

Message from the Chair

Dear Proteomics and Metabolomics Division member,



As 2017 comes to a close, it is a great time to review events and activities of this past year and begin planning for the new year. A highlight from 2017 was the tremendous representation of proteomics and metabolomics at the AACC Annual Scientific Meeting and Clinical Lab Expo in San Diego. Via posters, brown bags, symposia and on the expo floor, the Division was incredibly well represented. At the AACC Annual Meeting, we also hosted the Division’s Annual General Meeting (minutes found on page 3).

For the coming year, we encourage you to join our Division’s Site on the Artery to ensure you stay up to date on Division activities (see page 2 of the newsletter for details). The Artery is a great way to get more involved and learn about opportunities offered exclusively to Division members.

On behalf of the entire leadership of the Division, I want to thank you for your participation in the Proteomics and Metabolomics Division and wish you all the best in the New Year.

Sincerely,

Mari DeMarco, PhD DABCC FACB FCACB
Chair, Proteomics and Metabolomics Division

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Communicating via the Artery

By *Valentinas Gruzdis, Artery Moderator*

What is Artery?

The AACC Artery is an online community of laboratory professionals that facilitates networking, sharing of new ideas and information, and discussions of best practices.

How is the Division using the Artery?

We use our Division's site on the Artery to communicate with our members on topics including division activities, nominations, awards, and the latest scientific advancements in our field. Posting on division Artery page is also a great way to engage with other division members and communicate with the division leadership.

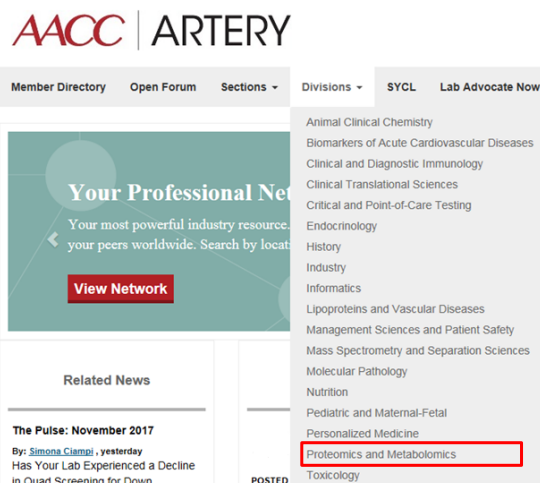
How do I keep up-to-date on Division activities and opportunities?

Sign up to receive daily Proteomics & Metabolomics Division digests:

Step 1: go to:

<https://artery.aacc.org/home>

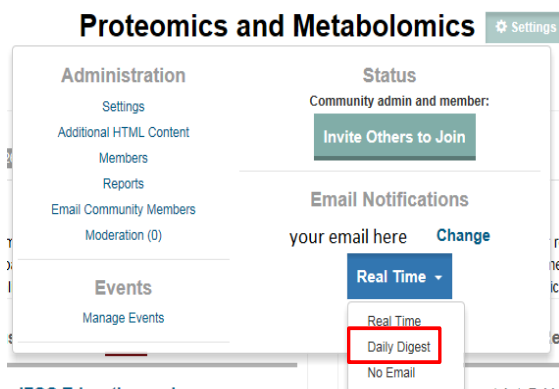
Step 2: select our division:



Step 3. click on settings:

Proteomics and Metabolomics 

Step 4: select email notifications (your preference):



Annual General Meeting Minutes

The annual general meeting for the Division took place on August 1, 2017 at the Annual AACC conference in San Diego, California.

2017 Division Leadership

Past-Chair – Michael Bennett

Chair – Mari DeMarco

Secretary – Danni Li

Treasurer – Alex Rai

Member-at-Large – Zahra Shajani Yi

Awards Chair – Ashley Beasley Green

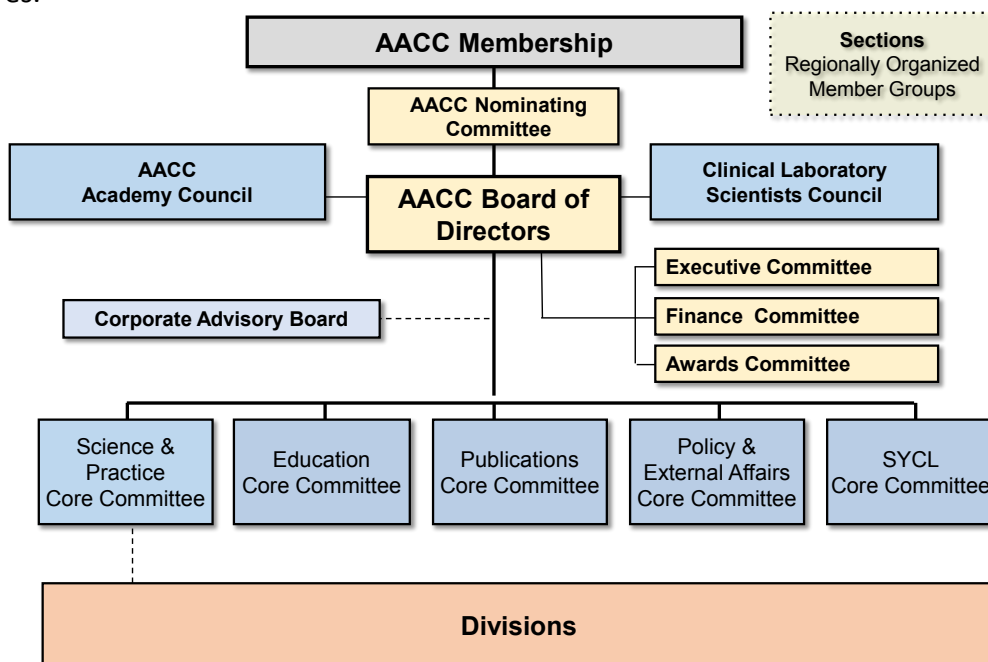
Membership Chair – Ming Jin

Nominating Committee – Erin Kaleta & Edward Leung

Artery Moderator – Valentinas Gruzdys

New AACC Governance Model

In the new model, Divisions have direct access to the Science & Practice Core Committee (SPCC). The SPCC oversees AACC’s scientific activities and the translation of science and technology into clinical practice in the field of laboratory medicine. The Committee ensures that the breadth of scientific interests of the AACC membership is represented in the association’s programs and initiatives.



