

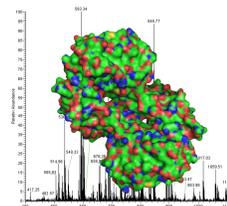
American Association for Clinical Chemistry

Proteomics and Metabolomics

Division

NEWSLETTER

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Message from the Chair: New beginnings, new frontiers

Stephen R. Master, MD, Ph.D., Chair, Proteomics and Metabolomics Division

2013 has been an eventful year for the Proteomics Division, and many long-term initiatives have finally become a reality! As we move forward into 2014, I'd like to take this opportunity to share with you some of our successes over the past year as well as the ways in which we hope to serve the needs of Division members as we progress into the future.

Perhaps the most significant development for our Division over the past year has been the approval of our name change by AACC Board. As of January 1, 2014, the Proteomics Division will officially become the "Proteomics and Metabolomics Division", thus expanding the mission that was originally undertaken when the Division was established almost a decade ago. Interestingly, the original Proteomics Division bylaws were written to encompass broad discussion of multianalyte measurements, so--rather than looking on this as a new direction--it may be that we are only now fulfilling the full vision of our founding members! In any case, this change comes at the end of a long process that was started last year under past chair Steve Wong, and it has continued through this year with a vote of our membership, approval by the AACC Division Management Group, and ultimate approval by the AACC Board.

In this Issue:

Message from the Chair

Contributions

Annual Meeting Lunch Photos

MSACL 2014

AACC Emerging Technologies 2014

NCI

There are several compelling developments that have led us to make this change. First, it has become clear over the past several years that proteomics and metabolomics share many of the same analytical platforms and challenges. For example, mass spectrometry has emerged as a primary technology used for both proteomic characterization as well as broad assessment of metabolite changes. This is true not only at the biomarker discovery stage, but also in the targeted measurement of analytes. Indeed, the use of triple quadrupole mass spectrometry to

measure individual metabolites and small molecules is now well entrenched in the clinical laboratory, and the expansion of this approach to encompass peptides and proteomics has only happened more recently. Proteomics and metabolomics will continue to mutually inform and enrich each other in this way, and we look forward to having our Division facilitate and encourage this interaction. Similarly, the bioinformatics challenges required to measure, compare, and validate biomarker panels demonstrate remarkable overlap between proteomics and metabolomics, and combining forces between disciplines may even lead to the development of composite diagnostics that embrace both fields. Finally, it is important that AACC serve its metabolomics members formally at the Division level. Until this change there was no official Divisional “home” for metabolomics, and we are tremendously excited to expand the Proteomics Division in this way. By combining forces and expanding our membership, we believe that our Division can make significant progress in advancing the field of clinical laboratory medicine.

Our Division has been busy in many other ways over the past year. Many of you are aware of our longstanding efforts to organize a biomarker discovery conference in cooperation with other AACC divisions. Under the leadership of Jim Ritchie and in collaboration with the Molecular Pathology, Clinical Translational Science, and Clinical and Diagnostic Immunology Divisions, a working group consisting of representatives from our four divisions spent significant time to develop a standalone meeting addressing emerging topics of mutual interest. The 2012 release of the Institute of Medicine “Omics” report suggested that a timely discussion of biomarker development issues within the Clinical Chemistry community would be of great benefit. Through a gracious offer by Dave Herold and the Mass Spectrometry Applications in the Clinical Laboratory (MSACL) group, we were able to organize the first MBDxA (Molecular biology diagnostic applications) meeting as a satellite meeting of MSACL. This meeting met and exceeded our scientific expectations, and our Division is extremely grateful to Dave and Chris Herold for making this possible. Additionally, in recognition of the success of this event, the AACC Divisional Management Group presented our four divisions with DMG Annual Awards for “Advancing the Profession of Clinical Chemistry.” Hopefully this will serve to set the stage for further scientific collaborations between AACC divisions as we look to 2014.

