AMP Association for Molecular Pathology

NOVEMBER 1-3, 2018

Henry B. Gonzalez Convention Center
San Antonio, TX, USA

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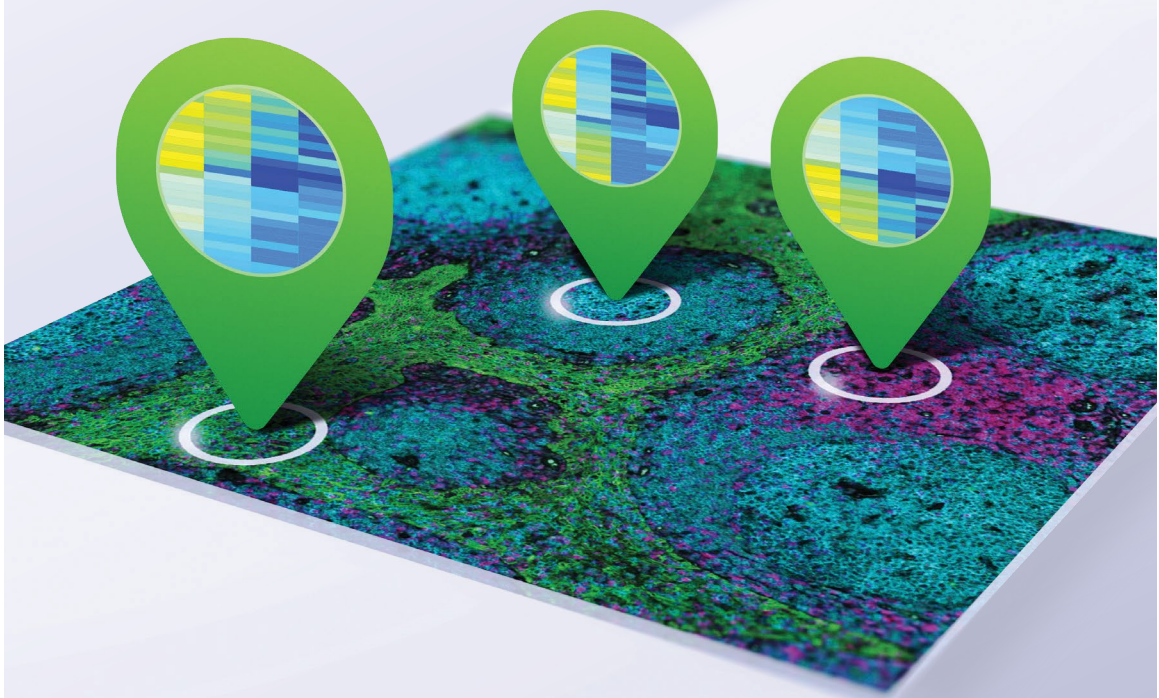

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AMP Association for Molecular Pathology

6120 Executive Blvd, Suite 700 • Rockville, MD 20852
301-634-7987 • amp@amp.org

Welcome to the 2018 Association for Molecular Pathology Annual Meeting & EXPO!

It is my honor and great pleasure to welcome you to the 2018 AMP Annual Meeting and Expo. The theme of our meeting this year is **"Precision Medicine Starts Here"**. The Precision Medicine Initiative of the National Institutes of Health defines precision medicine as "an emerging approach for disease treatment and prevention that takes into account individual variability in genes, environment, and lifestyle for each person." For an increasing number of diseases across a wide variety of medical specialties, the one-size-fits-all approach to patient diagnosis and treatment is becoming obsolete. As molecular pathology professionals, we lead the way in developing and applying new technologies to achieve the best patient care and outcome in this rapidly evolving field. We also play a vital role in educating our clinical colleagues, lay public, and elected officials of the value of the critical work that we do.

Our Program Committee has worked hard to plan this year's program. A major goal was to invite outstanding speakers whose work would be of broad interest across subdivisions, which we hope will encourage dialogue and foster discussion among attendees who work in different areas of molecular pathology. We believe that we have succeeded.

One of those outstanding speakers, the recipient of the AMP Award for Excellence in Molecular Diagnostics, Dr. Jonathan Rothberg, will talk on "Reimagining Healthcare: Next Generation DNA Sequencing to Ultrasound-on-a-Chip." Dr. Rothberg is recognized for his pioneering work in genomics, proteomics, and the development DNA sequencing technologies. He is also an entrepreneur who has founded several major biotechnology companies, whose technology we use daily in our molecular diagnostics laboratories.

Planning and assembling a program for the annual meeting takes tremendous effort from the Planning Committee and the AMP staff. It is, without a doubt, a team effort. Chairing this committee is the easy part. The real work is done by the committee members and AMP staff. In addition to biweekly teleconferences to plan the program content, the committee members spent many additional hours identifying and inviting exciting speakers. I would like to recognize all of the subdivision committee members: Linda Jo Bone Jeng and Elaine Spector (Genetics), Eric Duncavage and Lynn Wang (Hematopathology), Belinda Yen-Lieberman, Jennifer Dien Bard, and David Hillyard (Infectious Diseases), Somak Roy and Matthew Lebo (Informatics), Lynette Marie Sholl and Christina Lockwood (Solid Tumors), Lynne Whetsell and Fernanda Sabato (Technical Topics), and Neal Lindeman, the incoming Program Chair. AMP committee members/volunteer groups are shaping and leading the field. Check out the many accomplishments and ongoing projects by reading the AMP Committee Reports on the AMP Website (**https://www.amp.org/about/committees/**) or in the **Annual Meeting & Expo Mobile App**.

I would like to continue to extend my thanks to the AMP staff. They are models of organization, efficiency, and grace under pressure. Special thanks go to Sara Hamilton and Teniola Ayeni, who guided and supported the committee through the entire process of creating the program. Their expertise was invaluable. They coordinated and facilitated the teleconferences, organized the program, and kept us on task, which was not always easy. Many thanks also go to Lucia Barker and Kathleen Carmody, who coordinated the abstract submission and review processes. I also extend my sincere thanks to Tara Burke, Elisabeth Campbell, Eriko Clements, Rhonda Jenkins, Jon Korman, Laurie Menser, Andy Noble, Mrudula Pullambhatla, TaNika Switzer, Robyn Temple-Smolkin, Sarah Thibault-Sennett, Michele Zink, and Mary Steele Williams.

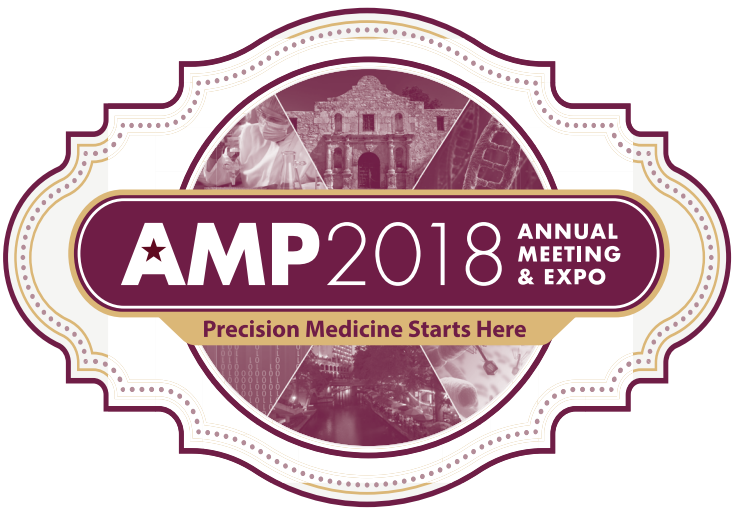
I would also like to thank our corporate sponsors and exhibitors, who have helped support our 2018 meeting. I would encourage you to attend our Corporate Workshops on Wednesday, October 31, to learn about the newest technologies in our rapidly evolving field. Finally, many thanks to our attendees and the entire membership for making our meeting the premier gathering of molecular pathology professionals. This is THE place to network and get connected and involved. Please take advantage of everything the Annual Meeting & Expo has to offer.

Have a great time in San Antonio, y'all!

From the 2018 Program Committee,

Lynne V. Abruzzo

Lynne V. Abruzzo, MD, PhD
2018 Program Committee Chair



NOTES

Bristol-Myers Squibb: at the forefront of Immuno-Oncology research

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At Bristol-Myers Squibb, we recognize pathologists play a crucial role in furthering advancements that may help predict which patients are likely to benefit from Immuno-Oncology therapies.

To learn more, visit us at **Booth 924** at the Association for Molecular Pathology Annual Meeting in San Antonio, November 1–3, 2018

The sponsor of this ad verifies that they had no input into decision making regarding selection of educational programs, content, or faculty for this 2018 Annual Meeting.

For more information, please visit **IOHCP.com** and our YouTube channel at **youtube.com/bmsIOresearch**.

Bristol-Myers Squibb

Immuno-Oncology

GENERAL INFORMATION

GENERAL INFORMATION

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AMP 2018 Annual Meeting & Expo
Code of Conduct

The Association for Molecular Pathology (AMP) is committed to providing a friendly, safe, and welcoming environment for all, regardless of gender, sexual orientation, disability, race, ethnicity, religion, national origin, age, gender identity, or any other demographic group. We expect all attendees, media, speakers, AMP staff and volunteers, venue staff, contractors, guests, and exhibitors to help us ensure a safe and positive annual meeting experience for everyone.

While we cannot influence behavior outside of the official AMP annual meeting hours, we expect all participants at the AMP 2018 Annual Meeting & Expo to abide by this Code of Conduct in all venues, including ancillary events and all social gatherings. All participants are responsible for their own conduct. Anyone who is the recipient of unacceptable behavior should feel free to speak up without any fear of recrimination.

- AMP holds its collegial community in high value. Do your part to give everyone you encounter an enjoyable experience so they remember you and the meeting favorably.
- Exercise consideration and respect in your speech and actions.
- Abstain from all demeaning, discriminatory, or harassing behavior and speech.
- Respect the fact that slides and posters may include unpublished work so do not photograph them without the presenter's express permission.
- Be mindful of your surroundings and of your fellow participants. Alert Security Personnel or call 911 if you notice a dangerous situation or someone in distress.
- Notify AMP Staff of any violation of this Code of Conduct that you experience or observe.

Unacceptable Behaviors

Unacceptable Behaviors Include:

- Intimidating, harassing, abusive, discriminatory, derogatory or demeaning speech or actions
- Harmful or prejudicial verbal or written comments, jokes, or visual images related to gender, sexual orientation, disability, race, ethnicity, religion, national origin, age, gender identity, or any other demographic group
- Use of provocative and/or sexual images, including in presentation slides and exhibit booths
- Deliberate intimidation, stalking, or following
- Harassing photography

- Photographing slides of oral presentations and posters without the express permission of the presenter/author
- Recording of scientific and other sessions without the express permission of the presenter(s)
- Undue disruption of scientific sessions or other events
- Unwelcome and uninvited attention or contact
- Physical assault, including unwelcome touch or groping
- Real or implied threat of physical harm
- Real or implied threat of professional or financial damage or harm

What to Do if You Observe or Experience Conduct that Violates this Code:

Please contact the nearest AMP or Security Staff. All reports will be kept confidential to the extent possible. If you believe the situation is an emergency, call 911.

AMP Staff will help participants contact convention center/hotel/venue security or local law enforcement authorities, and otherwise assist those experiencing conduct that violates this Code. We value your attendance, and want your experience to be professionally rewarding and personally enjoyable.

Consequences of Unacceptable Behavior

Unacceptable behavior from any participant at the AMP 2018 Annual Meeting & Expo, including attendees, media, presenters, AMP staff and volunteers, venue staff, guests, and exhibitors, will not be tolerated. Anyone asked to stop unacceptable behavior is expected to comply immediately.

If a participant engages in unacceptable behavior, the AMP Executive Director will determine appropriate action to be taken immediately, if any, which may include expulsion from the AMP 2018 Annual Meeting & Expo, without refund, and/or contacting local law enforcement authorities. The Board of Directors may consider the matter for additional action.

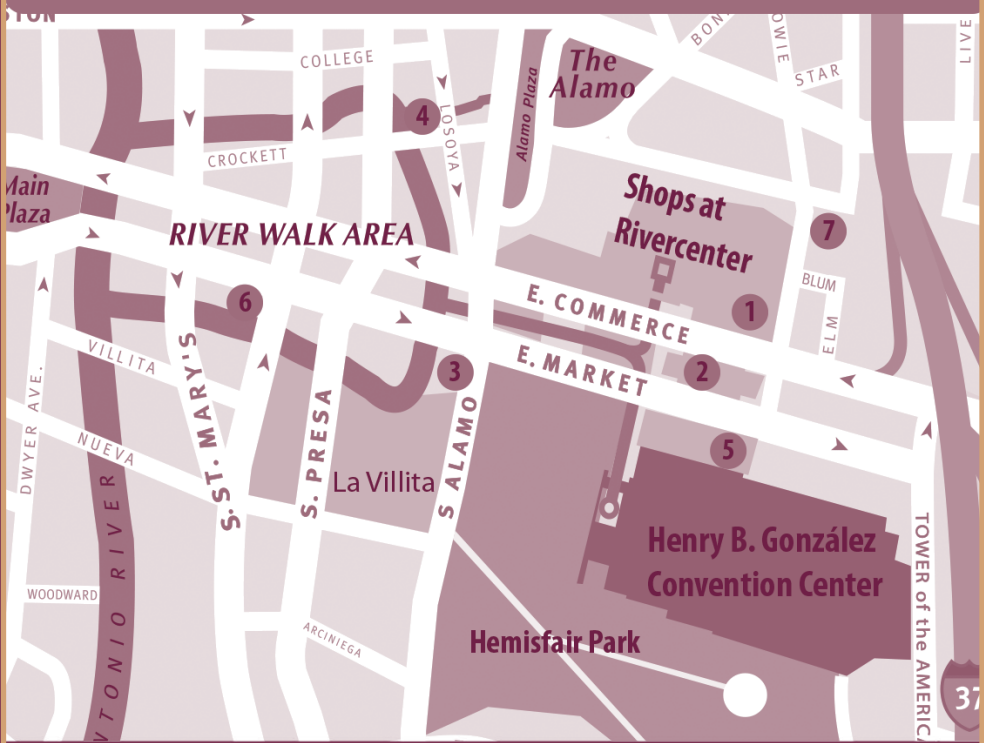
See also the ***AMP Scientific Integrity Policy for Submission of Abstracts*** available in the Abstracts/Posters section of the AMP 2018 Annual Meeting & Expo website.

San Antonio Downtown Map

For more maps and information about downtown San Antonio, visit
http://visitsanantonio.com

AMP 2018 Annual Meeting & Expo Hotel Map

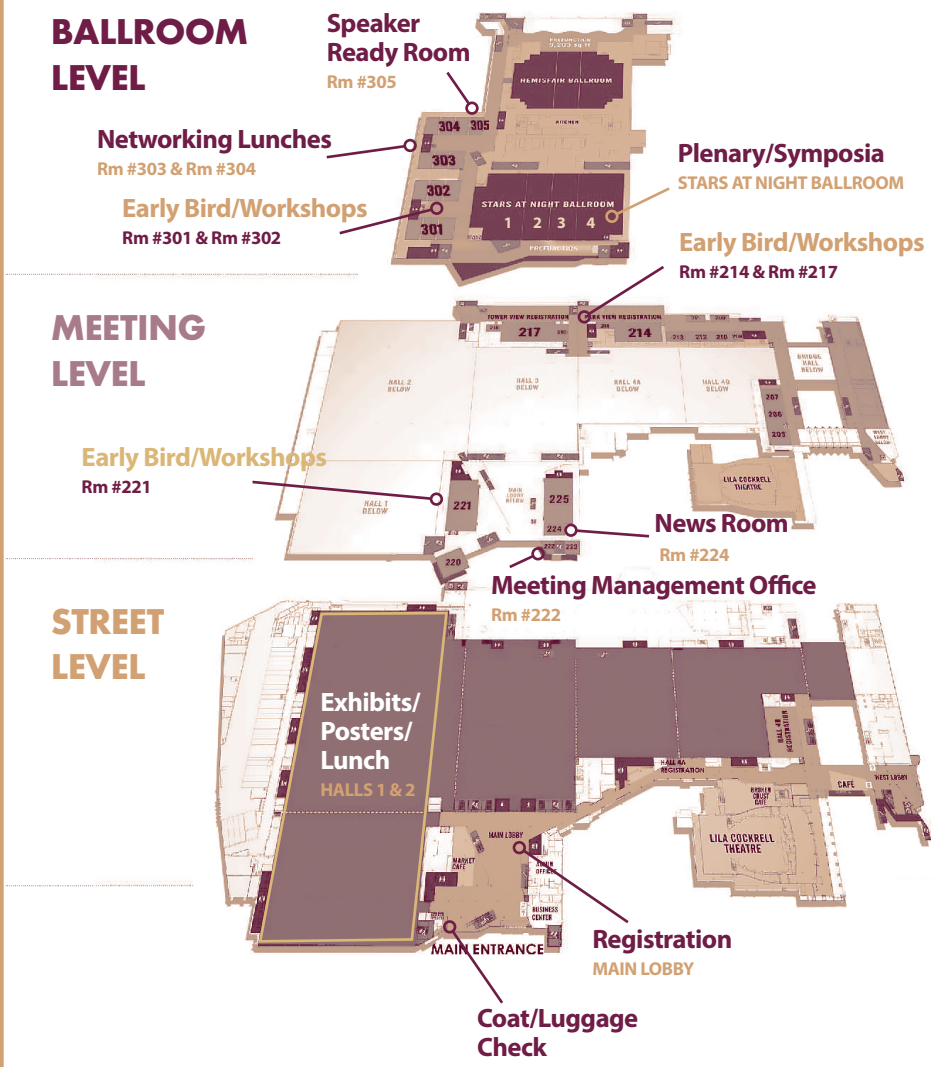
1. San Antonio Marriott Rivercenter..... 101 East Bowie Street
2. San Antonio Marriott Riverwalk.....889 East Market Street
3. Hilton Palacio del Rio.....200 South Alamo Street
4. Hyatt Regency San Antonio Riverwalk.....123 Losoya Street
5. Grand Hyatt San Antonio.....600 East Market Street
6. The Westin Riverwalk.....420 West Market Street
7. La Quinta Inn & Suites.....303 Blum Street



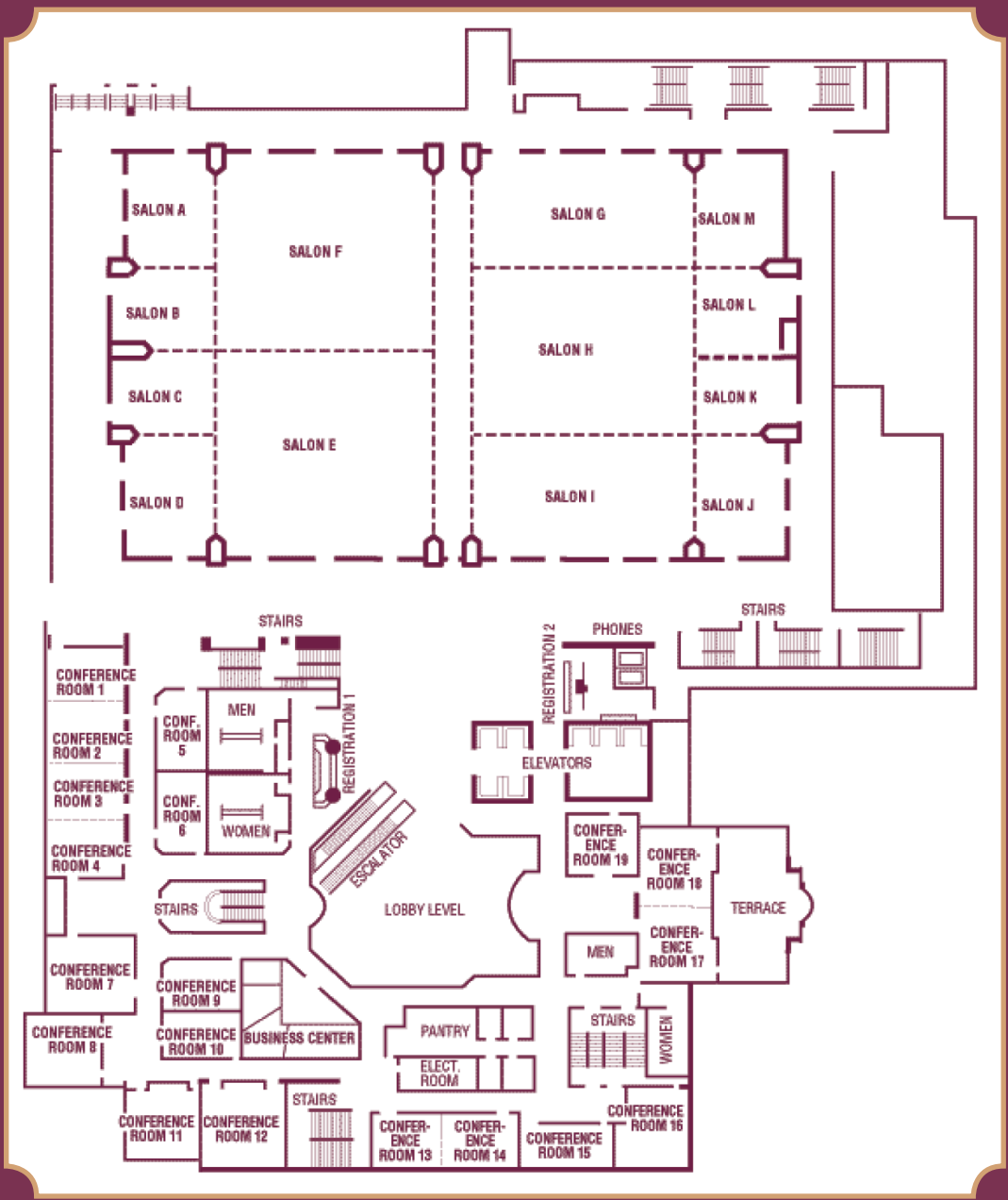
VISIT SAN ANTONIO

*Convention Center and AMP Hotels are highlighted

San Antonio
Henry B. Gonzalez Convention Center



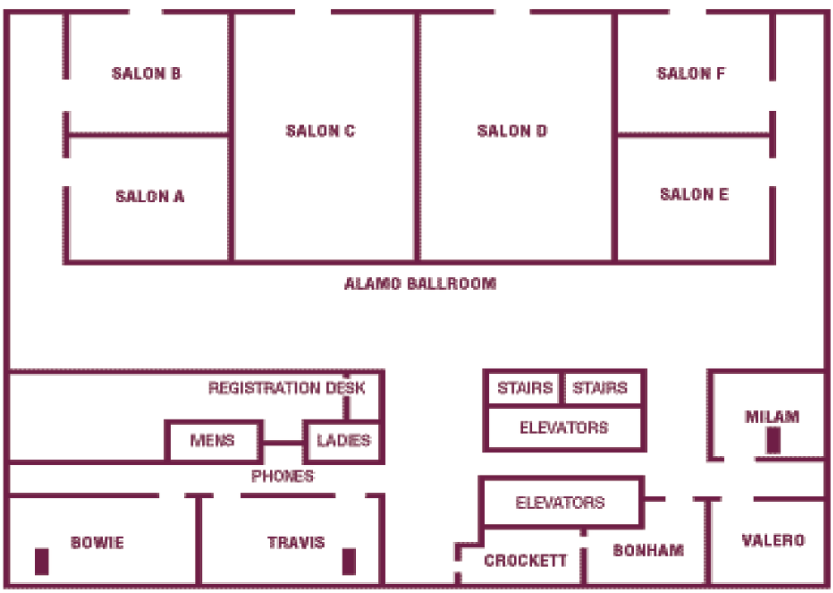
San Antonio
Marriott Rivercenter Floorplan



San Antonio
Marriott Riverwalk Hotel Floorplan

SECOND FLOOR
BALLROOM LEVEL

MARRIOTT



FIRST FLOOR

Highlights & General Information

Attendee/Exhibitor Registration Desk Hours

(Convention Center, Main Lobby, Street Level)

Tuesday, October 30	2:00pm – 6:00pm
Wednesday, October 31	7:00am – 5:00pm
Thursday, November 1	6:45am – 5:00pm
Friday, November 2	6:45am – 5:00pm
Saturday, November 3	6:45am – 2:00pm

Exhibit Hall Hours

(Convention Center, Exhibit Hall 1&2, Street Level)

Thursday, November 1 *(Welcome Reception in the Exhibit Hall)*	11:30am – 4:30pm
	5:45pm – 7:00pm
Friday, November 2 *(Appointment only demos 4:00pm – 5:00pm*)*	9:00am – 4:00pm
Saturday, November 3 *(Appointment only demos 8:00am – 9:00am*)*	9:00am – 1:30pm

** Appointment only demo times are specifically for exhibitors and their invited guests (Registered Attendees or Official Guests of Exhibitors) to conduct demos in a quieter atmosphere than during regular Exhibit Hall hours.*

AMP Meeting Paths

Want to create your own Path? AMP Meeting Paths are a convenient way to tailor your meeting experience around the content you most want to see. The 2018 Program Committee has carefully examined the scientific program and identified seven paths that will direct you to sessions based on your favored area of interest.

2018 Meeting Paths Key:

A = Advocacy/Lab Management Path
C = Cancer/Oncology
E = Education & Professional Development
ID = Infectious Diseases
IF = Informatics
IC = Inherited Conditions
M = Molecular Methodologies & Technologies

You can search the Program Listing on the Mobile App to find sessions included on your preferred Path.

Highlights

❋ Welcome Reception – Supported by QIAGEN

Please join us for the Welcome Reception in the Exhibit Hall, immediately following the scientific program on Thursday, November 1st from 5:45pm - 7:00pm. Help us kick-off another successful Annual Meeting & Expo while networking with your friends and colleagues. This event is open to all registered Meeting Attendees.

❋ AMP Trainee Happy Hour

Sponsored by the AMP Jeffrey A. Kant Leadership Fund

Join us in AMP Trainee Happy Hour on Wednesday October 31 from 7:00pm – 8:00pm! This is your chance to connect with other AMP trainees over great food and drinks at a local San Antonio bar. All registered trainees are welcome and will receive a ticket that they may use at Margaritaville (849 E Commerce St, San Antonio, TX 78205), in exchange for a free drink! Your drink ticket will be included on your badge sheet when you check-in for the Annual Meeting & Expo.

❋ AMP Central

Visit AMP's booth in the Exhibit Hall, centrally located just past the main entrance to the hall. AMP Central features unique programming including career networking opportunities and the chance to meet current committee members. AMP Central is the best place to learn about all that AMP does and find out how you can get involved! For details on AMP Central Events, see event listings throughout this program.

❋ Networking Lounge/Speed Networking – NEW!

Sponsored by Membership Affairs Committee

The AMP Membership Affairs Committee invites you to enjoy this brand new feature of the AMP Exhibit Hall. Visit Booth #1923 in Aisle 19 to utilize this casual networking space throughout the meeting. During lunch on Friday (11:45am – 1:00pm) and Saturday (12:15pm – 1:30pm), this space will feature 30-minute long speed networking sessions. This is a fantastic opportunity to meet new colleagues and friends who share your interests. Visit booth #1923 to sign up for this new event!

❋ Innovation Spotlight Stages

Now in its 3rd year, this crowd favorite returns with a new and creative format. This year's Innovation Spotlight Stages will continue to provide a unique opportunity for exhibiting companies to showcase products or services, but this year the Stages will also feature cutting-edge AMP produced content. The TWO Innovation Spotlight Stages are located in the main cross aisle on the right and left corners of the Exhibit Hall. Innovation Spotlight presentations are open to all Meeting Registrants and seating will be on a first come, first served basis. Schedules for this program are available in your meeting bag, on the Mobile App or on signage located outside the seating of each Stage.

❋ Business & Awards Session

AMP invites all Meeting Attendees to attend the AMP Business & Awards Session on Friday, November 2nd at 5:15pm. Come hear how AMP is working hard to help you advance patient care. A number of awards, including the Young Investigator, Technologist and the Jeffrey A. Kant Leadership Award are presented at this session.

❋ AMP 2018 Social Event

The AMP Social Event will take place on Friday, November 2 at 7:00pm at the Marriott Rivercenter, Grand Ballroom, Salon EF. The Social Event is intended to facilitate networking opportunities between trainees, new, and long-standing AMP attendees. There will be mingling, dancing, amateur acts and great food! Attendees who purchased tickets when registering for the meeting will receive their ticket when they check-in at the registration desk for their name badge. If any tickets are still available for sale, they may be purchased at the Registration Desk.

General Information

❋ Mobile App

The AMP 2018 Mobile App is available for your Android, iPhone and other mobile devices. The AMP Mobile App is a robust tool allowing you to plan your meeting experience in advance and allows you to get instant updates onsite! AMP thanks **Bayer** for its generous support of the AMP Mobile App. Please go to *https://amp18.amp.org/program/mobile-app/* for more information or just scan the QR code to download it now!

❋ Abstracts

Please refer to the Poster section of the Program for more information on the Poster Map, Poster Listings and Author Index. The abstracts have been published in the November 2018 issue of The Journal of Molecular Diagnostics (JMD). This issue is in your meetings bags. They are also available online at *https://amp18.amp.org/abstracts-posters/poster-list/.*

❋ AMP Ambassadors

Members of the AMP Membership Affairs Committee will be donning big yellow "Ask me About AMP" buttons. Look for them in the hallways and between sessions to learn about AMP membership benefits and opportunities during the meeting for first time attendees and those who are early in their career.

❋ Attendee Badges

Name badges are required for admittance to all scientific sessions, exhibit hall, meals and other official meeting events. Badges contain a bar code that holds the attendee's name, address, email. Exhibitors will scan badges to send information after the meeting.

❋ Attire

Attire is business casual for the meeting sessions and receptions, and casual for the Social Event. Remember to dress in layers and wear comfortable walking shoes.

❋ Business Centers

The UPS Store is the operator of the Business Center located in the lobby of the Convention Center, Street Level at the Main Entrance. Some of their services include but are not limited to copy & print services, and shipping & receiving. Their standard hours of operation are Monday - Friday from 8:00 am - 6:30pm and Saturday from 9:00am – 5:00pm but can vary based on events occurring at the Convention Center. Please contact them for more information at store4180@theupsstore.com or at 210-258-8950. There is also a FedEx Office located in the Grand Hyatt San Antonio, which is located next to the Convention Center at 600 East Market Street, San Antonio, TX 78205. They are open Monday – Friday from 7:00pm – 7:00pm, Saturday, and Sunday from 10:00am – 5:00pm and can be reached at 210-212-7133.

Highlights & General Information

❋ Charging Station

Stop by and re-charge your electronics at the AMP Charging Station in the front left of the Exhibit Hall (see floorplan in the "Exhibits" section).

❋ Childcare Services

Did you bring your son/daughter to San Antonio and need assistance with their care? Services for in-home/in-hotel childcare are available through the Northside Sitters Club. Committed to providing quality and dependable service, the Northside Sitters club have been providing childcare services in the San Antonio area for the past 43 years. For more information on their services, please visit (*https://northsidesittersclub.com/*) or contact *rosie@northsidesittersclub.com* (210-710-7940). The fees for their services are as listed below:

(1-2) Children from the same family:
$95.00 for 4 hours and $17.00 for each additional hours needed. (Per sitter per day)

(3) Children from the same family:
$120.00 for 4 hours plus $20 for each additional hours needed. (Per sitter per day)

(4) Children from the same family:
$125.00 for 4 hours plus $23 for each additional hours needed. (Per sitter per day)

Note: Childcare services have a 4-hour minimum per day per sitter

To book a sitter, please email *Rosie@northsidesittersclub.com* with the registration form. You may download the registration form here: *https://www.amp.org/AMP2018/assets/File/Northside_Sitters_Club_Registration_form.pdf*

Disclaimer: AMP is not responsible for the services provided by the Northside Sitters Club.

❋ City Information – San Antonio

San Antonio has become one of America's most authentic destinations. It is a city alive: a city of poets and lyricists, painters and sculptors, a city rich and humble. We hope that AMP Annual Meeting & Expo attendees and exhibitors will be able to explore and take in all the authenticity San Antonio has to offer. Show your conference badge in participating restaurants, retail stores and attractions in order to receive discounts and special offers. Find more information on local dining, hotels, shopping and the Show Your Badge program online at: *http://visitsanantonio.com/english/2018AMP*.

❋ Consent to Use of Photographic Images/ Contact Information

Registration for and attendance at the AMP 2018 Annual Meeting & Expo constitutes the registrant's agreement with the AMP's use and distribution (both now and in the future) of the registrant or attendee's image or voice in photographs, videotapes, electronic reproductions, audiotapes of such events and activities, and inclusion of their address in the registrant mail list (email addresses are not distributed).

Highlights & General Information

❋ Continuing Education

The AMP 2018 Annual Meeting & Expo has been planned and implemented in accordance with the Essential Areas and policies of the Accreditation Council for Continuing Medical Education through the joint providership of the American Society for Clinical Pathology (ASCP) and the Association for Molecular Pathology. ASCP is accredited by the ACCME to provide continuing medical education (CME) for physicians and continuing medical laboratory education (CMLE) for non-physicians. Refer to the "Continuing Education" section for more information.

❋ Dining Options

San Antonio has a wide range of food options available for meeting attendees near the Convention Center. Find more information on local dining online at *http://visitsanantonio.com/Microsites/New-Template-(10)/Dining*. Please see below for meals included in attendee registration.

❋ First Aid & Medical Emergencies

For medical emergencies, please dial 210-207-7773 to be instantly connected to the Security Department. If the injury is life threatening, call 911 immediately. The Convention Center address is 900 E. Market St. Call the Security Division after the 911 call to ensure they coordinate with the first responders to minimize response time. Automated External Defibrillator (AED) units are located throughout the Convention Center. The AED's are available for use and are marked "Automatic Defibrillator". There are always EMTs on-site during the day and there are multiple medical centers in close proximity from the property. The room is located in the Convention Center, Hall 2, Office H201.

❋ Guest of Presenter Badges

If a registered attendee would like a family member or friend to see his/her invited talk or poster presentation, the registered attendee may request a session guest badge at the AMP Registration Desk. The session guest badge must be returned to the Registration Desk after the session requested. Guests should be accompanied at all times and are not permitted at breaks/meals.

❋ Guest of Exhibitor Badges

Each exhibiting company receives non-personalized guest badges for use during the event. Exhibitors are responsible for coordinating, issuing, and providing badges to their guests. All guests of exhibitors must be accompanied by a registered member of the exhibit staff and are permitted access to the Exhibit Hall, only. Badges must be worn at all times.

❋ International Exhibitors

AMP is Global! with members from more than 47 countries, meeting attendees from around the world, and an active International Affairs Committee. The AMP Annual Meeting & Expo is the gathering place for molecular diagnostic professionals from around the globe. AMP exhibitors are no exception, representing more than 15 countries, many of our exhibitors have traveled far to share their products and services with us. Look for the globe icon in the program listing to identify these exhibitors and stop by to say hello.

Highlights & General Information

❋ Internet

Complimentary Wireless Internet is available in the Entrance Lobby and a few public spaces of the Convention Center. Some of the public spaces include the Main Lobby, West Lobby, foyer areas outside of the Ballrooms, Park View (outside of Room 214), Tower View (outside of Room 217), & foyers outside of the meeting rooms. Attendees who wish to purchase wireless service may do so for $12.95 per day/per computer available in all public spaces, meeting rooms, & Ballrooms (Not available on the Exhibit Hall Floor).

❋ Lost & Found

The Lost & Found is located at the AMP Registration Desk. Please speak to an AMP Staff member regarding a lost item or to turn in a found item.

❋ Luggage & Coat Check Hours

A luggage and coat check area will be made available for all attendees. Attendees utilizing this service do so at their own risk. AMP will not be responsible for any missing or stolen personal items from this area or for items that are not retrieved after the luggage check closes.

Location: Convention Center, Main Lobby, Street Level

Hours:
Wednesday, October 31 . . . . . 7:30am – 5:30pm
Thursday, November 1 . . . . . 6:30am – 7:30pm
Friday, November 2 . . . . . 6:30am – 7:00pm
Saturday, November 3 . . . . . 6:30am – 5:30pm

❋ Meals (Continental Breakfast and Lunch)

Continental Breakfast and Lunch are provided for registered meeting attendees, only, and are included in the price of meeting registration. Exhibitors are encouraged to grab lunch onsite in the Market Cafe located in the Main Lobby or at one of the variety of local venues just outside the convention center.

Continental Breakfast Times
Thursday, November 1 . . . . . 7:00am – 8:00am
Friday, November 2 . . . . . 7:00am – 8:00am
Saturday, November 3 . . . . . 7:00am – 8:00am

Lunch Times*
Thursday, November 1 . . . . . 11:45am – 1:00pm
Friday, November 2 . . . . . 11:45am – 1:00pm
Saturday, November 3 . . . . . 12:15pm – 1:30pm

** Please go to the end of the "Highlights & General Information" section for full descriptions of lunch options.*

❋ News Room

The News Room is available for all qualified print, online, and broadcast news media outlets. Visit *https://amp18.amp.org/media1/media-information/* for more information or contact Andy Noble (*ANoble@amp.org*) or 415-722-2129. Location and hours of operation for the News Room are as follows:

Convention Center, Room 224, Meeting Level
Thursday, November 1 . . . . . 8:00am – 4:30pm
Friday, November 2 . . . . . 8:00am – 4:30pm
Saturday, November 3 . . . . . 8:00am – 12:00pm

❋ Nursing Mothers

A Nursing Mothers Room is located in the convention center and available for Annual Meeting attendees. Seating and outlets will be available in the rooms. Please see their locations below. Keep in mind there will be limited availability for the use of these rooms.

Room 1: Located near Room 215 (#2137) (Accommodates 1 person)

Room 2: Located in the Public walkway connecting the Main Entrance Lobby & the West Lobby (#1212) (Accommodates 2 people)

❋ Parking

Parking is available for $10/day in the Convention Center garage on 850 E. Commerce (corner of Commerce & Bowie Streets). The garage is located across the street from the main entrance to the Convention Center. You may visit here (*http://downtownsanantonio.org/discover/*) for additional parking in Downtown San Antonio or ask at the Information Desk, Convention Center, Main Lobby, Street Level for more information.

❋ Photography/Recording

Please be respectful of your colleagues. Do not record presentations without the speaker's permission. Do not take photographs of posters without authorization/permission of the author. Meeting attendees may be asked to leave if this causes disruption to a session.

❋ Poster Tube Storage

Bins for poster tubes will be available throughout the poster sections. Poster Tube Storage will NOT be staffed and is not secured. If you would like to leave your poster tube, please clearly mark it with your name and place it in one of the bins. AMP is not responsible for any lost, stolen or damaged posters or poster tubes.

❋ Ribbon Bar

Back by popular demand! Stop by the RIBBON BAR located in the Registration Area to pick-up applicable ribbon(s) for your meeting badge, i.e., Committee, Speaker, Awardee, Trainee, First Time Attendee and others.

❋ Social Media Policy

We encourage the use of social media for professional networking purposes before, during and after AMP 2018. Attendees are also invited to share insights from presentations provided that they are respectful of the presenter's wishes: if slides or posters indicate that photos are not permitted, attendees must refrain from taking pictures and sharing on social media. To ensure that everyone has a positive social media experience, please adhere to these guidelines:

Do:

- Follow AMP on Twitter @AMPath like us on Facebook *facebook.com/AMPathology*, and/or join our LinkedIn group *linkedin.com/groups/2681654*
- Use the #AMP2018 and #AMPlifier hashtags to join the conversation and get the latest annual meeting updates
- Post about what you discover at the meeting

Highlights & General Information

- Share your knowledge and insights
- Be respectful and courteous to your colleagues
- Have fun!

Don't:

- Post inflammatory, disrespectful or otherwise inappropriate comments
- Take/share photos of slides or posters without permission
- Post copyrighted/trademarked/embargoed materials

❋ Speaker Presentations

The AMP 2018 Speaker Presentations will be made available to all Registered Meeting Attendees and AMP Members through March 2019. The Presentations will also be available to AMP Members in the Digital Library. Detailed instructions will be sent to all registered meeting attendees in December.

❋ Speaker Ready Room

If you are speaking at a scientific session and did not upload your presentation in advance of the meeting, you will need to visit the speaker ready room before your session to provide a copy of your presentation. The speaker ready room is located at the **Convention Center, Room 305, Ballroom Level**. All presentations will be collected in the speaker ready room, and your presentation will be preloaded onto the computer in your session room. Please visit the speaker ready room at least one hour prior to the start of your session. Technicians will be available to receive your presentation during the hours listed below. Presentations will not be loaded directly onto the computers in the session room, so it is essential that you stop by the speaker ready room. You will be able to review and/or make changes to your presentation before providing it to the technicians.

