Welcome to the fourteenth issue of our Divisional Newsletter. This special issue is dedicated to the 2018 Association for Molecular Pathology (AMP) Annual Meeting & Expo, which was held this past November in San Antonio, TX. Numerous members of the PCD traveled across the country to share our projects and results with the Molecular Pathology community. Pages 2 & 3 in this Newsletter highlight the presentations and posters representing the tremendous amount of work that is going on in our Division.

I would like to personally commend our previous fellow Paul Hess, MD, PhD, on delivering a platform presentation, which was selected by the AMP committee from the abstract submissions.

Although the annual meeting was primarily focused on educational purposes, we dedicated a bit of time to come together and celebrate our achievements. On the evening of November 1st, members from Penn & CHOP convened at a nearby restaurant, Casa Río, for a social event. The event was well attended, at a popular location on the River Walk and all had a great time. Make sure to take a look at photos inside this issue.

I am very proud of our division members and their contributions to the meeting this year. The efforts put forth towards posters and presentations was rewarded in how well-received they were at the meeting. I look forward to an even more successful meeting featuring our divisions accomplishments in the fall of 2019.

I hope you all enjoyed the Holidays and I am looking forward to another exciting year!

Kojo Elenitoba-Johnson, MD
1. Saffoora Dehlami, MS: Variant Characterization for a Clinical Lymphoma Sequencing Panel
2. Nya Nelson, MD, PhD: A limited FISH panel is a useful surrogate for metaphase analysis to rapidly identify patients with AML-MRC
3. Amanda Oran, PhD: Validation of a Low Input Targeted NGS Assay for Lymphoma Across Multiple Specimen Types
4a. Robyn Sussman, PhD: Mutational Signatures Differ Between Cytogenetic Risk Groups of De Novo AML
5. Siddharth Bhattacharyya, MD: Standardization of FLT3-ITD Mutation Allelic Ratio Reporting in the Clinical Laboratory Setting
6a. Priya Velu, MD, PhD: Routine Clinical Monitoring of Disease Status Through NGS Measurement of Clonal Architecture in AML and MDS

6b. Priya Velu, MD, PhD: Histomorphometric Features of Nuclei Architecture and Morphology in Digitized H&E Images Correlate with Mutations in EGFR and KRAS in Early Stage Non-small Cell Lung Cancer
7a. Carmela Paolillo, PhD: Clinical Validation of a Fusion Transcript Next-generation Sequencing (NGS) Panel for Sarcomas and Solid Tumors with Diagnostic, Prognostic and Therapeutic Value
7b. Carmela Paolillo, PhD: Quality Before Input: Validation of a NGS Assay with Respect to Input and Degradation
8. Chris Orr, PhD: Clinically Validated Fusion Transcript Panel Identifies TERT Fusions

9. Jeremy Adler, MD, PhD: Interpretation of Mutational Signatures Associated With Smoking from an Amplicon-Based Clinical Oncology Sequencing Panel
10. Ashkan Bigdeli, MS: Identification of Germline Mutations in Tumor DNA Samples Absent a Matched-Normal
11. Claire Cirelli: Improving the Molecular Pathology Workflow with Machine Learning: Automated Calculation of Tumor Percentages on H&E Digital Whole Slide Images
12. Akshay Chitturi, MS: Dual-Assay Demultiplexing with Preferential Read Allocation and Unequal Index Size Presents Bioinformatics Challenges
* Paul Hess: Assessing Cancer Diagnosis From Clinical Genomics Data Using Machine Learning-Platform Presentation (image on cover page)


14. Johnathan Belman, MD, PhD: Optimizing RNA Extraction to Facilitate BCR/ABL1 Quantitative Testing
4b. Robyn Sussman, PhD: Dual Extraction of DNA and Total Nucleic Acid (TNA) from Single Specimens Enables Evidenced-based Therapeutic Strategy for Minute Samples
15. David Lieberman, MS: Suitability of Formal-2000 Decalcified Paraffin Embedded Tissue for Fluorescence in situ Hybridization (FISH) and Next-generation Sequencing (NGS)

16. Salvatore Priore, MD, PhD: Standardized Protocol for Handling Quality or Quantity Not Sufficient (QNS) Samples in an Academic NGS Laboratory
17. Jason Rosenbaum, MD: Virtual Case Sets for Genomics Education: Thinking Outside the Slide Box
18. Mohsen Hosseini, MD, PhD: Molecular Diagnosis of Graft-versus-Host Disease after Liver Transplantation: an Institutional Experience
"What impressed me the most about AMP probably was the collective experience, as opposed to one specific encounter. The diversity of topics and the strength of the science and the medicine represented within each topic created a rich environment with great relevance to healthcare impact. People were very nice and collegial, creating an impressive atmosphere both professionally and academically." - Jonathan Belman, MD PhD

AMP EXPERIENCES

"I really enjoyed it."  
- Sai Priore, MD PhD

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"AMP was such a great opportunity to catch up with all of our vendors, colleagues and collaborators in one event. I took care of a lot of loose ends on projects with both vendors and collaborators, and had a lot of interesting feedback on our work that was presented in posters as well. I especially liked discussing lab workflows with collaborators and hearing how other institutions share the same challenges that we do. We hear from our clinicians that institution X is able to do this, how come you can’t? But in reality, institution X is really struggling to make that a reality just like we are." - Robyn Sussman, PhD

1953
Watson Crick model of DNA

1983
PCR invented

1989
National Center for Human Genome Research started

1995
Association of Molecular Pathology founded

2000
First version of human genome sequence

2005
Commercial introduction of NGS

Present and former members of Penn Medicine and the Children’s Hospital of Philadelphia convened at Casa Rio.

THANK YOU VIVIANNA, CODY, AND JACKIE FOR PLANNING THE SOCIAL EVENT