In addition to MBDxA, our Division sponsored a number of sessions during the AACC 2013 Annual Meeting. These included 3 short courses (“Advanced Applications of Molecular Diagnostics and Pharmacogenomics in Targeted Therapeutics”, “Bioinformatics for Clinical Chemists”, “Quantification of Proteomics by LC-MS”) as well as 3 symposia (“Oral Fluid as an Alternate Specimen for Workplace, Clinical and Forensic Toxicology”, “Advancing Clinical Proteomics through High Quality Discovery Research”, “Proteomic and Metabolomic Biomarkers for the Clinical Laboratory: Shared Goals, Common Strategies”). We also had a number of outstanding abstracts presented for awards consideration by the division, and particular congratulations are extended to this year’s winner, Maria Willrich (Mayo Clinic), for her poster “Infliximab measurement in serum using selective reaction monitoring LC-MS/MS”. One of our awards committee members specifically commented to me on the substantially increased number of high-quality proteomics posters this year, and we are all excited to see the field mature and move into an increasing number of clinical labs.

The finances of the Division have remained stable. We have been able to simultaneously conserve funds as well as execute some of the strategic goals for our Division with respect to interdivisional interaction. Specifically, our luncheon at the Annual Meeting held in conjunction with the Molecular Pathology Division (see report later in this issue) was a great success that allowed for wonderful conversations between the two groups. Better yet, we were able to utilize some of the resources that were saved from this combined event to support speaker travel for the MBDxA meeting.

As I close this brief report, I'd like to thank the officers for their tremendous service to the Division over the past year. Steve Wong has continued to serve as our past Chair while simultaneously assuming his new role as President-Elect of AACC, and many of our successes this year are directly attributable to his leadership and guidance of the division. Andy Hoofnagle served as chair elect and treasurer, and Yusheng Zhu has now completed his first year as secretary. Yan Zhang and Alex Rai have filled an important role on the Executive Committee as members at large, and Mark Marzinke and Jerry Yeo have continued to ensure the ongoing success of the division as nominating committee members. Alan Rockwood serves the executive committee as membership chair, and Jim Ritchie continues to contribute not only as head of the awards committee but also as leader of the multidivisional working group. We are looking forward to the imminent election of our new Treasurer, and I have also asked Dennis Dietzen to advise the Divisional leadership as we build Metabolomics within the AACC. Working with each of these officers and members has been a real privilege, and I look forward to continued success in 2014!

...and Happy Holidays to all!

Contributions

If you are interested in contributing articles or news to the Division Newsletter, or even if you simply have an idea for topics (e.g. LDT regulation) or forums (e.g. social media sites) that would be of use to the AACC proteomics community, please contact Steve Master (srmaster@mail.med.upenn.edu).

Divisional Lunch 2013

Report by Yan Zhang, Member at Large

The Molecular Pathology Division & Proteomics Divisions had a combined luncheon on Tuesday, 7/30/13, 12p-2p, at Hilton Americas-Houston during the AACC Annual Meeting in Houston, TX. We had a great attendance for the luncheon.

Drs. Alex J. Rai and Stephen Master, the chairs of Molecular Pathology Division and Proteomics Division, respectively, presented the division reports. The meeting provided a great discussion



of the directions being taken by the two divisions and the ways in which collaborations between



these two divisions can be enhanced in the future. In addition, the meeting discussed the reasons for adding metabolomics, another rapidly growing field with potential applications in the clinical settings, to the Proteomics Division. There was also a good discussion of ways to enhance the interaction between our division members and the Journal of Clinical Proteomics.



The audience provided very valuable input during the meeting. Several board members provided the annual reports. Dr. Andrew Hoofnagle (treasurer) gave an update on the financial state of the Division.

Henry Rodriguez, Director of Office of Cancer Clinical Proteomics Research at National Institutes of Health, presented his view on the future development between AACC and NIH in cancer clinical proteomics research. The meeting ended with the introduction of our new board members



Photos (clockwise from top left): Alex Rai (Columbia University), Stephen Master (Univ. of Penn.), Andy Hoofnagle (Univ. of Washington), Henry Rodriguez (NCI, NIH), lunch attendees, lunch attendees

MSACL 2014

As discussed in the chair's message (above), our Division was pleased to be involved with MSACL for the satellite MBDxA meeting in 2013. While MBDxA planning is underway for 2015, the MSACL (Mass Spectrometry Applications in the Clinical Laboratory) conference will be held in San Diego, CA from March 1-5, 2014. As has been the case in this past, this highly successful conference has content planned that is of significant interest to both the metabolomics and proteomics communities. Planned topics include:

1. Disease Markers
2. Fundamentals : General
3. Fundamentals : Metabolomics
4. Fundamentals : Microbiology
5. Fundamentals : Proteomics
6. ICP-MS
7. Imaging
8. Inborn Errors of Metabolism
9. Metabolomics
10. Microbiology/Virology
11. Molecular Diagnostics
12. New Advances
13. Occupational and Environmental Health
14. Pain Management
15. Proficiency Testing
16. Proteomics
17. Regulations & Standards
18. Sample Prep & Automation
19. Small Molecule Analytes
20. Tissue Analysis
21. Tobacco Exposure
22. Toxicology
23. Translational Mass Spec

This promises to be an outstanding meeting, and we look forward to continuing the good relationship between MSACL and the AACC. For more information, including a registration link, please consult www.msacl.org.

