



## Message from the Chair

Dear Proteomics and Metabolomics Division member,

With the 2019 AACC annual meeting fast approaching, I am excited to share information about Division-sponsored events taking place at the annual meeting as well as numerous other events featuring proteomics and metabolomics. Please stop by our booth at the **Division Networking Event** on the opening day of AACC.

The Division Networking Event will occur during the AACC Opening Mixer on **Sunday, August 4, 2019 from 6:45 - 8:00pm** on the outdoor Grand Plaza of the Anaheim Convention Center.

Current AACC members and non-members can visit booths set up by all of the AACC Divisions to learn more about the various benefits of being a Division member. Please stop by the Proteomics and Metabolomics booth as we have some great prizes to give away!

This year, our **Annual Division Mixer, Mass Spectacular, in joint-collaboration with the Mass Spectrometry and Separation Sciences Division (MS3), will take place on Tuesday, August 6, 2019, from 6:00 PM – 8:00 PM**, at the Hilton Anaheim, Pacific D Room. Join us for a reception and networking with fellow MSSS and Proteomics and Metabolomics Division members and affiliates. This event includes heavy hors d'oeuvres, and each attendee will receive two (2) drink tickets. We will recognize our Divisions' award winners during the mixer, so please join us in congratulating them for their accomplishments.

We'd also like to recognize and thank our Mass Spectacular supporters: [Agilent](#), [MSACL](#), [SCIEX](#), [Thermo Fisher Scientific](#), and [Waters Corporation](#).

Registration for the Mass Spectacular is \$10 per person.

*Please note: you may register for the Mass Spectacular even if you are not attending the AACC Annual Scientific Meeting. Select 'Special Events Only' on Step 3 of the registration page and choose the 'Mass Spectacular'.*

You may also register onsite on the day of the event.

Also, please be sure to check out other Division events taking place in Anaheim by clicking on the links below:

[Mass Spectrometry and Separation Sciences Division](#) <link to Division's events page with calendar of events>

[Proteomics and Metabolomics Division](#) <link to Division's events page with calendar of events>

We look forward to seeing everyone in Anaheim at the Mass Spectacular. There is an incredible amount of proteomics and metabolomics content at this year's annual meeting; several of these events are highlighted below and there are many more great workshops, brown bags symposia and posters to be found in the program.

At this time, I would like to acknowledge the members of our division leadership and all the work they have contributed to our division: Drs Mari DeMarco (Past Chair), Stefani Thomas (Secretary), Angela Fung (Treasurer), Ashley Beasley Green (Awards Chair), Valentinas Gruzdis (Artery Moderator), Danni Li (Nominating Committee) and Mark Lowenthal (Nominating Committee). A special thank you to Zahra Shajani Yi (member at large) who put together this newsletter, which is a fantastic resource for navigating the annual meeting.

On behalf of the entire leadership of the Division, I want to thank you for your participation in the Proteomics and Metabolomics Division, and I look forward to catching up with you at the Division Networking Event and Division Mixer!

Sincerely,

Ravinder Jit Singh, PhD, DABCC, FAACC, FCACB

*Chair, Proteomics and Metabolomics Division*

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## Annual Meeting Events Related to the Proteomics and Metabolomics Division

### Symposia

**Monday, August 5, 2019, 2:15-4:15 PM**

2:15PM -	<a href="#">32216 Quantitative Proteomics in Clinical Care: Development, Deployment and Future Directions</a>	Scientific Session	Mass Spectrometry Proteomics	Christa Cobbaert, PhD, Prof Andre Mattman, MD Jennifer Van Eyk, PhD
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2:15PM -	<a href="#">32224 Marijuana, Multiplexed Imaging, and Activity Metabolomics - Late Breaking Applications of Mass Spectrometry</a>	Scientific Session	Mass Spectrometry Toxicology/TDM	Robert Fitzgerald, BS, PhD Sean Bendall, BS, PhD Gary Siuzdak, BS, PhD
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## Symposia ePoster Walk – Led by Dr. Singh and leaders of the Division

**Wednesday, August 7, 2019, 10:00-10:45 AM (arrive 15 min prior to the start of the session)**

**Location: Exhibit Hall A near the physical poster displays**

ePoster session	Date	Start time	End time	Location	Room/area	Expected attendance
Proteomics and Metabolomics Division ePoster Session	Wednesday, 8/7/2019	10:00 AM	10:45 AM	Anaheim Convention Center	<b>Exhibit Hall A near the physical poster displays</b>	10

10-15 minutes per presentation according to the following schedule:

