice O’Gorman (Northwestern U) and Charles Goolsby (Northwestern U)
- Cutting Edge Cytometry – speakers C. Bruce Bagwell (Verity Software House) and Alan Moser (Cira Discovery Sciences, Inc), with an extended data analysis discussion forum
- Image cytometry—speakers Dan Fisher (Roswell Park Cancer Institute) and Hans Minderman (Roswell Park Cancer Institute)
- Technical innovations in cytometry—speakers James Kobie (U of Rochester), Kathleen McGrath (U of Rochester) and Michael Betts (U of Pennsylvania)

GLIIFCA also hosted the popular pre-meeting Resource Managers Workshop (see ISAC E-News, Dec. 2007).

Honors and awards of note included the following: The GLIIFCA Steering Committee welcomed Frank Mandy as the Carleton and Sigrid Stewart Plenary Lecturer. The 2007 Young Investigator Award was given

to Brian Grimberg (Case Western Reserve U) for his presentation "Combination of Hoechst and Thiazole Orange to Monitor Malaria Life-Cycle Progression using Flow Cytometry." Winners of the outstanding poster awards were Rebecca Copeland (Northwestern U), Nicolas Perez (U of Illinois, Chicago) and Betty-Anne McBey (U of Guelph). In addition, travel awards were given to eight registrants who presented posters at the meeting. Alex Nakeff was honored for his significant contributions to GLIIFCA— future Young Investigator Awards will be given in his name.

The program committee for GLIIFCA 17 is at work under the guidance of Paul Wallace (President), with Michael Sramkoski and Vera Donnenberg. The meeting will be held September 19-21st, 2008, in Milwaukee, Wisconsin. Please visit the GLIIFCA website (www.gliifca.org) for meeting developments and Steering Committee contact information.

➤ METROFLOW WINTER MEETING - REPORT

Peter Lopez, Vice President, Metro Flow Group
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MetroFlow, the NY/NJ Cytometry User Group, held its annual winter meeting on February 5th 2008 at the New York Academy of Science, newly relocated to the 40th floor of 7 World Trade Center in Manhattan. The focus of this meeting was the use of flow cytometry in the study of stem cells. 110 attendees registered for this full-day meeting. Speakers included William Telford from NIH, Benjamin Thompson from NYUMC, Valerie Horsley from Rockefeller University, Fiona Doetsch from Columbia University, Rick Cohen from Rutgers University and Maria Lopez from NYS Dept of Health. Vendors exhibited their latest materials, software, and instrumentation. For more on MetroFlow, and to see more about this and previous meetings of the MetroFlow group, visit the MetroFlow website at www.metroflow.org

➤ QUANTITATIVE IMAGING CYTOMETRY SYMPOSIUM

Pamela Moody, Manager, Flow Cytometry Shared Resource, Cold Spring Harbor Laboratory
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The inaugural Quantitative Imaging Cytometry Symposium was held from January 30th - February 1st, 2008 at the Cold Spring Harbor Laboratory QIC Center of Excellence. The objective was to provide educational and training resources for utilization of the emerging technology that combines quantitative measurement of cellular constituents with comprehensive imaging at various degrees of resolution. This was achieved by having morning presentations by distinguished scientists well known in the fields of cytometry as well as afternoon practical hands-on sessions focused on solid-phase imaging cytometry techniques.

Morning sessions included:

- Time, Biochemistry, and Cell States: The Role of Cytometry in Systems Biology - James Jacobberger
- Laser Scanning Cytometry: Where It Fits into Modern Biomedical Analysis - William Telford
- Unique Analytical Capabilities of Quantitative Image Cytometry and Their Applications in Cell and Molecular Biology - Zbigniew Darzynkiewicz
- Cell Fate Signaling in Tumor Cells - Shazib Pervaiz
- Potential Mechanisms for the Generation of Chromosome Aneuploidy in Human Cancer - John M. Lehman
- The Impact of Systemic Chemotherapy on Circulating Epithelial Tumor Cells (CETCs) in Breast Cancer - Katharina Pachmann

- Applying Quantitative Imaging Cytometry to Diagnostic Cytopathology and Histopathology - William Geddie
- QIC Applications in Pre-Clinical Drug Development - David L. Krull
- Quantitation of Caspase3 Activation as a Pharmacodynamic Endpoint in Fine Needle Aspirate (FNA) Biopsies - Gloria Juan, Manager
- Quantitative Imaging of Biomarkers in Whole Sections and Tissue Microarrays Using Laser Scanning Cytometry - Vijayalakshmi Ananthanarayanan

Afternoon sessions were devoted to practical instruction in various applications of quantitative imaging cytometry. The CSHL core facility is equipped with an iCys Research Imaging cytometer, representing state-of-the-art quantitative imaging cytometry technology. The majority of attendees were involved in practical discussions related to sample preparation for automated analysis, the application protocol "decision tree", selecting appropriate dyes, data acquisition and analysis of cellular and tissue specimens, cell surface immunophenotyping, extracting features for analysis, selecting and applying appropriate segmentation techniques, quality control, and many other subjects. The sessions were equipped with individual data analysis stations and quantitative imaging analysis instrumentation utilizing principles of laser scanning cytometry.

