

**2009 CYTOMETRY DEVELOPMENT WORKSHOP:  
OCTOBER 14 - 18  
SESSION TOPICS AND MODERATORS**

**SESSION 1 – Flow Cytometry Quality Control/Standards – Ming Yan  
(Wednesday afternoon 4:30 - 6:00)**

**Tutorial** – Ming Yan - Assay Quality Control based on Cytometer Instrument Performance

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**Tutorial** - Stephen Perfetto - Inter-Instrument Standardization and Quantum of Light

James Wood - Instrument Standardization, Instrument Comparisons

Eric Chase - Q and B values of the Pacific Blue Channel

Robert Hoffman - NIST/ISAC fluorescence standardization study

**SESSION 2 – Flow Cytometry Applications – Marty Bigos  
(Wednesday evening 7:30 – 9:00)**

**Tutorial** - Jolene Bradford - Novel & New Reagents from Invitrogen including new cell cycle tools and membrane asymmetry probe

Doug Redelman - Some bad new tandem conjugates

Marty Bigos - Comparison of different excitations of various fluouochromes

Rich Konz - Core Facility Management

Doug Redelman - Sorting large cells from dispersed solid tissue - 130 vs. other nozzle sizes

Martin Buescher - Development of a "NoLyse/NoWash" protocol for flow cytometric whole blood analysis

**Happy Hour (Wednesday Evening 9:00-10:00)**

**SESSION 3 – Flow Cytometry New Technologies/Instrumentation – John Nolan  
(Thursday morning 8:30 – 10:00)**

**Tutorial** – Giacomo Vacca – Laser Rastering and lysis free assays

Giacomo Vacca – Laser Rastering: Routine whole blood assays at 300,000+ events/min

**Tutorial** - Sunil Dalal – A new mid-range hematology analyzer with more effective throughput and additional key assays

Martin Krockenberger - Flow cytometry and Mie scattering to measure the size and hemoglobin concentration of red blood cells

**SESSION 4 – Flow Cytometry New Technologies/Instrumentation – John Nolan  
(Thursday morning 10:30 – 12:00)**

Joshua Herr - Applications of Microflow Cytometry

John Nolan - More parameters for less with Raman flow cytometry

Steve Graves - Sheathless focusing approaches for flow cytometry

**Tutorial** – Jessica Houston – Phase sensitive flow cytometry

Jessica Houston - Digital signal processing techniques for time dependent cytometry sorting and analyses

**SESSION 5 – Flow Cytometry New Technologies/Instrumentation – John Nolan  
(Thursday afternoon 4:30 – 6:00)**

**Tutorial** - Shervin Javadi - Using digitally assigned time delay to enable users to reassign detectors to different spatially separated lasers in Stratadigm's S1000 platform  
Shervin Javadi - Innovations in simplifying multicolor flow Cytometry instrumentation  
Leo Ostruszka - Simultaneous measurement of two or more spectrally overlapping fluorochromes with a single detector  
Shervin Javadi - Achieving optical stability by mounting the flow cytometer's optical components on a single plate (lasers, emissions module, excitation optics, interrogation area, etc)

**SESSION 6 – Cytometry Light Sources – Howard Shapiro  
(Thursday evening 7:30 – 9:00)**

**Tutorial** – Ken Ibbs - Lasers developed for the Cytometry market; updates on the diode based NUV technology platform  
Ken Ibbs - High power visible and UV lasers based on broad area diodes  
Christopher Bare - Integrating the 561nm laser into a Core Resource Facility: instrument homologation, quality of data, and end-user training  
Bill Holber – Laser Driven Light Sources from Energetiq Technology, Inc.  
Doug Redelman - LSR filter selections for the 561 laser and for Pacific Orange from the 405 laser

**Happy Hour (Thursday Evening 9:00-10:00)**

**SESSION 7 – Imaging – Jeff Price  
(Friday morning 8:30 – 10:00)**

**Tutorial** – Aaron Daub - Using live cell imaging to measure individual cell fates  
Aaron Daub - High Content Screening using Live Cell Imaging of Primary Neurons: A novel look at neurodegenerative disease  
Behrad Azimi – Emulating cell death markers using image cytometry and classification/computer learning  
Elliot Botvinick - Laser microrheology of engineered tissues; both passive and active rheology  
Elliot Botvinick - Laser tweezers to study the role of endocytosis in Notch signaling  
Elliot Botvinick - Laser tweezers in the study of vascular mechanotransduction