Speaker Ready Room Hours:
Wednesday, October 31..... 12:00pm – 5:00pm
Thursday, November 1 ..... 6:30am – 5:00pm
Friday, November 2 ..... 6:30am – 5:00pm
Saturday, November 3 ..... 6:30am – 5:00pm

❋ Special Event: Emerging Targets for the Diagnosis of Cancer: *NTRK* Fusion in Solid Tumors

Developed through a strategic collaboration between AMP and Medscape Education Oncology

Thursday, November 1
Location: Henry B. Gonzalez Convention Center, Room 221
Symposium: 7:30 PM – 8:30 PM, preceded by dessert & coffee

Make your way up the escalator from the Welcome Reception to a free 60-minute, live symposium highlighting best practices for testing for and reporting results of NTRK fusions as well as management of patients with TRK TKI therapy. This symposium will feature iPads to deliver interactive content and is sure to provide lively discussion.

This program is supported by an educational grant from Bayer.

Lunch Options

General Lunches are open to all **AMP 2018 Annual Meeting & Expo** registered attendees. The General Lunches will be held in the Exhibit Hall (**Convention Center, Exhibit Hall 1&2, Street Level**) and can be accessed through the cross aisles to the right of the main Exhibit Hall entrance on Thursday and Friday. On Saturday, please join us in the Exhibit Hall for the Exhibitor Appreciation Lunch.

Networking Lunches are open to all **AMP 2018 Annual Meeting & Expo** registered attendees.* They do not require payment or pre-registration. Simply show up at the appropriate networking lunch as noted below. Please note that seating is limited and available on a first come, first served basis. Networking lunches close when room capacity is filled. Please have your badge scanned as you enter the networking luncheons. This helps AMP measure outcomes and facilitate future planning.

** Some lunches are for specific groups of members, only – see descriptions below…*

Thursday, November 1

❋ New to AMP? First Time at the Annual Meeting? – New Member and First Timers Lunch

(Hosted by the Membership Affairs Committee)

Time: 11:45am – 1:00pm
Location: Convention Center, Room 303, Ballroom Level

New to AMP? First Time at the Annual Meeting? Join us for lunch! This event is an opportunity to network with other first time attendees and new AMP Members. Current members of the Membership Affairs Committee will be on hand to answer questions and help you kick off a great experience at this year's AMP meeting!

❋ Molecular Tumor Board: Not Just Another Meeting!

(Hosted by the International Affairs Committee)

Time: 11:45am – 1:00pm
Location: Convention Center, Room 304, Ballroom Level
Speaker: Antonia Sepulveda, MD, PhD
Moderator: Helen Fernandes, PhD

Hosted by AMP's International Affairs Committee, this luncheon is an opportunity for meeting attendees who reside and work outside of North America to gather, network, and discuss topics of mutual concern and interest. This year's luncheon's topic is Molecular Tumor Boards.

Please join your fellow international colleagues at this special, free luncheon event.

Friday, November 2

❋ Training & Education Networking Luncheon

(Hosted by the Training & Education Committee)

Time: 11:45am – 1:00pm
Location: Convention Center, Room 303, Ballroom Level
Moderators: Barbara Anderson, MS, Brittany Coffman, MD, Jeffrey Gagan, MD, PhD

Trainees, junior faculty and technologists: SEIZE this opportunity to speak to and network with some of the best and most prominent players in the molecular pathology field! WIN valuable textbooks in the annual textbook give-away! EAT free food! JOIN US for this unique and valuable event!

❋ Consumer Genetic Testing: The Changing Face of Molecular Diagnostics

(Hosted by the Professional Relations Committee)

Time: 11:45am – 1:00pm
Location: Convention Center, Room 304, Ballroom Level
Moderator: Professional Relations Committee Members

The Professional Relations Committee (PRC) communicates and coordinates activities with government, coalitions, trade associations, and patient and professional organizations to inform policy discussions that have an impact of the practice on molecular pathology. As part of this mission, the PRC monitors changes in how members practice in order to develop appropriate and up-to-date policy positions. This luncheon is an opportunity for meeting attendees to engage in a discussion with PRC members on the evolving and future roles of consumer genetic testing and examine if and how it is changing the way AMP members practice molecular pathology. The discussion will examine various aspects of consumer genetic testing such as: is it a threat or opportunity; how do molecular pathology laboratories adapt; is it an increasing career option? Plan now to join us for this dynamic discussion!

AMP CENTRAL

Visit the AMP Central Booth in the Exhibit Hall! You can . . .

As a volunteer-driven society, AMP members have unique opportunities to advance the field and their careers by getting involved. As we prepare for the next election, consider nominating candidates for open positions, or throw your hat into the ring!

Meet Someone New
The Technologist Mixer, hosted by the Training & Education Committee, and our Speed Networking Events*, hosted by the Membership Affairs Committee, are great ways to network and meet new people who share your interests.

Attend a #Tweetup
Connect with molecular professionals using Twitter during the meeting and throughout the year. Make sure to use the hashtags *#AMP2018* and *#AMPlifier* to get all the latest updates!

Explore AMP Education
Learn about AMP's wide array of educational offerings and tools to help expand your knowledge base at the Education Showcase hosted by the Training & Education Committee.

Get Involved with AMP!
On Friday afternoon, AMP committee representatives will be available to answer questions about the important work they do and how you can get more involved.

Nominate Yourself or a Colleague
Stop by any time to view open committee positions and submit nominations for candidates ready to advance the field and take the next step in their career. (Self-nominations are encouraged!)

View/Post Job & Fellowship Listings
Find your next job or right candidate during the meeting!

Thursday, Nov. 1
2:30pm – 3:45pm
Technologist Mixer

5:45pm – 7:00pm
Tweetup!

Friday, Nov. 2
9:45am – 10:45am
Education Showcase

11:45am – 1:00pm
Speed Networking*

2:30pm – 3:30pm
Get Involved with AMP!
AMP Committee "Meet & Greet" event

Saturday, Nov. 3
12:15pm – 1:30pm
Speed Networking*

AMP Central is the place to be if you're a member or attendee interested in learning more about all that AMP has to offer!

*Speed Networking will be hosted in aisle 1900 at Booth 1923.

NOTES

AMP Association for Molecular Pathology

AWARD RECIPIENT

AMP Award for Excellence in Molecular Diagnostics 2018

Jonathan M. Rothberg, PhD

Founder, Chairman, and CEO of Butterfly Network, Inc.
Guilford, CT, USA

AMP Association for Molecular Pathology

AWARD RECIPIENT

Jeffrey A. Kant Leadership Award 2018

For Exceptional Leadership in Advancing the Mission and Goals of the Association for Molecular Pathology

Roger D. Klein, MD, JD

Faculty Fellow, Center for Law,
Science and Innovation in the Sandra Day O'Connor College of Law
Arizona State University
Tempe, AZ, USA

Group of (the Federalist Society's)
Regulatory Transparency Project
Washington, DC, USA

AMP Association for Molecular Pathology

AWARD RECIPIENT

AMP Meritorious Service Award 2018

Kevin C. Halling, MD, PhD

Mayo Clinic
Rochester, MN, USA

AMP Association for Molecular Pathology

AWARD RECIPIENTS

Travel Awards 2018

AMP Technologist Travel Awards

Sahar Halabi, BS
American University of Beirut Medical Center, Beirut, Lebanon

Hayley Robinson, MLS (ASCP)
Center for Integrated Diagnostics, Massachusetts General Hospital, Boston, MA, USA

Poonam Santra, MSc
Tata Medical Center, Kolkata, India

International Trainee Travel Awards

Carla Godoy, PhD
Instituto de Ensino e Pesquisa do Hospital Sírio Libanês, São Paulo, Brazil

Pragya Gupta, MD
Tata Medical Center, Kolkata, India

Julia Thierauf, MD
Heidelberg University Hospital, Heidelberg, Germany

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Carolyn Sue Richards, PhD
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Elaine B. Spector, PhD
Kristy R. Crooks, PhD
Yassmine Akkari, PhD

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Noah A. Brown, MD
Rachel L. Sargent, MD
David Viswanatha, MD
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Mark D. Ewalt, MD
Rashmi S. Goswami, MD, PhD

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Kenneth L. Muldrew, MD, MPH
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Amanda Harrington, PhD
Belinda Yen-Lieberman, PhD
Jennifer Dien Bard, PhD
Sophie S. Arbefeville, MD
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Lynette M. Sholl, MD
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Working Groups and Task Forces

CAP/IASLC/AMP Molecular Testing Guideline for Selection of Lung Cancer Patients- Guideline Revision/Update Working Group

Neal Lindeman, MD, AMP Co-chair and Steering Committee
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Maria E. Arcila, MD, AMP Expert Panelist
Lynette Sholl, MD, AMP Expert Panelist
David J. Kwiatkowski, MD, PhD, AMP Expert Panelist

Copy Number Variants (CNV) Working Group

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Carolyn Sue Richards, PhD

Myeloid Mutations in Myelodysplastic and Myeloproliferative Diseases (MDS, MPN, MDS/MPN) Working Group

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EAC 101 Working Group

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Birgit Funke, PhD
Dara Aisner, MD, PhD
Federico Monzon, MD
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Jill Hagenkord, MD

Genomics Education for Primary Care Residents Working Group

Laura J. Tafe, MD, Chair
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Devon Chabot-Richards, MD
Anthony Snow, MD
Yassmine Akkari, PhD (T&E Committee Representative)

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Pranil Chandra, DO
Elaine Lyon, PhD
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Anthony N. Sireci, MD, Msc
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Jason N. Rosenbaum, MD, Co-Lead
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Yuan Ji, PhD
Andria del Tredici, PhD
Larisa Cavallari, PhD
Ann Moyer, MD, PhD
Michelle Whirl-Carrillo, PhD

Variant Interpretation Test Across Labs (VITAL) Working Group

Elaine Lyon, PhD, Chair
Carolyn Sue Richards, PhD
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Sherri Bale, PhD
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Glenn E. Palomaki, PhD

Liquid Biopsy Applications Working Group

Christina Lockwood, PhD, Chair
Laetitia Borsu, MD
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Kandelaria Rumilla, MD
Meera Hameed, MD
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NGS Utility of T/B Cell Clonality Working Group

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Timothy C. Greiner, MD
Joseph D. Khoury, MD
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David Wu, MD, PhD
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NGS Germline Variant Confirmation Working Group

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Ryan Schmidt, MD, PhD

New Frontiers in Infectious Diseases Multiplex Testing Working Group

Michael Lewinski, PhD, Chair
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Tumor Mutational Burden Working Group

Larissa V. Furtado, MD
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Benjamin R. Kipp, PhD
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Daniel Dolderer, MD

Tumor Mutational Burden: Challenges and Opportunities for Improving Patient Care Working Group

Susan J. Hsiao, MD, Course Director
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Advancing Patient Care in NSCLC: Breaking Down Barriers Working Group

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Lynette M. Sholl, MD

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Federico A. Monzon, MD
Victoria Pratt, PhD
Barbara A. Zehnbauer, PhD

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Maria P. Bettinotti, PhD	**FNIH Biomarkers Consortium Steering Committee for Inflammation & Immunity**
Rong Mao, MD	**FNIH Biomarkers Consortium Steering Committee for Metabolic Diseases**
Allison M. Cushman-Vokoun, MD, PhD	**FNIH Biomarkers Consortium Steering Committee for Cancer**
Christina Lockwood, PhD	**FNIH Biomarkers Consortium Identification and Validation of ctDNA Reference Materials working group**
Christina Lockwood, PhD	**ASCO-CAP Liquid Biopsies White Paper Project Workgroup**
Sinchita Roy-Chowdhuri, MD, PhD	**AMP-ASC (bidirectional)**
Marilyn Li, MD, PhD	**ACMG ClinGen Somatic Cancer Clinical Domain Workgroup**
Feras Hantash, PhD	**Medical Device Innovation Consortium (MDIC) Somatic Reference Samples working group**
Marina Nikiforova, MD	**CAP NGS Test Validation/Metrics Manuscripts working group**
Benjamin Pinsky, MD, PhD	**ASM Next Generation Sequencing Coalition**
Pranil Chandra, DO	**CAP Personalized Healthcare Committee's "Incidental findings in the context of tumor genomic evaluations" project workgroup**
Jan Nowak, MD, PhD Dara Aisner, MD, PhD	**Collection and Handling of Thoracic Small Biopsy and Cytology Specimens for Ancillary Studies: CAP in collaboration with CHEST, ASC, ATC, AMP, PSC, PPS, SIR, and STR**
Peter Canoll, MD, PhD Dolores Lopez-Terrada, MD, PhD Meera Hameed, MD	**Diagnostic Testing for Diffuse Gliomas: CAP in Collaboration AANP, ASCO, AMP, and SNO**
Avni Santani, PhD	**CLSI Nucleic Acid Sequencing Methods in Diagnostic Laboratory Medicine, 2nd Edition (MM09) Working Group**
Antonia Sepulveda, MD, PhD	**Checkpoint Inhibitor Testing in Body Sites Other Than Lung: CAP in collaboration with ASCO & AMP**
Federico A. Monzon, MD	**ASCO CancerLinQ Oncology Leadership Council**

AMP Representatives to Other Organizations

Kojo S. J. Elenitoba-Johnson, MD (*ex officio* – President)	**Intersociety Pathology Council and Pathology Roundtable**
Maria Arcila, MD Christopher Watt, MD, PhD	**ASCO/CAP/AMP Molecular Oncology Tumor Boards**
David Wu, MD, PhD	**APC Fellowship Directors ad hoc Committee**
Laura J. Tafe, MD	**NHGRI Inter-Society Coordinating Committee for Practitioner Education in Genomics**
Cecilia Yeung, MD (*ex officio* – T&E Chair)	**American Board of Pathology (AMP is a "Cooperating Society")**
Laura J. Tafe, MD	**APC Undergraduate Medical Educators Section**
Eric Duncavage, MD	**Association of Community Cancer Centers (ACCC) Advisory Committee**
Betsy A. Bove, PhD	**FASEB Board, Science Policy Committee and its Clinical & Translational Research Subcommittee**
Megan S. Lim, MD, PhD	***The FASEB Journal* Editorial Board**
Victoria Pratt, PhD	**National Academies of Science, Engineering, and Medicine Roundtable on Genomics and Precision Health**
Roger Klein, MD, JD Amy Lo, MD	**Personalized Medicine Coalition (PMC) Policy Committee**
Aaron Bossler, MD, PhD Anthony Sireci, MD (Technical Advisor)	**CAP Pathology Coding Caucus**
Mary Lowery Nordberg, PhD Jennifer Yoest, MD	**AACC Lab Tests Online Editorial Board**

NOTES

AMP ED EDUCATION ONLINE

Educates

CONTINUING EDUCATION

CONVENIENT ONLINE MOLECULAR EDUCATION FOR HEALTHCARE PROFESSIONALS

Have you explored AMP's online learning management platform, AMP*ED*™?

AMP*ED*™ aims to bring the world-renowned, cutting edge content you have come to expect from AMP's live events, but with the convenience of learning from your home, office, or lab. AMP*ED*™ can help you to get up to speed on current trends and techniques or provide a refresher on foundational concepts. New content is being added regularly so check back often at ***educate.amp.org***!

Many of our educational offerings include the opportunity to earn CME/CMLE and/or SAM credit.

The ever-expanding selection of content includes:

- **Online MGP Review Course**
- **Molecular Genetic Pathology Question Bank**
- **Tumor Mutational Burden Online Learning Series**
- **2016 World Health Organization (WHO) Updates in Hematologic Malignancies (+AMP Certificate)**
- **NGS 101 Webinar Series**
- **Practical Case Studies for Infectious Diseases**
- *And more...*

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"**AMP** is the best organization for anyone who wants to stay on the ***cutting edge*** of the future of molecular pathology."

— **Matthew Hiemenz, MD**
Molecular Pathologist
Assistant Director of Clinical Genomics, Center for Personalized Medicine, Children's Hospital Los Angeles

CONTINUING EDUCATION

AMP Association for Molecular Pathology

AMP2019 ANNUAL MEETING & EXPO

ANNIVERSARY CELEBRATION

MARK YOUR CALENDAR!

November 7-9, 2019

Corporate Workshop Day
November 6

Baltimore Convention Center
Baltimore, MD

Continuing Medical Education (CME)

This activity ("Association for Molecular Pathology 2018 Annual Meeting & Expo") was planned and implemented in accordance with the Essential Areas and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of the American Society for Clinical Pathology (ASCP) and the Association for Molecular Pathology (AMP). ASCP is accredited by the ACCME to provide continuing medical education for physicians.

The CME and CMLE online application form will be available online (*https://amp18.amp.org/ce-credits/continuing-education/*) beginning on November 3, 2018 and must be submitted no later than December 31, 2018. You may keep track of credit by completing the Credit Tracker found on the tab divider for this section. Complete only for the sessions which you attended, then transfer your ratings per speaker on the online application form and complete the other evaluation questions to claim credit. If you did not purchase CE credit at the time of your conference registration, you will have an opportunity to request after the meeting. See the information posted on the website listed below. Please claim CE credit by following the instructions at *https://amp18.amp.org/ce-credits/continuing-education/*. Should you have questions, contact AMP by email at *AMPEducation@amp.org*.

Meeting Objective/Target Audience

The objective of the AMP 2018 Annual Meeting & Expo is to (1) increase basic and applied pathology knowledge, focusing on the molecular diagnosis of disease, (2) provide a forum for the exchange of new research by scientists and investigators, and (3) facilitate knowledge acquisition regarding issues and challenges related to patient care, early detection and disease prevention. The AMP 2018 Annual Meeting & Expo is designed to meet the participants' educational needs in the physician competency area of Medical Knowledge, as defined by the Accreditation Council for Graduate Medical Education (ACGME) and the American Board of Medical Specialties (ABMS), and to support participants' lifelong learning towards a goal of promoting patient safety and improving patient care.

The AMP 2018 Annual Meeting & Expo is especially targeted to clinical practitioners, research scientists, medical education professionals, and students and postdoctoral fellows with an interest in gaining a basic and/or advanced understanding of diagnostic, prognostic, and therapeutic approaches in the areas of hematopathology (leukemias, lymphomas, lymphoproliferative disorders), solid and soft tissue tumors, infectious diseases, inherited diseases, and informatics with the goal of improving patient care, improving clinical practice, and enabling constructive interactions with pathologists, other health care practitioners, and laboratory directors and technologists.

Disclosure of Financial Relationships and Resolution of Conflicts of Interest

ASCP and AMP require that audiences at CME-approved educational programs be informed of the organizers' and presenters' (speaker, faculty, author, or contributor) academic and professional affiliations, and the existence of any relevant financial relationship a presenter has with any proprietary entity producing health care goods or services consumed by, or

used on patients, with the exemption of non-profit or government organizations and non-health care related companies. The intent of this disclosure is not to prevent a speaker from making a presentation. This policy allows the listener/attendee to be fully knowledgeable in evaluating the information being presented. All CME activities are evaluated by the participants for the presence of any commercial bias and this input is used for subsequent CME planning decisions. The primary purpose of this activity is educational and the comments, opinions, and/or recommendations expressed by the faculty or authors are their own and not those of ASCP or AMP.

Disclosure includes any relationship that may bias one's presentation or which, if known, could give the perception of bias. These situations may include, but are not limited to: 1) stock options or bond holdings in a for-profit corporation or self-directed pension plan; 2) research grants; 3) employment (full or part-time); 4) ownership or partnership; 5) consulting fees or other remuneration; 6) non-remunerative positions of influence such as officer, board member, trustee, or public spokesperson; 7) receipt of royalties; 8) speaker's bureau; 9) other. For full-time employees of industry or government, the affiliation listed in the Program will constitute full disclosure.

Several of the organizers of this educational activity disclosed a relevant financial relationship that, in the context of their presentation could be perceived by some as a real or apparent conflict of interest. The disclosures have been reviewed and conflicts of interest resolved or managed. Organizers that disclosed no relevant financial relationship are also listed.

Organizers - Program Committee Disclosures:

- Jennifer Dien Bard, Children's Hospital of Los Angeles
  Monetary funds for clinical trial services and honorarium for speaking sessions from BioFire; Monetary funds for clinical trial with Luminex ; Monetary funds for clinical trial and honorarium for webinar with DiaSorin Molecular; Monetary funds for clinical trial with Great Basin.
- Eric J. Duncavage, Washington University at St. Louis
  Consulting fees from Cofactor Genomics; Consulting fees, P&V licensing and equity interest from Abbvie.
- Y. Lynn Yang, University of Chicago
  Consulting fee from Asuragen; Research funding from Portola Pharmaceuticals.
- Belinda Yen-Lieberman, Cleveland Clinic
  Honoraria from Hologic as a Speaker.

The remaining AMP 2018 Program Committee members have no relevant financial relationships to disclose:

- Lynne V. Abruzzo, The Ohio State University
- Linda Jeng, University of Maryland School of Medicine
- Matthew Lebo, Brigham and Women's Hospital
- Neal I. Lindeman, Brigham and Women's Hospital, Harvard Medical School
- Christina Lockwood, University of Washington
- Somak Roy, University of Pittsburgh Medical Center
- Maria Fernanda Sabato, Medical College of Virginia
- Lynette M. Sholl, Brigham and Women's Hospital
- Elaine B. Spector, University of Colorado School of Medicine, Children's Hospital Colorado
- Lynne H. Whetsell, Saint Francis Hospital

Organizers - Awards Committee Disclosures (AMP Award for Excellence in Molecular Diagnostics)

The 2016 Awards Committee recommended the AMP 2018 Award for Excellence in Molecular Diagnostics recipient who presents the keynote lecture of the AMP 2018 Annual Meeting & Expo. Members who disclosed a financial relationship are:

- Kenneth Bahk, Stock options from Geneweave as a Board of Directors member.
- Angela M. Caliendo, Honorarium from Biofire Diagnostics, Cepheid, IBIS Biosciences, IncellDX, Nanosphere, Quidel, Roche Molecular as a Scientific Advisory Board member. Research funding from Hologic and T2 Biosystems as an investigator.
- Tadd S. Lazarus, Salary and stock options from QIAGEN, Inc. as an employee.

Members of the 2016 Awards Committee who disclosed no relevant financial relationships are:

- Charles E. Hill, (Chair of Awards Committee), Emory University School of Medicine
- Karen L. Kaul, NorthShore University Health System

Disclosures of Invited Speakers of CME Scientific Sessions

Several of the invited speakers of this educational activity disclosed a relevant financial relationship that, in the context of their presentation could be perceived by some as a real or apparent conflict of interest. The disclosures have been reviewed and conflicts of interest resolved or managed. Speakers that disclosed no relevant financial relationship are listed below.

The following speakers disclosed no relevant financial relationships:

Kevin Alby
Maria E. Arcila
Panagiotis Benos
Jonathan S. Berg
Laurence J. Clark
Catherine E. Cottrell
Jesse S. Boehm
Joseph A. Califano
Kristy Crooks
Bryan R. Cullen
Breck A. Duerkop
Olivier Elemento
Altovise T. Ewing
Michael Fine
Birgit Funke
Paul B. Gerrard
Alex Greninger
Wayne W. Grody
Jill Hagenkord
Ingrid A. Holm
Katherine Huang
Angela L. Jacobson
Sabah Kadri
Karen L. Kaul
Jeffrey D. Klausner
Jeffrey M. Klco
Megan S. Lim
Christina Lockwood
Cecily P. Marroquin
Christopher E. Mason
Kevin Messacar
Valentina Nardi
Jared L. Nedzel
Jonathan A. Nowak
Randall J. Olsen
Victoria M. Pratt
Thomas W. Prior
Gary W. Procop
Mark J. Routbort
Somak Roy
Jeremy Segal
Elizabeth M. Swisher
Uri Tabori
Ying Taur
Matthew Walter
Jeremy L. Warner
Ahmet Zehir

Disclosures of Invited Speakers of CME Scientific Sessions

Dara L. Aisner
Fees from Genentech Research as a consultant. Funding from Genentech. Fees from Bristol Myers Squibb as a consultant. Honoraria from AbbVie.

Eric H. Bernicker
Honorarium from Guardant Health as an Advisory Board member. Honorarium from Abbvie as an Advisory Board member. Honorarium from Astra Zeneca as an Advisory Board member.

Timothy A. Blauwkamp
Equity from Karius, Inc. as Chief Scientific Officer.

Danielle Bonadies
Salary and stock options from My Gene Counsel as owner.

Ethan Cerami
Honorarium from Merck as a speaker.

Jennifer Dien Bard
Consultant for BioFire Diagnostics.

Samuel Dominguez
Research grant funding from Biofire. Research grant funding from Cepheid.

Elaine P.S. Gee
Owner and President of BigHead Analytics Group. Consulting fees from BigHead Analytics Group as an independent contractor and consultant.

Christopher D. Gocke
Salary from OncoMedx, Inc. as a board member, employee and manager.

Lucy A. Godley
Royalties from UpToDate, Inc. for an article on inherited hematopoietic malignancies.

Romney M. Humphries
Salary and stock options from Accelerate Diagnostics as an employee.

Elissa Levin
Salary and stock options from Helix as an employee and shareholder. Stock options from Vinome as a founder and shareholder.

Stephen E. Lincoln
Salary and shares in Invitae as an employee. Shares in Illumina and Thermo Fisher as a private investor.

Elaine Lyon
Quarterly fee and expense reimbursement from Complete Genomics Inc. as a Consultant.

Vincent J. Magrini
Consulting Fees from New England Biolabs as a member of NEB's NextGen Key Opinion Leader group.

Robert L. Nussbaum
Salary and stock from Invitae Corporation as CMO. Compensation from Pfizer as a consultant.

Mitchell R. O'Connell
Member of Scientific Advisory Board for Dahlia Biosciences. Equity holder in Dahlia Biosciences.

John D. Pfeifer
Equity interest in PierianDx as a co-founder. Equity interest in P&V Licensing LLC as a co-founder.

Jonathan M. Rothberg
Stock options from Butterfly Network, Inc. as the founder, chairman, and CEO.

Karl V. Voelkerding
Scientific Advisor for PierianDx.

Brian Wolpin
Research grant funding from Celgene as an investigator.

Jennifer A. Woyach
Research funding from Acerta. Research funding from Karyopharm. Research funding from Morphosys.

Barbara A. Zehnbauer
Fees from Amgen, Inc. as a consultant.

The following disclosures by speakers are not relevant financial relationships.

Alexis B. Carter
Salary as an Employee of Children's Healthcare of Atlanta who is developing several NGS assays. Since the Children's Healthcare of Atlanta is a nonprofit organization, it is not considered a commercial interest as defined by the ACCME. Paid faculty member for Clinical Informatics Board Review Course provided by American Medical Informatics Association (AMIA), a professional society which participated in the development of this guideline. Since the AMIA is a nonprofit organization, it is not considered a commercial interest as defined by the ACCME.

Stephanie I. Fraley
Co-founder of a new startup company that aims to commercialize the technology developed in my research lab. The company is early stage and does not yet produce or sell any products. Since the company does not produce or sell any products, it is not considered a commercial interest as defined by the ACCME.

Nils Gehlenborg
Honorarium from Cambridge Healthtech Institute as workshop instructor. Since the Cambridge Healthtech Institute is a nonprofit organization, it is not considered a commercial interest as defined by the ACCME. Consulting fees from National Institutes of Health as subject matter expert. Since the National Institutes of Health is a government institution, it is not considered a commercial interest as defined by the ACCME.

Elaine Lyon
Unpaid (possibly compensated in the future) from Center for Genomic Interpretation, LLC as a Consultant. Since the Center for Genomic Interpretation is a nonprofit organization, it is not considered a commercial interest as defined by the ACCME.

Continuing Medical Education

Abstract Author Disclosures

Only the abstracts listed below are included as CME content of the AMP 2018 Annual Meeting & Expo and will be defended in oral platform presentations. The other abstracts submitted to the AMP 2018 Annual Meeting & Expo that are published in *The Journal of Molecular Diagnostics* are not included as a CME activity.

GENETICS: G021; G025; G026; G044
HEMATOPATHOLOGY: H014; H025; H039; H041
INFECTIOUS DISEASES: ID007; ID012; ID019; ID063
INFORMATICS: I009; I025; I027; 1034
SOLID TUMORS: ST002; ST055; ST107; ST144
TECHNICAL TOPICS: TT046; TT059; TT070; TT074

The following abstract/poster presenting authors disclosed no relevant financial relationships

Zachary Abrams
Roby P. Bhattacharyya
Christina M. Bouwens
Anita S. Bowman
A. Rose Brannon
Jonathan Dudley
Dennis J. Eastburn
Evan Fernandez
Kevin Greene
Paul R. Hess
Nicole Hoppman
Jessica Housekeeper
Ulrike P. Kappes
Niklas Krumm
Hong Kai Lee
James Liyu
Lorena Lozano
Andrea Malheiro
Renata M. Minillo
Jiuhong Pang
Nikhil Patkar
Avni Santani
Sarah Stratt
Chad M. Vanderbilt
Brittany A. Young

Trainee/Technologist Early Bird Case Study Presenter Disclosures

The Early Bird Case Study speakers' disclosures are located online here: https://amp18.amp.org/abstracts-posters/abstract-submission-information/.

PLEASE NOTE: Sessions that are not eligible for Continuing Medical Education (CME):

The meeting program states those events which are not a Continuing Medical Education activity with the designation "NOT CME."

The following events/sessions are not eligible for CME:

- Social events and meals listed in the meeting program.
- Visiting exhibits because of standards of the ACCME that are designed to prevent commercial bias.
- Viewing posters in the Exhibit Hall because the posters are in the line of sight of commercial exhibits.

ONLINE Continuing Education (CE) Application

Applications for CME and CMLE credits will be submitted ONLINE. Keep track of your credit by completing the Credit Tracker found on the tab divider for this section. Complete only for the sessions that you attended, then transfer your ratings on the ONLINE application form. If you did not purchase CE credit at the time of your conference registration, you will have an opportunity to request it after the meeting. See the information posted on the website listed below.

https://amp18.amp.org/ce-credits/continuing-education/

IMPORTANT: The deadline to claim CME/CMLE is Monday, December 15, 2018.

SAM Credit

SAM credit will be available during the 2018 AMP Annual Meeting & Expo for select talks. The talks/sessions that include SAM will be listed on *https://amp18.amp.org/ce-credits/continuing-education/* and available on the AMP Annual Meeting App under, "AMP Education Events".

This activity ("Association for Molecular Pathology 2018 Annual Meeting & Expo") is approved by the American Board of Pathology. Physicians should only claim credit commensurate with the extent of their participation in the activity. Participants must successfully complete the online exam (answering at least 80% of the questions correctly).

Access to the online exam will be available after the conference. AMP Education will send an email to those who purchase **SAM ± CME/CMLE** Credit with detailed instructions on how to claim credits

The deadline to purchase SAM +/- CME/CMLE for the AMP 2018 Annual Meeting & Expo is Monday, December 15, 2018 at 11:59pm (23:59) Eastern Time.
The deadline for completing the online test for SAM credit and/or evaluations for CME/CMLE credit is Monday, December 31, 2018 at 11:59pm (23:59) Eastern Time.

NOTE: Meeting participants may receive both CME and SAM credit, but it is important that applicants understand that **both types of credit cannot be claimed for the same content** and the total number of credits claimed cannot exceed 20.75

By purchasing SAM credit, applicants verify that they will not claim SAM credit on any content (e.g., sessions/workshops/symposia) for which CME credit has been - or is being - claimed and vice-versa.

Please contact AMP via email (*AMPEducation@amp.org*) if you have any questions regarding Continuing Education.

Meeting Evaluation & Certificate of Attendance

We value your comments and feedback on the AMP 2018 Annual Meeting & Expo regardless of whether you apply for CE credit. If you do not apply, please submit your Meeting Evaluation no later than December 31, 2018 online. The link can be found here: https://amp18.amp.org/ce-credits/continuing-education/#certificate.

You will receive a Certificate of Attendance upon completion.

AMP

2018 Annual Meeting
CREDIT TRACKER

Rate each speaker on the following criteria on a scale of 1-5.
1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree

					The Presenter		The presenter had good teaching skills, and				
Date	Session Time	# of Hours Attended	Speaker Name	Presentation Title	Presented the content well	Was knowledgeable	Maintained proper pace	An engaging approach to learners	Promoted interaction with & among learners	Facilitated the question & answer session well	Additional Comments, if any

Visit https://amp18.amp.org/ce-credits/continuing-education.

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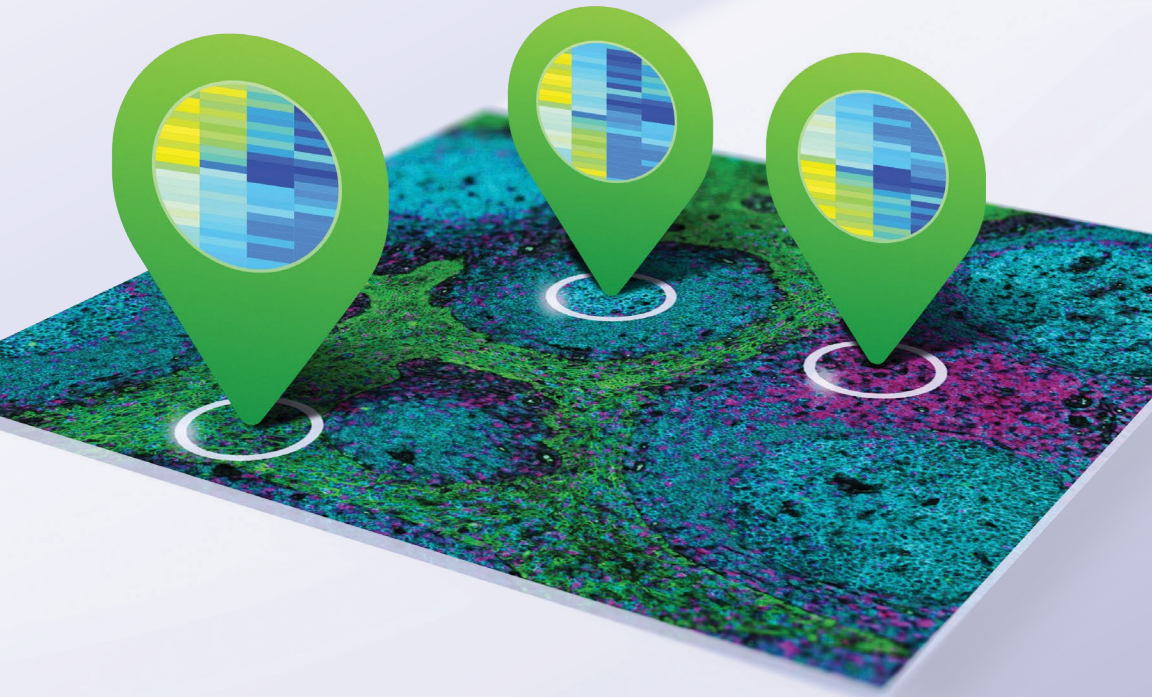

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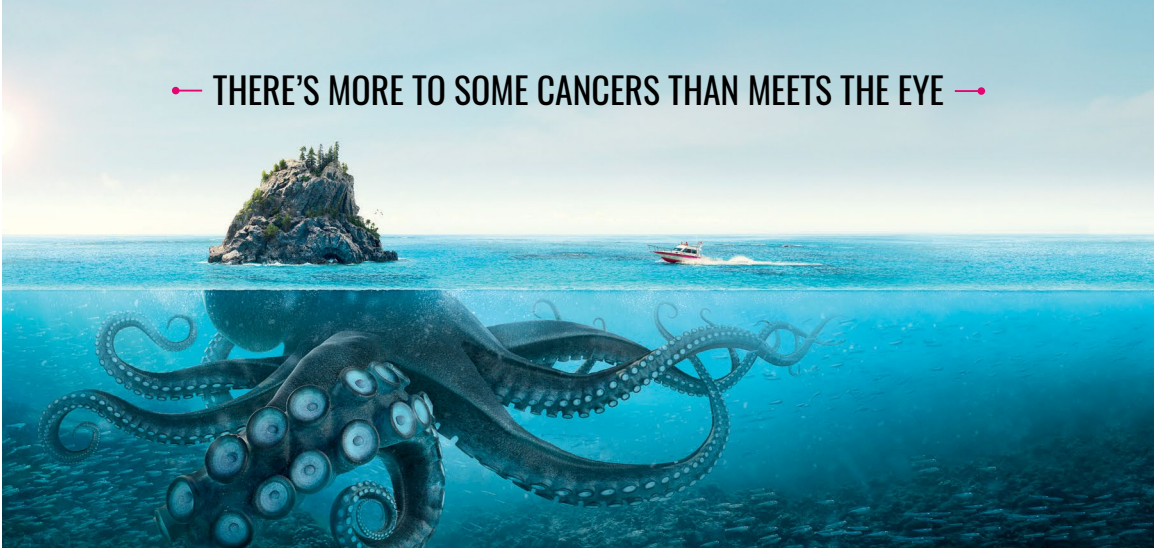
THERE'S MORE TO SOME CANCERS THAN MEETS THE EYE



WHAT'S DRIVING THE TUMOR?

Actionable alterations may be present in many tumors[1,2]

Some patients who undergo tumor genomic profiling may have an alteration that may be associated with an approved or investigational therapy[1,2]

TRK fusion proteins are oncogenic drivers across multiple tumor types[3,4]

- In TRK fusion cancer, one of the three *NTRK* genes fuses with an unrelated gene, causing overexpression of the TRK protein[3,5-7]
- Research has identified *NTRK* gene fusions in at least a dozen types of both common and rare solid tumors[4,5,7,8]

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Specific tests can uncover TRK fusion cancer[3,6]

A number of diagnostic testing methods can detect TRK fusion cancer; however, only sensitive and specific tests should be used.[3,6]

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- Pan-TRK immunohistochemistry assays (IHC)[11]
- DNA fluorescence in situ hybridization (FISH)[8-10]
- Reverse transcription-polymerase chain reaction (RT-PCR)[9,12]

LEARN MORE ABOUT *NTRK* GENE FUSIONS AND TESTING RESOURCES AT **TRKCANCER.COM**

NTRK, neurotrophic tyrosine receptor kinase; TRK, tropomyosin receptor kinase.

References: 1. Massard C, Michiels S, Ferté C, et al. High-throughput genomics and clinical outcome in hard-to-treat advanced cancers: results of the MOSCATO 01 trial. *Cancer Discov*. 2017;7(6):586-595. **2.** Boland GM, Piha-Paul SA, Subbiah V, et al. Clinical next generation sequencing to identify actionable aberrations in a phase I program. *Oncotarget*. 2015;6(24):20099-20110. **3.** Vaishnavi A, Le AT, Doebele RC. TRKing down an old oncogene in a new era of targeted therapy. *Cancer Discov*. 2015;5(1):25-34. **4.** Okimoto RA, Bivona TG. Tracking down response and resistance to TRK inhibitors. *Cancer Discov*. 2016;6(1):14-16. **5.** Amatu A, Sartore-Bianchi A, Siena S. *NTRK* gene fusions as novel targets of cancer therapy across multiple tumour types. *ESMO Open*. 2016;1(2):e000023. **6.** Kumar-Sinha C, Kalyana-Sundaram S, Chinnaiyan AM. Landscape of gene fusions in epithelial cancers: seq and ye shall find. *Genome Med*. 2015;7:129. doi:10.1186/s13073-015-0252-1. **7.** Lange AM, Lo H-W. Inhibiting TRK proteins in clinical cancer therapy. *Cancers*. 2018;10(4):E105. doi:10.3390/cancers10040105. **8.** Yan L, Zhang W. Precision medicine becomes reality–tumor type-agnostic therapy. *Cancer Commun*. 2018;38(1):6. doi:10.1186/s40880-018-0274-3. **9.** Abel HJ, Al-Kateb H, Cottrell CE, et al. Detection of gene rearrangements in targeted clinical next-generation sequencing. *J Mol Diagn*. 2014;16(4):405-417. **10.** Rogers T-M, Arnau GM, Ryland GL, et al. Multiplexed transcriptome analysis to detect *ALK, ROS1* and *RET* rearrangements in lung cancer. *Sci Rep*. 2017;7:42259. doi:10.1038/srep42259. **11.** Hechtman JF, Benayed R, Hyman DM, et al. Pan-trk immunohistochemistry is an efficient and reliable screen for the detection of *NTRK* fusions. *Am J Surg Pathol*. 2017;41(11):1547-1551. **12.** Vendrell JA, Taviaux S, Béganton B, et al. Detection of known and novel ALK fusion transcripts in lung cancer patients using next-generation sequencing approaches. *Sci Rep*. 2017;7(1):12510. doi:10.1038/s41598-017-12679-8.