Name	Presentation time	Abstract title
Bremansu Osa-Andrews, PhD (A-345)	10:00 – 10:10 AM	Novel P-glycoprotein Biosensor Technology Detects Six Anticancer Modulators of the Transporter through a Fluorescence-Based Drug Profiling
Cameron Furey, MD (B-244)	10:10 – 10:20 AM	Do We Still Need Amylase in the Management of Acute Pancreatitis?
Irina Kirpich, PhD (A-137)	10:20 – 10:30 AM	Alterations in Plasma Lipid Metabolites in Patients with Mild and Severe Form of Alcoholic Liver Disease: Correlations with the Disease Severity
Chia-Ni Lin, PhD (A-146)	10:30 – 10:40 AM	A metabolomics approach to identify plasma biomarkers for Alzheimers disease

## Even More Proteomics and Metabolomics at the 2019 Annual Meeting!

**Sunday, August 4**

### Opening Plenary Session

#### 2019 Wallace H. Coulter Lectureship Award

#### **Biomarker Discovery: From Technology Development to Clinical Applications**

*David R. Walt, PhD*

*Hansjörg Wyss Professor, HHMI Professor, Department of Pathology, Harvard Medical School Core Faculty—Wyss Institute for Bioinspired Engineering at Harvard University*

In this session, Dr. Walt will describe how biomarker discovery is performed today and will discuss how we can compress the timeframe from discovery to clinical impact. He will draw upon his experiences in translating research from an academic lab to the commercial sector.

Some successful examples of how novel technologies have found their way to the clinic will be described.

## **Monday, August 5**

### **Translating Genes, Brain, and Behavior: A Next Generation Human Framework**

*Julie Korenberg, MD, PhD*

*Professor of Pediatrics*

*Director, Center for Integrated Neuroscience and Human Behavior*

*University of Utah*

Peering into the brain's black box for how we think/feel/communicate reveals neural circuitry as a common language that yokes the power of human genetics to its influences in development and disease, on brain architecture, and behavior. Uncommon partial aneuploidies (Williams and Down syndromes) provide genes influencing human cognition/social-emotional behavior and these unexpectedly implicate primate hypothalamic circuitry. The trail leads, via neural imaging, to dysregulated hormones, a perturbed transcription factor (neuronal development), and an unknown tract spanning the brain limbic system. This is the next era of brain diagnostics and therapeutics in which new gene-disease associations are rapidly translated to brain circuitry.

## **Tuesday, August 6**

### **Using Biomarkers to Tailor Treatment for Breast Cancer**

*Virginia Kaklamani, MD, DSc*

*Professor of Medicine, UT Health San Antonio MD Anderson Cancer Center*

Treatment of breast cancer has evolved in the past several years. The estrogen receptor has been used to select patients who are candidates for endocrine therapy. Genomic assays are currently being used to select patients who may not benefit from chemotherapy in the early stage setting. Markers such as PIK3CA mutations, PD-L1 staining, and ESR1 mutations select patients who may benefit from targeted therapies or may have resistant tumors to other therapies. Breast cancer evolves and this evolution leads to emergence of resistance.

## **Wednesday, August 7**

### **Towards Precision Medicine**

*Euan Ashley, BSc, MB ChB, FRCP, DPhil, FAHA, FACC, FESC*

*Professor of Medicine, Genetics & Data Science Director, Stanford Center for Inherited Cardiovascular Disease*

The session will introduce the concept of precision medicine, particularly with reference to clinical genomics, using specific patient examples, including from the Undiagnosed Diseases Network. Algorithmic approaches to human genome interpretation will be discussed and areas where current technologies fall short of clinical grade test quality will be highlighted. Newer

technologies such as long read sequencing and new algorithms for improving test performance in complex areas of the genome will be introduced. Finally, near term opportunities for predictive and preventive genomic medicine will be examined in the context of changing healthcare delivery environments.

## Thursday, August 8

### Extreme Molecular Diagnostics

*Carl Wittwer, MD, PhD*

*Professor of Pathology, University of Utah*

Extreme molecular diagnostics takes only seconds. With very short turn-around times, pre-analytical and post-analytical challenges are minimized, point-of-care testing makes sense, and high-throughput is not necessary. Real-time “extreme” PCR in <15-seconds (35 cycles, 60-bp human genomic DNA) is specific, sensitive, and high yield. High-speed melting analysis (4-seconds) allows single base genotyping and variant scanning. Rapid reverse transcription and sample preparation will enable sample-to-answer diagnostics in <1-minute. The value of point-of-care testing depends on how quickly it can be performed.