**SESSION 8 – Imaging – Jeff Price  
(Friday morning 10:30 – 12:00)**

Robert Leif - An Analog Method to Produce Time-Gated Images of Lanthanide & Luminescence  
Jeff Price - FFPET-IF  
Mahsa Ranji - Quantitative deconvolution  
Anne Plant - Cell image metadata: gathering and searching terms  
Anne Plant - Comparison of cell image segmentation algorithms  
**Derek Fuller** – Chromatic aberration; bad for imaging great for autofocus  
Bill Hyun - CaBIG - Tools: CaImage and CaMicroscope

**SESSION 9 – Flow Cytometry Data Analysis – John Nolan  
(Friday afternoon 4:30 – 6:00)**

Martin Buescher - Issues in scaling and visualization of flow data

Wayne Moore - A model based approach to the automatic analysis of fluorescence compensation controls

Wes Munsil - Data Analysis: Considerations for Reproducibility

Janet Siebert - Exhaustive Expansion: Combining Flow Cytometry and High Throughput Analytics to Screen Complex Mixtures of Cells

Nikesh Kotecha - Web based flow cytometry data analysis

**SESSION 10 – Flow Cytometry Data Analysis – Janet Siebert  
(Friday evening 7:30 – 9:00)**

Adam Asare - Bioinformatic challenges to high-throughput flow cytometry analysis within a clinical trial consortium such as the Immune Tolerance Network

Suzanne Mertens - Quality assessment approaches for large volumes of flow cytometry data

Jason Liu - Quality assessment of flow cytometry data

Jay Almarode - Distributed analysis and post processing of flow data: A client/server computing architecture for distributing analysis of flow data files, and automated post processing of results for comparative studies

Maciej Simm - Command-line (pre-) analysis of large batch of data

**Happy Hour (Friday evening 9:00 – 10:00)**

**SESSION 11 – Data Analysis – Adam Treistar  
(Saturday morning 8:30 – 10:00)**

Maciej Simm - Teaching old code new tricks - summary of improvements to FlowJo user interfaces to flow cytometric data analysis

Adam Treistar - Assessing the quality of gating methods

John Quinn - The application of pattern recognition systems for automated classification of flow cytometric data

Aaron Hart - Evaluating classification - A match ratio calculation utility

**SESSION 12 – Data Analysis – Jim Woods  
(Saturday morning 10:30 – 12:00)**

Jill Schoenfeld - Comparing Variance Between manual gating and automated population identification

Ryan Plankenhorn - FlowJo Internationalization

Maciej Simm - Applying flow tools and analysis logic to non-flow datasets

Francis Bull - Gating ML and Flowjo

Josef Spidlen – Flow Cytometry Data Standards

Robert Leif - Safe XML Software Standards

**SESSION 13 – Mass Cytometry – Howard Shapiro**

**(Saturday afternoon 4:30 – 6:00)**

**Tutorial** - Olga Ornatsky - Mass cytometry methods development and applications

Olga Ornatsky - Application of mass cytometry in biology

**Tutorial** – Vladamir Baranov - Mass cytometry instrumentation and reagents

Vladamir Baranov - Mass cytometry instrumentation, physical principals, operation;  
development of element tagged affinity reagents

**SESSION 14 – Alternative Cytometry Technologies – Nancy Perlmutter**

**(Saturday evening 7:30 – 9:00)**

Pete Edmond - Cytometry Challenges in a Milk Matrix

Paul Johnson - Fungi in Blood and Bronchoalveolar Lavage Fluid

**Tutorial** – Howard Shapiro - Cytometric Initiatives in Malaria and TB

Howard Shapiro - The \$4,999 Cytometer: Slow Flow or No Flow?

Nancy Perlmutter - Cytometric approaches to TB

**BONFIRE: HAPPY HOUR WITH S'MORES AND MORE**

**(Saturday evening 9:00 – 11:00)**