Emerging Clinical and Laboratory Diagnostics: The Portable Lab

Also of interest to Proteomics and Metabolomics Division members... The historic AACC Oak Ridge Conference has now become “Emerging Clinical and Laboratory Diagnostics”, with a continued emphasis on new technologies for the clinical laboratory. This year’s conference will be held in San Jose, CA from April 24-25, 2014. The theme of this conference is “The Portable Lab”, with discussion of both analyte measurements as well as data analysis. The marriage of point of care devices to “big data” analytical techniques has profound implications for the delivery and informatic processing of proteomic and metabolomic measurements, and this conference provides an ideal window into emerging issues for our members. Be sure to strongly consider attending this event! More information is available on the AACC website at: <http://www.aacc.org/events/meetings/Pages/8715.aspx>

NCI/CPTC

As a reminder to those who may be new to our group, the AACC Proteomics Division has been engaged with the NCI in a long-term partnership that has been formalized through an memorandum of understanding between NCI and AACC. One tangible way in which this has moved forward has been in the integration of clinical chemistry expertise into NCI proteomic efforts, including the Proteome Characterization Centers funded by the NCI CPTAC program under the direction of Henry Rodriguez. For further information about work supported by CPTAC, including funding opportunities as they develop as well as links to publications reflecting CPTAC-supported work designed to rigorously evaluate emerging technologies for proteomic measurement, visit the web site at:

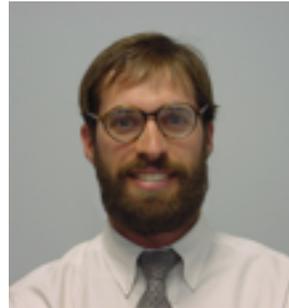
<http://proteomics.cancer.gov>

2013 AACC Proteomics Division Officers



Chair

Stephen Master, MD, PhD.
Pathology and Laboratory Medicine
University of Pennsylvania
Phone: 215-898-8198
srmaster@mail.med.upenn.edu



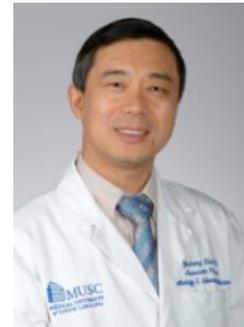
Chair Elect / Treasurer

Andy Hoofnagle, MD, PhD
University of Washington
Laboratory Medicine
ahoof@u.washington.edu



Past Chair

Steven Wong, PhD.
Wake Forest University School of Medicine
Phone: 336-716-2639 Fax: 336-716-7595
shwong@wakehealth.edu



Secretary

Yusheng Zhu, PhD
Pathology and Laboratory Medicine
Medical University of South Carolina
zhuyu@musc.edu



Member at Large

Yan Zhang, PhD.
Pathology and Laboratory Medicine
University of Rochester Medical Center
Yan1_Zhang@URMC.Rochester.edu



Member at Large

Alex Rai, PhD.
Columbia University Medical Center
Pathology and Cell Biology
ajr2170@columbia.edu

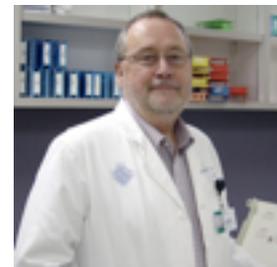


Membership Committee Chair

Alan Rockwood, PhD
ARUP Laboratories
Phone: 801-583-2787 x2830
rockwoal@aruplab.com

Nominating Committee

Mark Marzinke, JHU
Jerry Yeo, U. of Chicago



Awards Committee Chair

James Ritchie, PhD.
Emory University Hospital
Pathology & Laboratory Medicine
Phone: 404-712-7178 Fax: 404-712-4780
jritchi@emory.edu