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PP-LAR-US-0101-1 09/2018

Program At-A-Glance

		Thursday, 11/01/18	Friday, 11/02/18	Saturday, 11/03/18
MORNING	07:00-08:00	Breakfast	Breakfast	Breakfast
	07:00-07:30	Early Birds	Early Birds	Early Birds
	07:30-08:00			
	08:00-08:30	Break Opening Remarks	Break	Break
	08:30-09:00	Award for Excellence Lecture	Plenary Sessions*	Plenary Sessions*
	09:00-09:30			
	09:30-10:00	Break	Visit the Exhibits, AMP Central & Posters	Visit the Exhibits, AMP Central & Posters (Odd Numbered Posters)
	10:00-10:30	Plenary Sessions		
	10:30-11:00		Workshop Sessions	Workshop Sessions
	11:00-11:30			
	11:30-12:00	Lunches	Lunches	Lunches
AFTERNOON	12:00-12:30			
	12:30-01:00			
	01:00-01:30	Workshop Sessions	Plenary Sessions	Symposium Sessions
	01:30-02:00			
	02:00-02:30			
	02:30-03:00	Visit the Exhibits, AMP Central & Posters (Award Judging & General Viewing)	Visit the Exhibits, AMP Central & Posters (Even Numbered Posters)	Break
	03:00-03:30			Plenary Sessions
	03:30-04:00		Symposium Sessions*	
	04:00-04:30			
	04:30-05:00	Plenary Sessions*		Closing Remarks
EVENING	05:00-05:30		Break	
	05:30-06:00		Business Meeting & Awards Session	
	06:00-06:30	Welcome Reception (Supported by QIAGEN)		
	06:30-07:00			
	07:00-07:30			
	07:30-08:00	Special Event	AMP 2018 Social Event	
	08:00-08:30			
	08:30-09:00			

***ID Special Sessions will be held:**
Thursday, November 01 from 4:15pm - 5:45pm • Friday, November 02 from 9:15am - 10:15am and 4:15pm - 5:00pm
Saturday, November 03 from 9:15am - 10:15am

AMP 2018 ANNUAL MEETING & EXPO

San Antonio, TX • November 1–3, 2018

Note: All sessions are scheduled at the Convention Center unless otherwise noted.

Tuesday, October 30, 2018		
8:00am - 4:30pm	**AMP Reference Material Forum** *(Separate Registration)*	*Grand Hyatt, Travis AB, 3rd Level*
9:45am - 11:15am	**Executive Committee Meeting** *(Invitation Only)*	*Grand Hyatt, Presidio ABC, 3rd Level*
11:30am - 6:00pm	**Board of Directors Meeting** *(Invitation Only)*	*Grand Hyatt, Presidio ABC, 3rd Level*
2:00pm - 6:00pm	**Attendee, Speaker, and Exhibitor Registration & Express Check-In**	*Main Lobby, Street Level*
6:30pm	**Board of Directors Dinner** *(Invitation Only)*	*Offsite*
Wednesday, October 31, 2018		
7:00am - 5:00pm	**Attendee, Speaker, and Exhibitor Registration & Express Check-In**	*Main Lobby, Street Level*
7:30am - 5:00pm	**Committee Meetings** *(Invitation Only)*	*Marriott Riverwalk, Various Rooms (2nd Floor)*
7:30am - 8:30am	**Registration, Continental Breakfast for Outreach Course**	*Grand Hyatt, Presidio ABC, 3rd Level*
8:30am - 3:45pm	**Molecular Pathology Outreach Course (MPOC)** *(Separate Registration)*	*Grand Hyatt, Presidio ABC, 3rd Level*
4:45pm - 5:45pm	**Volunteer Appreciation Reception** *(Invitation Only)*	*Marriott Riverwalk, Riverview, Level p1*
6:00pm - 7:00pm	**MGP Program Directors Meeting** *(Invitation Only)*	*Grand Hyatt, Presidio ABC, 3rd Level*
7:00pm - 8:00pm	**Trainee Happy Hour**	*Offsite, see Page 14 for details*
Thursday, November 1, 2018		
General Information		
6:30am - 8:00am	**Poster Set-Up**	*Exhibit Hall 1&2, Street Level*
6:45am - 5:00pm	**Attendee, Speaker, and Exhibitor Registration & Express Check-In**	*Main Lobby, Street Level*
11:30am - 4:30pm 5:45pm - 7:00pm	**Exhibit Hall Open** *(Note: The Exhibit Hall will be closed from 4:30pm - 5:45pm)*	*Exhibit Hall 1&2, Street Level*

Program Listing

Thursday, November 1, 2018

6:45am - 8:00am **Continental Breakfast** Early Bird Session Room Foyers

7:00am - 8:00am **Early Bird Sessions**

◆ **Genomics of Pediatric AML and MDS** Room 301, Ballroom Level
CE Credit: 1 Hour **Path:** Cancer/Oncology

Moderators: Eric J. Duncavage, MD, Washington University, Saint Louis, MO, USA and Mohamed Hussaini, MD, Moffitt Cancer Research Center, Tampa, FL, USA

Genomics of Pediatric AML and MDS
Jeffery M. Klco, MD, PhD, St Jude Children's Research Hospital, Memphis, TN, USA

◆ **Finding the "Indel" in the Haystack** Room 214, Meeting Level
CE Credit: 1 Hour **Path:** Informatics

Moderators: Somak Roy, MD, University of Pittsburgh Medical Center, Pittsburgh, PA, USA and Parker Wilson, Washington University School of Medicine, St. Louis, MO, USA

Large Indel Detection in Clinical NGS Assays
Sabah Kadri, PhD, Ann & Robert H. Luri Children's Hospital of Chicago, Chicago, IL, USA

◆ **Personalized Genomics: Advancing Continuity in Research to Clinical Care** Room 217, Meeting Level
CE Credit: 1 Hour **Path:** Molecular Methodologies & Technologies

Moderators: Lynne Whetsell, Saint Francis Hospital, Tulsa, OK, USA and Tamara Restrepo, Boston Children's Hospital, Boston, MA, USA

Personalized Genomics: Advancing Continuity in Research to Clinical Care
Vincent J. Magrini, PhD, Nationwide Children's Hospital, Columbus, OH, USA
Catherine E. Cottrell, PhD, Nationwide Children's Hospital, Columbus, OH, USA

◆ **Lab of the Future: Cool Toys for the Diagnosis of Infectious Diseases** Room 221, Meeting Level
CE Credit: 1 Hour **Path:** Infectious Diseases; Molecular Methodologies & Technologies

Moderators: Belinda Yen-Lieberman, PhD, The Cleveland Clinic Foundation, Cleveland, OH, USA and Deepu Alex, MD, PhD, Memorial Sloan Kettering Cancer Center, New York City, NY, USA

Validation of the Karius Microbial Cell-free DNA Sequencing Test for Infectious Disease
Timothy A. Blauwkamp, PhD, Karius, Inc., Redwood City, CA, USA

A Smart Diagnostic: Technology that Learned to Identify and Count Individual Bacteria in Blood
Stephanie I. Fraley, PhD, University of California, San Diego, CA, USA

◆ **Case Studies in Genetics and Informatics** Room 302, Ballroom Level
CE Credit: 1 Hour **Path:** Informatics; Inherited Conditions

Moderators: Elaine B. Spector, PhD, University of Colorado School of Medicine, Aurora, CO, USA and Kristy R. Crooks, PhD, University of Colorado, Aurora, CO, USA

Occurrence of Medulloblastoma in a Patient with Curry-Jones Syndrome
Binu Porath, PhD, Children's Mercy Kansas City, Kansas City, MO, USA

Identification of a Novel Likely Pathogenic PIK3R1 Variant by Targeted Next-Generation Sequencing Analysis in a Patient with Overgrowth Syndrome and Lymphatic Malformation
Christopher Suciu, MD, MS Washington University School of Medicine in St. Louis, St. Louis, MO, USA

Sex Check: Verifying Patient Sex Based on Off-Panel SNPs on the X Chromosome
Jennifer Bynum, MD, Johns Hopkins, Baltimore, MD, USA

A Discrepancy Between the Human Reference Genome (GRCh37) and Transcriptome (RefSeq) Results in the Incorrect Annotation of a Clinically-Relevant Sequence Variant in RECQL4
Lisa Lansdon, PhD, Children's Mercy Kansas City, Kansas City, MO, USA

Thursday, November 1, 2018 *continued*

8:00am - 8:15am **Coffee Break**
(Supported by Phillips)

8:15am - 8:30am Opening Remarks

◆ **Opening Remarks** Stars at Night Ballroom, Ballroom Level

Moderator: Lynne V. Abruzzo, MD, PhD, Ohio State University Medical Center, Columbus, OH, USA and 2018 Program Chair

8:30am - 9:45am Award Lecture

◆ **Reimagining Healthcare: Next Generation DNA Sequencing to Ultrasound-on-a-Chip** Stars at Night Ballroom, Ballroom Level

CE Credit: 1.25 Hours **Path:** Special Session

Moderators: Kojo S.J. Elenitoba-Johnson, MD, University of Pennsylvania, Philadelphia, PA, USA and Lynne V. Abruzzo, MD, PhD, Ohio State University Medical Center, Columbus, OH, USA and 2018 Program Chair

Reimagining Healthcare: Next Generation DNA Sequencing to Ultrasound-on-a-Chip
Jonathan M. Rothberg, PhD, Founder, Chairman, and CEO of Butterfly Network, Inc. CT, USA

9:45am - 10:15am **Coffee Break** Stars at Night Ballroom Foyer, Ballroom Level
(Supported by Phillips)

10:15am - 11:45am Plenary Session

◆ **Life Starts with DNA: Sequencing of the Baby Genome** Stars at Night Ballroom, Ballroom Level

CE Credit: 1.50 Hours **Path:** Informatics; Inherited Conditions

Moderators: Linda Jo Bone Jeng, MD, PhD, University of Maryland, Baltimore, MD, USA and Elaine B. Spector, PhD, University of Colorado School of Medicine, Aurora, CO, USA

Newborn Genomic Sequencing for Diagnosis and Screening
Jonathan S. Berg, MD, PhD, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA

The BabySeq Project: A Study Of Newborn Genomic Sequencing
Ingrid A. Holm, MD, MPH, Boston Children's Hospital/Harvard Medical School, Boston, MA, USA

11:45am - 1:00pm **General Lunch, Exhibit Hall 1&2, Street Level** Various Locations
(Entrance through Exhibit Hall)

Networking Lunches: Please see lunch descriptions in the "Highlights & General Information" section of the Program Book, Pages 21-22.

Innovation Spotlight Schedule: See schedule on Mobile App and by each stage located in the Exhibit Hall.

1:00pm - 2:30pm Workshop Sessions

◆ **Variant Interpretation:** Room 301, Ballroom Level
Challenges and Progress towards Solutions

CE Credit: 1.50 Hours **Path:** Inherited Conditions

Moderators: Elaine B. Spector, PhD, University of Colorado School of Medicine, Aurora, CO, USA and Jennifer Sanmann, PhD, University of Nebraska Medical Center, Omaha, NE, USA

Challenges of Variant Interpretation: Sources of Variability Among VITAL Participants
Elaine Lyon, PhD, Hudson Alpha, Huntsville, AL, USA

ClinVar and ACMG Variant Classification Standards for Inherited Cardiovascular Disease
Birgit Funke, PhD, Veritas Genetics, Danvers, MA, USA
Harvard Medical School, Boston, MA, USA

◆ **Role of Next Generation Sequencing for Outbreak Investigation** Room 302, Ballroom Level

CE Credit: 1.50 Hours **Path:** Infectious Diseases

Moderators: Jennifer Dien Bard, PhD, Childrens Hospital Los Angeles, Los Angeles, CA, USA and Sophie Arbefeville, MD, University of Minnesota Medical Clinic, Minneapolis, MN, USA

Viral Genomics in the Clinical Lab
Alex Greninger, MD, PhD, University of Washington, Seattle, WA, USA

NGS for Natural Disasters
Randall J. Olsen, MD, PhD, Houston Methodist Hospital and Research Institute, Houston, TX, USA

◆ **Cutting Edge Informatics Infrastructure for Personalized Medicine** Room 214, Meeting Level

CE Credit: 1.50 Hours **Path:** Informatics

Moderators: Somak Roy, MD, University of Pittsburgh Medical Center, Pittsburgh, PA, USA and Sabah Kadri, PhD, University of Chicago, Chicago, IL, USA

Leveraging Computer Infrastructure to Scale Clinical Bioinformatics
Elaine P.S. Gee, PhD, BigHead Analytics Group, Windsor, CA, USA

Standards and Apps for Genomic Decision Support
Jeremy L. Warner, MD, MS, Vanderbilt University, Nashville, TN, USA

◆ **Payer Perspectives on Coverage and Reimbursement of Molecular Diagnostics** Room 221, Meeting Level

(Sponsored by the AMP Economic Affairs Committee)

CE Credit: 1.50 Hours **Path:** Advocacy/Lab Management

Moderator: Charles Matthews, ClearView Health Partners, Newton, MA, USA

Payer Perspectives on Coverage and Reimbursement of Molecular Diagnostics
Laurence Clark, MD, National Government Services, E. Syracuse, NY, USA
Paul Gerrard, MD, Palmetto GBA, Columbia, SC, USA
Charles Matthews, ClearView Health Partners, Newton, MA, USA
Gabriel Bien-Willner, MD, Palmetto GBA, Columbia, SC, USA
Michael Fine, MD, Health Net, Laguna Beach, CA, USA

◆ **Molecular Tumor Board** Room 217, Meeting Level

CE Credit: 1.50 Hours **Path:** Cancer/Oncology; Informatics; Molecular Methodologies & Technologies

Moderators: Lynette M. Sholl, MD, Brigham & Women's Hospital, Boston, MA, USA and Christina Lockwood, PhD, University of Washington, Seattle, WA, USA

Panel Discussion
Elizabeth M. Swisher, MD, University of Washington, Seattle, WA, USA
Jonathan A. Nowak, MD, PhD, Brigham and Women's Hospital, Boston, MA, USA
Stephen E. Lincoln, Invitae, San Francisco, CA, USA
Eric H. Bernicker, MD, Houston Methodist Hospital, Houston, TX, USA
Valentina Nardi, MD, Massachusetts General Hospital, Boston, MA, USA
Angela Jacobson, University of Washington, Seattle, WA, USA

2:30pm - 4:15pm Break

Coffee Break- Visit Exhibit Hall AMP Central and Posters Exhibit Hall 1&2, Street Level
(Award Applicant Posters Attended)

AMP Central Activities: Technologist Mixer

Innovation Spotlight Schedule: See schedule on Mobile App and by each stage located in the Exhibit Hall.

Thursday, November 1, 2018 *continued*

4:15pm - 5:45pm **Plenary Session**

◆ **Somatic and Germline Mutations in Hematologic Malignancies** Stars at Night Ballroom, Ballroom Level

CE Credit: 1.50 Hours **Path:** Cancer/Oncology

Moderators: Eric J. Duncavage, MD, Washington University, Saint Louis, MO, USA and Y. Lynn Wang, MD, PhD, Incyte, Wilmington, DE, USA

Spliceosome Gene Mutations in MDS
Matthew Walter, MD, Washington University, St. Louis, MO, USA

Germline Predisposition to Hematopoietic Malignancies
Lucy A. Godley, MD, PhD, The University of Chicago, Chicago, IL, USA

4:15pm - 5:45pm **Special Session: Infectious Diseases**

◆ **Meningitis/Encephalitis Syndromic Testing in the Clinical Setting: Is it Ready for Prime Time?** Room 301, Ballroom Level

CE Credit: 1.50 Hours **Path:** Infectious Diseases

Moderator: David R. Hillyard, MD, ARUP Laboratories, Inc, Salt Lake City, UT, USA

Are Meningitis/Encephalitis Panels Ready for Prime Time?
Kevin Alby, PhD, University of Pennsylvania, Philadelphia, PA, USA

Point-Counterpoint: Molecular Diagnosis of Meningitis/Encephalitis
Jennifer Dien Bard, PhD, Children's Hospital Los Angeles, Los Angeles, CA, USA
University of Southern California, Los Angeles, CA, USA

5:45pm - 7:00pm **Welcome Reception** Exhibit Hall 1&2, Street Level

(Supported by QIAGEN)

AMP Central Activities: Tweet Up! Meet the other #AMPlifiers you have gotten to know online as you prepare for #AMP2018

7:30pm - 8:30pm **Special Event: Emerging Targets for the Diagnosis of Cancer: *NTRK* Fusion in Solid Tumors** Room 221, Meeting Level

Developed through a strategic collaboration between AMP and Medscape Education Oncology

7:30pm - 9:00pm **JMD Editorial Board Dinner** (Invitation Only) Marriott Rivercenter, Salon D

Friday, November 2, 2018

6:45am - 5:00pm	**Attendee, Speaker, and Exhibitor Registration & Express Check-in**	Main Lobby, Street Level
6:45am - 8:00am	**Continental Breakfast** *(Supported by EntroGen)*	Early Bird Session Room Foyers
9:00am - 4:30pm	**Exhibit Hall Open**	Exhibit Hall 1&2, Street Level

7:00am - 8:00am Early Bird Sessions

◆ **Keys to Publishing in Scientific Journals** Room 301, Ballroom Level

Path: Advocacy/Lab Management; Cancer/Oncology; Education & Professional Development; Infectious Diseases; Informatics; Inherited Condition; Molecular Methodologies & Technologies

Moderator: Lynne V. Abruzzo, MD, PhD, Ohio State University Medical Center, Columbus, OH, USA

Keys to Publishing in Scientific Journals
Barbara A. Zehnbauer, PhD, Emory University School of Medicine, Atlanta, GA, USA

◆ **Conceptual Nuts and Bolts of Visualizing Big Data in Genomics** Room 217, Meeting Level

CE Credit: 1 Hour **Path:** Informatics

Moderators: Matthew Lebo, PhD, Brigham & Women's Hospital, Boston, MA, USA and Arivarasan Karunamurthy, MD, University of Pittsburgh Medical Center ,Pittsburgh, PA, USA

Visualizations for Genomic Data, the GTEx Experience
Jared L. Nedzel, Broad Institute, Cambridge, MA, USA
Katherine Huang, Broad Institute, Cambridge, MA, USA

◆ **The Growth and Evolution of Consumer Genetic Testing** Room 221, Meeting Level

(Sponsored by the Professional Relations Committee)

CE Credit: 1 Hour **Path:** Advocacy/Lab Management

Moderator: Jill Hagenkord, MD, Color Genomics, Burlingame, CA, USA

Panel Discussion
Jill Hagenkord, MD, Color Genomics, Burlingame, CA, USA
Elissa Levin, MS, Helix, San Francisco, CA, USA
Danielle Bonadies, MS, My Gene Counsel, Branford, CT, USA
Altovise Ewing, PhD, 23andMe, Mountain View, CA, USA

◆ **AMP Guidance/Standards for NGS Germline Variant Confirmation** Room 214, Meeting Level

(Sponsored by the Clinical Practice Committee)

CE Credit: 1 Hour **Path:** Informatics; Inherited Conditions

Moderator: Antonia R. Sepulveda, MD, PhD, Columbia University Medical Center, New York, NY, USA

AMP Guidance/Standards for NGS Germline Variant Confirmation
Kristy Crooks, PhD, University of Colorado, Denver, CO, USA

◆ **Case Studies in Solid Tumors** Room 302, Ballroom Level

CE Credit: 1 Hour **Path:** Cancer/Oncology

Moderators: Lynette M. Sholl, MD, Brigham & Women's Hospital, Boston, MA, USA and Anna Yemelyanova, MD, University of Alabama, Birmingham, AL, USA

Circulating Tumor DNA (ctDNA) Detection in CSF in a Patient with Metastatic Melanoma to the CNS
Andres, Moon, MD, University of Washington, Seattle, WA, USA

An Unusual Driver Mutation in a Lung Adenocarcinoma
Erik Nohr, MD, Stanford Healthcare, Palo Alto, CA, USA

LMNA/NTRK1 Fusion in a Paravertebral Soft Tissue Mass
Yulei Shen, MD, PhD, Baylor College of Medicine, Houston, TX, USA

Recurrent Glioblastoma with Primary and Secondary Features in a Patient with a Deficiency of Mismatch Repair
Martin Powers, MD, University of California San Diego, San Diego, CA, USA

Friday, November 2, 2018 *continued*

8:00am - 8:15am **Break**

8:15am - 9:15am **Special Session: Infectious Diseases**

◆ **The Role of Genomic Susceptibility Testing in Predicting Antimicrobial Responses** Room 301, Ballroom Level

CE Credit: 1 Hour **Path:** Infectious Diseases

Moderator: Jennifer Dien Bard, PhD, Childrens Hospital Los Angeles, Los Angeles, CA, USA

Use of Molecular Testing to Predict Gonorrhea Treatment
Jeffrey D. Klausner, MD, MPH, University of California, Los Angeles, CA, USA

Value of Molecular AST Methods for Bacteria: Are We There?
Romney M. Humphries, PhD, Accelerate Diagnostics, Tucson, AZ, USA

8:15am - 9:45am **Plenary Session**

◆ **Tumoral Genomic Diversity** Stars at Night Ballroom, Ballroom Level

CE Credit: 1.50 Hours **Path:** Cancer/Oncology

Moderators: Lynette M. Sholl, MD, Brigham & Women's Hospital, Boston, MA, USA and Christina Lockwood, PhD, University of Washington, Seattle, WA, USA

Predictor of Response to PARP Inhibitors
Elizabeth M. Swisher, MD, University of Washington, Seattle, WA, USA

Leveraging Personalized Medicine for Diagnosis and Treatment of Pancreatic Cancer
Brian Wolpin, MD, MPH, Dana-Farber Cancer Institute, Boston, MA, USA

9:45am - 10:45am **Break**

Coffee Break- Visit Exhibit Hall, AMP Central and Posters
Exhibit Hall 1&2, Street Level

AMP Central Activities: Education Showcase

Innovation Spotlight Schedule: See schedule on Mobile App and by each stage located in the Exhibit Hall.

10:45am - 11:45am **Workshop Sessions**

◆ **Platform Presentations of Selected Genetics Abstracts** Room 221, Meeting Level

CE Credit: 1 Hour **Path:** Inherited Conditions

Moderators: Linda Jo Bone Jeng, MD, PhD, University of Maryland, Baltimore, MD, USA and Snehalkumar Patel, MD, PhD, National Institutes of Health, Bethesda, MD, USA

G044 - Designing and Implementing NGS Tests for Inherited Disorders: a Practical Framework with Step-by-Step Guidance for Clinical Laboratories
Avni B. Santani, PhD, Children's Hospital of Philadelphia, Philadelphia, PA, USA

G025 - Verification of Very Small Copy Number Variants (Micro CNVs) Detected on Whole Genome CMA Analysis and Implications for Clinical Reporting
Ulrike P. Kappes, MPH, MD, PhD, Medical College of Wisconsin, Milwaukee, WI, USA

G026 - Two-site Evaluation of a One-tube PCR/CE Assay that Resolves CAG Length Polymorphisms in Exon 1 of the HTT Gene
Sarah Statt, PhD, Asuragen, Austin, TX, USA

G021 - Brazilian Panorama of Whole Exome: Details of 315 Cases
Roberta Sitnik, PhD, Hospital Israelita Albert Einstein, São Paulo, Brazil

◆ **Platform Presentations of Selected Hematopathology Abstracts** Room 214, Meeting Level
CE Credit: 1 Hour **Path:** Cancer/Oncology

Moderators: Y. Lynn Wang, MD, PhD, University of Chicago, Chicago, IL, USA and Juehua Gao, MD, PhD, Northwestern University, Chicago, IL, USA

H025 - Ultradeep Error Corrected Next-generation Sequencing (NGS) of ABL1 Kinase Domain Mutations in BCR-ABL1 Positive Malignancies
Nikhil Patkar, MD, Tata Memorial Center, Mumbai, Maharashtra, India

H041 - Longitudinal Monitoring of AML Tumors with High-throughput Single-Cell DNA Sequencing Reveals Rare Clones Prognostic for Disease Progression and Therapy Response
Dennis J. Eastburn, PhD, Mission Bio, Inc., South San Francisco, CA, USA

H014 - Mate Pair Sequencing: Ushering Cytogenetics Into the Era of Personalized Medicine
Nicole Hoppman, PhD, Mayo Clinic, Rochester, MN, USA

H039 - Donor-derived Clonal Hematopoiesis of Indeterminant Potential Mutations are Detected in Transplant Recipients after Allogeneic Hematopoietic Stem Cell Transplant
James Liu, Oregon Health & Science University, Portland, OR, USA

◆ **Platform Presentations of Selected Infectious Diseases Abstracts** Room 301, Ballroom Level
CE Credit: 1 Hour **Path:** Infectious Diseases

Moderators: Belinda Yen-Lieberman, PhD, The Cleveland Clinic Foundation, Cleveland, OH, USA and Adrienne Bambach, Roche, Rochester, NY, USA

ID004 - Evaluation of a Novel Isothermal Amplification Assay for Detection and Genotyping of Human Papillomavirus in Formalin-fixed Paraffin-embedded Tissue of Oropharyngeal Carcinomas
Yi-Wei Tang, MD, PhD, Memorial Sloan Kettering Cancer Center, New York, NY, USA

ID012 - Comprehensive Solid Tumor Microbiome Profiling via Analysis of Unmapped Reads in Large Panel, Hybridization Capture-based NGS Assay Data
Chad M. Vanderbilt, MD, Memorial Sloan Kettering Cancer Center, New York, NY, USA

ID063 - A Quantitative, Multiplexed RNA Detection Platform for Rapid Pathogen Identification and Phenotypic Antibiotic Susceptibility Testing (AST) using NanoString(™) Technology
Roby P. Bhattacharyya, MD, PhD, Broad Institute, Cambridge, MA, USA

ID007 - The Diagnostic Yield of Universal Pathogen Detection by Next-Generation Sequencing Compared to the Standard of Care in Patients with Pneumonia
Brittany A. Young, MD, PhD, University of Utah, Salt Lake City, UT, USA

◆ **Platform Presentations of Selected Informatics Abstracts** Room 302, Ballroom Level
CE Credit: 1 Hour **Path:** Informatics

Moderator: Somak Roy, MD, University of Pittsburgh Medical Center, Pittsburgh, PA, USA

I025 - Identification of Viral Integration Sites in Cancer Genomes using Unmapped Reads in Targeted Next-Generation Sequencing Data
Anita S. Bowman, MS, Memorial Sloan Kettering Cancer Center, New York, NY, USA

I027 - Detection of Microsatellite Instability Using a Large Next-generation Sequencing Panel Across Diverse Tumor Types
Susan J. Hsiao, MD, PhD, Columbia University Medical Center, New York, NY, USA

I009 - Personalized Transcriptomic Drug Profiling in Non-small Cell Lung Cancer
Zachary Abrams, PhD, The Ohio State University, Athens, OH, USA

I034 - Assessing Cancer Diagnosis From Clinical Genomics Data Using Machine Learning
Paul R. Hess, MD, PhD, University of Pennsylvania, Philadelphia, PA, USA

Friday, November 2, 2018 *continued*

◆ **Platform Presentations of Selected Solid Tumors Abstracts** Room 217, Meeting Level
CE Credit: 1 Hour **Path:** Cancer/Oncology

Moderators: Lynette M. Sholl, MD, Brigham & Women's Hospital, Boston, MA, USA and Rena Xian, MD, Johns Hopkins Medical Institutions, Baltimore, MD, USA

ST002 - Analysis of Urinary Cell-free DNA for Early Detection and Surveillance of Bladder Cancer
Jonathan Dudley, MD, Stanford University, Stanford, CA, USA

ST055 - DNA Sequencing of Human, Epstein-Barr Virus, and Helicobacter Pylori Genomes to Classify and Monitor Gastric Adenocarcinoma
Margaret L. Gulley, MD, University of North Carolina, Chapel Hill, NC, USA

ST107- Clinical Validation of MSK-ACCESS: An Ultrasensitive Next-generation Sequencing Assay for Liquid Biopsies in the Clinic
A. Rose Brannon, PhD, Memorial Sloan Kettering Cancer Center, New York, NY, USA

ST144- Prognosis Determined by Tumor Mutational Burden (TMB) Using Whole Exome Sequencing (WES)
Evan Fernandez, MS, Weill Cornell Medicine, New York, NY, USA

11:45am - 1:00pm Lunch

General Lunch, Exhibit Hall 1&2, Street Level Various Locations
(Entrance through Exhibit Hall)

Networking Lunches: **Please see lunch descriptions in the "Highlights & General Information" section of the Program Book, Pages 21-22.**

AMP Central Activities: MAC Networking

Innovation Spotlight Schedule: See schedule on Mobile App and by each stage located in the Exhibit Hall.

1:00pm - 2:30pm Plenary Session

◆ **Microbiome and Predictive Response to Immunotherapy** Stars at Night Ballroom, Ballroom Level
CE Credit: 1.50 Hours **Path:** Infectious Diseases

Moderators: Belinda Yen-Lieberman, PhD, The Cleveland Clinic Foundation, Cleveland, OH, USA and Jennifer Dien Bard, PhD, Childrens Hospital Los Angeles, Los Angeles, CA, USA

Microbiome Changes with Infectious Complications During Stem Cell Transplantation
Ying Taur, MD, MPH, Memorial Sloan Kettering Cancer Center, New York, NY, USA

The Intestinal Virome: From Chronic Inflammation to Bacteriophage Therapy Targeting Multidrug Resistant Bacteria
Breck A. Duerkop, PhD, University of Colorado School of Medicine, Aurora, CO, USA

2:30pm - 3:30pm Break

Coffee Break - Visit Exhibit Hall, AMP Central, and Posters Exhibit Hall 1&2, Street Level
(Even-numbered posters attended)

AMP Central Activities: Get Involved With AMP!

Innovation Spotlight Schedule: See schedule on Mobile App and by each stage located in the Exhibit Hall.

Friday, November 2, 2018 *continued*

3:30pm - 5:00pm **Symposium Sessions**

◆ **Utilization of CRISPR/Cas Technique as Anti-viral Therapeutic Agent and as an Adaptive Immune Modulator in DNA Editing and RNA Targeting** Room 217 Meeting Level

CE Credit: 1.50 Hours **Path:** Infectious Diseases; Cancer/Oncology; Molecular Methodologies & Technologies

Moderators: Belinda Yen-Lieberman, PhD, The Cleveland Clinic Foundation, Cleveland, OH, USA and Jennifer Dien Bard, PhD, Childrens Hospital Los Angeles, Los Angeles, CA, USA

CRISPR/Cas9 Targeting and Inactivation of Viral DNA Genomes
Bryan R. Cullen, PhD, Duke University Medical Center, Durham, NC, USA

Programmable RNA-targeting CRISPR-Cas Enzymes for RNA Detection and Therapeutics
Mitchell R. O'Connell, PhD, University of Rochester, Rochester, NY, USA

◆ **Clinical Advances in NGS** Stars at Night Ballroom 1&2, Ballroom Level

CE Credit: 1.50 Hours **Path:** Advocacy/Laboratory Management; Informatics; Molecular Methodologies & Technologies

Moderators: Linda Jo Bone Jeng, MD, PhD, University of Maryland, Baltimore, MD, USA and Elaine B. Spector, PhD, University of Colorado School of Medicine, Aurora, CO, USA

Industry Perspective
Robert L. Nussbaum, MD, Invitae Corporation, San Francisco, CA, USA

Academic Perspective
Wayne W. Grody, MD, PhD, University of California, Los Angeles, CA, USA

◆ **In Silico Sequencing Data and Tools: Current and Future Applications in Clinical Practice** Stars at Night Ballroom 3&4, Ballroom Level

CE Credit: 1.50 Hours **Path:** Advocacy/Laboratory Management; Molecular Methodologies & Technologies

Moderators: Somak Roy, MD, University of Pittsburgh Medical Center, Pittsburgh, PA, USA and Matthew Lebo, PhD, Brigham & Women's Hospital, Boston, MA, USA

"In Silico" Proficiency Testing
John D. Pfeifer, MD, PhD, Washington University School of Medicine, St. Louis, MO, USA

In Silico Proficiency Testing for Clinical Next Generation Sequencing
Karl V. Voelkerding, MD, University of Utah School of Medicine, Salt Lake City, UT, USA

4:15pm - 5:00pm **Special Session: Infectious Diseases**

◆ **ID TOWN HALL** Room 301, Ballroom Level

Path: Infectious Diseases

Moderator: David R. Hillyard, MD, ARUP Laboratories, Inc, Salt Lake City, UT, USA

5:00pm - 5:15pm **Break**

5:15pm - 6:30pm **Business Session**

◆ **Business Meeting & Award Session** Stars at Night Ballroom 1&2, Ballroom Level

7:00pm - 10:30pm **AMP 2018 Social Event** Marriott Rivercenter, Grand Ballroom, Salon EF
(Separate Registration)

Saturday, November 3, 2018		
6:45am - 2:00pm	**Attendee, Speaker, and Exhibitor Registration & Express Check-in**	
6:45am - 8:00am	**Continental Breakfast**	Early Bird Session Room Foyers
9:00am - 1:30pm	**Exhibit Hall Open**	Exhibit Hall 1&2, Street Level
1:00pm - 1:30pm	**Poster Removal**	Exhibit Hall 1&2, Street Level

7:00am - 8:00am **Early Bird Sessions**

◆ **AMP Guidance for Non-Standard or Emerging NGS Applications: Liquid Biopsy** Room 214, Meeting Level

(Sponsored by the Clinical Practice Committee)

CE Credit: 1.0 Hour **Path:** Cancer/Oncology; Informatics; Molecular Methodologies & Technologies

Moderator: Antonia R. Sepulveda, MD, PhD, Columbia University Medical Center, New York, NY, USA

Panel Discussion
Christina Lockwood, PhD, University of Washington, Seattle, WA, USA
Christopher D. Gocke, MD, Johns Hopkins University, Baltimore, MD, USA

◆ **Prior's Puzzlers** Room 301, Ballroom Level

CE Credit: 1.0 Hour **Path:** Inherited Conditions

Moderator: Lynne V. Abruzzo, MD, PhD, Ohio State University Medical Center, Columbus, OH, USA

Prior's Puzzlers
Thomas W. Prior, PhD, Case Western Reserve University, Cleveland, OH, USA

◆ **Strength in Numbers: Building an Academic Consortium to Facilitate Cost-Effective Clinical NGS** Room 221, Meeting Level

CE Credit: 1.0 Hour **Path:** Advocacy/Lab Management

Moderators: Lynette M. Sholl, MD, Brigham & Women's Hospital, Boston, MA, USA and Guoli Chen, MD, PhD, Hershey Medical Center, Hershey, PA, USA

Strength in Numbers: Building an Academic Consortium to Facilitate Cost-Effective Clinical NGS
Jeremy Segal, MD, PhD, University of Chicago, Chicago, IL, USA
Dara L. Aisner, MD, PhD, University of Colorado School of Medicine, Denver, CO, USA

◆ **Case Studies in Hematopathology** Room 302, Ballroom Level

CE Credit: 1.0 Hour **Path:** Cancer/Oncology

Moderators: Y. Lynn Wang, MD, PhD, Incyte, Wilmington, DE, USA and Mark D. Ewalt, MD, University of Colorado, Aurora, CO, USA

Identification of a Rare Germline POT1 Mutation by Targeted Next-Generation Sequencing of a Splenic Marginal Zone Lymphoma
Audrey Jajosky, MD, PhD, University Hospitals Cleveland Medical Center, Cleveland, OH, USA

Identification of Acute Leukemia Risk Mutations in a Child with Severe Congenital Neutropenia
Jennifer Yoest, MD, Washington University School of Medicine in St. Louis, St. Louis, MO, USA

Whole Genome Sequencing Identifies Cryptic High-Risk Cytogenetic Findings In A Patient With Acute Myeloid Leukemia
Michael, Alberti, MD, PhD, Washington University School of Medicine in St. Louis, St. Louis, MO, USA

A Case of Myeloid Neoplasm with Germline Predisposition: Connecting the Clinical, Laboratory, Morphology and Molecular Dots
Fatima Zahra Jelloul, MD, MD Anderson Cancer Center, Houston, TX, USA

◆ **Platform Presentations of Selected Technical Topics Abstracts** Room 304, Ballroom Level
CE Credit: 1.0 Hour **Path:** Molecular Methodologies & Technologies

Moderators: Fernanda Sabato, MS, Virginia Commonwealth University, Richmond, VA, USA and Yajuan Liu, PhD, University of Washington, Seattle, WA, USA

TT074 - Multi-Patient Longitudinal Monitoring of Cancer Mutations from Circulating DNA of Using Personalized Single Color Digital PCR Assays
Christina M. Bouwens, Stanford University, Stanford, CA, USA

TT059 - Cell-free DNA Allograft Rejection Monitoring Using Low-coverage Whole Genome Sequencing
Niklas Krumm, MD, PhD, University of Washington, Seattle, WA, USA

TT070 - Universal Design and Rapid PCR for Genotyping by High Resolution Melting
Jessica Houskeeper, MRes, University of Utah, Salt Lake City, UT, USA

TT046 - The NIH Genetic Testing Registry (GTR): Test Methodologies as a Sensor of the Precision Medicine Environment
Adriana Malheiro, MS, National Center for Biotechnology Information, NIH, Bethesda, MD, USA

8:00am - 8:15pm Break

8:15am - 9:15am Special Session: Infectious Diseases

◆ **Test Utilization and Clinical Utility of Molecular Test** Room 301, Ballroom Level
CE Credit: 1.0 Hour **Path:** Infectious Diseases

Moderator: Belinda Yen-Lieberman, PhD, The Cleveland Clinic Foundation, Cleveland, OH, USA

Opportunities and Challenges in Laboratory Stewardship: Leaders Apply Here
Gary W. Procop, MD, Cleveland Clinic, Cleveland, OH, USA

8:15am - 9:45am Plenary Session

◆ **Artificial Intelligence in Genomic Medicine** Stars at Night Ballroom, Ballroom Level
CE Credit: 1.50 Hours **Path:** Informatics

Moderators: Somak Roy, MD, University of Pittsburgh Medical Center, Pittsburgh, PA, USA and Matthew Lebo, PhD, Brigham & Women's Hospital, Boston, MA, USA

Artificial Intelligence in Cancer Genomics and Therapy
Olivier Elemento, PhD, Weill Cornell Medicine - Englander Institute for Precision Medicine, New York, NY, USA

Probabilistic Graphical Models for Integrative Analysis of Pathomics Data
Panagiotis Benos, PhD, University of Pittsburgh School of Medicine, Pittsburgh, PA, USA

9:45am - 10:45am Break

Coffee Break - Visit Exhibit Hall, AMP Central, and Posters Exhibit Hall 1&2, Street Level
(Odd-numbered posters attended)

Innovation Spotlight Schedule: See schedule on Mobile App and by each stage located in the Exhibit Hall.

10:45am - 12:15pm Workshop Sessions

◆ **Clinical Implementation of Liquid Biopsy for Cancer Patients** Room 301, Ballroom Level
CE Credit: 1.50 Hours **Path:** Cancer/Oncology; Molecular Methodologies & Technologies

Moderators: Christina Lockwood, PhD, University of Washington, Seattle, WA, USA and Alanna Church, Boston Children's Hospital, Boston, MA, USA

Clinical Applications of Digital PCR
Maria E. Arcila, MD, Memorial Sloan Kettering Cancer Center, New York, NY, USA

Liquid Biopsy for Solid Tumors: Promises and Perils
Mark J. Routbort, MD, PhD, University of Texas MD Anderson Cancer Center, Houston, TX, USA

◆ **Show Me the Data: Visualization At the Interface of Molecular Pathology and Patient Care** Room 214, Meeting Level
CE Credit: 1.50 Hours **Path:** Informatics

Moderators: Matthew Lebo, PhD, Brigham & Women's Hospital, Boston, MA, USA and and Vernell Williamson, PhD, Virginia Commonwealth University Health, Richmond, VA, USA

Cancer Genomics Visualization across Scales: Nucleotides to Cohorts
Nils Gehlenborg, PhD, Harvard Medical School, Boston, MA, USA

Data Commons for Precision Cancer Medicine
Ethan Cerami, PhD, Dana-Farber Cancer Institute, Boston, MA, USA

◆ **Enterovirus D68 and Acute Flaccid Myelitis: What We've Learned Since 2014** Room 304, Ballroom Level
CE Credit: 1.50 Hours **Path:** Infectious Diseases

Moderators: Jennifer Dien Bard, PhD, Childrens Hospital Los Angeles, Los Angeles, CA, USA and Erin Graf, Children's Hospital of Philadelphia & University of Pennsylvania, Philahelphia, PA, USA

The Role of Enterovirus D68 in Acute Flaccid Myelitis
Kevin Messacar, MD, University of Colorado/Children's Hospital Colorado, Aurora, CO, USA

Epidemiology, Surveillance, and Diagnosis of Enterovirus D68
Samuel Dominguez, MD, PhD, University of Colorado/Children's Hospital Colorado, Aurora, CO, USA

◆ **Training the Next Generations of Next Gen** Room 302, Ballroom Level
CE Credit: 1.50 Hours **Path:** Education & Professional Development

Moderators: Linda Jo Bone Jeng, MD, PhD, University of Maryland, Baltimore, MD, USA and Bing (Melody) Zhang, Stanford University School of Medicine, Stanford, CA, USA

Innovations and Transitions in ABMGG's Continuing Certification Program
Cecily P. Marroquin, American Board of Medical Genetics & Genomics, Bethesda, MD, USA

Fellowship Training and Continuing Certification in Molecular Pathology
Karen L. Kaul, MD, PhD, NorthShore University Health System, Evanston, IL, USA

Mobility, Digital and innovation by Apple Educators
Sarah P. Farrell, PhD

◆ **Best Practices for Clinical Validation of NGS Bioinformatics Pipeline** Room 221, Meeting Level
CE Credit: 1.50 Hours **Path:** Informatics

Moderator: Antonia R. Sepulveda, MD, PhD, Columbia University Medical Center, New York, NY, USA

AMP Guidelines for Validating Next Generation Sequencing Bioinformatics Pipelines
Somak Roy, MD, University of Pittsburgh Medical Center, Pittsburgh, PA, USA
Alexis B. Carter, MD, Children's Healthcare of Atlanta, Atlanta, GA, USA

12:15pm - 1:30pm General Lunch, Exhibit Hall 1&2, Street Level

(Entrance through Exhibit Hall)

Networking Lunches: Please see lunch descriptions in the "Highlights & General Information" section of the Program Book, Pages 21-22.