Overall it was an exceptionally well received event with numerous international participants. We are committed to expanding the Quantitative Imaging Cytometry Symposium at the Cold Spring Harbor Laboratory to become a prime educational and information exchange forum. Preparations for the 2009 QIC symposium have already begun. A dedicated website www.imagingcytometrycenter.com will soon be updated to post the 2008 Symposium proceedings and 2009 dates. We look forward to seeing those interested in the theory and practice of quantitative imaging cytometry at the Cold Spring Harbor Laboratory next year.

Upcoming Meetings/Conferences/User Groups/Courses

➤ 2008 NW REGIONAL CYTOMETRY MEETING, PORTLAND, OREGON

March 13-15, 2008. The 2008 NW Regional Cytometry Meeting will be held at OHSU on March 13 - 15. The meeting is 'ecumenical' (characterization thanks to HMS) in the sense of organized for both a flow and imaging group and topics to be discussed have been chosen with this in mind. Topics on Friday, March 14, will generally be more flow-related, while those on the 15th will be more imaging and ~ omics related, with emphasis on high content analysis. The meeting as a whole has been informed of an opportunity in Oregon for a legislatively funded drug discovery pre-screening facility. Oregon Translational Research and Drug Discovery Institute (OTRADI) will set up operations later in the year, and this meeting is designed in part to engender more interest in high content analysis. General discussion of probes, integration of different ~ omic platforms, and automated acquisition, will open what opportunities these technologies present for a more dynamic, systems understanding of the cell. This research may have significant benefits for individualized medicine and drug discovery. The meeting will be of wide interest given the thrust of automation and importance of systems cell biology.

The meeting is also an umbrella for two other events: A Flow Informatics and Computational Cytometry Society (FICCS) meeting and a FloCyt course. Both will be meeting on Thursday, March 13th. Registration for these two events is separate from registration for the regional meeting. See below for more information on FloCyt courses.

Registration for the regional meeting on Friday and Saturday is \$25. For registration materials or additional

information, go to: <http://www.isac-net.org/media/2008NWRCM.pdf>, or contact the meeting coordinator, Allan Kachelmeier, at kachelme@ohsu.edu.

➤ LEIPZIGER WORKSHOP

April 2-5, 2008. The upcoming 13th Leipziger 2008 Workshop on "Cytomics and NanoBioengineering" (www.leipziger-workshop.de) features many highlighted key-note speakers. Our Website is open for registration and submission of lecture and poster abstracts. The Location for the 13th Leipziger Workshop is the BioCity Leipzig (Biotechnological Biomedical Center (BBZ)), Deutscher Platz 5, 04103 Leipzig. Contact: Prof. Dr. Attila Tárnok, tarnok@medizin.uni-leipzig.de, Universität Leipzig - Herzzentrum, Klinik für Kinderkardiologie, Strümpellstrasse 39, 04289 Leipzig

➤ 31ST ANNUAL COURSE IN FLOW CYTOMETRY, BOWDOIN COLLEGE, BRUNSWICK, MAINE

June 14-20, 2008. The annual research course will provide you with state-of-the-art information on important cutting-edge topics in cytometry. Nationally recognized instructors organize hands-on laboratories and present related lectures. If you're interested in learning about cytometry or just seeing what's new, come and experience an intense week of hard work and good times in the great state of Maine. To obtain the latest information on the course and/or register, visit our web site, <http://www.vsh.com/bowdoin>. Contact: Mark Munson, Verity Software House, Inc., E-mail: sales@vsh.com.