Division Bylaws

We are reviewing the division bylaws with the aim of modernizing structure, fostering greater participation, and ensuring continuity of activities year-to-year. Any updates would require review by the SPCC and voting by membership. Members can access division bylaws on our website: <https://www.aacc.org/community/divisions/proteomics>

2017 Division Awards

Claire Knezevic – Abstract Award



Dr. Knezevic was awarded the 2017 Abstract Award for her work: “Development of Multiplexed Mass Spectrometry-based Assays for Urine Biomarkers of Aggressive Prostate Cancer.” With the support of the Association for Mass Spectrometry: Applications to the Clinical Lab (MSACL), in addition to the usual prize, Dr. Knezevic also received free registration to the 2018 MSACL conference in Palm Springs, California!

Photo: Dr. Knezevic accepting her award & free meeting registration.

Michael Bennett – Division Leadership Award



In 2017 Dr. Bennett began serving his term as President of the AACC. The acceptance of this post unfortunately meant that Dr. Bennett had to step-down a year early as Chair of the Proteomics & Metabolomics Division. At the 2017 Annual General Meeting, Dr. Bennett was honored for his service to the Division and ongoing leadership to the AACC community.

Photo: Dr. Bennett receiving his Division Leadership Award from Dr. DeMarco.

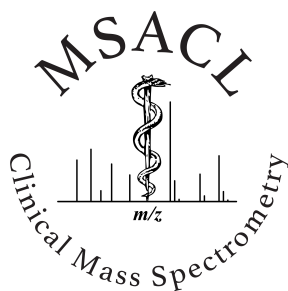
2018 Elections

Ravinder Singh – Chair-Elect



Division members recently elected Dr. Ravinder Singh as chair-elect for 2018. Dr. Singh is the Director of the Endocrinology Laboratory at the Mayo Clinic. Many of the LC-MS/MS methods he has developed are now considered reference methods, and have subsequently been utilized for method standardization efforts. He has published his work on originally developed methods including such analytes as cortisol, synthetic corticosteroids, metanephrines, estradiol, vitamin D, and urine albumin.

Division Sponsor



PROTEOMICS
AND METABOLOMICS
DIVISION NEWS

Proteomics & Metabolomics in Practice

Exosomal Proteins as Cancer Biomarkers: Application to Uveal Melanoma

By Blake Ebert and Alex J. Rai, Department of Pathology & Cell Biology, Columbia University

Melanoma is a tumor derived from transformed melanocytes, the pigment producing cells found on the surface of the body. Uveal melanoma (UM) is a rare type of non-cutaneous melanoma that arises from melanocytes in the uveal tract, forming a malignant tumor of the eye. Metastatic disease frequently involves the liver and is associated with poor outcomes – resulting almost always in death within 15 months. There is a significant deficit in our ability to diagnose early and effectively treat UM, accounting for the devastating prognosis. By advancing diagnostics to detect UM in a pre-metastatic state, we may be able to improve outcomes.

In recent years, exosomes have drawn the attention of researchers throughout the globe. Exosomes are membrane bound vesicles formed in multivesicular endosomes that carry molecules out of the cell through cellular secretion. Packaged with proteins and genetic material, fully mature exosomes possess the ability to either remain in the local microenvironment or travel long distances within the body. In ordinary cellular conditions, exosomal release and fusion is associated with normal cell growth, information exchange, cell to cell communication, and activation of certain cell-specific functions, including T cell stimulation and initiation of anti-tumor immune response.

It has been reported that tumor cells release exosomes at a higher rate than normal cells, supporting the hypothesis that tumors use these vesicles for communication, tumor cell dissemination, and metastasis initiation via transfer of vesicular contents and manipulation of the surrounding microenvironment. Further, melanoma cell-derived exosomes appear to be intricately involved in initiation, growth, pre-metastatic niche formation, and subsequent metastasis of melanoma. Thus, we hypothesize that these molecules can be used as biomarkers to diagnose earlier and better predict site of metastasis and response to chemotherapeutic agents. In addition, these vesicles are readily found in clinical samples and can potentially provide a specific protein signature allowing for the development of a diagnostic assay. UM in particular is poised to benefit most from improved detection because of the difficulty of pre-metastatic detection and severely negative outcomes associated with late diagnosis. We are initiating studies to first isolate exosomes from UM cell lysates and subsequently in clinical samples such as serum and urine. We anticipate that using proteomics analysis we will uncover biomarker candidates that can assist in the management of patients with this dreaded disease.

Upcoming deadlines & events

February 22, 2018 - Abstract submission deadline for the 2018 AACC Annual Scientific Meeting and Clinical Lab Expo

July 29 – August 2, 2018 - AACC Annual Scientific Meeting and Clinical Lab Expo, Chicago, IL