AMP Central Activities: MAC Networking

Innovation Spotlight Schedule: See schedule on Mobile App and by each stage located in the Exhibit Hall.

Saturday, November 3, 2018 *continued*

1:30pm - 3:00pm **Symposium Sessions**

◆ **Finding the Patient Perspective: Molecular Testing in Advanced NSCLC** Room 217, Meeting Level

(Developed through a partnership between Medscape and the Association for Molecular Pathology)

CE Credit: 1.50 Hours / *Instructions for obtaining continuing education for this session will be provided on-site and/or after the session.*

Path: Cancer/Oncology

Moderators: Christina Lockwood, PhD, University of Washington, Seattle, WA, USA

Eric H. Bernicker MD, Houston Methodist Hospital, Houston, TX, USA
Christina Lockwood, PhD, University of Washington, Seattle, WA, USA
Lynette M. Sholl, MD, Brigham & Women's Hospital, Boston, MA, USA
Don Stranathan, Lung Cancer Survivor/Advocate, Santa Rosa, CA, USA

◆ **Precision Medicine in Mature Lymphoid Malignancies** Stars at Night Ballroom 1&2, Ballroom Level

CE Credit: 1.50 Hours **Path:** Cancer/Oncology

Moderators: Y. Lynn Wang, MD, PhD, Incyte, Wilmington, DE, USA and Lynne V. Abruzzo, MD, PhD, Ohio State University Medical Center, Columbus, OH, USA

Resistance to Targeted Therapies in Chronic Lymphocytic Leukemia
Jennifer A. Woyach, MD, The Ohio State University, Columbus, OH, USA

Towards a Genomic Classification of T Cell Malignancies: Opportunities for Precision Medicine
Megan S. Lim, MD, PhD, University of Pennsylvania, Philadelphia, PA, USA

◆ **Metagenomic Characterization of Molecular Scientists** Stars at Night Ballroom 3&4, Ballroom Level

CE Credit: 1.50 Hours **Path:** Infectious Diseases; Molecular Methodologies & Technologies

Moderators: Amy L. Leber, PhD, Nationwide Children's Hospital, Columbus, OH, USA and Amanda Harrington, Loyola University Medical Center, Maywood, IL , USA

Metagenomic Mapping of the Phones of AMP 2018
Christopher E. Mason, PhD, Weill Cornell Medicine, New York, NY, USA

3:00pm - 3:15pm **Break**

3:15pm - 4:45pm **Plenary Session**

◆ **Hypermutation and Mutation Signature Detection in Cancer** Stars at Night Ballroom 1&2, Ballroom Level

CE Credit: 1.50 Hours **Path:** Cancer/Oncology; Informatics

Moderators: Lynette M. Sholl, MD, Brigham & Women's Hospital, Boston, MA, USA and Christina Lockwood, PhD, University of Washington, Seattle, WA, USA

Clinical Implications of Mutational Load and Signatures on Replication Repair Deficiency in Cancer
Uri Tabori, MD, PhD, Hospital for Sick Children, Toronto, Ontario, Canada

Hypermutation in Cancer: Burden and Signatures of Mutational Processes
Ahmet Zehir, PhD, Memorial Sloan Kettering Cancer Center, New York, NY, USA

4:45pm - 5:00pm **Closing Remarks** Stars at Night Ballroom 1&2, Ballroom Level

Lynne V. Abruzzo, MD, PhD, Ohio State University Medical Center, Columbus, OH, USA and 2018 Program Chair

Neal Lindeman, MD, Brigham & Women's Hospital, Boston, MA, USA and 2019 Program Chair

NOTES

AMP

Advocates

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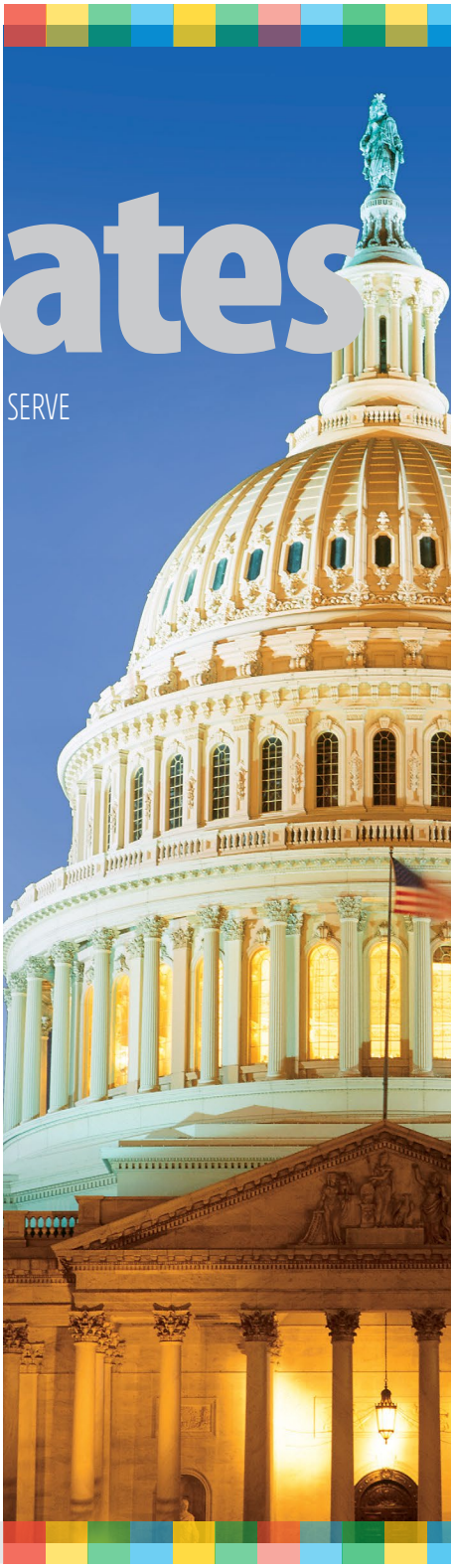

THURSDAY PROGRAM

The **AMP ADVOCACY PROGRAM** endeavors to inform and influence public policy affecting molecular pathology. AMP communicates regularly with federal agencies and members of Congress regarding professional and reimbursement issues and continues to confront numerous regulatory and reimbursement forces adversely affecting molecular diagnostic testing including:

- **Oversight of Laboratory Developed Procedures (LDPs)**
- **Coding, Coverage, and Reimbursement of Molecular Procedures**
- **Implementation of the new Medicare Clinical Diagnostic Laboratory Test Payment System (PAMA)**
- **Regulatory Oversight of NGS Diagnostic Tests**
- **National Coverage Determination (NCD) for NGS for Medicare Beneficiaries with Advanced Cancer**

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"As a Molecular Pathologist, I am responsible for performing high quality and accurate testing for my patients. Legislators have comparable obligations to their constituents. So, I feel obliged to advocate for my patients, and my specialty. It's my duty and privilege to educate officials on the critical role of molecular diagnostics in health care, and to ensure ***AMP Advocacy*** continues to be impactful."

Shelby D. Melton, MD
VA North Texas Health Care System

The Journal of Molecular Diagnostics

The Official Journal of
The Association for Molecular Pathology

Editor-In-Chief
Barbara A. Zehnbauer, PhD, FACMG, FACB

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Thursday
November 1, 2018

7:00am - 8:00am

Continental Breakfast

Location: Early Bird Session Room Foyers

7:00am - 8:00am

Early Bird Sessions

◆ Genomics of Pediatric AML and MDS

Location: Room 301, Ballroom Level
CE Credit: 1 Hour
Path: Cancer/Oncology

Genomics of Pediatric AML and MDS
Jeffery M. Klco, MD, PhD, St Jude Children's Research Hospital, Memphis, TN, USA

Session Description: We will discuss the recent advances in the genomic characterization of pediatric AML and MDS. In particular, we will discuss the differences observed between these diseases in children and adults and how some subtypes of AML/MDS are enriched in different age groups. A commentary on how these pediatric lesions can be used to detect minimal residual disease or guide therapy will be included. Lastly, we will discuss recent work on different germline lesions found in pediatric AML and MDS.

Session Objectives:
- Summarize the genomic differences between pediatric and adult AML.
- Discuss the development of MDS in children.
- Compare different MRD approaches in children with AML.

◆ Finding the "Indel" in the Haystack

Location: Room 214, Meeting Level
CE Credit: 1 Hour
Path: Informatics

Large Indel Detection in Clinical NGS Assays
Sabah Kadri, PhD, Ann & Robert H. Lurie Children's Hospital of Chicago, Chicago, IL, USA

Session Description: Detection of Insertion and Deletion (Indel) variants from next generation sequencing (NGS) data is challenging for current technologies and software. The problem is further compounded by laboratory approaches (e.g. the type of sequence chemistry) and the specific variant context (e.g. complex variants and difficult genomic regions). This session will discuss the various challenges and novel bioinformatics strategies to enhance the detection of Indel variants from NGS data.

Session Objectives:
- Summarize the challenges of general purpose variant calling for detection of Indel variants.
- Discuss bioinformatics strategies to improve Indel detection sensitivity from NGS data.

◆ Personalized Genomics: Advancing Continuity in Research to Clinical Care

Location: Room 217, Meeting Level
CE Credit: 1 Hour
Path: Molecular Methodologies & Technologies

Personalized Genomics: Advancing Continuity in Research to Clinical Care
Vincent J. Magrini, PhD, Nationwide Children's Hospital, Columbus, OH, USA

Catherine E. Cottrell, PhD, Nationwide Children's Hospital, Columbus, OH, USA

Session Description: Laboratories are increasingly utilizing complementary sequencing technologies for augmentation of data in difficult to characterize genomic regions. This session aims to examine the utility of generating long read data, including single molecule real-time sequencing and linked reads, to elucidate structural variant composition, detect fusion transcripts, quantify repeat expansions, resolve phasing, and improve mapping in repetitive regions. Optimization of such technologies in a development setting paves the way for translational and clinical applications.

Session Objectives:
- Review the advantages of single molecule sequencing, including generating long read lengths to characterize structural variation.
- Describe the third-generation sequencing technologies, including single molecule real-time (SMRT) sequencing and nanopore sequencing, and how these technologies can also detect fusion transcripts, quantify repeats, resolve phasing, and improve mapping of repetitive regions.
- Identify new applications for these optimized sequencing methods in translational research and clinical diagnostic fields.

◆ Lab of the Future: Cool Toys for the Diagnosis of Infectious Diseases

Location: Room 221, Meeting Level
CE Credit: 1 Hour
Path: Infectious Diseases; Molecular Methodologies & Technologies

Validation of the Karius Microbial Cell-free DNA Sequencing Test for Infectious Disease
Timothy A. Blauwkamp, PhD, Karius, Inc., Redwood City, CA, USA

A Smart Diagnostic: Technology that Learned to Identify and Count Individual Bacteria in Blood
Stephanie I. Fraley, PhD, University of California, San Diego, CA, USA

Session Description: This session is dedicated to presentations of unique and state-of-the-art molecular methods for the detection and quantitation of infectious disease organisms in patient samples.

Session Objectives:
- Describe the unique advantages of using microbial cell-free DNA sequencing to identify infectious diseases.
- Discuss results from analytical and clinical validations of quantitative microbial cfDNA sequencing tests.
- Outline the new integrative technology called "Universal Digital High Resolution Melt," which unites the advantages of digital PCR, high resolution melting of DNA, and machine learning to detect infectious microbes.

◆ Case Studies in Genetics and Informatics

Location: Room 302, Ballroom Level
CE Credit: 1 Hour
Path: Informatics; Inherited Conditions

Occurrence of Medulloblastoma in a Patient with Curry-Jones Syndrome
Binu Porath, PhD, Children's Mercy Kansas City, Kansas City, MO, USA

Identification of a Novel Likely Pathogenic PIK3R1 Variant by Targeted Next-Generation Sequencing Analysis in a Patient with Overgrowth Syndrome and Lymphatic Malformation
Christopher Suciu, MD, MS Washington University School of Medicine in St. Louis, St. Louis, MO, USA

Sex Check: Verifying Patient Sex Based on Off-Panel SNPs on the X Chromosome
Jennifer Bynum, MD, Johns Hopkins, Baltimore, MD, USA

A Discrepancy Between the Human Reference Genome (GRCh37) and Transcriptome (RefSeq) Results in the Incorrect Annotation of a Clinically-Relevant Sequence Variant in RECQL4
Lisa Lansdon, PhD, Children's Mercy Kansas City, Kansas City, MO, USA

Session Description: Challenging Case Studies are presented by trainees or technologists. They will discuss the case's clinical history, molecular analysis, interesting features, and the proposed diagnosis. Other molecular testing methods, if applicable, will be included in the presentation, including biopsies, gross/microscopic pathology, immunohistochemistry/flow cytometry, and cytogenetic findings.

Session Objectives:
- Describe the context of a challenging clinical case.
- Discuss the molecular pathology techniques used in the diagnosis of the case.
- Propose a final diagnosis based upon findings and diagnostic evidence.

8:00am - 8:15am

Break

8:15am - 8:30am

◆ Opening Remarks

Location: Stars at Night Ballroom, Ballroom Level
CE Credit: Not CME/CMLE
Path: Opening Remarks

Opening Remarks
Lynne V. Abruzzo, MD, PhD, Ohio State University Medical Center, Columbus, OH, USA and 2018 Program Chair

8:30am - 9:45am

Award Lecture

◆ Reimagining Healthcare: Next Generation DNA Sequencing to Ultrasound-on-a-Chip

Location: Stars at Night Ballroom, Ballroom Level
CE Credit: 1.25 Hours
Path: Special Session

Reimagining Healthcare: Next Generation DNA Sequencing to Ultrasound-on-a-Chip
Jonathan M. Rothberg, PhD, Jonathan M. Rothberg, PhD, Founder, Chairman, and CEO of Butterfly Network, Inc. CT, USA

Session Description: Jonathan Rothberg had just taken his first company public when his newborn son Noah began experiencing difficulty breathing. Terrified and desperate for answers, Rothberg vowed to build a machine that would tell him what was wrong with his son. Scientist, serial entrepreneur and father, Rothberg shares his quest to democratize healthcare through innovation. From the invention and commercialization of high-throughput "next-gen" genome sequencing to the creation of the Ultrasound-on-a-Chip, Rothberg describes the industry-disrupting power of semiconductors and machine learning, and reveals how his innovations helped decode the Neanderthal genome, give birth to precision medicine, and democratize access to personalized healthcare.

Session Objectives:

- Describe the historical and scientific context surrounding the invention of "next-generation" sequencing and its early applications.
- Describe the clinical value of AI-enabled ultrasound-on-chip as a diagnostic tool.

9:45am - 10:15am

Break

Location: Stars at Night Ballroom Foyer, Ballroom Level

10:15am - 11:45am

Plenary Session

◆ **Life Starts with DNA: Sequencing of the Baby Genome**

Location: Stars at Night Ballroom, Ballroom Level
CE Credit: 1.50 Hours
Path: Informatics; Inherited Conditions

Newborn Genomic Sequencing for Diagnosis and Screening
Jonathan S. Berg, MD, PhD, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA

The BabySeq Project: A Study Of Newborn Genomic Sequencing
Ingrid A. Holm, MD, MPH, Boston Children's Hospital/Harvard Medical School, Boston, MA, USA

Session Description: Dramatic advances in next-generation sequencing (NGS) have made it possible to consider extending this technology to newborn screening (NBS). This session will identify ways in which NGS could be used to augment NBS, as well as technical challenges and Ethical/Legal/Social issues encountered in the NSIGHT studies that would need to be addressed in order for NGS-NBS to be widely adopted.

Session Objectives:

- Describe differences between the use of sequencing in a diagnostic setting versus screening.
- Summarize challenges involved in the informed consent process for newborn sequencing.
- Discuss viewpoints on the likely implementation of newborn sequencing in the future.

11:45am - 1:00pm

Lunch

◆ **General Lunch, Exhibit Hall 1&2, Street Level** (Entrance through Exhibit Hall)

Networking Lunches: Please see lunch descriptions in the "Highlights & General Information" section of the Program Book, Pages 21-22.

Innovation Spotlight Schedule: See schedule on Mobile App and by each stage located in the Exhibit Hall.

1:00pm - 2:30pm

Workshop Sessions

◆ **Variant Interpretation: Challenges and Progress towards Solutions**

Location: Room 301, Ballroom Level
CE Credit: 1.50 Hours
Path: Inherited Conditions

What Variant Interpretation Among Laboratories (VITAL) Reveals
Elaine Lyon, PhD, Hudson Alpha, Huntsville, AL, USA

ClinVar and ACMG Variant Classification Standards for Inherited Cardiovascular Disease
Birgit Funke, PhD, Veritas Genetics, Danvers, MA, USA
Harvard Medical School, Boston, MA, USA

Session Description: Laboratories performing Next Generation Sequencing (NGS) and Sanger sequencing classify many variants daily. The ACMG along with AMP and CAP formed a working group to address laboratory practices and published a consensus guideline for a variant classification system in 2015. Several studies have been performed since then to access strengths and weaknesses of the guidelines and provide more information regarding how the guidelines are applied in the everyday working of the laboratory. The VITAL (Variant Interpretation Testing Across Laboratories) project is one such study that was implemented through AMP. ClinVar is a freely accessible, public archive of reports of the relationships among human

variations and phenotypes, with the option of providing supporting evidence for assigned classifications. Finally, the Clinical Genome Resource (ClinGen) has formed clinical domain expert panels who are adapting the original ACMG/AMP guideline for use in specific genes and disease and are submitting expert-panel endorsed variants with a 3-star status into ClinVar.

Session Objectives:
- Identify problems involved in interpretation of sequence variants.
- Explain the progress of the VITAL study.
- Discuss gene/disease specific adaptation of the ACMG/AMP framework.
- Explain the pros and cons of using ClinVar to assist in interpretation of sequence variants.

◆ Role of Next Generation Sequencing for Outbreak Investigation

Location: Room 302, Ballroom Level
CE Credit: 1.50 Hours
Path: Infectious Diseases

Viral Genomics in the Clinical Lab
Alex Greninger, MD, PhD, University of Washington, Seattle, WA, USA

NGS for Natural Disasters
Randall J. Olsen, MD, PhD, Houston Methodist Hospital and Research Institute, Houston, TX, USA

Session Description: This session will cover the challenges and opportunities of using a whole genome molecular epidemiology method (Next-Gen Sequencing) to investigate the epidemiology of infectious diseases. Situations including outbreaks and natural disasters will be discussed.

Session Objectives:
- Describe how whole genome sequencing allows unprecedented resolution for tracking infectious disease transmission.
- Discuss investigations from large public health outbreaks of food borne illness to local hospital-acquired infections.
- Summarize the clinical utility of whole genome sequencing of microbes to identify organisms with uncertain taxonomic origin and to investigate molecular bases of unusual antimicrobial resistance or virulence phenotypes.

◆ Cutting Edge Informatics Infrastructure for Personalized Medicine

Location: Room 214, Meeting Level
CE Credit: 1.50 Hours
Path: Informatics

Leveraging Computer Infrastructure to Scale Clinical Bioinformatics
Elaine P.S. Gee, PhD, BigHead Analytics Group, Windsor, CA, USA

Standards and Apps for Genomic Decision Support
Jeremy L. Warner, MD, MS, Vanderbilt University, Nashville, TN, USA

Session Description: Informatics has solidified itself as an important subdiscipline within the molecular pathology community. However, it is still often siloed from one laboratory to the next and even from the laboratory to the rest of the healthcare environment. Standards and new technologies are now developing or being applied in other industries that will enable molecular informatics to be interconnected across many arenas. This session will provide detail on some of these cutting-edge standards and technologies, specifically workflow languages, container infrastructure such as Docker, and the FHIR standard for relaying genomic findings to the electronic health records.

Session Objectives:
- Describe emerging technologies and standards in the clinical informatics space.
- Examine how these technologies can be implemented within a molecular diagnostics laboratory and where in the clinical testing process they can be implemented.
- Discuss how the standards fit into the broader healthcare infrastructure and ecosystem to support precision medicine.

◆ Payer Perspectives on Coverage and Reimbursement of Molecular Diagnostics
(Sponsored by the AMP Economic Affairs Committee)

Location: Room 221, Meeting Level
CE Credit: 1.50 Hours
Path: Advocacy/Lab Management

Payer Perspectives on Coverage and Reimbursement of Molecular Diagnostics
Laurence Clark, MD, National Government Services, E. Syracuse, NY, USA

Paul Gerrard, MD, Palmetto GBA, Columbia, SC, USA

Charles Matthews, ClearView Health Partners, Newton, MA, USA

Gabriel Bien-Willner, MD, Palmetto GBA, Columbia, SC, USA

Michael Fine, MD, Health Net, Laguna Beach, CA, USA

Session Description: The Economic Affairs Committee invites you to attend a workshop where payers and industry experts will participate in a discussion on coverage and reimbursement of molecular diagnostics. It is crucial that laboratories understand the coverage and reimbursement landscape of molecular diagnostics in today's healthcare system. Unfortunately, navigating through the different requirements is not simple. Private and Medicare payers also face a myriad of challenges to ensure access to and payment of appropriate molecular pathology procedures. The session will explore different perspectives, challenges, and processes with payer representatives and industry experts to providing coverage and reimbursement of molecular diagnostics.

Session Objectives:

- Understand how payers view new technologies and assays.
- Examine payer perspectives on different models of reimbursement (e.g. value-based and fee for service).
- Identify areas where AMP and member laboratories can assist payers.

◆ **Molecular Tumor Board**

Location: Room 217, Meeting Level
CE Credit: 1.50 Hours
Path: Cancer/Oncology; Informatics; Molecular Methodologies & Technologies

Panel Discussion
Elizabeth M. Swisher, MD, University of Washington, Seattle, WA, USA
Jonathan A. Nowak, MD, PhD, Brigham and Women's Hospital, Boston, MA, USA
Stephen E. Lincoln, Invitae, San Francisco, CA, USA
Eric H. Bernicker, MD, Houston Methodist Hospital, Houston, TX, USA
Valentina Nardi, MD, Massachusetts General Hospital, Boston, MA, USA
Angela Jacobson, University of Washington, Seattle, WA, USA

Session Description: Precision medicine demands a team effort to ensure accurate diagnosis, appropriate genomic testing, and integration of tumor and germline genetic findings into a comprehensive plan for optimal patient care. In this session, a multidisciplinary team including pathologists, oncologists, molecular diagnosticians, and informaticians will tackle two real-life clinical challenges. These case-based sessions will examine the performance of different technologies in the detection of challenging but clinically important genomic variants, the critical role of bioinformatics in detection and annotation of DNA variants, and the ultimate clinical implications.

Session Objectives:

- Recognize approaches to detection and interpretation of hereditary cancer predisposition gene variants in adult cancer patients.
- Summarize technical approaches for the detection of insertion-deletion events using DNA and RNA-based next generation sequencing methods.
- Discuss best practices for accurate and informative annotation of novel or ambiguous variants.

2:30pm - 4:15pm

Break

◆ **Coffee Break- Visit Exhibit Hall and Posters**
(Award Applicant Posters Attended)
(Supported by Philips)

Location: Exhibit Hall 1&2, Street Level
AMP Central Activities: Technologist Mixer
Innovation Spotlight Schedule: See schedule on Mobile App and by each stage located in the Exhibit Hall.

4:15pm - 5:45pm

Plenary Session

◆ **Somatic and Germline Mutations in Hematologic Malignancies**

Location: Stars at Night Ballroom, Ballroom Level
CE Credit: 1.50 Hours
Path: Cancer/Oncology

Spliceosome Gene Mutations in MDS
Matthew Walter, MD, Washington University, St. Louis, MO, USA

Germline Predisposition to Hematopoietic Malignancies
Lucy A. Godley, MD, PhD, The University of Chicago, Chicago, IL, USA

Session Description: This session will describe inherited mutations that confer an increased risk for the development of hematopoietic malignancies. We will cover the World Health Organization's provisional category for germline predisposition to myeloid malignancies as well as what is known regarding predisposition to lymphoid

malignancies. We will also discuss the detection of germline mutations from next-generation sequencing panels used in prognostication of acute leukemias. Acquired mutations in genes that code for core components of the spliceosome are common in several hematopoietic malignancies. This session will also review what is known about altered RNA splicing and abnormal hematopoiesis induced by spliceosome gene mutations. In addition, we will discuss novel therapeutic strategies to target spliceosome mutant cells in patients with myelodysplastic syndromes (MDS) and acute myeloid leukemia (AML).

Session Objectives:

- Outline the current WHO classification for germline predisposition to myeloid malignancies.
- Describe ways in which molecular profiling can be used to detect a germline syndrome.
- Discuss ongoing variant curation by the ClinGen Myeloid Malignancy Committee.
- Define the spliceosome genes that are commonly mutated in MDS and AML.
- Summarize the types of RNA splicing alterations induced by spliceosome gene mutations.
- Recognize novel treatment approaches for patients with spliceosome gene mutations.

4:15pm - 5:45pm

Special Session: Infectious Diseases

◆ **Meningitis/Encephalitis Syndromic Testing in the Clinical Setting: Is it Ready for Prime Time?**

Location: Room 301, Ballroom Level
CE Credit: 1.50 Hours
Path: Infectious Diseases

Are Meningitis/Encephalitis Panels Ready for Prime Time?

Kevin Alby, PhD, University of Pennsylvania, Philadelphia, PA, USA

Point-Counterpoint: Molecular Diagnosis of Meningitis/Encephalitis

Jennifer Dien Bard, PhD, Children's Hospital Los Angeles, Los Angeles, CA, USA
University of Southern California, Los Angeles, CA, USA

Session Description: In most incidences, syndromic testing has been a welcome addition to many clinical laboratories. In contrast, the meningitis/encephalitis (ME) panel by been met with polarizing viewpoints. It has the potential to revolutionize diagnostic testing for infections of the CNS by allowing for widespread implementation. However, recent studies reporting false-negative and false-positive results raise concerns of negative impact on patients. In this interactive session, two speakers have taken a stance, one for ME panel testing and one against.

Session Objectives:

- Discuss the epidemiology of meningitis and encephalitis and current diagnostic approaches.
- Outline case examples to argue for or against widespread utilization of the ME panel.
- Summarize key points that are important to be aware of when performing syndromic testing.

5:45pm - 7:00pm

Welcome Reception

◆ **Welcome Reception** *(Supported by QIAGEN)*

Location: Exhibit Hall 1&2, Street Level
CE Credit: Not CME/CMLE
Path: Reception

Session Description: Please join us for the Welcome Reception and help to kick-off another successful Annual Meeting & Expo while networking with your friends and colleagues in the Exhibit Hall. This event is open to all Registered Meeting Attendees. Supported by QIAGEN.

AMP Central Activities: Tweet Up! Meet the other #AMPlifiers you have gotten to know online as you prepared for #AMP2018.

7:30pm - 8:30pm

Special Event *(preceded by dessert and coffee)*

◆ **Emerging Targets for the Diagnosis of Cancer: *NTRK* Fusion in Solid Tumors**
Developed through a strategic collaboration between AMP and Medscape Education Oncology

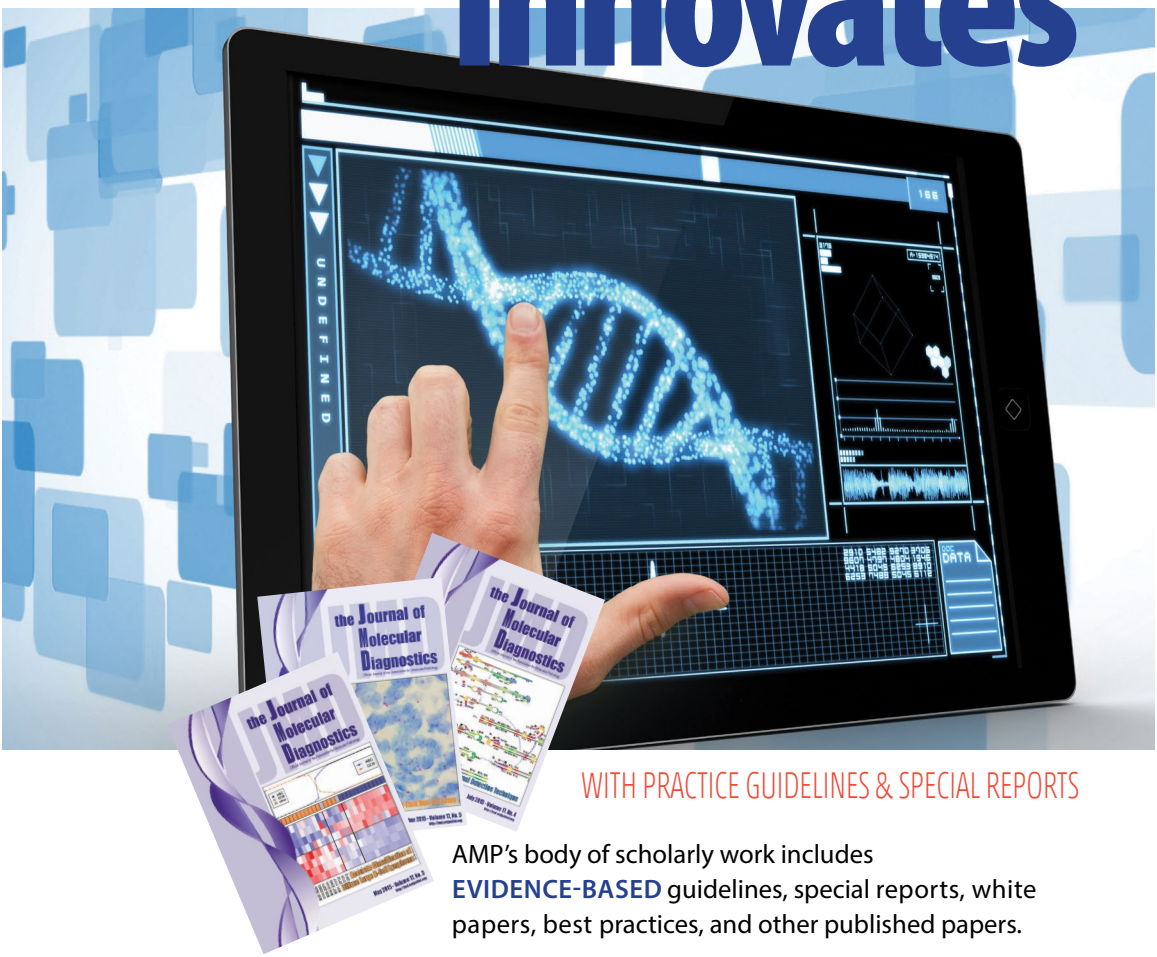
Location: Room 221, Meeting Level
CE Credit: 1.50 Hours/ Instructions for obtaining continuing education for this session will be provided on-site and/or after the session.
Path: Cancer/Oncology

Session Description: Make your way up the escalator from the Welcome Reception to a free 60-minute, live symposium highlighting best practices for testing for and reporting results of *NTRK* fusions as well as management of patients with TRK TKI therapy. This symposium will feature iPads to deliver interactive content and is sure to provide lively discussion.

This program is supported by an educational grant from Bayer.

AMP

Innovates



WITH PRACTICE GUIDELINES & SPECIAL REPORTS

AMP's body of scholarly work includes **EVIDENCE-BASED** guidelines, special reports, white papers, best practices, and other published papers.

Recent Reports Include:

- Clinical Significance of DNA Variants in Chronic Myeloid Neoplasms
- Recommendations for Clinical CYP2C19 Genotyping Allele Selection
- CAP/IASLC/AMP Updated Molecular Testing Guideline for the Selection of Lung Cancer Patients for Treatment With Targeted Tyrosine Kinase Inhibitors
- AMP/CAP Guidelines for Validation of Next-Generation Sequencing–Based Oncology Panels
- AMP/CAP Standards and Guidelines for Validating Next-Generation Sequencing Bioinformatics Pipelines
- AMP/ASCO/CAP Standards and Guidelines for the Interpretation and Reporting of Sequence Variants in Cancer
- ASCP/CAP/AMP/ASCO Molecular Biomarkers for the Evaluation of Colorectal Cancer
- Spectrum of Clinical Utilities in Molecular Pathology Testing Procedures
- NGS for Infectious Disease Diagnosis and Management
- Emerging ID Applications for MALDI TOF MS

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"I rely on AMP to ***research***, ***document***, and ***deliver*** the standards on which many of our molecular processes are based. AMP's reports and guidelines help us to define our internal best practices."

— **Kojo S. J. Elenitoba-Johnson, MD**
Director, Center for Personalized Diagnostics, University of Pennsylvania

FRIDAY PROGRAM

FRIDAY PROGRAM

Molecular Genetic Pathology Review Course

May 16-19, 2019
Bethesda, Maryland

Preparing for an exam, need a refresher, or looking for an introduction to Molecular Genetic Pathology?

Plan now to join us for the biennial Molecular Genetic Pathology Review Course.

This intensive 3.5 day course is held in conveniently located Bethesda, MD, right outside Washington, DC. Plan now to join us! Registration opening soon!

Course Director:
Gregory J. Tsongalis, PhD
Geisel School of Medicine,
Dartmouth University

www.amp.org/MGP

AMPED
EDUCATION ONLINE

Friday
November 2, 2018

7:00am - 8:00am

Continental Breakfast

Location: Early Bird Session Room Foyers
(Supported by EntroGen)

7:00am - 8:00am

Early Bird Sessions

◆ **Keys to Publishing in Scientific Journals**

Location: Room 301, Ballroom Level
CE Credit: Not CME/CMLE
Path: Advocacy/Lab Management; Cancer/Oncology; Education & Professional Development; Infectious Diseases; Informatics; Inherited Condition; Molecular Methodologies & Technologies

Keys to Publishing in Scientific Journals
Barbara A. Zehnbauer, PhD, Emory University School of Medicine, Atlanta, GA, USA

Session Description: Intended for trainees, new faculty, and intermediate-level laboratory scientists, this session will describe the functions and processing of submitted manuscripts through the journal editorial process. Aspects will include assessing the scope and mission of the journal, what editors look for, how to objectively convey the message of your work to the journal audience, how to constructively respond to reviewers' comments, and the most common errors that result in manuscript rejection. Examples will focus on experiences from the Journal of Molecular Diagnostics but will be broadly applicable to other scientific publications.

Session Objectives:
- Describe the attributes of a well-developed manuscript that concisely conveys one's work.
- Explain the common errors to avoid in manuscript submissions.
- Outline the review process.
- Identify constructive approaches to revise and improve manuscripts.

◆ **Conceptual Nuts and Bolts of Visualizing Big Data in Genomics**

Location: Room 217, Meeting Level
CE Credit: 1 Hour
Path: Informatics

Visualizations for Genomic Data, the GTEx Experience
Jared L. Nedzel, Broad Institute, Cambridge, MA, USA
Katherine Huang, Broad Institute, Cambridge, MA, USA

Session Description: The practice of Molecular Pathology is continuing to grow in size and scope. This creates the need to more rapidly parse through complex datasets in order to scale the analysis and interpretation of genomic data. One of the approaches to this problem is to provide enhanced data visualization at multiple steps within the testing pipeline. This session will detail some of the common and newer tools used in data visualization. Specifically, it will provide examples of how these tools were implemented and how they led to novel insights that may have otherwise been missed.

Session Objectives:
- Discuss current software and tools used in data visualization.
- Demonstrate a use case for data visualization and describe how it led to novel insights.
- Describe how to implement these tools within a laboratory.

◆ **The Growth and Evolution of Consumer Genetic Testing**
(Sponsored by the Professional Relations Committee)

Location: Room 221, Meeting Level
CE Credit: 1 Hour
Path: Advocacy/Lab Management

Panel Discussion
Jill Hagenkord, MD, Color Genomics, Burlingame, CA, USA
Elissa Levin, MS, Helix, San Francisco, CA, USA
Danielle Bonadies, MS, My Gene Counsel, Branford, CT, USA
Altovise Ewing, PhD, 23andMe, Mountain View, CA, USA

Session Description: Consumer genetic tests have gained increasing prominence during the past several years. Offerings range from tests for ancestry and physical traits like eye color to medically relevant assays for the predisposition to disease. This session will discuss the evolving and future roles of consumer genetic

tests in contemporary healthcare and examine key issues such as reporting, privacy, patient and provider comprehension, and regulation.

Session Objectives:
- Describe the current consumer genetic testing landscape.
- Explore the positive and negative features of consumer genetic testing from different stakeholder perspectives.
- Discuss potential roles for AMP and our members in this novel, alternative model of healthcare delivery.

◆ AMP Guidance/Standards for NGS Germline Variant Confirmation

(Sponsored by the Clinical Practice Committee)

Location: Room 214, Meeting Level
CE Credit: 1 Hour
Path: Informatics; Inherited Conditions

AMP Guidance/Standards for NGS Germline Variant Confirmation
Kristy Crooks, PhD, University of Colorado, Denver, CO, USA

Session Description: Recognizing the challenges of germline variant confirmation in the era of advanced sequencing techniques, AMP has convened a multistakeholder working group with representatives from the National Society of Genetic Counselors to develop a best practices guideline. This session will discuss the development of the consensus guideline document and provide an opportunity for engagement with the working group to provide feedback on existing challenges.

Session Objectives:
- Discuss the AMP-led guideline initiative regarding germline variant confirmation.
- Discuss orthogonal confirmation techniques and utilization.
- Discuss potential strategies to address confirmation of germline variants.
- Describe methods for variant confirmation optimization and accuracy.
- Describe potential methods to continue improvement and quality control of the variant confirmation process.

◆ Case Studies in Solid Tumors

Location: Room 302, Ballroom Level
CE Credit: 1 Hour
Path: Cancer/Oncology

Circulating Tumor DNA (ctDNA) Detection in CSF in a Patient with Metastatic Melanoma to the CNS
Andres, Moon, MD, University of Washington, Seattle, WA, USA

An Unusual Driver Mutation in a Lung Adenocarcinoma
Erik Nohr, MD, Stanford Healthcare, Palo Alto, CA, USA

LMNA/NTRK1 Fusion in a Paravertebral Soft Tissue Mass
Yulei Shen, MD, PhD, Baylor College of Medicine, Houston, TX, USA

Recurrent Glioblastoma with Primary and Secondary Features in a Patient with a Deficiency of Mismatch Repair
Martin Powers, MD, University of California San Diego, San Diego, CA, USA

Session Description: Challenging Case Studies are presented by trainees or technologists. They will discuss the case's clinical history, molecular analysis, interesting features, and the proposed diagnosis. Other molecular testing methods, if applicable, will be included in the presentation, including biopsies, gross/microscopic pathology, immunohistochemistry/flow cytometry, and cytogenetic findings.

Session Objectives:
- Describe the context of a challenging clinical case.
- Discuss the molecular pathology techniques used in the diagnosis of the case.
- Propose a final diagnosis based upon findings and diagnostic evidence.

8:00am - 8:15am

Break

8:15am - 9:15am

Special Session: Infectious Diseases

◆ The Role of Genomic Susceptibility Testing in Predicting Antimicrobial Responses

Location: Room 301, Ballroom Level
CE Credit: 1 Hour
Path: Infectious Diseases

Use of Molecular Testing to Predict Gonorrhea Treatment
Jeffrey D. Klausner, MD, MPH, University of California, Los Angeles, CA, USA

Value of Molecular AST Methods for Bacteria: Are We There?
Romney M. Humphries, PhD, Accelerate Diagnostics, Tucson, AZ, USA

Session Description: Antimicrobial susceptibility testing methodologies used in clinical laboratories remains dominated by phenotypic testing. Molecular methods are becoming more common, including the use of whole genome sequencing, which may be able to predict antimicrobial susceptibility. This session will explore the feasibility of genomic susceptibility testing to predict appropriate treatment for Infectious Diseases.

Session Objectives:
- Describe the utility of genomic susceptibility results.
- Discuss the use of molecular test to determine antimicrobial susceptibility of Neisseria gonorrhea.
- Discuss future directions in molecular antimicrobial susceptibility.

8:15am - 9:45am

Plenary Session

◆ **Tumoral Genomic Diversity**

Location: Stars at Night Ballroom, Ballroom Level
CE Credit: 1.50 Hours
Path: Cancer/Oncology

Predictor of Response to PARP Inhibitors
Elizabeth M. Swisher, MD, University of Washington, Seattle, WA, USA

Leveraging Personalized Medicine for Diagnosis and Treatment of Pancreatic Cancer
Brian Wolpin, MD, MPH, Dana-Farber Cancer Institute, Boston, MA, USA

Session Description: Human cancers are highly diverse, as evidenced by the complex pathologic classification systems that have evolved over the last century. Efforts to understand the genomics of solid tumors have only emphasized the complexity and demonstrated the biologic diversity of tumors even within individual morphologic categories. This results in significant implications for response to therapy and patient prognosis. This session will examine the genomic underpinnings of difficult-to-treat cancer types and will explore approaches to applying this knowledge to treatment selection.