➤ HANDS-ON FLOW CYTOMETRY COURSE, UNIVERSITY OF YORK

June 18-21, 2008. Peter O'Toole will be running another Hands-On Flow Cytometry course at the Technology Facility at the University of York. Details are at: http://www.york.ac.uk/depts/biol/tf/ic_flowcourse.htm

➤ ANNUAL MEETING OF THE WESTERN NY FLOW USERS GROUPS (WNYFUG)

July 16, 2008. The 5th meeting of the WNYFUG will be held at the University of Rochester on Wednesday July 16th, 2008. Come meet vendors; hear exciting talks in the fields of clinical, scientific and technical cytometry. Additionally, we will be awarding the 2nd annual Leon Wheelless Innovations in Cytometry Award. Contact: Tim Bushnell, Timothy_Bushnell@URMC.Rochester.edu. Updates can be found at <http://www.urmc.rochester.edu/wnyfug/>

➤ JOINT MEETING WITH THE MICROSCOPY SOCIETY OF AMERICA, ALBUQUERQUE, NEW MEXICO

August 2-3, 2008. The first joint session with the Microscopy Society of America (MSA) at "Microscopy and Microanalysis 2008" will occur this coming summer at the regular MSA meeting in Albuquerque, New Mexico. ISAC members have participated in this meeting in the past, but this coming year there will be a Pre-Meeting Congress devoted to "Cellular Analysis: Linking Quantitation to Structure And Function" under joint sponsorship of the two societies. The Pre-Meeting Congress is scheduled for August 2-3, and the regular MSA meeting continues August 3-7. Please find current information at the MSA website, <http://www.microscopy.org>. You can also register through the MSA site. The Pre-Meeting session is organized by J. Paul Robinson, Robert M. Zucker and Randall W. Smith, and will include a superb group of speakers on several aspects of cellular analysis including confocal, multiphoton, HTS, single molecule, fluorescence and other supporting and correlative methods.

Besides the Pre-Meeting Congress, there will be an open session during the regular MSA meeting: Imaging, Fluorescence and Flow Cytometry, Session A04 organized by J. Paul Robinson and Randall W. Smith. This open session will accept a broad range of both poster and platform presentations. Laboratories, students and postdocs are encouraged to present their research there. The MSA meetings have many interesting and concurrent sessions that you will find useful. There will be several sessions and posters on optics, fluorescence, filters, equipment and instruments that support ISAC objectives and functions.

➤ RMS ANNUAL FLOW CYTOMETRY COURSE, UNIVERSITY OF YORK

September 15 - 19, 2008. The RMS runs its annual Flow Cytometry course at the University of York (http://www.rms.org.uk/event_flow.shtml). The course is modular with a two day introduction for newcomers to flow cytometry and then three days on either research or clinical applications. This very successful course, organised by Peter O'Toole, Steven Couzens and Derek Davies, is always fully subscribed so early registration is advisable.

➤ FLOCYTE COURSES

flocyte@flocyte.com Applications for all courses can be found at this website.

March 3-7, 2008. FloCyte Regional Training Program is invited to present a short course in flow, 5 days of lecture, 4 separate courses, at the Instituto Nacional de Enfermedades Respiratorias in the District Federal in Mexico, our first course south of the border! We are presenting the Basic flow, Multiparameter and Compensation, Intracellular and Apoptosis courses! Information in Spanish is available as a link from our calendar on-line at www.FloCyte.com.

March 11-13, 2008. The IU Simon Cancer Center Flow Cytometry Resource Facility in Indianapolis, Indiana is pleased to host the FloCyte Regional Training Program which offers two flow cytometry courses in March 2008. The Basic Flow Cytometry course will be held March 11-12. The Multiparameter Flow Cytometry and Compensation course will be held March 13. Register for one or both of these courses by March 1 (to avoid the late registration fee) at the FloCyte Associates website: <http://www.flowcyte.com/F RTP/F RTPHome.htm>. Contact: in Indianapolis: Susan Rice, srice1@iupui.edu.

March 13, 2008. FloCyte Regional Training Program is invited to present our Intracellular course in conjunction with the Northwest Regional Cytometry Meeting in Portland, Oregon. A discount of 10% off the course tuition is offered if you sign up for the regional meeting as well! Registration and information are available on line at www.FloCyte.com. Our instructor, Dr. Dorothy Lewis, will be also speaking at the Cytometry meeting. See the program for this meeting at the ISAC website.

April 9-11, 2008. FloCyte Regional Training Program is invited to present our Basic and Multiparameter courses at the Cleveland Clinic where our very first course was held in January 2003. Since then we've trained over 2000 individuals in courses across the US and Europe. You can find more information on this course at www.FloCyte.com click on training and then Calendar.

Prior to the ISAC meeting in Budapest, FloCyte is again invited to Italy, to present our second set of Courses in Milano, Italy, at the H. San Raffaele. Our host there is Alessio Palini, and we are delighted to be invited back! The Basic Flow course will be **May 12-13**, and the Multiparameter and Compensation on May 14! If you are planning to make the trip to Europe, you can add Italy to your itinerary and write it off as a business trip as well!!