## Brown Bags

### Tuesday, August 6, 2019

7:30AM - 8:30AM	<a href="#">43129 Innovative, High-Throughput Methods to Identify Novel Cancer Metabolites</a>	Roundtable	Precision medicine and Oncology Mass Spectrometry	Andria Denmon, B.S., Ph.D	\$25.00
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12:30PM - 1:30PM	<a href="#">53229 Innovative, High-Throughput Methods to Identify Novel Cancer Metabolites</a>	Roundtable	Precision medicine and Oncology Mass Spectrometry	Andria Denmon, B.S., Ph.D	\$25.00
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### Wednesday, August 7, 2019

08-07-2019 7:30AM - 8:30AM	<a href="#">44130 Supporting Opioid Addiction Programs with Unexpected Testing – Ethanol Metabolite Test Development in an Appalachian Laboratory</a>	Roundtable	Toxicology/TDM Mass Spectrometry	Danyel Tacker, AA, BS, PhD	\$25.00
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08-07-2019 12:30PM - 1:30PM	<a href="#">54230 Supporting Opioid Addiction Programs with Unexpected Testing – Ethanol Metabolite Test Development in</a>	Roundtable	Toxicology/TDM Mass Spectrometry	Danyel Tacker, AA, BS, PhD	\$25.00
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an Appalachian Laboratory

## Research Highlights

## 2019 Division Abstract Awards

**Metabolomics Abstract Award Winner: Irina Kirpich, PhD: A-137 Alterations in Plasma Lipid Metabolites in Patients with Mild and Severe Form of Alcoholic Liver Disease: Correlations with the Disease Severity**

**Proteomics Abstract Award Winner: Bremansu Osa-Andrews, PhD: A-345 Novel P-glycoprotein Biosensor Technology Detects Six Anticancer Modulators of the Transporter through a Fluorescence-Based Drug Profiling**

**Monday, August 5, 2019**

2:15PM -	<a href="#">32224 Marijuana, Multiplexed Imaging, and Activity</a>	Scientific Session	Mass Spectrometry Toxicology/TDM	Robert Fitzgerald, BS, PhD	\$0.00
4:15PM	<a href="#">Metabolomics - Late Breaking Applications of Mass Spectrometry</a>			Sean Bendall, BS, PhD Gary Siuzdak, BS, PhD	

**Wednesday, August 7, 2019**

7:30AM -	<a href="#">44128 Pharmacogenomics and Mass Spectrometry in the Clinical Lab: A Fledgling Partnership</a>	Roundtable	Precision medicine and Oncology Genomics/Genetics	Grace Williams, BS, PhD	\$25.00
8:30AM					
12:30PM -	<a href="#">54228 Pharmacogenomics and Mass Spectrometry in the Clinical Lab: A Fledgling Partnership</a>	Roundtable	Precision medicine and Oncology Genomics/Genetics	Grace Williams, BS, PhD	\$25.00
1:30PM					
2:30PM -	<a href="#">34216 Liquid Chromatography-Tandem Mass Spectrometry, Advanced Topics</a>	Scientific Session	Mass Spectrometry	Brian Rappold Andrew Hoofnagle, MD, PhD Russell Grant, PhD	\$0.00
5:00PM					

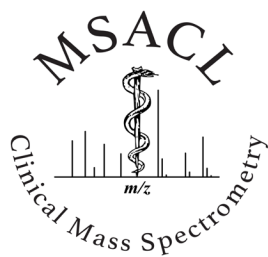
## Communicating via the Artery

By *Valentinas Gruzdys*, Artery Moderator

[June 2018 Newsletter](#)

Chair	Ravinder Jit Singh Mayo Clinic Laboratory Medicine and Pathology 200 First Street SW Rochester, MN 55905 Phone: 507-293-9571	Past Chair	Mari DeMarco St. Paul's Hospital Pathology and Laboratory Medicine 1081 Burrard Street Vancouver, BC, V6Z 1Y6 Canada Phone: 604-808-8470
Secretary	Stefani Thomas University of Minnesota 420 Washington Ave SE MCB 5-134 Minneapolis, MN 55455 Phone: 612-624-1024	Treasurer	Angela Fung St. Paul's Hospital Department of Pathology and Laboratory Medicine 1081 Burrard Street Vancouver, BC, V6Z 1Y6 Canada Phone: 604-806-8194
Nominating Committee	Danni Li University of Minnesota 420 Washington Ave SE MMC 609, Mayo D250-1 Minneapolis, MN 55455 Phone: 612-626-0299	Nominating Committee	Mark Lowenthal 100 Bureau Drive Gaithersburg, MD 20899 Phone: 301-975-8993
Awards Chair	Ashley Beasley Green NIST Biomolecular Measurement Division 100 Bureau Drive MS 8314 Gaithersburg, MD 20899-8390 301-975-4026	Member at Large	Zahra Shajani Yi Vanderbilt University School of Medicine 1301 Medical Center Drive 4918 TVC The Vanderbilt Clinic Nashville, TN 37232 Phone: 206-355-5867

## Division Sponsor



**MSACL** The Association for  
Mass Spectrometry:  
Applications to the Clinical Lab