Session Objectives:
- Examine the impact of germline cancer predisposition variants on therapeutic decision-making and patient counseling.
- Describe the affect of common driver variants on the outcomes of patients with pancreatic cancer.
- Explain the current role of in vitro models of human cancer in individualized patient care.
- Recognize the significance of the BRCA-Fanconi anemia pathway in carcinogenesis and targeted therapeutics.

9:45am - 10:45am

Break

◆ **Coffee Break- Visit Exhibit Hall, AMP Central and Posters**

Location: Exhibit Hall 1&2, Street Level
AMP Central Activities: Education Showcase
Innovation Spotlight Schedule: See schedule on Mobile App and by each stage located in the Exhibit Hall.

10:45am - 11:45am

Workshop Sessions

◆ **Platform Presentations of Selected Genetics Abstracts**

Location: Room 221, Meeting Level
CE Credit: 1 Hour
Path: Inherited Conditions

G044 - Designing and Implementing NGS Tests for Inherited Disorders: a Practical Framework with Step-by-Step Guidance for Clinical Laboratories
Avni B. Santani, PhD, Children's Hospital of Philadelphia, Philadelphia, PA, USA

G025 - Verification of Very Small Copy Number Variants (Micro CNVs) Detected on Whole Genome CMA Analysis and Implications for Clinical Reporting
Ulrike P. Kappes, MPH, MD, PhD, Medical College of Wisconsin, Milwaukee, WI, USA

G026 - Two-site Evaluation of a One-tube PCR/CE Assay that Resolves CAG Length Polymorphisms in Exon 1 of the HTT Gene
Sarah Statt, PhD, Asuragen, Austin, TX, USA

G021 - Brazilian Panorama of Whole Exome: Details of 315 Cases
Roberta Sitnik, PhD, Hospital Israelita Albert Einstein, São Paulo, Brazil
Session Description: Platform presentations of selected Genetics abstracts.

Session Objectives:
- Analyze platform presentations of abstracts highlighted by the Genetics Subdivision leadership as particularly significant.
- Evaluate the scientific merit and significance of these selected studies through further discussion with the authors.

◆ Platform Presentations of Selected Hematopathology Abstracts

Location: Room 214, Meeting Level
CE Credit: 1 Hour
Path: Cancer/Oncology

H025 - Ultradeep Error Corrected Next-generation Sequencing (NGS) of ABL1 Kinase Domain Mutations in BCR-ABL1 Positive Malignancies
Nikhil Patkar, MD, Tata Memorial Center, Mumbai, Maharashtra, India

H041 - Longitudinal Monitoring of AML Tumors with High-throughput Single-Cell DNA Sequencing Reveals Rare Clones Prognostic for Disease Progression and Therapy Response
Dennis J. Eastburn, PhD, Mission Bio, Inc., South San Francisco, CA, USA

H014 - Mate Pair Sequencing: Ushering Cytogenetics Into the Era of Personalized Medicine
Nicole Hoppman, PhD, Mayo Clinic, Rochester, MN, USA

H039 - Donor-derived Clonal Hematopoiesis of Indeterminant Potential Mutations are Detected in Transplant Recipients after Allogeneic Hematopoietic Stem Cell Transplant
James Liu, Oregon Health & Science University, Portland, OR, USA

Session Description: Platform presentations of selected Hematopathology abstracts.

Session Objectives:
- Analyze platform presentations of abstracts highlighted by the Hematopathology Subdivision leadership as particularly significant.
- Evaluate the scientific merit and significance of these selected studies through further discussion with the authors.

◆ Platform Presentations of Selected Infectious Diseases Abstracts

Location: Room 301, Ballroom Level
CE Credit: 1 Hour
Path: Infectious Diseases

ID004 - Evaluation of a Novel Isothermal Amplification Assay for Detection and Genotyping of Human Papillomavirus in Formalin-fixed Paraffin-embedded Tissue of Oropharyngeal Carcinomas
Yi-Wei Tang, MD, PhD, Memorial Sloan Kettering Cancer Center, New York, NY, USA

ID012 - Comprehensive Solid Tumor Microbiome Profiling via Analysis of Unmapped Reads in Large Panel, Hybridization Capture-based NGS Assay Data
Chad M. Vanderbilt, MD, Memorial Sloan Kettering Cancer Center, New York, NY, USA

ID063 - A Quantitative, Multiplexed RNA Detection Platform for Rapid Pathogen Identification and Phenotypic Antibiotic Susceptibility Testing (AST) using NanoString(™) Technology
Roby P. Bhattacharyya, MD, PhD, Broad Institute, Cambridge, MA, USA

ID007 - The Diagnostic Yield of Universal Pathogen Detection by Next-Generation Sequencing Compared to the Standard of Care in Patients with Pneumonia
Brittany A. Young, MD, PhD, University of Utah, Salt Lake City, UT, USA

Session Description: Platform presentations of selected Infectious Diseases abstracts.

Session Objectives:
- Analyze platform presentations of abstracts highlighted by the Infectious Diseases Subdivision leadership as particularly significant.
- Evaluate the scientific merit and significance of these selected studies through further discussion with the authors.

◆ Platform Presentations of Selected Informatics Abstracts

Location: Room 302, Ballroom Level
CE Credit: 1 Hour
Path: Informatics

I025 - Identification of Viral Integration Sites in Cancer Genomes using Unmapped Reads in Targeted Next-Generation Sequencing Data
Anita S. Bowman, MS, Memorial Sloan Kettering Cancer Center, New York, NY, USA

I

027 - Detection of Microsatellite Instability Using a Large Next-generation Sequencing Panel Across Diverse Tumor Types
Susan J. Hsiao, MD, PhD, Columbia University Medical Center, New York, NY, USA

I009 - Personalized Transcriptomic Drug Profiling in Non-small Cell Lung Cancer
Zachary Abrams, PhD, The Ohio State University, Athens, OH, USA

I034- Assessing Cancer Diagnosis From Clinical Genomics Data Using Machine Learning
Paul R. Hess, MD, PhD, University of Pennsylvania, Philadelphia, PA, USA

Session Description: Platform presentations of selected Informatics abstracts.

Session Objectives:
- Analyze platform presentations of abstracts highlighted by the Informatics Subdivision leadership as particularly significant.
- Evaluate the scientific merit and significance of these selected studies through further discussion with the authors.

◆ **Platform Presentations of Selected Solid Tumors Abstracts**

Location: Room 217, Meeting Level
CE Credit: 1 Hour
Path: Cancer/Oncology

ST002 - Analysis of Urinary Cell-free DNA for Early Detection and Surveillance of Bladder Cancer
Jonathan Dudley, MD, Stanford University, Stanford, CA, USA

ST055 - DNA Sequencing of Human, Epstein-Barr Virus, and Helicobacter Pylori Genomes to Classify and Monitor Gastric Adenocarcinoma
Margaret L. Gulley, MD, University of North Carolina, Chapel Hill, NC, USA

ST107- Clinical Validation of MSK-ACCESS: An Ultrasensitive Next-generation Sequencing Assay for Liquid Biopsies in the Clinic
A. Rose Brannon, PhD, Memorial Sloan Kettering Cancer Center, New York, NY, USA

ST144- Prognosis Determined by Tumor Mutational Burden (TMB) Using Whole Exome Sequencing (WES)
Evan Fernandez, MS, Weill Cornell Medicine, New York, NY, USA

Session Description: Platform presentations of selected Solid Tumors abstracts.
Session Objectives:
- Analyze presentations of abstracts highlighted by the Solid Tumors Subdivision leadership as particularly significant.
- Evaluate the scientific merit and significance of these selected studies through further discussion with the authors.

11:45am - 1:00pm

Lunch

◆ **General Lunch, Exhibit Hall 1&2, Street Level (Entrance through Exhibit Hall)**

Networking Lunches: Please see lunch descriptions in the "Highlights & General Information" section of the Program Book, Pages 21-22.

AMP Central Activities: MAC Networking
Innovation Spotlight Schedule: See schedule on Mobile App and by each stage located in the Exhibit Hall.

1:00pm - 2:30pm

Plenary Session

◆ **Microbiome and Predictive Response to Immunotherapy**

Location: Stars at Night Ballroom, Ballroom Level
CE Credit: 1.50 Hours
Path: Infectious Diseases

Microbiome Changes with Infectious Complications During Stem Cell Transplantation
Ying Taur, MD, MPH, Memorial Sloan Kettering Cancer Center, New York, NY, USA

The Intestinal Virome: From Chronic Inflammation to Bacteriophage Therapy Targeting Multidrug Resistant Bacteria
Breck A. Duerkop, PhD, University of Colorado School of Medicine, Aurora, CO, USA

Session Description: This plenary session will present data from two speakers illustrating the microbial communities in our bodies and the role microbiomes (viromes) play in human health and diseases. This session will explain the reasons that the human microbiome is as important as the human genome.

Session Objectives:
- Describe how the gut microbiome is disrupted during stem cell transplantation, and its impact on patient outcomes.
- Outline the connection between the microbiome and stem cell immunity, and how that could inform on other avenues of human health.
- Summarize interventional studies aimed at maintaining or restoring microbiome health to patients in the setting of stem cell transplantation.
- Discuss how the molecular characterization of bacteriophage infection mechanisms may lead to novel antibacterial therapeutics.

2:30pm - 3:30pm

Break

◆ **Coffee Break - Visit Exhibit Hall, AMP Central, and Posters**
(Even-numbered posters attended)

Location: Exhibit Hall 1&2, Street Level
AMP Central Activities: Get Involved With AMP!
Innovation Spotlight Schedule: See schedule on Mobile App and by each stage located in the Exhibit Hall.

3:30pm - 5:00pm

Symposium Sessions

◆ **Utilization of CRISPR/Cas Technique as Anti-viral Therapeutic Agent and as an Adaptive Immune Modulator in DNA Editing and RNA Targeting**

Location: Room 217, Meeting Level
CE Credit: 1.50 Hours
Path: Infectious Diseases; Cancer/Oncology; Molecular Methodologies & Technologies

CRISPR/Cas9 Targeting and Inactivation of Viral DNA Genomes
Bryan R. Cullen, PhD, Duke University Medical Center, Durham, NC, USA

Programmable RNA-targeting CRISPR-Cas Enzymes for RNA Detection and Therapeutics
Mitchell R. O'Connell, PhD, University of Rochester, Rochester, NY, USA

Session Description: A number of DNA viruses, including Hepatitis B virus (HBV) and Human papillomavirus (HPV), cause severe, chronic diseases in humans that are difficult to cure using currently available approaches. One possible novel treatment approach involves the cleavage and destruction of the long-lived viral DNA genomes that maintain these diseases using DNA editing. This session will discuss data obtained in cultured cells and animals that demonstrate significant reductions in viral load after targeting of the HBV or HPV16 DNA genome using CRISPR/Cas. The aim of this session is to also present studies performed to understand the molecular mechanisms by which CRISPR-Cas proteins such as Cas9 and Cas13 are able to target RNA, and how these properties can be exploited to develop a number of applications including RNA detection, RNA imaging, and manipulation of RNA function in health and disease.

Session Objectives:
- Summarize the molecular basis for persistent infections caused by DNA viruses.
- Outline evidence that CRISPR/Cas represents a potentially useful approach to the treatment and possibly even cure of otherwise refractory DNA virus infections.
- Discuss the molecular mechanisms of specific interaction between CRISPR/Cas9 and Cas13 adaptive immune systems and RNA.
- Outline the use of these properties to develop a number of applications including RNA detection, RNA imaging and manipulation of RNA function in health and disease.

◆ **Clinical Advances in NGS**

Location: Stars at Night Ballroom 1&2, Ballroom Level
CE Credit: 1.50 Hours
Path: Advocacy/Laboratory Management; Informatics; Molecular Methodologies & Technologies

Industry Perspective
Robert L. Nussbaum, MD, Invitae Corporation, San Francisco, CA, USA

Academic Perspective
Wayne W. Grody, MD, PhD, University of California, Los Angeles, CA, USA

Session Description: This session will present advances in next-generation sequencing (NGS) in CLIA-certified and CAP-accredited laboratories to improve diagnostic testing. Collaborative efforts between Invitae, the Laboratory of Molecular Medicine, and the National Institute of Standards and Technology resulted in a framework for assessment of which variants are at risk for being false positives and are in need of orthogonal confirmation. Unique cross-disciplinary interpretation and reporting decisions made by a "Clinical Genomics Board" at UCLA reveal surprising results and lessons learned.

Session Objectives:
- Recognize the large amount of data needed for accurate assessment of false positive rates.
- Predict quality factors and genome context that contribute to false positive rates.
- Assess clinical utility, diagnostic yield, interpretive challenges, and reimbursement issues for patients with undiagnosed disorders.
- Summarize ethical dilemmas raised by clinical NGS.

◆ **In Silico Sequencing Data and Tools: Current and Future Applications in Clinical Practice**

Location: Stars at Night Ballroom 3&4, Ballroom Level
CE Credit: 1.50 Hours
Path: Advocacy/Laboratory Management; Molecular Methodologies & Technologies

"In Silico" Proficiency Testing
John D. Pfeifer, MD, PhD, Washington University School of Medicine, St. Louis, MO, USA

In Silico Proficiency Testing for Clinical Next Generation Sequencing
Karl V. Voelkerding, MD, University of Utah School of Medicine, Salt Lake City, UT, USA

Session Description: One of the challenges unanimously faced by clinical laboratories is procuring samples containing the desired types of sequence variant for NGS assay validation and proficiency testing (PT); in particular, uncommon and difficult indels and complex variants. In contrast to physical samples, well-curated and validated in silico sequence data is an invaluable and replenishable resource with many potential clinical use cases. This session will discuss the strength and limitations of in silico sequencing data with insights on current and future clinical application for assay validation and PT.

Session Objectives:
- Define in silico sequence datasets and how are they generated, including the tools and software developed for this purpose.
- Describe the strengths and limitations of in silico datasets.
- Discuss the current and future applications of in silico data for assay validation and PT.

4:15pm - 5:00pm

Special Session: Infectious Diseases

◆ **ID TOWN HALL**

Location: Room 301, Ballroom Level
CE Credit: Not CME/CMLE
Path: Infectious Diseases

5:00pm - 5:15pm

Break

5:15pm - 6:30pm

Business Session

◆ **Business Meeting & Award Session**

Location: Stars at Night Ballroom 1&2, Ballroom Level
CE Credit: NOT CME/CMLE
Path: Special Session

Session Description: This session, open to all meeting attendees, provides both AMP members and those interested in molecular pathology an overview of the projects and accomplishments of the many AMP committees and working groups. The work of AMP committees have a significant impact on molecular pathology, including practice guidelines, molecular curricula for residents and technologists, and policy advocacy. The session opens with a very brief business meeting and closes with the presentation of awards, including the Technologist, Young Investigator, and Jeffrey A. Kant Leadership Awards.

Session Objectives:
- Identify the relationship between selected projects of the Clinical Practice Committee and their own clinical practice.
- List the regulatory and reimbursement policies in the midst of discussion or implementation that impact molecular pathology.
- Summarize the contributions of the Leadership Award recipient to advance the field of molecular pathology.

7:00pm - 10:30pm

Social Event

◆ **AMP 2018 Social Event**
(Separate Registration)

Location: Marriott Rivercenter, Grand Ballroom, Salon EF

The AMP Social Event is intended to facilitate networking opportunities between trainees, new, and long-standing AMP attendees. There will be mingling, dancing, amateur acts and great food! Attendees who purchased tickets when registering for the meeting will receive their ticket when they check-in at the registration desk for their name badge. If any tickets are still available for sale, they may be purchased at the Registration Desk.

NOTES

AMP AROUND THE GLOBE

SATURDAY PROGRAM

SERVING THE INTERNATIONAL COMMUNITY OF MOLECULAR PROFESSIONALS

International Affiliates

American University of Beirut Medical Center
Brazilian Society of Clinical Pathology & Laboratory Medicine
German Society for Pathology
Hong Kong Society for Molecular Diagnostic Sciences
Italian Society of Pathology and Translational Medicine
Korean Society for Laboratory Medicine
Molecular Pathology Association of India

An AMP International Affiliate is a non-U.S. based organization focused on molecular pathology or diagnostics that wishes to establish a formal relationship with AMP. In turn, AMP supports molecular diagnostic professionals around the world through its Affiliates.

AMP International Events

AMP 2019 GLOBAL CONGRESS
Hong Kong
May 16-18, 2019

ABSTRACT DEADLINE:
November 20, 2018

International Membership Grants

Thanks to generous donations to the AMP Strategic Initiatives Fund, each year non-U.S. laboratory professionals who would not otherwise have access to AMP services and activities due to limited financial resources in the applicant's local environment may apply to receive one year of AMP membership at no charge.

International Conference Grants

AMP members who are on organizing committees of conferences outside of North America are invited to apply for AMP co-sponsorship of the event and support for speaker travel.

SATURDAY PROGRAM

AMP GLOBAL 2019

GLOBAL CONGRESS ON MOLECULAR PATHOLOGY

Hong Kong, May 16-18, 2019

EVIDENCE-BASED PRECISION MEDICINE

Important dates:

Abstract submission deadline
November 20, 2018

Early bird registration deadline
January 31, 2019

SAVE THE DATE

www.amp-global-congress.com

Saturday
November 3, 2018

7:00am - 8:00am

Continental Breakfast

Location: Early Bird Session Room Foyers

7:00am - 8:00am

Early Bird Sessions

◆ **AMP Guidance for Non-standard or Emerging NGS Applications: Liquid Biopsy**
(Sponsored by the Clinical Practice Committee)

Location: Room 214, Meeting Level
CE Credit: 1.0 Hour
Path: Cancer/Oncology; Informatics; Molecular Methodologies & Technologies

Panel Discussion
Christina Lockwood, PhD, University of Washington, Seattle, WA, USA
Christopher D. Gocke, MD, Johns Hopkins University, Baltimore, MD, USA

Session Description: Recognizing the challenges in developing, validating, and implementing clinical cell-free DNA (cfDNA) techniques (i.e., liquid biopsy), AMP has convened a multistakeholder working group with representatives from the College of American Pathologists and American Society for Clinical Oncology to develop a best practices guideline. This session will discuss the development of the consensus guideline document and provide an opportunity for engagement with the working group to provide feedback on existing challenges.

Session Objectives:
- Discuss the AMP-led guideline initiative regarding clinical cell-free DNA techniques.
- Discuss clinical cell-free DNA techniques and utilization.
- Discuss challenges to implementing cfDNA methods in the clinical laboratory.
- Describe potential methods to continue improvement and quality control of clinical cfDNA testing.

◆ **Prior's Puzzlers**

Location: Room 301, Ballroom Level
CE Credit: 1.0 Hour
Path: Inherited Conditions

Prior's Puzzlers
Thomas W. Prior, PhD, Case Western Reserve University, Cleveland, OH, USA

Session Description: The Genetic Puzzlers are back at the AMP meeting this year. AMP members are invited to submit genetic case puzzlers for presentation. Cases should facilitate discussion and should highlight interesting clinical and technical issues. The session provides an excellent forum to share experiences and teach others how they handled a challenging genetic case. Those submitting accepted cases will be invited to present and provide a learning objective.

Session Objectives:
- Those submitting accepted cases will be invited to present and provide a learning objective.

◆ **Strength in Numbers: Building an Academic Consortium to Facilitate Cost-Effective Clinical NGS**

Location: Room 221, Meeting Level
CE Credit: 1.0 Hour
Path: Advocacy/Lab Management

Strength in Numbers: Building an Academic Consortium to Facilitate Cost-Effective Clinical NGS
Jeremy Segal, MD, PhD, University of Chicago, Chicago, IL, USA
Dara L. Aisner, MD, PhD, University of Colorado School of Medicine, Denver, CO, USA

Session Description: This session will focus on the advantages of an inter-institutional consortium of academic labs for large panel NGS oncology tests. The speakers will discuss efforts to collaborate on design parameters and specifications as well as sharing techniques and methodologies for library preparation and bioinformatic solutions. The advantages and challenges associated with multi-institutional commercial-scale reagent purchasing and technical optimization will also be emphasized.

Session Objectives:
- Review the current status of the genomic oncology diagnostics space, including

obstacles and incentives for inter-institutional collaboration.
- Discuss the basic principles of capture-based next generation sequencing assays, including various options for custom development.
- Summarize design considerations for large-scale hybrid capture probe purchases, including refinement via directed pilot studies.
- Describe the potential of multi-institutional assay design and bioInformatics collaborations to help lower costs and promote performance standardization.

◆ Case Studies in Hematopathology

Location: Room 302, Ballroom Level
CE Credit: 1.0 Hour
Path: Cancer/Oncology

Identification of a Rare Germline POT1 Mutation by Targeted Next-Generation Sequencing of a Splenic Marginal Zone Lymphoma
Audrey Jajosky, MD, PhD, University Hospitals Cleveland Medical Center, Cleveland, OH, USA

Identification of Acute Leukemia Risk Mutations in a Child with Severe Congenital Neutropenia
Jennifer Yoest, MD, Washington University School of Medicine in St. Louis, St. Louis, MO, USA

Whole Genome Sequencing Identifies Cryptic High-Risk Cytogenetic Findings In A Patient With Acute Myeloid Leukemia
Michael, Alberti, MD, PhD, Washington University School of Medicine in St. Louis, St. Louis, MO, USA

A Case of Myeloid Neoplasm with Germline Predisposition: Connecting the Clinical, Laboratory, Morphology and Molecular Dots
Fatima Zahra Jelloul, MD, MD Anderson Cancer Center, Houston, TX, USA

Session Description: Challenging Case Studies are presented by trainees or technologists. They will discuss the case's clinical history, molecular analysis, interesting features, and the proposed diagnosis. Other molecular testing methods, if applicable, will be included in the presentation, including biopsies, gross/microscopic pathology, immunohistochemistry/flow cytometry, and cytogenetic findings.

Session Objectives:
- Describe the context of a challenging clinical case.
- Discuss the molecular pathology techniques used in the diagnosis of the case.
- Propose a final diagnosis based upon findings and diagnostic evidence.

◆ Platform Presentations of Selected Technical Topics Abstracts

Location: Room 304, Ballroom Level
CE Credit: 1.0 Hour
Path: Molecular Methodologies & Technologies

TT074 - Multi-Patient Longitudinal Monitoring of Cancer Mutations from Circulating DNA of Using Personalized Single Color Digital PCR Assays
Christina M. Bouwens, Stanford University, Stanford, CA, USA

TT059 - Cell-free DNA Allograft Rejection Monitoring Using Low-coverage Whole Genome Sequencing
Niklas Krumm, MD, PhD, University of Washington, Seattle, WA, USA

TT070 - Universal Design and Rapid PCR for Genotyping by High Resolution Melting
Jessica Houskeeper, MRes, University of Utah, Salt Lake City, UT, USA

TT046 - The NIH Genetic Testing Registry (GTR): Test Methodologies as a Sensor of the Precision Medicine Environment
Adriana Malheiro, MS, National Center for Biotechnology Information, NIH, Bethesda, MD, USA

Session Description: Platform presentations of selected Technical Topics abstracts.

Session Objectives:
- Analyze platform presentations of abstracts highlighted by the Technical Topics leadership as particularly significant.
- Evaluate the scientific merit and significance of these selected studies through further discussion with the authors.

8:00am - 8:15pm

Break

8:15am - 9:15am

Special Session: Infectious Diseases

◆ **Test Utilization and Clinical Utility of Molecular Test**

Location: Room 301, Ballroom Level
CE Credit: 1.0 Hour
Path: Infectious Diseases

Opportunities and Challenges in Laboratory Stewardship: Leaders Apply Here
Gary W. Procop, MD, Cleveland Clinic, Cleveland, OH, USA

Session Description: This presentation will focus mainly on challenges regarding the clinical utility of, and opportunities for, molecular diagnostics tests in Pathology and Lab Medicine Laboratories.

Session Objectives:
- Discuss interventions undertaken to improve care delivery through laboratory stewardship.
- Describe additional emphases on laboratory leadership and collaboration with clinical colleagues, as well as the importance of communication, professionalism, and a system-based approach to problem solving.
- Summarize evidence presented from described interventions on promoting healthcare affordability that directly improve quality of health care delivered.

8:15am - 9:45am

Plenary Session

◆ **Artificial Intelligence in Genomic Medicine**

Location: Stars at Night Ballroom, Ballroom Level
CE Credit: 1.50 Hours
Path: Informatics

Artificial Intelligence in Cancer Genomics and Therapy
Olivier Elemento, PhD, Weill Cornell Medicine - Englander Institute for Precision Medicine, New York, NY, USA

Probabilistic Graphical Models for Integrative Analysis of Pathomics Data
Panagiotis Benos, PhD, University of Pittsburgh School of Medicine, Pittsburgh, PA, USA

Session Description: From sequencing to phenotypic information, the amount of data within the molecular diagnostics laboratory is increasing at an ever-rapid pace with the emergence of new technologies and structured data sources. While dealing with this influx of information requires new analyses, it also presents an opportunity to learn from the data to provide novel insights that would otherwise be difficult to identify. This session will present an overview of these analysis methods, including artificial intelligence and machine learning approaches, and their current and future applications in the fields of genomics and molecular diagnostics for improving patient care.

Session Objectives:
- Describe the concepts of artificial intelligence and machine learning.
- Summarize the emergence of big data in genomics, including the challenges and opportunities associated with large-scale analyses.
- Examine the current and future use of these tools in the genomics and molecular pathology practice.

9:45am - 10:45am

Break

◆ **Coffee Break - Visit Exhibit Hall, AMP Central, and Posters**
(Odd-numbered posters attended)

Location: Exhibit Hall 1&2, Street Level
Innovation Spotlight Schedule: See schedule on Mobile App and by each stage located in the Exhibit Hall.

10:45am - 12:15pm

Workshop Sessions

◆ **Clinical Implementation of Liquid Biopsy for Cancer Patients**

Location: Room 301, Ballroom Level
CE Credit: 1.50 Hours
Path: Cancer/Oncology; Molecular Methodologies & Technologies

Clinical Applications of Digital PCR
Maria E. Arcila, MD, Memorial Sloan Kettering Cancer Center, New York, NY, USA

Liquid Biopsy for Solid Tumors: Promises and Perils
Mark J. Routbort, MD, PhD, University of Texas MD Anderson Cancer Center, Houston, TX, USA

Session Description: This session will focus on the implementation & validation of a cirulating cell free DNA assay for sequence variants, copy number variations, and fusions. The speakers will discuss the clinical indications for ccfDNA testing with an emphasis on the importance of clinical

correlation and the pitfalls that may arise when viewing ccfDNA data in isolation. Challenges such as interpretation of somatic versus germline variants as well as interpretation of variants arising in the context of clonal hematopoiesis wil be emphasized.

Session Objectives:
- Recognize the "cellular compartment of origin" challenge inherent to ccfDNA testing.
- Generate approaches for dealing with likely germline findings of cancer susceptibility.
- Discuss the pre-analytic and standardization challenges associated with ctDNA.
- Summarize the clinical utility of dPCR in ctDNA testing.

◆ Show Me the Data: Visualization At the Interface of Molecular Pathology and Patient Care

Location: Room 214, Meeting Level
CE Credit: 1.50 Hours
Path: Informatics

Cancer Genomics Visualization across Scales: Nucleotides to Cohorts
Nils Gehlenborg, PhD, Harvard Medical School, Boston, MA, USA

Data Commons for Precision Cancer Medicine
Ethan Cerami, PhD, Dana-Farber Cancer Institute, Boston, MA, USA

Session Description: Data visualization is an invaluable technology for gaining insights into the results of complex genomics analyses. Interactive visual data exploration and communication are highly effective strategies that are largely unexplored in the practice of molecular pathology and precision medicine. This session will highlight the role of data visualization in exploring, interpreting, and communicating high-complexity molecular data in patient care.

Session Objectives:
- Describe the concepts and transformative power of data visualization for exploration and communication of genomics data.
- Summarize how visual data exploration and communication can streamline the practice of precision medicine.
- Discuss the potential-use cases of data visualization in current clinical practice.

◆ Enterovirus D68 and Acute Flaccid Myelitis: What We've Learned Since 2014

Location: Room 304, Ballroom Level
CE Credit: 1.50 Hours
Path: Infectious Diseases

The Role of Enterovirus D68 in Acute Flaccid Myelitis
Kevin Messacar, MD, University of Colorado/ Children's Hospital Colorado, Aurora, CO, USA

Epidemiology, Surveillance, and Diagnosis of Enterovirus D68
Samuel Dominguez, MD, PhD, University of Colorado/Children's Hospital Colorado, Aurora, CO, USA

Session Description: Large outbreaks of enterovirus D68 (EV-D68) in 2014 and 2016 were widespread in North America and other regions and coincided with associated cases of acute flaccid myelitis (AFM), a polio-like paralysis that is due to lesions in the anterior horn of the spinal cord. This session will discuss epidemiological and biological evidence supporting the association between EV-D68 and AFM. In addition, current recommendations related to diagnostic testing will be discussed.

Session Objectives:
- Summarize current understanding of the epidemiology and disease associations of EV-D68.
- Describe evidence supporting and lacking in the causal relationship between enterovirus D68 and acute flaccid myelitis.
- Discuss current laboratory testing options for EV-D68.

◆ Training the Next Generations of Next Gen

Location: Room 302, Ballroom Level
CE Credit: 1.50 Hours
Path: Education & Professional Development

Innovations and Transitions in ABMGG's Continuing Certification Program
Cecily P. Marroquin, American Board of Medical Genetics & Genomics, Bethesda, MD, USA

Fellowship Training and Continuing Certification in Molecular Pathology
Karen L. Kaul, MD, PhD, NorthShore University Health System, Evanston, IL, USA

Mobility, Digital and innovation by Apple Educators
Sarah P. Farrell, PhD

Session Description: This session will present up-to-date approaches to teaching and learning. Apple educators apply tools to target instruction to the next generation. The American Board of Medical Genetics and Genomics (ABMGG) modernizes maintenance of certification (MOC) to Continuing Certification. The American Board of Pathology (ABP) allows flexibility in career paths for Molecular Genetic Pathology diplomates and self-tailoring of continuous certification to fit their practice. Come learn about these innovative approaches.

Session Objectives:

- Construct media-rich mobile-ready collaboration assignments.
- Describe the requirements and processes of ABMGG's Continuing Certification.
- Compare longitudinal assessment models such as CertLink to traditional MOC.
- Recognize available flexibility of ABP's modular format for continuous certification.

◆ **Best Practices for Clinical Validation of NGS Bioinformatics Pipeline**

Location: Room 221, Meeting Level
CE Credit: 1.50 Hours
Path: Informatics

AMP Guidelines for Validating Next Generation Sequencing Bioinformatics Pipelines
Somak Roy, MD, University of Pittsburgh Medical Center, Pittsburgh, PA, USA
Alexis B. Carter, MD, Children's Healthcare of Atlanta, Atlanta, GA, USA

Session Description: BioInformatics pipelines are an integral component of next generation sequencing (NGS) assay. There is, however, significant variability in how bioInformatics pipelines are validated in the global molecular genetics and pathology community in the absence of published guidelines. To address this unmet need, the Association of Molecular Pathology (AMP), with liaison representation from the College of American Pathologists (CAP) and the American Medical Informatics Association (AMIA), has developed a set of best practice consensus recommendations for the validation of clinical NGS bioInformatics pipelines. This sessions will discuss the guidelines and approaches to implementing these guidelines in the molecular pathology laboratory.

Session Objectives:

- Apply the recommendations from the recent joint consensus (AMP, CAP, AMIA) guideline for design, optimization and familiarization, and clinical validation of the NGS bioInformatics pipeline.
- Use the recommendations to successfully create a sample/variant cohort for clinical validation of the bioInformatics pipeline.
- Employ strategies to incorporate security of protected health information, preservation of sample identity, and data integrity of sequence files during validation and implementation of the pipeline.

12:15pm - 1:30pm

Lunch

◆ **General Lunch, Exhibit Hall 1&2, Street Level** (Entrance through Exhibit Hall)

Networking Lunches: Please see lunch descriptions in the "Highlights & General Information" section of the Program Book, Pages 21-22.

AMP Central Activities: MAC Networking
Innovation Spotlight Schedule: See schedule on Mobile App and by each stage located in the Exhibit Hall.

1:30pm - 3:00pm

Symposium Sessions

◆ **Finding the Patient Perspective: Molecular Testing in Advanced NSCLC**
(Developed through a strategic collaboration between AMP and Medscape Education Oncology)

Location: Room 217, Meeting Level
CE Credit: 1.50 Hours/ Instructions for obtaining continuing education for this session will be provided on-site and/or after the session.
Path: Cancer/Oncology
Eric H. Bernicker MD, Houston Methodist Hospital, Houston, TX, USA

Christina Lockwood, PhD, University of Washington, Seattle, WA, USA

Lynette M. Sholl, MD, Brigham & Women's Hospital, Boston, MA, USA

Don Stranathan, Lung Cancer Survivor/Advocate, Santa Rosa, CA, USA

Session Description: This symposium will use patient cases to highlight best practices and evidence for molecular testing and treatment selection throughout the continuum of disease for a patient with epidermal growth factor receptor (EGFR)-mutated non-small cell lung cancer (NSCLC). The patient's

perspective on molecular testing and its impact on quality of life will also be provided in addition to recommendations for optimizing communication within and across teams.

Session Objectives:

- Upon completion of this activity, learners will demonstrate increased knowledge regarding updated guidelines and evidence on biomarker tests that should be ordered to adequately characterize non-small cell lung cancer (NSCLC).
- Upon completion of this activity, learners will demonstrate greater competence related to strategies to improve time to appropriate treatment in patients with newly diagnosed or progressive epidermal growth factor receptor (EGFR)-mutated NSCLC including use of liquid biopsies, next-generation sequencing (NGS), and reflex testing.
- Upon completion of this activity, learners will demonstrate How biomarker testing results can be used to guide treatment selection in patients with EGFR-mutated NSCLC in the first, second, and third line.

◆ Precision Medicine in Mature Lymphoid Malignancies

Location: Stars at Night Ballroom 1&2, Ballroom Level
CE Credit: 1.50 Hours
Path: Cancer/Oncology

Resistance to Targeted Therapies in Chronic Lymphocytic Leukemia

Jennifer A. Woyach, MD, The Ohio State University, Columbus, OH, USA

Towards a Genomic Classification of T Cell Malignancies: Opportunities for Precision Medicine

Megan S. Lim, MD, PhD, University of Pennsylvania, Philadelphia, PA, USA

Session Description: For mature T-cell lymphomas, the recent application of genomic technologies has identified recurrent genetic alterations and enhanced our understanding of the pathogenetic mechanisms underlying this poorly understood category of non-Hodgkin lymphomas. Dr. Lim will discuss the potential relevance of these findings to diagnosis, prognosis, and therapy. Targeted small molecule therapeutics have transformed the therapy of chronic lymphocytic leukemia (CLL). While most patients achieve durable remissions, many with high genomic risk disease will relapse, and their outcomes are poor. Dr. Woyach will discuss known and suspected mechanisms of resistance to targeted therapies as well as pathways and agents with the potential to prevent or treat resistant disease.

Session Objectives:

- Summarize the genetic diversity of mature T-cell malignancies to improve diagnosis and discover opportunities for tailored therapy.
- Discuss targeted therapy for chronic lymphocytic leukemia (CLL), mechanisms of resistance to these therapies, especially Bruton tyrosine kinase (BTK) inhibitors.
- Describe novel therapies with the potential to overcome resistance to BTK inhibitors.

◆ Metagenomic Characterization of Molecular Scientists

Location: Stars at Night Ballroom 3&4, Ballroom Level
CE Credit: 1.50 Hours
Path: Infectious Diseases; Molecular Methodologies & Technologies

Metagenomic Mapping of the Phones of AMP 2018

Christopher E. Mason, PhD, Weill Cornell Medicine, New York, NY, USA

Session Description: Have you ever been curious to know what microorganisms you are harboring on your mobile phone? If so, this interactive event is what you've been waiting for. Similar to his past work mapping out the microbiome of the New York City Subway, Dr. Chris Mason and his team will be performing metagenomic sequencing on mobile phone samples of volunteers at the beginning of the meeting and the data will be presented during this session.

Session Objectives:

- Review the methodology used for metagenomic analysis of environmental samples.
- Determine the microbiome of AMP attendee's mobile phones and discuss the degree of microbial diversity.
- Discuss the significance of mapping out the community of microorganisms that inhabit public spaces.

3:00pm - 3:15pm

Break

3:15pm - 4:45pm

Plenary Session

◆ **Hypermutation and Mutation Signature Detection in Cancer**

Location: Stars at Night Ballroom 1&2, Ballroom Level
CE Credit: 1.50 Hours
Path: Cancer/Oncology; Informatics

Clinical Implications of Mutational Load and Signatures on Replication Repair Deficiency in Cancer

Uri Tabori, MD, PhD, Hospital for Sick Children, Toronto, Ontario, Canada

Hypermutation in Cancer: Burden and Signatures of Mutational Processes

Ahmet Zehir, PhD, Memorial Sloan Kettering Cancer Center, New York, NY, USA

Session Description: Oncogenic driver mutations have emerged as important targets for targeted kinase inhibitor therapy, but alterations in these genes often represent only a small fraction of the DNA substitutions present in human cancers. Examination of both the overall number and kind of DNA substitutions in tumors can lend insight into etiologies of mutagenesis and may predict responses to immunooncology-based therapies. Both whole exome and targeted panel data can be leveraged for broader analysis of tumor mutation burden and mutational signatures. This session will focus on approaches to TMB calculation and mutational signature detection including an emphasis on the clinical implications of these approaches.

Session Objectives:

- Compare and contrast analysis of tumor mutation burden obtained using exome data versus smaller panels.
- Summarize how tumor mutation burden correlates with response to immune-oncology treatment.
- Discuss how mutational signatures are derived from sequencing data, including from exome and targeted sequencing data.
- Describe the clinical significance of determining germline and somatic replication repair deficiency variants.

4:45pm - 5:00pm

Closing Remarks

Location: Stars at Night Ballroom 1&2, Ballroom Level
CE Credit: Not CME/CMLE
Path: Closing Remarks

Closing Remarks

Lynne V. Abruzzo, MD, PhD, Ohio State University Medical Center, Columbus, OH, USA and 2018 Program Chair

Neal Lindeman, MD, Brigham & Women's Hospital, Boston, MA, USA and 2019 Program Chair

NOTES

As a volunteer-driven society, AMP members have unique opportunities to advance the field and their careers by getting involved. As we prepare for the next election, consider nominating candidates for open positions, or throw your hat into the ring!

2019 Open Positions

Board of Directors:
President-Elect
Secretary-Treasurer
Program Committee Chair-Elect
Publication & Communication Committee Chair
Training & Education Committee Chair
*Technical Topics Representative to the Program Committee

** The Technical Topics Representative is not a Board position, however the Nominating Committee Chair is responsible for soliciting candidates.*

Genetics Subdivision:
Clinical Practice Committee Rep.
Nominating Committee Rep.
Program Committee Rep.
Training & Education Committee Rep.

Hematopathology Subdivision:
Chair
Clinical Practice Committee Rep.
Nominating Committee Rep.
Program Committee Rep.
Training & Education Committee Rep.

Infectious Diseases Subdivision:
Clinical Practice Committee Rep.
Nominating Committee Rep.
Program Committee Rep.
Training & Education Committee Rep.

Informatics Subdivision:
Clinical Practice Committee Rep.
Nominating Committee Rep.
Program Committee Rep.
Training & Education Committee Rep.

Solid Tumors Subdivision:
Chair
Clinical Practice Committee Rep.
Nominating Committee Rep.
Program Committee Rep.
Training & Education Committee Rep.

Each position will have at least two candidates on the ballot. Each position will also have a write-in provision.

Stop by AMP Central (main aisle of the Exhibit Hall) any time during the meeting to view open committee positions and submit nominations for candidates. (Self-nominations are encouraged!)

SPEAKER BIOS

Tumor Mutational Burden:

CHALLENGES AND OPPORTUNITIES FOR IMPROVING CANCER PATIENT CARE

Join us for this free online learning experience that explores the challenges and opportunities for tumor mutational burden (TMB) testing to improve cancer patient care. In this three-part series, world-renowned experts discuss the current best practices in TMB testing, interpretation, and reporting.

Available for Download Now:

- **Tumor Mutational Burden: Clinical and Diagnostic Utilization in Oncology**
- **Tumor Mutational Burden: Best Practices to Address Clinical and Technical Challenges**
- **Tumor Mutational Burden: Result Reporting and Application to Improve Patient Care**

This program has been supported through an educational grant from Bristol-Myers Squibb

www.amp.org/TMB

Speaker Bios

Note: The following bios listed below are for invited speakers. For a complete listing of all speakers, including Platform Presentation and Case Study speakers, please refer to the online Program Book & Mobile App

A

Dara Aisner, MD, PhD, is a board-certified certified Anatomic and Molecular Genetic Pathologist. She is an Associate Professor of Pathology at the University of Colorado School of Medicine in Denver, Colorado and a member of the University of Colorado Comprehensive Cancer Center. She also recently became board certified in Clinical Informatics. She is the Director of the Colorado Molecular Correlates Laboratory within the Department of Pathology. The laboratory provides level clinical molecular pathology laboratory services. She is a member of numerous oncology pathology and guidelines committees including the CAP/AMP/IASLC Guidelines for Biomarker Testing in Non-Small Cell Lung Cancer and the NCCN non-small cell lung cancer panel, and the College of American Pathologists Genomic Medicine Resource Committee, among others. She is a member of the Association for Molecular Pathology, for which she serves as a member of the Economic Affairs Committee. She is also a member of the United States and Canadian Academy of Pathology, among other professional societies. Dr. Aisner is the author of numerous publications and book chapters.

Kevin Alby, PhD, received his PhD from Brown University, completed an ASM CPEP fellowship at the University of North Carolina and is a Diplomate of the American Board of Medical Microbiology. He is currently the Director of Clinical Microbiology at the Hospital of the University of Pennsylvania where he focuses on the development and utilization of new technologies in the microbiology laboratory.

Maria Arcila, MD, is an anatomic and clinical pathologist with subspecialty training in Molecular genetic pathology and Hematopathology. She is the Laboratory Director for Diagnostic Molecular Pathology at Memorial Sloan Kettering where she is directly involved with the development, expansion, validation, and implementation of new and novel clinical tests to detect genetic alterations that are relevant to the management and treatment of patients with both solid tumors and hematologic malignancies. She has a specific interest in the development of high sensitivity assays for accurate and robust assessment of samples with very low tumor content and monitoring of minimal residual disease. To this end, she has been expanding the use of digital PCR in the clinical laboratory, as a way to overcome known limitations of other assays in the detection of key genetic alterations for treatment selection. In her presentation she will discuss the benefits of using digital PCR as a complementary method to NGS in the assessment of liquid biopsies.

B

Panagiotis Benos, PhD, received his undergraduate degree in Mathematics and a PhD degree in Molecular Biology from the University of Crete. Post-graduate studies include work with Prof. Michael Ashburner at EMBL-EBI in the analysis and annotation of the Drosophila genome and Prof. Gary Stormo at Washington University in St. Louis in the development of probabilistic models for protein-DNA interactions. In 2002 he joined University of Pittsburgh where he is currently Professor and Vice Chair at the Department of Computational Biology with joint appointments at the University of Pittsburgh Cancer Institute (UPCI), the Department of Computer Science and the Department of Biomedical Informatics. His research interests are in the field of computational biology and systems medicine. In particular he studies the causes of disease phenotypes and outcomes by integrating clinical

information and -omics data through machine learning methods. His work has been published in various peer-reviewed journals including Nature, Science, Genome Biology, Genome Research, etc.

Jonathan S. Berg, MD, PhD, is an associate professor in the Department of Genetics at the University of North Carolina at Chapel Hill (UNC). He also has a clinical appointment in the Department of Medicine, Division of Hematology–Oncology and the Lineberger Comprehensive Cancer Center. Dr. Berg graduated from Emory University with a B.S. in biology and completed the M.D./Ph.D. program at UNC in the Curriculum in Neuroscience. He subsequently underwent residency training in Clinical Genetics at Baylor College of Medicine. The recent revolution in genetic sequencing technology has led to an unprecedented opportunity to investigate the underlying etiology in families with genetic conditions, and yet it raises potential pitfalls that must be addressed in order to translate these new technologies into the practice of clinical genomics. Dr. Berg is particularly interested in the "incidental," or "secondary," findings that are discovered during the course of genome-scale sequencing, including the pre-test counseling and informed consent process; computational analysis required to determine the likely clinical relevance of variants; best practices for return of these findings to patients; and the impact of genomic findings on patients and their families. He is co-principal investigator of National Institutes of Health (NIH) grants to investigate the use of genome-scale sequencing as a diagnostic test in patients with suspected genetic disorders, as a potential screening tool in healthy newborns, and to develop a publicly available database of clinically relevant genes and variants through the "ClinGen" project. Dr. Berg has led the development of a novel semi-quantitative metric that evaluates several key aspects of "actionability" to score gene–phenotype pairs in a transparent, unbiased fashion. This approach is being studied as a way to guide the return of genomic findings in projects at UNC.

Eric H. Bernicker, MD, is a thoracic medical oncologist who practices at Houston Methodist Hospital. He received his MD from Baylor College of Medicine. He did his internal medicine training at the Baylor Affiliated Hospitals training program and then his oncology fellowship at MD Anderson Hospital. He is the director of the thoracic medical oncology program at HMH where he is the PI on a number of investigator initiated and cooperative group trials. He served on the expert panel that worked on the updated AMP/CAP/IASLC guidelines for biomarker testing in advanced lung cancer . He also started and continues to moderate the molecular oncology tumor board at HMH. As chair of the HMH cancer committee he has worked closely with anatomic and molecular pathologists to develop reflex molecular testing for lung and colorectal cancers at HMH.

Timothy A. Blauwkamp, PhD, is Chief Scientific Officer and co-founder of Karius. Prior to Karius, he led research and lab operations for the long-reads DNA sequencing startup Moleculo, until their acquisition by Illumina. Dr. Blauwkamp received his PhD in Biochemistry from the University of Michigan for studies of gene transcription networks in bacteria, followed by postdoctoral research at UofM and Stanford University focused on signaling mechanisms that influence early development and stem cell biology. His penchant for developing technologies that provide unprecedented insight into biology has led to 8 issued patents and more than 20 publications across the fields of genomics, developmental biology, and bacterial physiology.

Danielle Bonadies , MS, CGC, is the Director of the Genetics Division at My Gene Counsel, a digital health company that links current, updating, evidence-based information to genetic test results. Danielle practiced as a clinical genetic counselor at Yale School of Medicine for a decade, where she was the Assistant Director of the Cancer Genetic Counseling Program. She designed and ran several interactive, on-line patient education

and communication sites, and was involved in the cancer genetics education of thousands of patients, clinicians and students. Danielle has co-authored multiple book chapters and articles in genetic counseling and testing and was involved in the collection, documentation and publication of several key articles about the high rate of result misinterpretation amongst clinicians ordering genetic testing. At My Gene Counsel, Danielle oversees the development of digital genetic counseling tools and takes an active role in technology development.

C

Alexis Carter, MD, is the Physician Informaticist for the Laboratory at Children's Healthcare of Atlanta. She is board certified in clinical informatics, molecular genetic pathology, anatomic pathology and clinical pathology. Dr. Carter is the current chair of the Informatics Subdivision, Board Member and Executive Committee Member of the Association of Molecular Pathology. She is teaching faculty for the Clinical Informatics Board Review Course presented by the American Medical Informatics Association. In the College of American Pathologists, Dr. Carter is a member of the Informatics Committee and was a member of the working group that developed the validation guideline for Whole Slide Imaging. She currently works as the Secretary for the Clinical and Laboratory Standards Institute's working group for a new standard on two-dimensional barcoding for both clinical and anatomic pathology laboratory specimens. Dr. Carter is a member of the Office of the National Coordinator's TIGER team for Laboratory Regulations and Laboratory Reporting under Meaningful Use. She is a former chair of the International Pathology and Laboratory Medicine Special Interest Group for SNOMED-CT International. She is a former president of the Association of Pathology Informatics, an editorial board member of the *Journal of Pathology Informatics* and reviewer for multiple scientific journals in molecular diagnostics, genetics and informatics including the *Journal of Molecular Diagnostics*.

Ethan Cerami, PhD, is the Director of the Knowledge Systems Group at the cBioCenter and Lead Scientist in the Department of Biostatistics and Computational Biology at Dana-Farber Cancer Institute. Prior to joining Dana-Farber, he was the Director of Computational Biology at Blueprint Medicines, and Director of Cancer Informatics Development at Memorial Sloan Kettering Cancer Center (MSKCC). While at MSKCC, he co-founded the cBioPortal for Cancer Genomics, and his group remains active in its continued development. He is currently the Co-PI of the National Cancer Institute Cancer Immunologic Data Commons (CIDC), and the Co-PI of the DFCI MatchMiner platform for algorithmically matching patients to precision cancer medicine trials. Dr. Cerami has a MS in Computer Science from New York University and a PhD in Computational Biology from Cornell University.

Laurence J. Clark, MD, having been a practicing Internist in Alexandria, VA from 1980 to the present, and involved in the Medicare Carrier Advisory process since its inception, Dr. Clark is one of the JK Medical Directors. Dr. Clark has been licensed as a physician in Virginia since 1980, has served as President of the Medical Staff of the Mount Vernon Hospital in Alexandria, and has been a member of the extended faculty of Georgetown University, his medical alma mater, for seventeen years. After 33 years as a private practitioner, he now devotes his clinical time to the clinic of the Carpenter's Shelter, a homeless shelter in the City of Alexandria. He continues to educate first and second year medical students in patient evaluation and Ambulatory Care. Initially representing the American College of Physician's local chapter on the first DC Metropolitan Area Carrier Advisory Committee, he remained continuously active until 1998, when he was asked by TrailBlazer Medicare to serve as a consultant. Stepping down from the co-chairman's role, he supported the committee, first as a consultant, and then as Associate Medical Director for TrailBlazer Medicare. After several years in that capacity, he became Medical Director for TrailBlazer's Mid-Atlantic region, and continued until 2007, when TrailBlazer vacated the contract. He continued in the same

region as Medical Director with Highmark Medicare Services until late 2011. He began his tenure with National Government Services as Medical Director with both J13 and Title XVIII responsibilities on January 6, 2012, and subsequently became Medical Director for JK, New York and New England upon the award of that contract to NGS. Dr. Clark enjoys working with facilities and practitioners throughout Jurisdiction K, refining existing policies, and developing new ones where needed. He also shares a leadership role on several committees, working on collaborative policy initiatives with other Medicare contractors.

Catherine Cottrell, PhD, is a Director of the Institute for Genomic Medicine Clinical Laboratory at Nationwide Children's Hospital in Columbus, Ohio. She is an Associate Professor - Clinical in the Departments of Pathology and Pediatrics at The Ohio State University. Dr. Cottrell is dual certified by the American Board of Medical Genetics and Genomics in the specialties of Cytogenetics and Molecular Genetics having completed her fellowship training at The Ohio State University and Nationwide Children's Hospital in Columbus, Ohio. Following the conclusion of her fellowship, Dr. Cottrell assumed a faculty position in 2011 at Washington University (WU) School of Medicine in Saint Louis, Missouri. In the six years she spent at WU, she most recently served as the Director of the Cytogenetics and Molecular Pathology Laboratory, and as an Associate Professor in the Department of Pathology and Immunology, and Department of Genetics. Dr. Cottrell specializes in the clinical interpretation of complex laboratory tests including constitutional and oncology chromosome analysis, FISH analysis, next-generation sequencing, Sanger sequencing, as well as chromosomal microarray analysis. She has an interest in the development of new clinical diagnostic tests, and a focus somatic variant interpretation and mosaicism in the setting of congenital disease. Her current clinical and research emphasis includes constitutional whole exome sequencing, tumor somatic profiling, and best practices in genetic variant interpretation.

Kristy Crooks, PhD, FACMG, is an Assistant Professor in the Department of Pathology, Director of the Colorado Center for Personalized Medicine Biobank Laboratory, and Section Director for Heritable Disease Testing in the Colorado Molecular Correlates Laboratory at the University of Colorado. She is board-certified in Clinical Molecular Genetics and Clinical Cytogenetics. She earned her PhD at Duke University and completed her fellowship training at the University of North Carolina. Her research and clinical interests focus on leveraging high-throughput technologies for population screening for both common and rare genetic disease.

Bryan R. Cullen, PhD, obtained a B.Sc. in Biochemistry from Warwick University in the UK and a M.Sc. in Virology from the University of Birmingham before moving to the USA, where he obtained a Ph.D. in Microbiology from Rutgers University. In 1987, he was recruited to Duke University Medical Center as a Howard Hughes Medical Institute Investigator. He currently holds a James B. Duke Professorship in the Department of Molecular Genetics and Microbiology at Duke. Dr. Cullen's research interests have historically revolved around the use of viruses as genetic tools to understand aspects of the biology of the eukaryotic cell, focusing particularly on RNA-sequence mediated gene regulation. Currently, his laboratory is studying the regulation of viral mRNA expression by epitranscriptomic modifications and the use of CRISPR/Cas as a potential approach to the treatment of chronic diseases caused by DNA viruses. Dr. Cullen has published over 315 research papers, is on the editorial board of 11 prominent journals and has been recognized as one of the most highly cited scientists in the field of microbiology.

Jennifer Dien Bard, PhD, is the director of the clinical microbiology and virology laboratories at Children's Hospital Los Angeles (CHLA) and Associate Professor of Pathology at the University of Southern California Keck School of Medicine. Dr. Dien Bard is a Diplomate

of the American Board of Medical Microbiology and a Fellow of the Canadian College of Microbiologists. Her current research interests include the development and utilization of rapid laboratory diagnostics and their subsequent impact on patient management.

D

Samuel R. Dominguez, MD, PhD, is an Associate Professor of Pediatrics at the University of Colorado School of Medicine in the Division of Infectious Diseases. He is also an Associate Professor of Epidemiology in the School of Public Health. He serves as the Medical Director for the Clinical Microbiology Laboratory and the Associate Medical Director for Infection Control and Prevention at Children's Hospital Colorado. He obtained his undergraduate degree in chemistry and mathematics at Houghton college in 1992. He then completed the MD/PhD program at the University of Chicago. Dr. Dominguez completed his pediatric residency at the University of Chicago and his Pediatric Infectious Disease Fellowship at the University of Colorado, joining the faculty there in 2007. He has a research interest in clinical diagnostics and diagnostic stewardship, emerging infectious diseases, pediatric respiratory viral infections and enteroviruses, and Kawasaki disease. He is the author over 70 peer-reviewed publications.

Breck Duerkop, PhD, earned his doctoral degree in Microbiology from the University of Washington, where he studied quorum sensing and secondary metabolite synthesis the bacterial species *Burkholderia* under the guidance of Dr. E. Peter Greenberg. He completed postdoctoral research training at the University of Texas Southwestern Medical Center in the laboratory of Dr. Lora Hooper. During his postdoctoral studies, Dr. Duerkop used a combination of bacterial genetics and gnotobiotics to determine how intestinal colonization influenced the biology of *Enterococcus faecalis*, a Gram-positive commensal and nosocomial pathogen. His work was among the first to reveal that bacteriophages (viruses that infect bacteria) impact the dynamics of bacterial colonization in the mammalian intestine. Currently, Dr. Duerkop is an Assistant Professor of Immunology and Microbiology at the University of Colorado School of Medicine, where his lab studies bacteriophage-host interactions. His lab focuses on bacteriophage infection mechanisms of multidrug resistant bacteria and how the immune system influences intestinal bacteriophage communities. His lab has recently been exploring the molecular mechanisms of how Enterococci develop resistance to bacteriophages and whether bacteriophages can be used as next generation antibacterial therapeutics. His lab is also using metagenomics to study the influence of phage communities on intestinal inflammatory disorders such as Crohn's disease and ulcerative colitis with the long-term goal of understanding how phages contribute to host-microbe interactions and their overall impact on human health.

E

Olivier Elemento, PhD, is the director of the Englander Institute for Precision Medicine, an Institute that focuses on using genomics and informatics to make medicine more individualized. His research group combines Big Data with experimentation and genomic profiling to accelerate the discovery of cancer cures. In cancers, we are elucidating the patterns of aberrant pathway activities, rewiring of regulatory networks and cancer mutations that have occurred in cancer cells. We are also trying to understand how tumors evolve at the genomic and epigenomic level. We use high-throughput sequencing (ChIP-seq, RNA-seq, bisulfite conversion followed by sequencing – specifically RRBS-, ATAC-seq, exome capture and sequencing, single cell RNAseq using DropSeq) to decipher epigenetic mechanisms and regulatory networks at play in malignant cells and study how they affect gene expression. Our research has led to the development of the first New York State approved whole exome sequencing test for oncology, which is now used routinely on patients treated at Weill

Cornell Medicine/NewYork Presbyterian Hospital. He has had the privilege to mentor over 15 wonderful Weill Cornell graduate students and postdoctoral fellows. He has also enjoyed many productive collaborations with his Weill Cornell colleagues over the years and is looking forward to many more.

Altovise T. Ewing, PhD, LCGC, joined 23andMe as the company's first Medical Science Liaison- Genetic Counselor in April 2018. She works on the Medical Affairs team as a foundational member of the Clinical Development Division and as an external-facing clinical domain expert and product information specialist. Dr. Ewing earned a Ph.D. in Genetics and Human Genetics with a specialization in Genetic Counseling, from Howard University in 2011. During her research training, she spent time at the National Institutes of Health within The NHGRI and NCI. She also had the privilege of providing genetic counseling services to patients at Walter Reed National Military Medical Center. Dr. Ewing completed a Postdoctoral Research Fellowship at the Bloomberg School of Public Health at Johns Hopkins. Her scholarship focused on inclusion of diverse patient populations in cancer genetics research and development of ethically sound strategies to address health inequities.

F

Stephanie I. Fraley, PhD, joined UC San Diego in July 2014 as an Assistant Professor of Bioengineering. Her research takes a multidisciplinary and multi-scale approach to (1) develop inexpensive clinical profiling technologies for improved monitoring, understanding, and treatment of human diseases; and (2) engineer physiologically relevant *in vitro* systems to improve the translation of molecular studies of human disease. She earned her B.S. in Chemical Engineering in 2006 from The University of Tennessee Chattanooga and her Ph.D. in Chemical and Biomolecular Engineering in 2011 from The Johns Hopkins University. Dr. Fraley then joined the Emergency Medicine department at The Johns Hopkins University as a postdoctoral fellow. For her graduate work, she was awarded an NSF Graduate Research Fellowship, National Tau Beta Pi Fellowship, and was an Achievement Rewards for College Scientists Scholar, Johns Hopkins Heath Fellowship, National Siebel Scholarship, and ASEE/NSF Engineering Innovations Fellowship. Recently, she received a National Burroughs Wellcome Fund Career Award at the Scientific Interface for her research merging clinical diagnostic and basic research approaches. She is also a SAGE Bionetworks Scholar, Kavli Frontiers of Science Fellow, Biomedical Engineering Society Cellular and Molecular Bioengineering Rising Star awardee, and recipient of an NSF CAREER award.

Birgit Funke, PhD, FACMG, received her Ph.D. in molecular genetics from the University of Würzburg, Germany and trained as a postdoctoral fellow at the Albert Einstein College of Medicine in New York where she identified the gene for 22q11 deletion syndrome. She subsequently completed a fellowship in Clinical Molecular Genetics at Harvard Medical School and has dedicated her career to personalized genetic medicine since then. She served as the director of Clinical Research and Development at the Laboratory for Molecular Medicine (LMM) and was among the first worldwide to implement clinical next generation sequencing (NGS). She also has a extensive experience in clinical diagnostic testing for inherited cardiovascular disorders and is co-chairing the cardiovascular domain working group of the Clinical Genome Resource (ClinGen) whose mission is to harmonize and centralize knowledge resources for genomic medicine. Today, Dr. Funke is Vice President of Clinical Affairs at Veritas Genetics and part time Associate Professor of Pathology at Harvard Medical School. Her long term goal is to use genomic testing for disease prevention.

G

Elaine Gee, PhD, is the founder and principal consultant of BigHead Analytics Group with industry expertise in clinical bioinformatics and scalable compute platforms for clinical genomic testing. Previously Dr. Gee was the Director of Bioinformatics at ARUP Laboratories, where she supported the bioinformatics and compute infrastructure for next-generation sequencing-based assays. At ARUP she led her team to scale bioinformatics by creating an elastic cloud-based compute infrastructure in AWS that executed standardized bioinformatics pipelines (a.k.a. "Pipey", see https://www.genomeweb.com/clinical-lab-management/arup-launches-cloud-based-ngs-analytics-platform-massively-larger-scale). This work included tuning somatic and germline pipelines by variant class, developing a central genomic variant datastore to house discrete data, and modularizing the infrastructure. Additionally her work included incorporation of unique molecular identifiers to enable low frequency variant detection and creation of tools to optimize NGS target design in low complexity genomic regions. Dr. Gee focuses on pairing analytic and infrastructure quality improvements with design architecture to scale the bioinformatics product development life cycle by leveraging modularity and automation. Her background includes cross-disciplinary experience in signal processing, molecular dynamics modeling, and instrument integration and control. Dr. Gee earned her Ph.D. in biophysics from Harvard University and a B.S. in physics from the California Institute of Technology. She currently serves as the informatics subdivision lead on the AMP Global 2019 Organizing Committee.

Nils Gehlenborg, PhD, is an Assistant Professor in the Department of Biomedical Informatics at Harvard Medical School and the Director of the Master in Biomedical Informatics program. Dr Gehlenborg received his PhD from the University of Cambridge and was a predoctoral fellow at the European Bioinformatics Institute (EMBL-EBI) in the Functional Genomics Group of Alvis Brazma. He completed his postdoctoral training as a Research Associate in the lab of Peter J Park at the Center for Biomedical Informatics at Harvard Medical School and in the Cancer Program at the Broad Institute. The goal of Dr Gehlenborg's research is to improve human health by developing visual interfaces and computational techniques that enable scientists and clinicians to efficiently interact with biomedical data. Tight integration of algorithmic approaches from biomedical informatics with advanced data visualization techniques is central to his efforts, as is close collaboration with clinicians and experimentalists. Currently, Dr Gehlenborg is researching and developing novel tools to visualize epigenomics and 3D genome conformation data, EHR data, as well as heterogeneous and longitudinal data from large-scale cancer genomics studies. These efforts integrate visual and computational approaches to support sense-making in biology and medicine, enabling reproducible and collaborative research.

Christopher D. Gocke, MD, is an Associate Professor of Pathology and Oncology at the Johns Hopkins University School of Medicine. He is Director of the Division of Molecular Pathology, Deputy Director (Vice Chairman) of Personalized Medicine for the Department of Pathology, and co-director of Johns Hopkins Genomics. He received his B.A. in Chemistry from Princeton University and his M.D. in 1985 from Rutgers Medical School. His residency training in pathology was at the University of Rochester and Stanford University, where he was Chief Resident. He completed a fellowship in pathology at Stanford. Dr. Gocke has co-authored over 125 peer-reviewed publications in the area of cancer diagnostics. He is a past Councilor on the Program Directors' Council of the Association of Molecular Pathology and a member of the NCI's Investigational Drug Steering Committee. He is co-principle investigator on two NIH research project cooperative agreements. He is board certified in Molecular Genetic Pathology and Anatomic Pathology.

Lucy Godley, MD, PhD, developed her deep respect for science through her work in the laboratories of Drs. Sally and Vincent Marchesi at Yale University, with Dr. Don Wiley as a Harvard undergraduate, and during the graduate portion of her MSTP program, conducted under Dr. Harold Varmus at the University of California, San Francisco and the National Institutes of Health. She completed her medical training at Northwestern University followed by Internal Medicine/Hematology-Oncology training at The University of Chicago. During her postdoctoral research with Dr. Michelle Le Beau, Dr. Godley developed her interest in the molecular basis for the abnormal DNA methylation patterns that characterize human tumors. Since becoming a faculty member at The University of Chicago in 2003, the Godley Laboratory has concentrated on understanding the molecular drivers of the abnormal DNA methylation and 5-hydroxymethylcytosine patterns that characterize cancer cells as well as the molecular drivers of inherited hematopoietic malignancies. As a physician-scientist with both research and clinical responsibilities, Dr. Godley seeks to understand disease on a molecular basis and am able to bring that perspective to the care of my patients.

Alex Greninger, MD, PhD, is an assistant professor of laboratory medicine and associate director of the clinical virology laboratory at the University of Washington. He received a BS and MS in Biological Sciences and a BA in International Relations from Stanford University, a MPhil in Epidemiology at Cambridge University, and a MD/PhD from the University of California San Francisco. He is also interested using metagenomics and genomics of infectious diseases to inform diagnostics and evaluate antivirals, monoclonals, and vaccines to punch viruses in their stupid enveloped and capsid faces.

Wayne W. Grody, MD, PhD, is a Professor in the Departments of Pathology & Laboratory Medicine, Pediatrics, and Human Genetics at the UCLA School of Medicine. He is the director of the Molecular Diagnostic Molecular Laboratories and the Clinical Genomics Center within the UCLA Medical Center. He is also an attending physician in the Department of Pediatrics, specializing in the care of patients with or at risk for genetic disorders. He has been one of the primary developers of quality assurance and ethical guidelines for DNA-based genetic testing for a number of governmental and professional agencies including the FDA, VA, AMA, CAP, ACMG, ASHG, NCCLS, CDC, NIH-DOE Human Genome Project (ELSI program), and PSRGN. He served as a member of the NIH-DOE Task Force on Genetic Testing, and was the working group chair for development of national guidelines for cystic fibrosis and factor V-Leiden mutation screening. More recently, he served as founding chair of an Advisory Committee on Genomic Medicine for the entire VA healthcare system and as president of the American College of Medical Genetics. He did his undergraduate work at Johns Hopkins University, received his M.D. and Ph.D. at Baylor College of Medicine, and completed residency and fellowship training at UCLA. He is double board-certified by the American Board of Pathology (Anatomic and Clinical Pathology, Molecular Genetic Pathology) and the American Board of Medical Genetics (Clinical Genetics, Molecular Genetics, and Biochemical Genetics).

H

Jill Hagenkord, MD, is a board-certified pathologist with subspecialty boards in molecular genetic pathology. As Chief Medical Officer, Jill is involved in health product strategy, identification and evaluation of strategic business partnerships, regulatory strategy, health information review, and the development of provider and patient support tools. She also serves as the company liaison to medical professional societies as an active member in the Association for Molecular Pathology, the College of American Pathologists, American College of Medical Genetics and Genomics, and the National Academies of Science, Engineering, and Medicine's Roundtable on Genomics and Precision Health. Jill received her M.D. from Stanford University School of Medicine in 1999, did residency training at the University of California at San Francisco and the University of Iowa, and

completed fellowships at the University of Pittsburgh Medical Center. Subsequently, Dr. Hagenkord practiced pathology at Creighton University Medical Center where she founded iKaryo Diagnostics. Prior to joining Color, Jill was the Chief Medical Officer at 23andMe, Invitae, and Complete Genomics.

Ingrid A. Holm, MD, MPH, is a faculty member of the Division of Genetics and Genomics at Boston Children's Hospital (BCH) and Associate Professor of Pediatrics at Harvard Medical School. Dr. Holm's primary area of research is in the Ethical, Legal, and Social Implications (ELSI) of returning genomic information to children and parents. She is co-investigator in the "*Genomic Sequencing and Newborn Screening Disorders*" U19 (BabySeq project), a randomized trial of whole exome sequencing vs. standard of care in healthy and sick newborns. The BabySeq Project explores the medical, behavioral, and economic impacts of integrating genomic sequencing into the care of newborns. Dr. Holm co-leads the ELSI component to study the impact of the return of genomic results to parents and their health care providers. Dr. Holm is also co-investigator of the Electronic Medical Records and Genomics (eMERGE) III Network where she co-leads the Return of Results-ELSI Work Group, and she has an R01 to study the impact of return of actionable genetic information on eMERGE participants to their health care providers. Dr. Holm is co-PI of a study of exome sequencing in children with disorders of sex development and leads assessments of the impact of the return of results on families. She is a co-investigator of the Undiagnosed Diseases Network (UDN) Coordinating Center and the UDN Harvard Clinical site. Dr. Holm is also funded by PCORI (Patient Centered Outcomes Research Institute) to develop self-phenotyping methods for patients with undiagnosed diseases. Dr. Holm is a member of the Society for Pediatric Research, a Fellow in the American College of Medical Genetics, and a member of BCH IRB.

Katherine Huang, MS, is a Senior Software Engineer at the Broad Institute of MIT and Harvard. She specializes in front-end UI design and data visualization. She has been a developer for the Genotype Tissue Expression (GTEx) portal (http://gtexportal.org) since 2014. Prior to joining the GTEx portal team, she was involved in the Human Microbiome Project, development of various web portals, and comparative genomics. Ms. Huang holds an M.S. degree in Cell and Molecular Biology from the University of California, Riverside.

Romney Humphries, PhD, D(ABMM), M(ASCP), is Chief Scientific Officer at Accelerate Diagnostics, and a Professor of Pathology at the University of Arizona. Prior to this, she was the Section Chief of Clinical Microbiology and Assistant Clinical Professor of Pathology and Laboratory Medicine at UCLA. Dr. Humphries' research interests focus primarily on antimicrobial resistance and susceptibility testing. She is author of more than 100 scientific peer-reviewed publications. Dr. Humphries serves as a member of the CLSI AST subcommittee, the Microbiology Resource Committee for the College of American Pathologists and is a member of the clinical laboratory practices committee for ASM. She has spoken worldwide on the topics of antimicrobial resistance, susceptibility testing, in particular focusing on the challenges that all laboratories face in accurately and rapidly detecting antimicrobial resistance.

J

Angela Jacobson, MS, LCGC, is a licensed and board certified genetic counselor currently at the University of Washington Department of Laboratory Medicine, Genetics and Solid Tumors Lab. Angela is responsible for reviewing and triaging incoming cases, variant interpretation and reporting of somatic and germline panels. She brings her past experience coordinating two multidisciplinary cancer prevention programs at Seattle Cancer Care Alliance. Angela's interests include improving the clinical application of molecular testing for both treatment of cancer and detection of germline mutations with special interest in the molecular work up of mismatch repair deficiency.

K

Sabah Kadri, PhD, is the Director of Bioinformatics at the Genomic and Molecular Pathology Division at the University of Chicago, where she leads computational efforts on novel tools and pipeline development for clinical diagnostics using Next generation Sequencing (NGS). She obtained her doctoral degree in Computational Biology at Carnegie Mellon University, where she trained in interdisciplinary approaches to study microRNAs in echinoderm development. Her research work has been focused on using the power of NGS methods innovatively in the field of Computational Genomics. She later joined the Lander Lab at the Broad Institute, where she worked on end-RNASeq technologies and non-coding RNA populations, especially large non-coding RNAs (lincRNAs). Since joining the University of Chicago, Dr. Kadri has extended her expertise in NGS technologies to clinical research. Her areas of expertise include small and total RNASeq, single cell transcriptomics, clonal evolution of mutational profiles and development of algorithms & analytical pipelines for NGS clinical assays.

Karen Kaul, MD, PhD, is Chair of the Department of Pathology and Laboratory Medicine at NorthShore and is a Clinical Professor of Pathology at the University of Chicago's Pritzker School of Medicine, and previously served as Director of the Molecular Diagnostics Division at NorthShore University HealthSystem. Dr. Kaul is board-certified in Anatomic Pathology, and also Molecular Genetic Pathology, and has devoted her career to development of the field of molecular pathology, the laboratory basis for individualized medicine. She and her lab have been deeply involved in the development of laboratory tests for cancer, heritable, and microbial diseases. She is a past president of the Association for Molecular Pathology, and served as Editor in Chief of the Journal of Molecular Diagnostics for over a decade. She has been significantly involved in molecular diagnostics efforts, education, regulation, and standardization of the practice of molecular pathology for several professional societies, and is a frequent national speaker and panel member. Dr. Kaul has over 100 peer-reviewed publications in this area. She is the recipient of the 2008 Association for Molecular Pathology Leadership Award. Dr. Kaul has also been deeply involved in pathology training, having served as a program director for nearly 20 years. In 2011, she was appointed a Trustee of the American Board of Pathology where she is involved in professional examination and certification efforts, especially for molecular pathology and genomics. She is currently President of the American Board of Pathology, and also serves on the ACGME Residency Review Committee for Pathology. She was an ELAM (Executive Leadership in Academic Medicine) fellow in 2011-2012. She served as a member of the Tapestry/SPOT Dx working group. In late 2016, Dr. Kaul was invited to provide educational testimony to the bipartisan Senate Health Education Labor and Pension (HELP) committee on the contributions of lab-developed tests and procedures to personalized medicine. Dr Kaul has led clinical laboratory and translational research developments in molecular pathology for many years. Her lab has maintained ongoing efforts in investigation of molecular cancer biomarkers, including circulating tumor cells, DNA and proteins, and has also made significant contributions in the rapid molecular detection and characterization of microbes and antimicrobial resistance which have added novel capabilities to laboratories. Dr. Kaul has led efforts to expand molecular pathology and personalized medicine programs at NorthShore, serving as Interim Co-director of the Personalized Medicine Program. NorthShore has seen a considerable expansion of it tissue and genomic biorepository and is part of the federally-funded presidential Personalized Medicine Initiative. NorthShore does next-generation sequencing of tumors on site to ensure that patients get the optimal treatment, and that effort is being extended into cell-free DNA. NorthShore launched its novel lab and clinical program in Pharmacogenomics in the fall of 2016.

Jeffrey D. Klausner, MD, MPH, is a clinical infectious diseases specialist and research scientist at the University of California, Los Angeles. He has an active research program using molecular diagnostics to detect and identify antibacterial resistance in sexually transmitted infections. Professor Klausner is a frequent advisor to the WHO, CDC and ministries of health. He has published over 450 peer-reviewed publications in HIV and other STDs.

Jeffery M. Klco, MD, PhD, is an Assistant Member in the Department of Pathology at St. Jude Children's Research Hospital in Memphis, TN. He received his MD and PhD at Washington University School of Medicine in St. Louis, MO and completed residency in Anatomic Pathology and a fellowship in Hematopathology at Barnes-Jewish Hospital in St. Louis. He is board certified in both Anatomic Pathology and Hematopathology. Dr. Klco did post-doctoral research on the genomics and subclonal architecture of acute myeloid leukemia (AML) in the laboratory of Timothy Ley, MD. He is currently a physician scientist at St. Jude with effort on the hematopathology service as well as an active laboratory focused on the genomics of pediatric myelodysplastic syndromes and relapsed AML.

L

Elissa Levin, MS, CGC, is a nationally recognized leader in developing innovative models for responsibly delivering genomic information to consumers, patients, and providers. She is a board-certified genetic counselor with almost two decades of experience in academia and industry. Her roles have ranged from clinical practice to business, marketing, operations and product development. She is passionate about transforming the genetic testing user experience and building platforms to scale return of results and genetic counseling. As one of the pioneers of direct-to-consumer genomics, she has promoted the consumer perspective, the need to balance technology with human touch, in developing responsible models. In her current role at Helix, she leads the company's clinical and policy initiatives, setting standards to create a trusted environment where consumers can access a broad spectrum of DNA-informed products and services throughout their lives.

Megan S. Lim, MD, PhD, is the Director of the Joint Division of Hematopathology, Hospital of the University of Pennsylvania and the Children's Hospital of Philadelphia in the Department of Pathology and Laboratory Medicine. She is the Director of the Lymphoma Biology Program and Co-Leader for the Lymphoma Translational Center for Excellence at the Abramson Cancer Center. Dr. Lim received an MD from the University of Calgary and a PhD in Molecular Oncology from the University of Calgary and National Cancer Institute Lab of Pathology jointly. Dr. Lim obtained her Hematopathology fellowship training at the National Cancer Institute after which she assumed a faculty position at the University of Toronto (1998-2000) and then at the University of Utah (2000-2006). At the University of Michigan (2000-2015) she was the Director of Hematopathology and the Hematopathology Fellowship Program. She has held numerous leadership positions and served on training and education committees for the Association of Molecular Pathology and the United States Academy of Pathology. She is the Vice-Chair of the Non-Hodgkin Lymphoma Disease Committee of the Children's Oncology Group and participates in integrated translational research in pediatric lymphoma. Her research interests are focused on elucidating mechanisms involved in lymphoma pathogenesis. She research utilizes large-scale mass spectrometry-based proteomic profiling and genomic analysis to characterize novel pathogenetic mechanisms in lymphomas.

Stephen E. Lincoln, is responsible for scientific collaborations and clinical studies at Invitae. He has over 25 years of experience in bioinformatics, specifically as it is applied in the fields of genetics and genomics. His most recent research include studies of the clinical validity and utility of expanded genetic testing in hereditary cancers (PMIDs 26270727 and

26207792). He also works on rigorous methods to assess analytic validity of new assays and algorithms. Previously he held senior positions at Complete Genomics, Affymetrix and Incyte Genomics. Steve's academic background includes 7 years with Eric Lander at the Whitehead Institute and MIT during the initial phases of the human genome project.

Christina Lockwood, PhD, is an Associate Professor in Laboratory Medicine and Director of the Genetics and Solid Tumor Diagnostics Laboratory at the University of Washington Medical Center. She is board-certified through the American Board of Clinical Chemistry as well as the American Board of Medical Genetics and Genomics and a fellow of the AACC Academy. Dr. Lockwood's research is focused on bridging clinical service and translational research and recent projects have included the clinical deployment of cell-free DNA diagnostics in pregnancy, transplant, and oncology.

Elaine Lyon, PhD, is a tenured professor in the Pathology Department at the University of Utah, is certified by the American Board of Medical Genetics in Clinical Molecular Genetics. As a Medical Director of Molecular Genetics/Genomics at ARUP Laboratories since 2001, she has overseen molecular testing for inherited diseases, designing and validating laboratory assays for clinical use. Her roles comprise test development, quality assurance and review of technical data. She participated nationally in developing guidelines such as the "Assuring Quality in Next Generation Sequencing", "Clinical Standards for Next Generation Sequencing", "Interpretation of Sequence Variants". She serves as a member for the Molecular Pathology Advisory Group for the American Medical Association for cpt coding in molecular pathology and genomic sequencing procedures. As President of The Association for Molecular Pathology, she focused on demonstrating the value of molecular pathology, and led a Task Force for the Framework for the Evidence Needed to Demonstrate (FEND) Clinical Utility, which resulted in the manuscript, "The Spectrum of Clinical Utilities in Molecular Pathology Testing Procedures for Inherited Conditions and Cancer: A Report of the Association for Molecular Pathology".

M

Vincent J. Magrini, PhD, Director of Technology Development, leads the day-to-day operations for the Institute for Genomic Medicine (IGM) Research Laboratory. Dr. Magrini, a molecular genomics expert, was previously an Assistant Director at the McDonnell Genome Institute. His work focuses on molecular applications of next-generation sequencing (NGS) platforms including Illumina's two channel (NovaSeq) and four channel (HiSeq) chemistries, Single Molecule Real-Time (SMRT) sequencing on the Pacific Bioscience's Sequel, and microfluidic technologies including Oxford Nanopore and 10X Genomics. Dr. Magrini plays a lead role in the integration of novel genomics technology into the data production operations at IGM. His research interests include cancer genomics, expression profiling, and clinical assay applications development.

Cecily P. Marroquin, MA, is the Manager of MOC and Special Projects at the American Board of Medical Genetics and Genomics (ABMGG). She received a MA in Medical Anthropology from the George Washington University and has worked with ABMGG for 5 years on the Maintenance of Certification (MOC), now Continuing Certification program. Her current focus is on increasing the relevancy and decreasing the burden of continuing certification for ABMGG diplomates.

Christopher E. Mason, PhD, of the Mason laboratory develops and deploys new biochemical and computational methods in functional genomics to elucidate the genetic basis of human disease and human physiology. We create and deploy novel techniques in next-generation sequencing and algorithms for: tumor evolution, genome evolution, DNA and RNA modifications, and genome/epigenome engineering. We also

work closely with NIST/FDA to build international standards for these methods (SEQC2, IMMSA, and Epigenomics QC groups), to ensure clinical-quality genome measurements and editing. We also work with NASA to build integrated molecular portraits of genomes, epigenomes, transcriptomes, and metagenomes for astronauts, which help establish the molecular foundations and genetic defenses for enabling long-term human spaceflight. He has won the NIH's Transformative R01 Award, the NASA Group Achievement Award, the Pershing Square Sohn Cancer Research Alliance Young Investigator award, the Hirschl-Weill-Caulier Career Scientist Award, the Vallee Scholar Award, the CDC Honor Award for Standardization of Clinical Testing, and the WorldQuant Foundation Scholar Award. He was named as one of the "Brilliant Ten" Scientists by Popular Science, featured as a TEDMED speaker, and called "The Genius of Genetics" by 92Y. He has >150 peer-reviewed papers that have been featured on the covers of Nature, Science, Nature Biotechnology, Nature Microbiology, Neuron, and Genome Biology and Evolution, as well as cited by the U.S. District Court and U.S. Supreme Court. His work has also appeared on the covers of the Wall Street Journal, TIME, LA Times, New York Times, and across many media (ABC, NBC, CBC, CBS, Fox, CNN, PBS, NASA, NatGeo). He has co-founded four biotechnology start-up companies (Genome Liberty, Biotia, Pillar Health, and Shanghai MasonGene) and serves as an advisor to many others. He lives with his daughter and wife in Brooklyn, NY.

Kevin Messacar, MD, is an Assistant Professor of Pediatrics at the University of Colorado School of Medicine. He is an attending pediatrician and infectious disease consultant at Children's Hospital Colorado. Dr. Messacar obtained a BS with honors in biochemistry at the University of Michigan and MD at the University of Michigan Medical School. Dr. Messacar did his pediatric residency and infectious disease fellowship training at the University of Colorado where he received numerous teaching awards. Dr. Messacar's research interests focus on improving the use of diagnostic tests for infectious diseases with a focus on central nervous system infections. He is interested in the process of selecting, implementing, and evaluating newly emerging rapid diagnostic technologies using concepts of diagnostic and antimicrobial stewardship. He is currently conducting an NIH-sponsored trial evaluating the clinical impact of rapid multiplex PCR panels and metagenomic sequencing of cerebrospinal fluid on children with suspected meningitis and encephalitis. In 2014, Dr. Messacar received the Colorado Department of Public Health and Environment Astute Physician Award for recognition of the association between acute flaccid myelitis and enterovirus D68 in Colorado children.

N

Valentina Nardi, MD, is an assistant professor of pathology at Harvard Medical School and a hematopathologist and molecular genetic pathologist at the Massachusetts General Hospital in Boston. She received her M.D. from the University of Genoa, Italy where she completed an internship followed by a fellowship in hematology/oncology. Dr. Nardi joined George Daley's laboratory at Boston Children's Hospital as a postdoctoral fellow studying resistance to tyrosine kinase inhibitors in chronic myeloid leukemia. This research led to her decision to pursue molecular diagnostics as a career. After the postdoctoral fellowship, Dr. Nardi enrolled in the anatomic pathology residency program at the Massachusetts General Hospital where she also completed a fellowship in hematopathology. After a second fellowship in Molecular Genetic Pathology at the Brigham and Women's Hospital Dr. Nardi joined the faculty at Massachusetts General Hospital, Department of Pathology and Center for Integrated Diagnostics (CID) where she focuses on implementing molecular assays for hematological malignancies with a research interest in rapid detection of known and novel gene fusions in leukemias and sarcomas.

Jared Nedzel, MS, is a Principal Software Engineer in the Portals group at the Broad Institute of MIT and Harvard. Mr. Nedzel is the lead developer for the Genotype Tissue Expression (GTEx) Portal (http://gtexportal.org) – a comprehensive atlas of gene expression and regulation across multiple human tissues. The GTEx Portal supports about 13,000 users and 140,000 page views per month. Mr. Nedzel has led the development of the GTEx Portal from its initial conception through its current deployment on the Google Cloud Platform. He has focused much of his 20-year career in biotechnology on the development of data portals that allow scientists to search, visualize, and share scientific data. Mr. Nedzel holds an M.S. in Computer-Aided Civil Engineering from Stanford University, an M. Eng. in Geotechnical Engineering and a B.S. in Civil Engineering from Cornell University.

Jonathan A. Nowak, MD, PhD, is an associate pathologist at the Brigham and Women's Hospital, an instructor in pathology at Harvard Medical School, and an affiliated pathologist at the Dana-Farber Cancer Institute in Boston, MA. He received his MD from the Weill Medical College of Cornell University and his PhD from The Rockefeller University in New York City. Dr. Nowak completed residency in anatomic and clinical pathology, and additional subspecialty fellowship training in gastrointestinal pathology and molecular genetic pathology, at the Brigham and Women's Hospital. Dr. Nowak's clinical activities including development and reporting of both tumor and germline sequencing assays for hereditary cancer predisposition as part of a joint initiative between the Dana-Farber, Brigham and Women's Hospital, and Boston Children's Hospital. Additionally, Dr. Nowak leads a translational research group focused on pancreatic and colorectal cancer, with a particular emphasis on molecular classification and multiplexed imaging to characterize the tumor microenvironment.

Robert L. Nussbaum, MD, is the Chief Medical Officer of Invitae, a genetic information and diagnostic company. He is board certified in internal medicine, clinical genetics and clinical molecular genetics, and is a Fellow of the American College of Physicians and the American College of Medical Genetics and Genomics. From 2006-2015, he was the Holly Smith Professor of Medicine at UCSF, Chief of the Division of Genomic Medicine and Medical Director of both the Cancer Risk Program and the UCSF Program in Cardiovascular Genetics. He previously served in the Division of Intramural Research of the National Human Genome Research Institute, NIH, and was a Professor of Human Genetics, Pediatrics and Medicine at the University of Pennsylvania and an Associate Investigator of the Howard Hughes Medical Institute. He received an M.D. in 1975 from the Harvard-MIT Joint Program in Health Science and Technology, internal medicine training at Barnes Hospital/ Washington University (1975-1978), and genetics training at Baylor College of Medicine (1978-1981). He is the co-author of over 230 peer-reviewed publications in basic and applied human genetics as well as numerous commentaries, editorials, and textbook chapters. He was elected to the National Academy of Medicine (IOM) in 2004 and the American Academy of Arts and Sciences in 2015. Dr. Nussbaum served as a member of the Board of Directors and President of the American Society of Human Genetics, on the Board of Directors of the American Board of Medical Genetics and Genomics, and was a founding fellow on the Board of Directors of the American College of Medical Genetics and Genomics. Dr. Nussbaum was awarded the Klaus Joachim Zülch-Prize for Neurological Research, the Jay Van Andel Award for Outstanding Achievement in Parkinson's Disease Research, and the Calne Lectureship from Parkinson Canada for his work on hereditary Parkinson disease. He is co-author with Drs. Roderick M. McInnes and Huntington F. Willard of three editions of the popular textbook of human genetics, Thompson and Thompson's Genetics in Medicine. With his two co-authors, he received the 2015 Award for Excellence in Human Genetics Education from the American Society of Human Genetics. He has received numerous other awards for research, service and education from the University of Pennsylvania, the National Institutes of Health, the University of California San Francisco, and the Lowe Syndrome Association.

O

Mitchell O'Connell, PhD, is an Assistant Professor of Biochemistry and Biophysics at University of Rochester and a member of the Center for RNA Biology. After obtaining his PhD in Biochemistry at the University of Sydney, Mitchell was a postdoctoral fellow in the lab of Dr. Jennifer Doudna at the University of California, Berkeley, where he made a number of discoveries related to the ability for CRISPR systems to target RNA. Most notably, Mitchell discovered that the well-known gene editing tool CRISPR-Cas9 is also able to target RNA and can be harnessed as tool to study RNA biology in humans and other organisms. In 2017, he moved to Rochester and set his own lab, which focuses on understanding the biochemical mechanisms of RNA-mediated gene regulation, and on the development of new CRISPR-based tools to study these processes. The lab is particularly interested in how RNA processing is involved in the control and dynamics of fundamental biological processes (such as cell fate decision and maintenance, and neuronal function) and how these processes are dysregulated in disease.

Randall Olsen, MD, PhD, is a medical director of the Molecular Diagnostics Laboratory, Microbiology Laboratory and Special Testing Laboratory at Houston Methodist Hospital. He is also an Associate Professor of Pathology and Laboratory Medicine at Weill Cornell Medical College. Dr. Olsen received his medical and graduate degrees from the University of Nebraska and completed a clinical pathology residency at Baylor College of Medicine. The primary focus of his research laboratory is to investigate the molecular pathogenesis and host-pathogen interactions underlying severe invasive infections.

P

John D. Pfeifer, MD, PhD, is Vice Chair for Clinical Affairs in the Department of Pathology at Washington University School of Medicine. He is a Professor of Pathology and is board certified in Anatomic Pathology and also Molecular Genetic Pathology. Over the last several years Dr. Pfeifer has helped lead the development of Genomics and Pathology Services at Washington University in St. Louis (GPS@WUSTL). GPS@WUSTL is a CAP accredited/CLIA licensed environment designed around next generation sequencing (NGS) analysis to support patient care, clinical trials, and translational research studies, and Dr. Pfeifer manages the development of the wet bench analytics, bioinformatics, and faculty staffing models required to support NGS for clinical applications. He is also involved in NGS clinical test design (including gene-panel based testing versus exome- or genome-based sequencing) for inherited diseases and cancer, and in the evaluation of different sequencing platforms. Dr. Pfeifer's academic interests are primarily focused on investigation of the role of molecular genetic testing in the analysis of tissue specimens, specifically on the methods and clinical settings in which molecular testing provides independent information that increases diagnostic accuracy, provides more accurate prognostic estimates, or can be used to guide therapy. In line with his role in the development of GPS@WUSTL, several of his recent projects have focused on the role of NGS in patient care.

Thomas W. Prior, PhD, is currently the director of the molecular genetics laboratory at the center for human genetics at Case Western University. He received his Ph.D. from the Medical College of Virginia and trained as a postdoctoral fellow at the University of North Carolina. Dr. Prior holds an American Board of Medical Genetics and Genomics certification in Clinical Molecular Genetics. Prior to his appointment at Case Western, he served as the director of Molecular Pathology Laboratory at The Ohio State University. He has a longstanding research interest in the genetics of neuromuscular disorders, specifically in clinical applications and mutation detection. Dr. Prior has been most recently involved in the genetic disorder, spinal muscular atrophy (SMA): in both population carrier and newborn screening projects for SMA and in determining the role of the SMN2 gene and

other gene modifiers in effecting the disease phenotype. Lastly, over the years he has been involved in several funded research projects and clinical trials including: Muscular Dystrophy Cooperative Research Center (funded by the NIH), several projects funded by the Muscular Dystrophy Association, Clinical Trials for Pediatric Spinal Muscular Atrophy Project (funded by the NIH), Incidence and Molecular Screening for Hereditary Cancer (funded by the NIH), Project Cure: SMN2 Copy Number Assay (funded by the Families of SMA) and Carrier Screening for Spinal Muscular Atrophy (funded by the Claire Altman Heine Foundation).

Gary W. Procop, MD, MS, is Medical Director and Co-Chair of the Enterprise Laboratory Stewardship Committee. He is the Director of Molecular Microbiology, Virology, Mycology and Parasitology at the Cleveland Clinic. He is past Chair of the Departments of Clinical Pathology and Molecular Pathology, and past Section Head for Clinical and Molecular Microbiology. He completed a Bachelor of Science at Eastern Michigan University, followed by an M.D. and M.S. at Marshall University School of Medicine. Residency training in Anatomic and Clinical Pathology training was completed at Duke University Medical Center and a Clinical Microbiology Fellowship at the Mayo Clinic. He is a diplomat of the American Board of Pathology in Anatomic and Clinical Pathology, and Medical Microbiology. He is a Fellow of the American Academy of Microbiology, the College of American Pathologists, the American Society for Clinical Pathology, the Infectious Diseases Society of America, and the Royal Society of Tropical Medicine and Hygiene. He has given more than 625 scientific presentations, and has 207 published manuscripts, 50 chapters, and three books to his credit. He is the incoming Chair of the Committee on Continuing Certification of the American Board of Medical Specialties. He is a Past President and a Trustee of the American Board of Pathology, and Chair of the Microbiology Test Development Committee for the Board. He is Member of the Board of Directors and the Chair of the Antifungal Subcommittee of the Clinical Laboratory Standards Institute. He is also a Member of the Council on Scientific Affairs and Quality Practices Committee for the College of American Pathologists (CAP). He is also a Member of the Effective Test Utilization Subcommittee of the Commission on Science, Technology & Policy for the American Society for Clinical Pathology. He has served as a Member of the NGS Coalition and Conferences Committee for the American Society for Microbiology. He has also served as the Chair and Advisor of the Microbiology Resource Committee for the CAP. Major recognitions include the ASM BD Award for Research in Clinical Microbiology, the CAP Distinguished Patient Care Award, the John Beach Hazard Teaching Award, and the ASCP Mastership Designation. His primary interests are developing and promoting best practices in laboratory testing, the practical applications of molecular diagnostic methods for the diagnosis and treatment of infections; infectious disease pathology; mycology and parasitology.

R

Jonathan M. Rothberg, PhD, was awarded the National Medal of Technology by president Obama, our nation's highest honor for technological achievement, for inventing high-speed, "Next-Gen" DNA sequencing and ushering in the age of "Personal Genomes". He founded 454 Life Sciences, bringing to market the first low-cost high-speed method to sequence genomes, and the first new way to sequence DNA since Sanger and Gilbert won the Nobel Prize in 1980. Dr. Rothberg went on to sequence the first individual human genome (James Watson's Genome, Nature) and with Svante Paabo initiated the Neanderthal Genome Project. Under his leadership, 454 undertook the first deep sequencing of cancer, helped understand the mystery behind the disappearance of the honey bee, uncovered a new virus killing transplant patients, and elucidated the extent of human variation—work recognized by Science magazine as the breakthrough of the

year for 2007. *The New England Journal* described Dr. Rothberg's innovation as "The New Age of Molecular Diagnostics", Science magazine called it one of the top 10 breakthroughs for 2008. Dr. Rothberg went on to invent semiconductor chip-based sequencing, and sequenced Gordon Moore (*Moore's law, Nature*), enabling the $1,000 Genome. In addition to founding 454 Life Sciences and Ion Torrent, Dr. Rothberg Founded CuraGen, Clarifi, RainDance, Lam Therapeutics, Hyperfine Research, Quantum-Si, and Butterfly Network. At Butterfly Dr. Rothberg invented the first ultrasound-on-a-chip and in 2017 received clearance from the FDA for the World's first whole-body scanner, reducing the cost of medical imaging 50-fold and democratizing ultrasound.

Dr. Rothberg was born in 1963 in New Haven, Connecticut. He earned a B.S. in chemical engineering from Carnegie Mellon and a Ph.D. in biology from Yale and has an Honorary Doctorate from Mount Sinai. He was first to be named a World Economic Forum's Technology Pioneer four times, is an Ernst and Young Entrepreneur of the Year, received *The Wall Street Journal's* First Gold Medal for Innovation, *Nature Methods* First Method of the Year Award, the Irvington Institute's Corporate Leadership Award in Science, the Connecticut Medal of Technology, and the DGKL Biochemical Analysis Prize. Jonathan is a member of the National Academy of Engineering, the Connecticut Academy of Science and Engineering, is a trustee of Carnegie Mellon, and is an Adjunct Professor of Genetics at Yale.

Mark Routbort, MD, PhD, is a molecular pathologist and bioinformatician at the University of Texas MD Anderson Cancer Center. He serves as Director of Computational and Integrational Pathology for the Division of Pathology and Laboratory Medicine, facilitating the transactional and integrational use of genomic data both internally and with large scale multi-institutional collaborations. His time is divided between clinical sign out of tissue and blood-based genomic assays, and support of the computational pipelines and reporting tools for next generation sequencing in the clinical Molecular Diagnostics Laboratory.

Somak Roy, MD, is an Assistant Professor of Pathology at the University of Pittsburgh Medical Center (UPMC). He serves as the Director of Molecular Informatics, Genetics Services and MGP fellowship at the Division of Molecular and Genomic Pathology at UPMC. Dr. Roy is a board-certified molecular and anatomic pathologist. His clinical and translational work focuses on the following; 1) Use of modern computational infrastructure and innovative software technology for high-throughput sequence analysis, genomic data visualization, and optimizing molecular laboratory workflow. 2) molecular characterization of urothelial carcinoma to identify clinically relevant, theranostic biomarkers. Since 2014, he has been a member of Informatics Subdivision in the Association of Molecular Pathology (AMP). He served as a representative to the Clinical Practice Committee from 2014-2016 and currently to the Program Committee. Dr. Roy also chaired the AMP workgroup that developed and published the guidelines for validation of clinical NGS bioinformatics pipeline. Dr. Roy completed his medical school training at Seth G.S Medical College, Mumbai followed by pathology residency training at Maulana Azad Medical College, New Delhi. Upon arrival to the United States, he completed anatomic pathology residency from the University of Pittsburgh Medical Center and fellowships in Molecular and Genitourinary Pathology from the same institution.

S

Elizabeth Swisher, MD, graduated cum laude from Yale University and received her medical degree from the University of California at San Diego. She completed her residency in obstetrics and gynecology at the University of Washington and a fellowship in gynecologic oncology at Washington University, St Louis. She joined the faculty at the University of Washington in 1999 where she is currently a Professor in the Department of Obstetrics and

Gynecology, Director of the Division of Gynecologic Oncology and an adjunct Professor in the Department of Medicine, Division of Medical Genetics. Both her clinical and laboratory work focus on cancer genetics. She is medical director of the Breast and Ovarian Cancer Prevention Program at the Seattle Cancer Care Alliance. Her research has been funded by the NIH, the Department of Defense, the Ovarian Cancer Research Fund, and others. She is co-Leader of Stand up to Cancer's first Ovarian Cancer Dream Team. Dr. Swisher's research has primarily focused on understanding the early events of ovarian carcinogenesis and on the development of novel biomarkers of disease and prognosis, with an emphasis on the role of the BRCA-Fanconi anemia pathway. She has been exploring how a better understanding of this pathway can lead to more effective therapies and prevention of ovarian cancers. She is principal investigator on several PARP inhibitor therapeutic trials and leads the translational research for numerous other clinical trials. Her overall goal is to reduce the burden of ovarian cancer by combining broader identification of inherited risk with effective prevention.

T

Uri Tabori, MD, PhD, is a Staff Oncologist with the Division of Haematology/Oncology and a Senior Scientist within the Research Institute, holds the Garron Family Chair appointment in Childhood Cancer Research, and is a Professor in the Departments of Medical Biophysics, Institute of Medical Science and Paediatrics, University of Toronto. Dr. Tabori is a Principal Investigator within the Arthur and Sonia Labatt Brain Tumor research Centre at The Hospital for Sick Children. He received his MD at the Hebrew University in Jerusalem, he further completed his specialized training in Pediatrics at the Sorasky Medical Centre, in the Department of Haematology/Oncology at the Chaim Sheba Medical Centre, and Paediatric Neuro-Oncology here at SickKids. Dr Tabori's clinical practice focuses on the treatment of children with cancer, with a particular focus on brain tumors and cancer predisposition. Based on his clinical background and expertise, his research focuses on translational aspects of cancer originating from patients need, through basic discoveries and clinical trials to changes in how society is managing specific cancers. Specifically, Dr Tabori focuses on the development of systems for early detection, intervention and therapeutics in individuals highly predisposed to developing brain tumors. He is also studying mechanisms underlying brain tumor immortality and recurrence in the context of predisposition to cancer. Dr. Tabori has been the recipient of numerous awards, including the Canadian Cancer Society's Bernard and Francine Dorval Prize in 2016 and the Early Researcher Award from the Ontario Ministry of Development in Innovation in 2014.

Ying Taur, MD, MPH, received his MD and MPH. from New York Medical College, and completed internal medicine residency at Long Island Jewish Medical Center. He then completed his infectious diseases fellowship training at Memorial Sloan-Kettering Cancer Center in New York City, after which he stayed on there as faculty member. Dr. Taur's current work has primarily involved the study of the intestinal microbiota and its impact on human disease. He has received support by the National Institutes of Health and the Lucille Castori Center for Microbes, Inflammation, and Cancer for work specifically relating to the role of the intestinal microbiota in infections in immunocompromised individuals, particularly in recipients of allogeneic bone marrow transplant. He is principal investigator in a randomized trial of fecal microbiota transplantation in stem cell transplant recipients, for prevention of transplant-related complications.

V

Karl V. Voelkerding, MD, FCAP, received his Medical Degree from the University of Cincinnati College of Medicine in 1983. Subsequently, he completed post-doctoral research and clinical training in molecular biology and clinical pathology. In 1990, he

joined the faculty of the Department of Pathology and Laboratory Medicine at the University of Wisconsin in Madison, Wisconsin, where he developed and directed a molecular diagnostics laboratory while also practicing transfusion medicine. In 2001, Dr. Voelkerding served as President of the Association for Molecular Pathology, and in 2002 he moved to Salt Lake City, Utah to join the ARUP Laboratories. Currently, he is a Professor of Pathology at the University of Utah and a Medical Director of Genomics and Bioinformatics at the ARUP Laboratories. Dr. Voelkerding has a longstanding involvement in the translation of new technologies into molecular diagnostics, and this interest has focused over the past few years on next generation sequencing. He is currently the Chair of the College of American Pathologists Genomic Medicine Resource Committee.

W

Matthew Walter, MD, is a Professor of Medicine at Washington University School of Medicine in St. Louis and a member of the Siteman Cancer Center. He trained in Internal Medicine at Johns Hopkins Hospital and completed a fellowship and post-doctoral training in Hematology-Oncology at Washington University. His laboratory at Washington University focuses on the discovery of mutations and clonal evolution that occurs within the genomes of hematopoietic cells from patients with myelodysplastic syndrome (MDS). In collaboration with the McDonnell Genome Institute at Washington University, the group identified mutations in *U2AF1*, a spliceosome gene commonly mutated in MDS. The lab continues to study the contribution of spliceosome gene mutations for MDS initiation and progression using primary patient samples and pre-clinical models.

Brian Wolpin, MD, MPH, is a medical oncologist and translational scientist at Dana-Farber Cancer Institute and Harvard Medical School. He obtained his M.D. from Harvard Medical School and completed a residency in internal medicine at Brigham and Women's Hospital. He completed fellowship training in medical oncology at Dana-Farber Cancer Institute (DFCI) and returned to Brigham and Women's hospital to serve as chief medical resident. Subsequently, he received a M.P.H. from Harvard School of Public Health. His research program is focused on understanding the factors that promote initiation and progression of pancreatic ductal adenocarcinoma to identify new screening tests and therapeutic approaches. These studies involve evaluation of blood-based circulating markers, germline alterations, and somatic alterations in hundreds to thousands of subjects. Dr. Wolpin is Director of the Gastrointestinal Cancer Center and Director of the Hale Center for Pancreatic Cancer Research at DFCI, and an Associate Professor of Medicine at Harvard Medical School. He also serves as Chair of the NCI Pancreatic Cancer Detection Consortium Steering Committee, co-Principal Investigator for the Pancreatic Cancer Cohort Consortium, Vice-Chair of the NCI Pancreas Task Force, and co-Director of the Pancreas and Biliary Tumor Center at Dana-Farber/Brigham and Women's Cancer Center. His research has been funded by the National Cancer Institute, Howard Hughes Medical Institute, Lustgarten Foundation, ASCO Conquer Cancer Foundation, Pancreatic Cancer Action Network, and U.S. Department of Defense. Dr. Wolpin's clinical practice involves the care of patients with gastrointestinal cancers, with a particular focus on pancreatic cancer. He holds multiple leadership positions related to clinical expertise, including membership on the Alliance/CALGB Gastrointestinal Cancer Committee, NCCN Guidelines Committee for Pancreatic Adenocarcinoma, and NCI Pancreas Task Force.

Jennifer Woyach, MD, is an Associate Professor with Tenure in the Division of Hematology at The Ohio State University (OSU), and the section chair of Chronic Lymphocytic Leukemia (CLL). She is a physician scientist focused on translational research in CLL. Her laboratory interests include experimental therapeutics in CLL with

a focus on signaling pathways and kinase inhibition. She has extensive experience studying BTK inhibitors, resistance mechanisms associated with irreversible BTK inhibitors, and strategies to overcome resistance. The group at OSU led the collaborative effort to characterize the first group of patients resistant to ibrutinib and discovered novel mutations in the B cell receptor signaling pathway which confer resistance to this agent. Clinically, Dr. Woyach is the principal investigator for multiple early stage clinical trials investigating novel targeted therapies for CLL and other hematologic malignancies. She also is chair of the US intergroup Phase III study A041202 which is investigating chemoimmunotherapy versus targeted therapy as initial therapy for older adults with CLL. She is a cadre member of the Leukemia Committee and Cancer in the Elderly Committee of the Alliance for Clinical Trials in Oncology.

Z

Ahmet Zehir, PhD, is an Assistant Attending in the Department of Pathology and the Director of Clinical Bioinformatics in the Molecular Diagnostics Service (MDS). He received his Ph.D. from Tulane University in 2009 and has since been at Memorial Sloan Kettering Cancer Center. In MDS, he works closely with the leadership in development of new next-generation sequencing (NGS) based assays for the clinical laboratory by providing expertise in pipeline development and data analysis. He has played a key role in MSK-IMPACT assay development, validation and obtaining FDA authorization. He is interested in expanding the information obtained from NGS assays by developing, validating and implementing new algorithms into the clinical workflows. His research focuses on identification of clonal hematopoiesis in cancer patients and defining its relationship with treatment modalities. He is also interested in finding novel bio-markers associated with tumorigenesis and treatment response.

Barbara A. Zehnbauer, PhD, FACMG, has more than 30 years' experience leading laboratory quality and directing clinical diagnostic testing. She received her education at Southern Illinois University and the University of Chicago. Her professional appointments have included the John Hopkins University School of Medicine, Washington University School of Medicine, and the US Centers for Disease Control and Prevention. She is currently an Adjunct Professor of Pathology at the Emory School of Medicine in Atlanta, Georgia. Barb has professional board certification in Clinical Molecular Genetics from the American Board of Medical Genetics. Dr. Zehnbauer has led the development of professional practice guidelines and accreditation standards for laboratory testing with the College of American Pathologists (CAP) and the Clinical and Laboratory Standards Institute (CLSI). She is the Chair of the CLSI Molecular Methods Expert Panel and received the CLSI Excellence in Standards Development award in 2013. Barb is certified as a CAP Laboratory Inspector and Inspection Team Leader. She is an expert consultant and chairs the Steering Committee for a multi-stakeholder national project to develop quality standards for precision molecular diagnostic testing in oncology therapeutics to advance precision medicine. Dr. Zehnbauer is a past-president of the Association for Molecular Pathology, currently serving as an active member of the AMP Professional Relations Committee and the Publications and Communications Committee. She is the Editor-in-Chief of AMP's official journal, *The Journal of Molecular Diagnostics*. Dr. Zehnbauer received the Jeffrey A. Kant Leadership Award in 2015 for her exceptional leadership in AMP advancing the mission and vision of molecular diagnostics.

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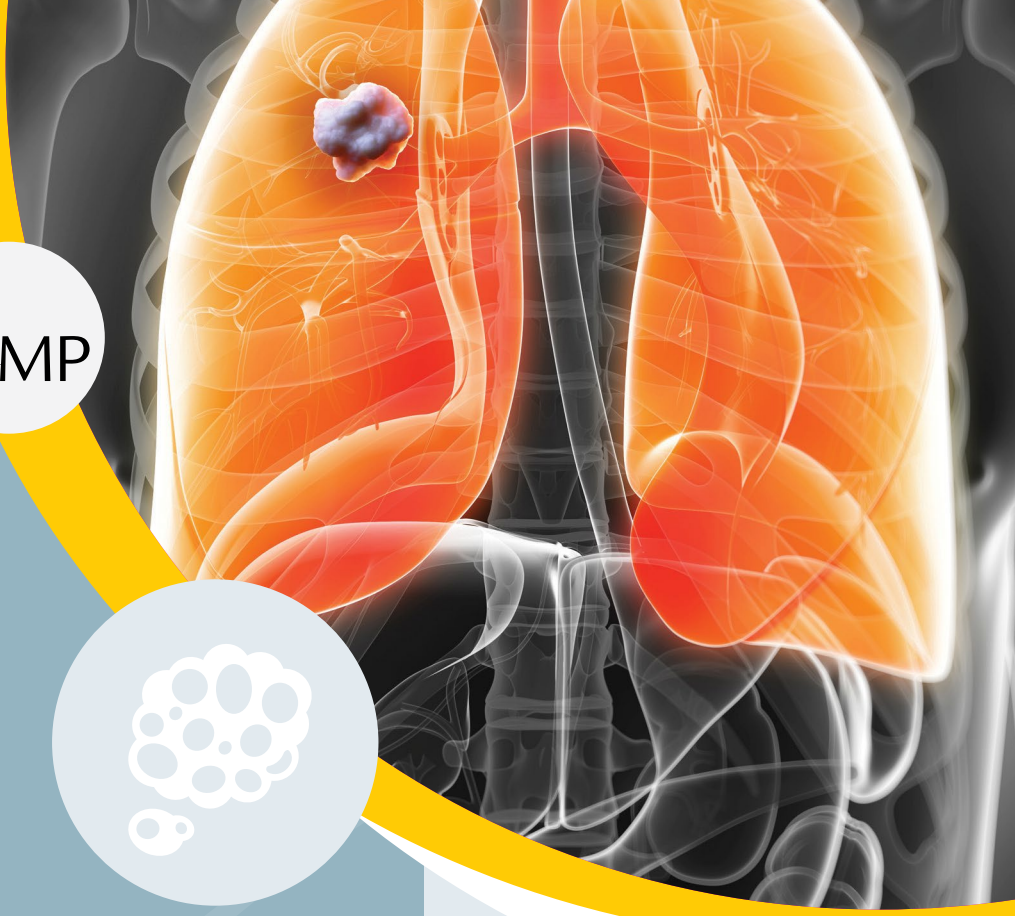

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Poster Information

- All posters are on display in the Convention Center, Exhibit Hall 1& 2, Street Level.
- Poster set-up is Thursday, November 1, 6:30am - 8:00am.
- All posters must remain on display through 1:00pm, Saturday, November 3.

Posters are listed in sequence by category and number in the following format:

Poster #. Abstract Title of Poster Listing
First Author's
Name

Key to poster categories:

G = Genetics
I = Informatics
HP = Hematopathology
OTH = Other
ID = Infectious Diseases
ST = Solid Tumors
TT = Technical Topics

- All Award Applicant posters display in Poster Number order in the areas of their subject category. They are identified as Award Applicant posters by a card mounted on the poster board.
- All Award Applicants must attend their posters on Thursday, November 1, 2:30pm - 4:15pm for interviews with members of the poster reviewing committees. Award candidates are required to stand at their poster until 4:15pm.
- All First/Presenting Authors, including Award Applicants, must attend their posters either Friday afternoon (even-numbered posters) or Saturday morning (odd-numbered posters):
  - Even-numbered posters must be attended on Friday, November 2, 2:30pm – 3:30pm.
  - Odd-numbered posters will be attended on Saturday, November 3, 9:45am –10:45am.
  - Authors who have more than one even- or odd-numbered poster may either ask another author to attend their additional poster or attend it themselves during the other session. In the latter case, the author should place a note on the poster board alerting attendees that they will attend the poster in the alternate session.
  - Poster removal is Saturday, November 3, 1:00pm-1:30pm. Posters must remain in place until at least 1:00pm. Posters remaining past 1:30pm will be removed and discarded.
  - Please note that poster-viewing is not eligible for Continuing Education credit.
- **Poster Map:** Posters will be displayed in the back of the Exhibit Hall by subject category. Please see the onsite "Poster Map" for a detailed location of your poster. You may also visit page 172-173 for a full map of the Exhibit Hall

Poster Listing

Even numbered posters will be attended by their authors on Friday, November 2, 2:30pm-3:30pm.

Odd numbered posters will be attended by their authors on Saturday, November 3, 9:45am-10:45am.

GENETICS

G001. Genomic DNA Reference Panels for HLA Class I and II Loci: A GeT-RM Collaborative Project
M.P. Bettinotti

G002. Frequency and Diagnostic Yield of Mosaic Variation Identified by Whole Exome Sequencing
C.R. Miller

G003. WITHDRAWN

G004. Performance Evaluation of VCU Health NIPT, a Single-Nucleotide-Polymorphism (SNP) Based Non-invasive Prenatal Testing for Common Aneuploidy
C. Yang

G005. Development of a Clinical CD33 Genotying Assay to Predict Response to Gemtuzumab
B.A. Barkoh

G006. Characterization of Beta Hemoglobinopathy Results in a Large Population Referred for Carrier Testing
C.A. Holland

G007. Pro-fibrotic Cardiac Gene Activation in Diabetic Zucker Rat Model is Directly Associated to the Incremental Visceral Adiposity: The EPACs Proteins Signaling
M.M. Corsi Romanelli

G008. Validation of a Targeted Variant Genotyping Assay for Personalized Antihypertensive and Chronic Kidney Disease Therapy
W.M. Stansberry

G009. Analysis of ARID1A Mutations and Co-occurring Variants in Cancer Biopsies Reveals Significant Associations in Multiple Diseases.
T. Buys

G010. Validation of an Economical, Real Time PCR Genotyping Assay for Detection of ACMG/ACOG Recommended Mutations in the *CFTR* Gene for General Population Screening
S. Beqay

G011. Cre Recombinase-mediated Circularization for Custom Mate Pair Library Preparation
E. Zimmerman Zuckerman

G012. Clinical Laboratory Experience with Different Carrier Screen Panels
H. Zhu

G013. Rapid Molecular Haplotyping of Thiopurine Methyltransferase *3A, *3B, and *3C
M. Leong

G014. Pathogenic Variants in MID1 in Patients with X-linked Opitz G/BBB Syndrome Type 1
L. Fan

G015. Clinical Evaluation of the Luminex ARIES System for Single Nucleotide Polymorphism Analysis of rs6025 (Factor V Leiden), rs1801133 (Methylenetetrahydrofolate Reductase), and rs1799963 (Prothrombin)
M. Leong

G016. **How to Consistently Determine if a Variant is a Polymorphism?**
D. Qin

G017. High-throughput Approach for Multi-omic Testing for Prostate Cancer Research
M. Shannon

G018. Clinically Integrated Molecular Diagnostics in Adenoid Cystic Carcinoma
J.C. Thierauf

G019. Germline BRCA Mutation Studies in a Select Indian Cohort Using Next-generation Sequencing (NGS)
J.C. Vyas

G020. Phylogenetic Analysis of Duffy, Kidd, and Lewis Allele
M. Kim

G021. Brazilian Panorama of Whole Exome: Details of 315 Cases
R.M. Minillo

G022. Clinical Validation of a Multi-gene Panel on Myeloid Malignancies by Next Generation Sequencing
G. Liu

G023. A Recurrent Heterozygous *RPL21* Mutation Responsible for Hereditary Hypotrichosis Simplex in a Chinese Family
Z. Xu

G024. Confirmation of Cis Inheritance of Variants in *ABCB1*, *SHROOM3*, and *SLC28A3* During the Validation of a Targeted Genotyping Assay
W.M. Stansberry

G025. Verification of Very Small Copy Number Variants (Micro CNVs) Detected on Whole Genome CMA Analysis and Implications for Clinical Reporting
U.P. Kappes

G026. Two-site Evaluation of a One-tube PCR/CE Assay that Resolves CAG Length Polymorphisms in Exon 1 of the *HTT* Gene
S.N. Statt

G027. A Streamlined, Single-Tube PCR Assay that Quantifies *SMN1* and *SMN2* Copy Numbers Using Capillary Electrophoresis
W. Laosinchai-Wolf

G028. New Variant-centric XML for ClinVar Data
M. Landrum

G029. Measuring the Economic Value of Sequencing: Why is it Important, Why is it Challenging, and What are Solutions
K.A. Phillips

G030. Newborn Screening, Diagnosis, and Carrier Testing for Spinal Muscular Atrophy by Multiplex Droplet Digital PCR
N. Vidal-Folch

G031. What's in a VUS Rate? Simulated VUS Rate Calculations for Hereditary Cancer Genes Using Population Frequency Data and ClinVar Submissions
K.E. Kaseniit

G032. What Can We Learn From Oncologists? A Survey of Molecular Testing Patterns
J.S. Menezes

G033. A Data-Driven Approach to Determine Disease Content in Expanded Carrier Screening Panels
R. Ben-Shachar

G034. Clinical Impact and Cost Effectiveness of a 176 Condition Expanded Carrier Screen
K.A. Beauchamp

G035. Detection of Copy-Number Variants in Expanded Carrier Screening Maximizes Identification of Cystic Fibrosis Carriers
D. Muzzey

G036. The Algorithm for Estimation of Human T-cell Receptor Repertoire with Single Cell RNA Sequencing
Y. Cho

G037. WITHDRAWN

G038. Pharmacogenomics: *VKORC1* + *CYP2C9* and *TPMT*: Two New, Ready-to-use Real-time PCR Assays
M. Gramegna

G039. Interpretation of Microdeletion Variants Aided by Population Analysis of Copy-number Variation
K.E. Kaseniit

G040. Frequency of Deletion 13q Associated with other Abnormalities Detected by Fluorescence *in situ* Hybridization (FISH) in Multiple Myeloma Patients – an Experience from a Referral High-end Diagnostic Centre
M. Kumar

G041. Molecular Diagnosis of Graft-versus-Host Disease after Liver Transplantation: an Institutional Experience
S.M. Hosseini

G042. Analytical Performance of the Oncomine BRCA1/2 Assay on the Ion Torrent S5
D. Saxena

G043. A Novel Custom Panel Target Sequencing with Molecular Tags for 0.1% Allelic Frequency Detection
X. Peng

G044. Designing and Implementing NGS Tests for Inherited Disorders – a Practical Framework with Step-by-step Guidance for Clinical Laboratories
A.B. Santani

G045. SMA Complete: Addressing SMN Copy Number and Silent Carrier Status with a Single Complete Multi-plex qPCR Assay
R. Daber

G046. Double Splicing Variants in BCR-ABL are Associated with Tyrosine Kinase Inhibitor (TKI) Resistance in Chronic Myelogeneous Leukemia (CML)
D. Dash

G047. Validation of a Neuro-Oncology Next-generation Sequencing 219-Gene Panel
C. Zysk

G048. IGF1 Proteomic Variant Confirmation using Genotyping Assay
A.D. Maus

G049. Adaptation and Validation of a Pan-cancer Somatic Next Generation Sequencing Assay for Detection of Germline Hereditary Cancer Predisposition Variants
D.K. Manning

G050. Expression Analysis of Telomere-related Genes in Solid and Hematologic Tumors Using RNA-Seq
M.A. Atiq

G051. Meta-analysis of AKT1 rs2494732 Genotype and the Risk of Psychotic Adverse Effects by Cannabis Use
M. Nakano

G052. In cis Heterozygous BRCA2 Pathogenic Mutations in a Jordanian Family: Case Report
L. Abu Jamous

G053. Characterization of Novel Aneuploidy Reference Materials for NGS-based Non Invasive Prenatal Screening (NIPT)
F. Sabato

G054. The SureMASTR BRCA Screen Assay Combined with MASTR Reporter Analysis is an Accurate and Precise Workflow for SNV, Indel and CNV Detection in Blood- and FFPE-derived DNA
A. Rotthier

G055. CNV Contribution to Pathogenic Alleles within a Healthy Population: Results from Expanded Carrier Screening of 137,000 Individuals
S.G. Cox

G056. Use of Molecular Identifiers and Targeted NGS to Enable Variant Detection Below 1% Allele Frequencies in Circulating Cell-free DNA
L. Kurihara

G057. WITHDRAWN

G058. Evaluation of a Single-tube, Long-read, Two-mode PCR Technology that Reports the Categorical Range of DMPK CTG Expansions and Resolves up to 2000 Repeats in Myotonic Dystrophy Type 1
B. Hall

G059. ACMG Incidental Findings at the CLIA-certified Colorado Center for Personalized Medicine Biobank: Data from the First 10,000 Subjects
S.J. Wicks

G060. Phenotypic and Genotypic Study of Patients with Hermansky-Pudlak Syndrome
J.A. Majerus

G061. Performance Characteristics of High-resolution Human Leukocyte Antigen (HLA) Typing Using TruSight Next-generation Sequencing (NGS) Technology
A. Budhai

G062. WITHDRAWN

G063. Multiplex Synthetic Reference Material for Monitoring the Analytical Performance of Highly Complex Variant Detection of Cystic Fibrosis Transmembrane Conductance Regulator (CFTR) using Next Generation Sequencing
R. Mihani

G064. Low Input Microfluidic Library Preparation Platform for Targeted CFTR Using Blood, Buccal Swabs and Saliva Samples
N. Ramalingam

G065. Validation of a Next-generation Sequencing Gene Panel for Inherited Platelet Disorders
W. Zhang

G066. Identification of Mutation Signatures in Tumors Using Panel-based Targeted Sequencing
S. Rana

G067. WITHDRAWN

G068. CleanPlex Amplicon-based Next Generation Sequencing Heredity Panels for Determining Genetic Predispositions
L. Lin

HEMATOPATHOLOGY

H001. The Detection of a *BRAF* Mutated Clone in Acute Myeloid Leukemia with Mutated *Npm1* and Extensive Extramedullary Involvement
K. Gvozdjan

H002. Short Tandem Repeat Aberrancies in Hematopoietic Stem Cell Transplant Recipients
K. Gvozdjan

H003. A Strategy for Implementing Sensitivity Controls for qPCR Chimerism Monitoring
J. Tyler

H004. Genetic Profiling of Adult Acute Myeloid and Lymphoid Leukemia Cases in a Major Referral Center in Lebanon
S. Halabi

H005. Clinical Implementation of T-cell Clonality Testing by Next-generation Sequencing: Improved Detection Sensitivity and Reliability in Initial Diagnosis and Minimal Residual Disease Detection of T-cell Malignancies
J. Yao

H006. Performance Evaluation of a Custom DNA/RNA Next-generation Sequencing (NGS) Assay for Hematologic Malignancies
J. Karrs

H007. Evaluation of Performance of Two Commercially Available BCR-ABL Real-time PCR Assays for Deep Molecular Response in International Scale.
B. Das

H008. Fusion Detection by Next-generation Sequencing from Methanol/Acetic Acid Fixed Cell Pellets in the Setting of Acute Lymphoblastic Leukemia Workup
X. Qu

H009. Fluorescence *in situ* Hybridization as a Tool for Minimal Residual Disease Testing in Multiple Myeloma
S. Golem

H010. Reproducibility of Clinical Samples by the Illumina TruSight Myeloid Next-generation Sequencing Panel
L. Commander

H011. Extended Myeloid Mutation Profiling Using NGS in Triple-negative Myeloproliferative Neoplasms: Single Institution Experience at a High Volume National Reference Laboratory
A. Jhuraney

H012. Validation of a Custom, Focused Next-generation Sequencing Panel for Lymphoma
M. Kluk

H013. Identification of *FLT3* ITD Using Next-generation Sequencing (NGS): A Single Institution's Experience
A. Campbell

H014. Mate Pair Sequencing: Ushering Cytogenetics Into the Era of Personalized Medicine
N. Hoppman

H015. Evaluation of *NPM1* Mutation Detection by Droplet Digital PCR for Minimal Residual Disease Detection
R.Y. Walder

H016. Detection of *CRLF2* Rearrangements in B-cell Acute Lymphoblastic Leukemia in Children with Down Syndrome
A. Garcia

H017. Standardization of *FLT3*-ITD Mutation Allelic Ratio Reporting in the Clinical Laboratory Setting
S. Bhattacharyya

H018. A Limited FISH Panel is a Useful Surrogate for Metaphase Analysis to Rapidly Identify Patients with AML-MRC
N.D. Nelson

H019. IntelliGEN Myeloid 50 Gene Panel Validation and Testing Experiences
L. Cai

H020. Mutational Analysis of Myeloid Neoplasms in Paired Peripheral Blood and Bone Marrow by Next-generation Sequencing
P. Michaels

H021. Guideline-adherent, Evidence-based NGS Workflow for Myeloid Leukemia
R. Kohle

H022. Evaluation of Targeted Next-generation Sequencing Panels for Myeloid Malignancies-Focusing on *CEBPA* and *FLT3* Genes
R. Akabari

H023. Novel *PML-SYK* Fusion in Acute Myeloid Leukemia Constitutively Activates Targetable Pathways
J. Mosquera

H024. Validation of a Low Input Targeted NGS Assay for Lymphoma Across Multiple Specimen Types
A. Oran

H025. Ultradeep Error Corrected Next-generation Sequencing (NGS) of ABL1 Kinase Domain Mutations in BCR-ABL1 Positive Malignancies
N. Patkar

H026. Routine Clinical Monitoring of Disease Status Through NGS Measurement of Clonal Architecture in AML and MDS
P.D. Velu

H027. Peripheral T-cell Lymphoma: Understanding and Characterizing the Phenotypic Behavior Using Molecular Tools
O. Shetty

H028. Myeloseq One: A Cost Effective Integrated Next-generation Sequencing Assay for Myeloid Malignancies
R. Kodgule

H029. Minimal Residual Disease in AML can be Monitored Utilizing Cell-free DNA
L.M. Chamberlain

H030. Rosai-Dorfman Disease Co-existing with Lymphoma in the Same Lymph Node: A Localized Histiocytic Proliferation with MAPK/ERK Pathway-induced Cyclin D1 Upregulation
S. Garces

H031. Clinical Utility of Targeted Next-generation Sequencing in Evaluation of Cytopenias of Undetermined Significance
R. Beck

H032. Myeloid Neoplasms with Ring Sideroblasts without SF3B1 Mutation
S. Bhavsar

H033. Clinical Use of Rapid Transcriptome (R-RNASeq) Analysis for Gene Fusion and Rearrangement Detection in Pediatric Leukemia
E.M. Azzato

H034. Mutational Signatures Differ between Cytogenetic Risk Groups of *de novo* AML
R.T. Sussman

H035. Therapy-related Acute Myeloid Leukemia, Characterized by t(8;16)(p11;p13);*MYST3-CREBBP* and Co-occurring *TET2* and *ASXL1* Mutations
A. Alsuwaidan

H036. Variant Characterization for a Clinical Lymphoma Sequencing Panel
S. Deihimi

H037. Post-remission NGS-based MRD Surveillance is Critical for Early Detection of Impending Relapse in B-ALL
S. Cheng

H038. Clinical Evaluation of the Archer VariantPlex Myeloid Panel for Mutation Profiling in Myeloid Neoplasms
A. Campbell

H039. Donor-derived Clonal Hematopoiesis of Indeterminant Potential Mutations are Detected in Transplant Recipients after Allogeneic Hematopoietic Stem Cell Transplant
J. Liu

H040. Comprehensive Assessment of Variants in *SOCS1*, *JAK2* and *B2M* Using Anchored Multiplex PCR and Next-generation Sequencing
H.E. Robinson

H041. Longitudinal Monitoring of AML Tumors with High-throughput Single-cell DNA Sequencing Reveals Rare Clones Prognostic for Disease Progression and Therapy Response
D.J. Eastburn

H042. Next-generation Sequencing-based Detection of Clinically Significant *IKZF1* Deletions and *KMT2A* Partial Tandem Duplications
K.C. Floyd

H043. Development of Synthetic Secondary Standards for *BCR-ABL1* Quantification on GeneXpert BCR-ABL V2 and Xpert BCR-ABL Ultra Assays
R. Mihani

H044. Validation of a Custom Next-Generation Sequencing (NGS) Panel for Characterizing Mutations in Ph-like ALL Using Anchored Multiplex PCR Technology
A. Guimaraes-Young

H045. Detection of Clonal Rearrangements in Multiple Myeloma Samples Using LymphoTrack Assays
Y. Huang

H046. Pediatric Myeloid Sarcoma: A Single Institution Clinicopathologic and Molecular Analysis
T. Zho

H047. PTPN11 Mutation is Uncommon in Acute Myeloid Leukemia, but Associated with a Complex Karyotype, Co-mutations in *KRAS* or *NRAS* and Poor Prognosis
R. Ruiz-Cordero

H048. Accurate Detection of *FLT3*-ITDs and *CEBPA* Variants in Acute Myeloid Leukemia by Anchored Multiplex PCR and Next-generation Sequencing
N.M. Nair

H049. A Single NGS-based Assay for Simultaneous Identification of *BCR/ABL1* Fusion and *ABL1* Sequencing Detects Resistance Mutation and Subclones
R. Ruiz-Cordero

H050. Clinicopathologic Characterization of Myeloid Neoplasms with Concurrent Spliceosome Mutations and MPN-associated Mutations
Y. Liu

H051. SNP Genotyping-based Stem Cell Engraftment Detection in Targeted NGS Testing
W. Chen

H052. Development of a Reverse Transcriptase Quantitative Polymerase Chain Reaction (RT-qPCR) Assay for Nucleophosmin (NPM1) Minimal Residual Disease (MRD) Monitoring in Acute Myeloid Leukemia
M. Mai

H053. Next-generation Sequencing in Burkitt-like Lymphoma with 11q Aberration: A Clinicopathologic Correlation
A.N. Alsuwaidan

H054. Integrative Analysis of Programmed Death-Ligand 1 DNA, mRNA, and Protein Status and their Clinicopathological Correlation in Diffuse Large B-cell Lymphoma
X. Zhou

H055. Optimizing Diagnostic Algorithms for Pediatric Leukemia: Synergy Between Next-generation Sequencing, Chromosomal Microarray, and Conventional Cytogenetics
M.C. Hiemenz

H056. Variant Allele Frequency does not correlate with Marrow-based Leukemic Blast Proportions in Acute Myeloid Leukemia
L.N. Toth

H057. BCOR Mutations Portend Poor Survival Independent of Concurrent Mutations in Other Epigenetic Modulators in Myelodysplastic Syndrome
I. Badat

H058. Isochromosome 17q in Acute Myeloid Leukemia and Myeloid Neoplasms
M. Kim

H059. Comparison of Interpretive Guidelines for IGH and TCR Clonality by NGS in B and T-cell Cancers
L. Lay

H060. Impact of Single versus Multiple Splicesome Mutations in MDS/CMML
M. Hussaini

INFECTIOUS DISEASES

ID001. Development of a Real-time PCR Assay for the Direct Detection of *Mucorales* Species
K.D. Tardif

ID002. Comparison of the Roche Cobas Ampliprep/Cobas Taqman v2.0 and Cobas 6800 for HIV, HCV, HBV and CMV Viral Load Determination
T.R. Sundin

ID003. Evaluation of a Commercial Sample–to-Answer Assay for the Detection of Varicella-Zoster Virus Directly from Clinical Specimens
M.J. Espy

ID004. Evaluation of a Novel Isothermal Amplification Assay for Detection and Genotyping of Human Papillomavirus in Formalin-fixed Paraffin-embedded Tissue of Oropharyngeal Carcinomas
L. Lozano

ID005. Second Generation Next-generation Sequencing-based System for Detecting Drug Resistance Mutations in HIV-1 Combined with Isothermal Amplification
E.J. Wee

ID006. Comparison of Real-time PCR with Transcription Mediated Amplification for HPV Detection/Genotype and Correlation with Cytological and Histological Results
S. McClellan

ID007. The Diagnostic Yield of Universal Pathogen Detection by Next-generation Sequencing Compared to the Standard of Care in Patients with Pneumonia
B.A. Young

ID008. Spectrum Profile of Respiratory Pathogens Detected by the BIOFIRE Plex Assay: Experience of a Major Tertiary Care Center in Lebanon
S. Halabi

ID009. Evaluation of Cobas HBV, HCV, and HIV-1 Tests on the Cobas 6800 Platform
M.K. Leong

ID010. Performance and Workflow Comparison of Simplexa Bordetella Direct (IUO) with Illumigene Pertussis
E.M. Dault

ID011. Performance Evaluation of Two Commercial Molecular Assays for Genotyping Hepatitis C Virus
S.L. Mitchell

ID012. Comprehensive Solid Tumor Microbiome Profiling via Analysis of Unmapped Reads in Large Panel, Hybridization Capture-based NGS Assay Data
C.M. Vanderbilt

ID013. Evaluation of the DiaSorin Molecular Simplexa Bordetella Real-time Sample-to-Result PCR Test on the LIAISON MDX System
T.E. Schutzbank

ID014. Evaluation of Panther Fusion System for Respiratory Viral Detection in a Pediatric Hospital
A. Rector

ID015. Adjusting the pH of Urine Samples at the Time of Collection May Provide a More Accurate Measurement of Cytomegalovirus (CMV) Viral Load
M. Galdzicka

ID016. Detection of Herpes Simplex Virus (HSV) Types 1 and 2 and Varicella-Zoster Virus (VZV) From Cutaneous and Mucocutaneous Lesions Using the Quidel Solana HSV 1+2/VZV Assay
E. Tam

ID017. Efflux Gene Expression by Ofloxacin Stress in Multidrug-resistant *Mycobacterium tuberculosis* and Extensively Drug-resistant *M. tuberculosis* with/without *gyrA* Mutation using RNA-seq
H. Lee

ID018. Triplex Assay for Zika, Dengue, and Chikungunya Viruses by Sentosa SA Real-time RT-PCR Assay
J. Wong

ID019. A Host Gene Signature for Diagnosis and Risk Stratification of Acute Infection and Sepsis at Hospital Admission: HostDx Sepsis
O. Liesenfeld

ID020. Development and Validation of a Quantitative Multiplex Real-time PCR Assay for Identification of Bacterial Pathogens From Respiratory Specimens
A. Seth

ID021. Evaluation and Time-motion Analysis of the GenePOC Rapid C. difficile Assay Compared to the Meridian Illumigene Assay
H. Webber

ID022. Evaluation of the Galileo Pathogen Solution Next-generation Sequencing Pipeline for the Identification and Quantification of DNA Viruses in Transplant Patients
M.L. Carpenter

ID023. Clinical Implications of the Increased Sensitivity of the FDA Roche 6800 CMV Viral Load Assay
J. Pettersson

ID024. Performance Evaluation of AdvanSure RV-plus Real-time PCR Assays for the Detection of Respiratory Viruses
J. Sohn

ID025. Quantitative Detection of HCV Using the NeuMoDx Molecular Diagnostic System
J. Zhu

ID026. Quantitative Detection of Epstein-Barr Virus (EBV) in Plasma and Whole Blood Matrices
L. Gong

ID027. WITHDRAWN

ID028. Evaluation of the GenMark ePlex Respiratory Pathogen Panel for the Detection of Respiratory Pathogens
A.M. Carlin

ID029. Development of a New Diagnostic System Based on Real-time LAMP PCR for Specific Detection of 10 Species of Arboviruses
E. Choi

ID030. Analytical Validation of a Sample-to-Sequence Pipeline for Non-targeted Pathogen Detection in Clinically Relevant Matrices
K. Parker

ID031. Identification of *M. tuberculosis* and *M. bovis* in Clinical Respiratory Specimens Using the VELA Diagnostics Sentosa SA MTC PCR Assay
H. Webber

ID032. Pre-market Evaluation of Hologic's Group B *Streptococcus* PCR Assay on the Panther Fusion System
F. Zhang

ID033. Multicenter Evaluation of the Sentosa SA HSV1/2 Qualitative PCR Test
D. Kohn

ID034. A Rapid Host Gene Expression Assay to Discriminate Bacterial from Viral Infections
W. Nie

ID035. High Throughput FluA/B/RSV Testing May Complement Existing Methods During the Peak of Flu Season
R. Hein

ID036. WITHDRAWN

ID037. A High Throughput System for Profiling Respiratory Tract Microbiota
J. Li

ID038. WITHDRAWN

ID039. Cost Effectiveness Model Describing Emergency Department Use of a Novel Multi-mRNA Test for Diagnosis and Risk Assessment of Acute Respiratory Tract Infections and Sepsis
I. Stojanovic

ID040. Quantitative Detection of Cytomegalovirus on NeuMoDx Molecular Systems
M. Mastronardi

ID041. Performance Evaluation of Unpreserved Stool and Stool in Transport Medium with a Multiplex Gastrointestinal Pathogen Panel with an Automated, High Throughput System
C. Knoth

ID042. WITHDRAWN

ID043. Development and Evaluation of a High Throughput Multiplex Molecular Panel that Detects 20 Respiratory Pathogens in Clinical Specimens
M. Aye

ID044. Hepatitis C Virus Genotyping by Next-generation Sequencing: An Accurate and Cost-effective Alternative
B.G. Nezami

ID045. Technology to Produce Non-infectious Recombinant Virus as Reference Materials for Unculturable or Highly Dangerous Viral Pathogens
B. Anekella

ID046. Detecting *Helicobacter pylori* and Predicting Antibiotic Resistance from Formalin-fixed Paraffin Embedded Gastric Biopsies Using Targeted Next-generation Sequencing
B.G. Nezami

ID047. Clinical Evaluation of the Aptima *Mycoplasma genitalium* Assay Reveals the Prevalence of *Mycoplasma genitalium* Infection among Patients Tested for other Sexually Transmitted Pathogens in Indiana
R.F. Relich

ID048. Evaluation of DiaSorin Molecular Simplexa Bordetella Direct Kit for the Detection and Differentiation of *Bordetella pertussis* and *Bordetella parapertussis*
T. Ton

ID049. A Cross-sectional Study of Swab versus Tissue Sampling of Wounds for the Detection of Microbes by PCR
E. Baum-Jones

ID050. Evaluation of a Next-generation Sequencing Assay: The Sentosa SQ HIV Genotyping Assay for HIV Genotype and Drug Resistance Mutation Analysis
D. Kohn

ID051. Rapid and Accurate Cross-kingdom Human Pathogen Identification and Detection Using Hyb & Seq Technology
D. Bezdan

ID052. Validation of a Novel Qualitative Real-time PCR Assay Versus Direct Fluorescent Antibody Testing for the Detection of *Pneumocystis jirovecii* Pathogen
A. Spohn

ID053. WITHDRAWN

ID054. Simultaneous Detection of Tick-borne Pathogens Using a High Definition Multiplexed PCR Assay
M.W. Mashock

ID055. Clinical Performance Study Results of the Hologic GBS Assay on the Fully Automated Panther Fusion System
B. Eaton

ID056. Quantification of CMV Using the m2000 RealTime CMV Assay
M.A. Johnston

ID057. High-definition PCR (HDPCR): a Novel, Instrument Agnostic qPCR Multiplexing Technology Applied to Tick-borne Pathogen Testing
B. Amro

ID058. Evaluation of a Completely Automated BKV Viral Load Assay on the Abbott m2000 Platform
F. Nolte

ID059. Validation of Qualitative HIV Detection of HIV in Whole Blood with the Hologic Aptima HIV Assay
K. Tardif

ID060. The Prevalence of Clarithromycin-resistant *Helicobacter pylori* in Utah; a Laboratory-based Survey
K.N. Carter

ID061. Is There a Need for HCV Resistance Testing in Routine Diagnostics and Patient Treatment? Routine HCV Genotyping and Resistance Testing and Performance of the Sentosa SQ HCV Genotyping v2.0 Assay
M. Obermeier

ID062. Evaluation of the ARIES *Bordetella* Assay for Detection and Identification of *Bordetella* pertussis in Nasopharyngeal Swab Specimens
T. McMillen

ID063. A Quantitative, Multiplexed RNA Detection Platform for Rapid Pathogen Identification and Phenotypic Antibiotic Susceptibility Testing (AST) using NanoString Technology
R.P. Bhattacharyya

ID064. The Galileo Pathogen Solution Next-Generation Sequencing Pipeline Detects and Identifies RNA Respiratory Viruses in Haematopoietic Stem Cell Transplant Patients
M.L. Carpenter

ID065. Molecular Screening for *Trichomonas vaginalis* and *Mycoplasma genitalium* in the RADAR Longitudinal Cohort Study of Young Transgender Women and Young Men who Have Sex with Men
E. Munson

ID066. Evaluation of Performance and Workflow using the GenePOC Strep A, C/G Assay for Detection of Group A, C, and G *Streptococcus* from Patients Presenting with Pharyngitis to the Emergency Department
D. Mastandrea

ID067. Evaluation of the BD MAX Vaginal Panel for the Detection of Vaginitis in Women
K. Culbreath

ID068. Evaluation of ELITech HSV 1&2 ELITe MGB for the Detection and Differentiation of Herpes Simplex Virus 1 and 2 from Lesions
V.P. Maceira

ID069. Different CMV Strains for Quality Controls and its Impact on Assay Calibration
J. Boonyaratanakornkit

ID070. Detection of Microorganisms and Antibiotic Resistance Genes in Skin and Soft Tissue Infections by a PCR-based Diagnostic Test
G. Zhu

ID071. Comparison of Three Nucleic Acid Amplification Tests (NAATs) to Culture for Detection of Group B Streptococcus (GBS)
J. Shin

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I001. Evaluation of a Guideline-adherent Microsatellite Instability (MSI) Module for Calculation of MSI Using a Comprehensive 170 Assay on an NGS Platform.
R. Kolhe

I002. Clinical Implications of the Reference Sequence Used for Diagnostic Interpretation
J.A. SoRelle

I003. CCKB: A High-Performance and Genome-Scale Informatics Portal for Analysis and Multi-Institutional Sharing of Pediatric Cancer Variants
X. Gai

I004. A Machine-Learning Framework for Accurate Classification and Quantification of Oncogenic Variants Using the QuantideX NGS DNA Hotspot 21 Kit
L. Ringel

I005. Improving Variant Call Accuracy by Combining Torrent Variant Caller and PLATYPUS
Z. Siddiqui

I006. Improving the Molecular Pathology Workflow with Machine Learning: Automated Calculation of Tumor Percentages on H&E Digital Whole Slide Images
C.M. Cirelli

I007. Assessment of a Somatic Mutation Detection Pipeline Using a Simulated Tumor Genome
Z. Li, R. Zhang

I008. Interpretation of Mutational Signatures Associated With Smoking from an Amplicon-Based Clinical Oncology Sequencing Panel
J.E. Adler

I009. Personalized Transcriptomic Drug Profiling in Non-small Cell Lung Cancer
Z. Abrams

I010. NeGeSeI-NIPT: A Web Based Tool for the Management of Non-Invasive Prenatal Screening Assays in the Clinical Laboratory
V. Williamson

I011. NeGeSeI–Inheriseq: a scalable informatics solution for the management of assays for hereditary cancer
V. Williamson

I012. A Local Population Allele Frequency Query Tool
M. Leong

I013. Classification of Variants from Myeloid NGS Panel Testing Using a Scalable Evidence Based Variant Classification Workbench (SEBVaC)
W. Chen

I014. A Molecule-Centric Approach to Phasing
M. Debeljak

I015. Using AutoIt to Automatically Enter Molecular LDT Results into the Laboratory Information System
J. Grojean

I016. Fragment Size Characterization of Cell-Free DNA Mutations from Clonal Hematopoiesis
T. Jiang

I017. NGS Panel Analyzer: A Software Tool to Assess NGS Panel Design
S.B. Patel

I018. WITHDRAWN

I019. Database of High-Resolution Melting Publications with Data Mining and Statistical Reporting
Z.L. Dwight

I020. A Clinical Decision Support Tool to Integrate Next-Generation Sequencing and Cytogenetics Assays for Myeloid Cancers
S. Bandla

I021. Development and Analysis of a Machine Learning Variant Caller
D.E. Wood

I022. Evaluation of SOPHiA DDM v4 for NGS Analysis of Ampliseq Cancer Hotspot Panel
D.C. Green

I023. Precision Medicine Requires Molecular Pathologists Have Clinical Decision Support and Automation Found in Agilent Alissa to Analyze and Interpret Large Numbers of Variants from NGS Assays
S. Van Vooren

I024. Identification of Germline Mutations in Tumor DNA Samples Absent a Matched-normal
A. Bigdeli

I025. Identification of Viral Integration Sites in Cancer Genomes Using Unmapped Reads in Targeted Next-generation Sequencing Data
A.S. Bowman

I026. Variant Inspector: A Computational Approach for Somatic Variant Prioritization in Routine Clinical Practice
R.J. Maglantay

I027. Detection of Microsatellite Instability Using a Large Next-generation Sequencing Panel across Diverse Tumor Types
J. Pang

I028. A Rigorous Interlaboratory Examination of the Need to Confirm NGS-Detected Variants by an Orthogonal Method in Clinical Genetic Testing
S.E. Lincoln

I029. Dual-Assay Demultiplexing with Preferential Read Allocation and Unequal Index Size Presents Bioinformatics Challenges
A. Chitturi

I030. Integrating Clinical Genomics into Electronic Health Records to Foster Precision Medicine
A. Sigaras

I031. Standardization of Molecular Diagnostic Testing for Non-small Cell Lung Cancer
A. Karimnezhad

I032. Effects of Probe Regions on Somatic Variant Calling in TruSeq Amplicon Cancer Panel
P.B. Mayigowda

I033. Modern Application Deployment Infrastructure for Supporting Clinical Next- generation Sequencing (NGS) Testing
L. Santana Dos Santos

I034. Assessing Cancer Diagnosis from Clinical Genomics Data Using Machine Learning.
P.R. Hess

OTHER (e.g. Education)

OTH001. Virtual Case Sets for Genomics Education: Thinking Outside the Slide Box
J.N. Rosenbaum

OTH002. Standardized Protocol for Salvaging Quality or Quantity Not Sufficient (QNS) Samples in an Academic NGS Laboratory
S.F. Priore

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ST001. Clinical Utility of Reflex Ordered Testing for Molecular Biomarkers in Stage IV Lung Cancer
T.L. Phung

ST002. Analysis of Urinary Cell-free DNA for Early Detection and Surveillance of Bladder Cancer
J. Dudley

ST003. Utility of a Comprehensive and Cost-effective DNA/RNA Panel (170 Genes) for Single Nucleotide Variants (SNV's), Small Insertions or Deletions (Indels), Copy Number Variations (CNV's) Splice Variations, and Gene Fusions on an NGS in Evaluation of Colon Cancer
R. Kolhe

ST004. Validation of *FFPE* Tissue Punches for Detection of *KRAS* and BRAF Mutations with the Idylla PCR-based Molecular Diagnostics Assay
D. Morlote

ST005. Evaluation of a Guideline-adherent Tumor Mutational Burden (TMB) Module for Calculation of TMB Using a Comprehensive 170 Gene Assay on a NGS Platform.
R. Kolhe

ST006. Comparison of Two DNA Polymerases in Detection of DNA Methylation via Pyrosequencing
C.M. Farrell

ST007. WITHDRAWN

ST008. Analyses of *BRAF* Mutations and MSI Status Frequencies in TKi Non-treatable Lung Adenocarcinoma Patients
G.N. Berardinelli

ST009. Evaluation of Microsatellite Instability Testing and Lynch Syndrome Screening Through Tumor Sequencing Using Illumina TruSight Oncology 500 panel
S. Zhang

ST010. Identification of Different Levels and Spatial Patterns of Methylation of Promoter-Associated CpGs74-78 of the O6-Methylguanine Methyltransferase Gene *(MGMT)* in Gliomas
F. Khan

ST011. Evaluation of Molecular Spectrum of *BRCA* Gene Mutation in Indian Scenario using Next Generation Sequencing (NGS) Approach
B. Das

ST012. Development of a Novel Pan-Cancer Biomarker Panel for Improved Detection of MSI in Tumor and Liquid Biopsies
J. Bacher

ST013. Comparison of Cobas EGFR Mutation Test and PANAMutyper R EGFR Assay in the Detection of *EGFR* Mutations in Plasma from Non-small Cell Lung Cancer Patients
K. Lee

ST014. Comprehensive Genomic Profiling of Thyroid Neoplasm by Next-generation Sequencing of Fine Needle-Aspiration Biopsy Material Preserved in CytoLyt
H.J. Park

ST015. TruSight Oncology 500: Measuring Tumor Mutation Burden with Targeted Sequencing
J. Ju

ST016. Analytical Validation of the Oncomine Comprehensive Assay v3 with FFPE and Cell Line Tumor Specimens in a CAP-accredited and CLIA-certified Clinical Laboratory
A. Yuki

ST017. Nextgen Digital Spatial Molecular Pathology: Digital IHC Coupled to Automated Gene and Protein Expression Profiling Measuring Complex Signatures within the Context of the Tumor Microenvironment
E. Imler

ST018. Clinical Implementation of Precision Medicine in the Classification of Medulloblastomas: Concordance, Conflict, Recurrence, and Reclassification
B. Liechty

ST019. Clinical Validation of a Combined DNA and RNA Target-capture Next Generation Sequencing (NGS) Test for Solid Tumors on FFPE Specimens
S.P. Strom

ST020. Molecular Epidemiology of *CREBBP* and *EP300* Mutations in Solid Tumors
J.P. Solomon

ST021. Prevalence of *EGFR* Mutations in Indian Lung Cancer Patients
R. Katara

ST022. Detection and Quantitation of Human Papilloma Virus Type 16 in Oropharyngeal Squamous Cell Carcinomas
K. Vadlamudi

ST023. Cross-Platform Comparison of NGS and MALDI-TOF for Detecting RAS/RAF Mutations in Circulating Tumor DNA from Metastatic Colorectal Cancer Patient Plasma
W. Guo

ST024. Clinical Implementation of Mutational Signature Analysis
L. Lawrence

ST025. Implementation and Validation of the Moffitt Solid Tumor Actionable Result (STAR) Assay
E.L. Roberts

ST026. A Functional DNA Repair Assay Platform to Stratify Melanoma and Select the Best Therapeutic Option
S. Sauvaigo

ST027. Ultra-Rapid EGFR Mutation Assessment in Lung Adenocarcinoma without Prior DNA Extraction
M.E. Arcila

ST028. Confirmation of Novel Gene Fusions Detected by Next-Generation Sequencing using Enriched RNA Libraries
N.T. Ngo

ST029. Assessment of Significant Components in Multigene Testing for Breast Cancer in Clinical Laboratories
P. Gao

ST030. Culture of Circulating Tumor Cells (CTCs) using Three-dimensional Culture and Conditional Reprogramming Methods
C. Park

ST031. ISO Certification of a Complete Next Generation (NGS) Sequencing Workflow for *BRCA1/2* Analysis
S. Marchini

ST032. Analytical Validation of the Oncomine Breast cfDNA Assay v2
W. Liu

ST033. Assessment of Pre-analytical Effects on RNA Sequencing
A. Beams

ST034. Performance Evaluation of Asuragen QuantideX NGS RNA Lung Cancer Panel by ACL Laboratories
S. Spirtovic

ST035. Performance Evaluation of Illumina TruSight Tumor 15 Panel by ACL Laboratories.
S. Spirtovic

ST036. Comparison of Three Next-generation Sequencing Platforms in Fusion Detection: FusionPlex by Archer, Oncomine by ThermoFisher, and AmpliSeq by Illumina
X. Qu

ST037. WITHDRAWN

ST038. A Turnkey Solution for NGS-based Detection of Somatic Mutations in Cancer
M. Yee

ST039. Clinicopathologic and Molecular Features of Undifferentiated Round Cell Sarcomas of Bone and Soft Tissues, including BCOR-CCNB3 and CIC-DUX4 Test Results
B. Rekhi

ST040. *KRAS* Mutations in Tissue Samples from Cologuard-Positive Patients
K. Murphy

ST041. Evaluation of the Biocartis Idylla Rapid Near-to-Patient EGFR Mutation CE-IVD Marked Tissue Test: Correlation to an FDA Approved Orthogonal Method using 79 Clinical Formalin-Fixed, Paraffin-Embedded Tissue Samples
M. Kohlman

ST042. Clinically Significant Germline Variants Detected by Mutation Profiling of Non-small Cell Lung Cancer in Patients with Multiple Nodules Harboring Different Somatic Mutations
A. Almradi

ST043. Clinical Validation of a Custom-designed Next-generation Sequencing-based FusionPlex Panel for Salivary Gland Tumors
N.V. Guseva

ST044. A Comparison of the Performance Characteristics of the Illumina TruSeq Stranded mRNA Kit and TruSeq RNA Sample Preparation v2 Kit for Gene Fusion Detection
R.N. Wehrs

ST045. Development and Validation of an RNA Sequencing Assay for the Detection of Gene Fusions in Formalin-fixed Paraffin Embedded Tumors
R.A. Jackson

ST046. Multi-institutional Evaluation of the 2017 AMP, ASCO and CAP Standards and Guidelines for Interpretation and Reporting of Sequence Variants in Cancer
D. Sirohi

ST047. Establishing the Impact of *STK11* Canonical Splice Site Variants Identified by NGS Panel Testing in Non-Small Cell Lung Cancers (NSCLC): Prognostic and Therapeutic Implications
D.J. Seward

ST048. Validation of the ArcherDx VariantPlex Solid Tumor Assay for the Molecular Analysis of Clinical Tumor Samples
K.D. Davies

ST049. Clinical Targeted Next-generation Sequencing Panel Testing in Non-small Cell Lung Cancer: Single Institution Experience at a High Scale National Reference Laboratory
K. Barber

ST050. *MLH1/PMS2*-deficient, *BRAF*-mutated, and Calretinin-positive Colorectal Carcinoma Presents at Advanced Stage and is Associated with Poor Differentiation and Poor Prognosis
W. Zhang

ST051. Analytical Validation of a DNA Dual Strand Approach for an FDA-approved NGS based Praxis Extended RAS Panel for FFPE Metastatic Colorectal Cancer Samples
A. Iyer

ST052. Optimization of Testing Methods in Detecting MET Amplification, Expression, and Activation for Targeted MET TKI Treatment in Non-small Cell Lung Cancer Patients
H. Gong

ST053. Personalized ddPCR Mutation Assays Targeting Patient Specific ctDNA: A Tool to Monitor Treatment Responses to Mutation-Specific T-cell Transfer Immunotherapy in Epithelial Cancer Patients
L. Xi

ST054. Importance of Amplicon Size for Detecting Microsatellite Instability in Liquid Biopsies
M. Campan

ST055. DNA Sequencing of Human, Epstein - Barr Virus, and *Helicobacter pylori* Genomes to Classify and Monitor Gastric Adenocarcinoma
K. Greene

ST056. Clinical Utility of Comprehensive Genomic Profiling in Pediatric Brain Tumors
J. Ji

ST057. Validation of Antibody Panels for High-plex Immunohistochemistry Applications
D.A. Hinerfeld

ST058. Novel Liquid Biopsy (ctDNA) Reference Material Development and Characterization using CRISPR/Cas9-engineered Cell Lines
S. Saddar

ST059. Detection of *ALK, RET, ROS1* Rearrangements by NanoString in Brazilian Patients with Non-small Cell Lung Cancer
L. Novaes

ST060. Characterization of the Tumor Microenvironment using a Novel High-plex Protein Imaging Technology
D.A. Hinerfeld

ST061. GNAS Expression Improves Survival Prognostication of SHH Medulloblastoma Molecular Subgroup
L. Leal

ST062. Distinct Genetic Signature of Mucinous Micropapillary Breast Carcinoma from its Invasive Non-mucinous Counterpart
M. Gurav

ST063. Development of a Next Generation Sequencing Panel for Glioma Classification
N. D'Haene

ST064. Mutational Profiling in Advanced Non-small Cell Lung Cancer (NSCLC) Patients: A Tertiary Care Study of 1,052 Cases from Eastern India
P. Gupta

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RET
MET
NTRK
A2M
ABL1
ADCY5
AGPAT2
AGTY1
BMI1
BUB4

BRAF
DDR2
EGFR
FGFR1
KRAS
ERBB2
MET
NRAS
PIK3CA
PTEN
RET
ROS1
MAP2K1

Learn more about TruSight Oncology 500.

EXPO INFORMATION

For Research Use Only. Not for use in diagnostic procedures.

AMP Association for Molecular Pathology

Corporate Partners

AMP would like to thank our 2018 Corporate Partners for their generous support!

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Hologic — The Science of Sure

LOXO Oncology

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nanoString Technologies

Qiagen

ThermoFisher Scientific

Vela Diagnostics

Expo Information

The **AMP Expo Hall** is a cornerstone of the AMP Annual Meeting, presenting attendees with the opportunity to learn about the latest technology, innovation, and patient care improvements. When planning your time at the AMP 2018 Meeting & Expo, be sure to check out all that our expo hall has to offer! Our international exhibitors are marked with next to their name.

❋ AMP 2018 Welcome Reception in the Exhibit Hall

Supported by QIAGEN

Join us for the Welcome Reception in the AMP Expo Hall, supported by QIAGEN on Thursday 5:45pm – 7:00pm as we celebrate the start of the AMP 2018 Annual Meeting & Expo. This event is open to all AMP registrants, attendees, and exhibitors.

❋ AMP CENTRAL

AMP's booth in the exhibit hall is the perfect place for AMP members looking to network and attendees who are interested in learning more about all of what AMP does throughout the year. The schedule of events can be found on page 95.

❋ Exhibitor Appreciation Lunch

Join us Saturday in the Expo Hall, as we show our appreciation for the ongoing and generous support of our Annual Meeting Exhibitors. Saturday's general lunch will be served in the expo hall, giving you an opportunity to explore, learn about new products, and continue building on relationships you have made earlier in the meeting. This event is open to all attendees & exhibitors.

❋ Innovation Spotlight Stages

Now in its 3rd year, this crowd favorite returns with a new and creative format. This year's Innovation Spotlight Stages will continue to provide a unique opportunity for exhibiting companies to showcase products or services, but this year the Stages will also feature cutting-edge AMP produced content. The TWO Innovation Spotlight Stages are located in the main cross aisle on the right and left corners of the Exhibit Hall. Innovation Spotlight presentations are open to all Meeting Registrants and seating will be on a first come, first served basis. Schedules for this program are available in your meeting bag, on the Mobile App or on signage located outside the seating of each Stage.

❋ Meet the AMP 2018 Exhibitors

Explore the AMP Expo Hall and meet nearly 200 exhibiting companies!
Take a few moments to peruse the list of exhibitors found on page 174. You can also read about this year's exhibitors in the meeting program on page 176 or the Mobile App.

❋ Networking Lounge/Speed Networking – NEW!

Sponsored by Membership Affairs Committee

The AMP Membership Affairs Committee invites you to enjoy this brand new feature of the AMP Exhibit Hall. Visit Booth #1923 in Aisle 19 to utilize this casual networking space throughout the meeting. During lunch on Friday (11:45am – 1:00pm) and Saturday (12:15pm – 1:30pm), this space will feature 30-minute long speed networking sessions. This is a fantastic opportunity to meet new colleagues and friends who share your interests. Visit booth #1923 to sign up for this new event!

❋ Preview the Abstracts & Plan your Poster Viewing

Check out the scientific posters which are sure to educate you on the latest and most innovative developments in the field! Refer to the Exhibit Hall Map on page 172 for poster locations.

Henry B. Gonzalez Convention Center
Exhibit Hall Floorplans

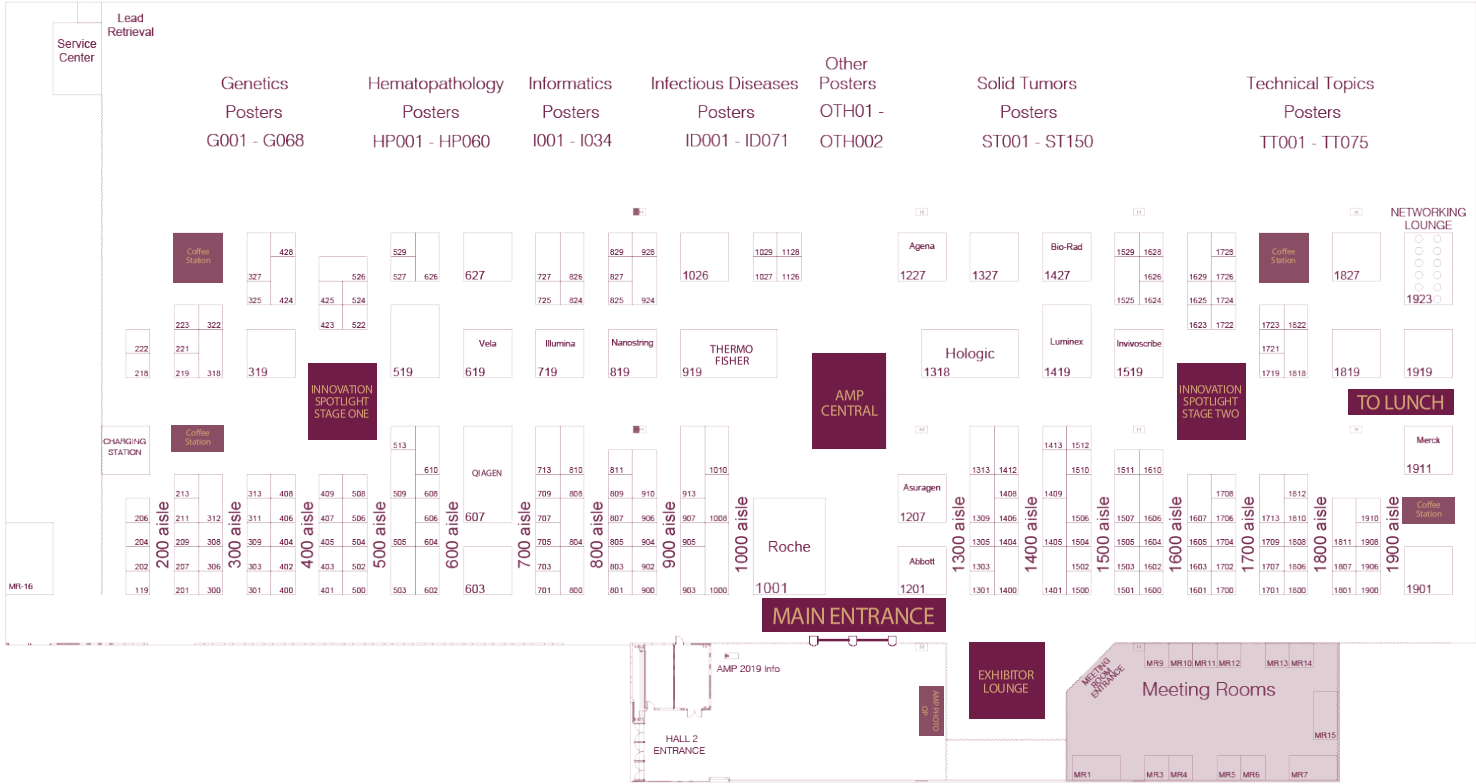
Expo Hours & Dates

Thursday, November 1	
Coffee Break	9:45am -10:15am
General Lunch - Visit Exhibit Hall and View Posters	11:45am - 1:00pm
Coffee Break - Visit Exhibit Hall, AMP Central (Schedule) and View Posters	2:30pm - 4:15pm
Welcome Reception in the Exhibit Hall	5:45pm - 7:00pm

Friday, November 2	
Coffee Break	9:45am -10:15am
General Lunch - Visit Exhibit Hall and View Posters	11:45am - 1:00pm
Coffee Break - Visit Exhibit Hall, AMP Central (Schedule) and View Posters	2:30pm - 4:15pm

Saturday, November 3	
Coffee Break	9:45am -10:15am
Exhibitor Appreciation Lunch	12:15pm - 1:30pm

AMP 2018 Annual Meeting & Expo
November 1 - 3, 2018
San Antonio Convention Center
Halls 1 & 2
San Antonio, Texas



Precision Medicine Starts Here

Exhibitor Listing (By Alphabetical order)

DIRECTORY NAME	PRIMARY BOOTH
4titude	1704
Abbott Molecular*	**1201**
AccuRef Diagnostics	907
Adaptive Biotechnologies	1607
Admera Health	1910
Advanced Analytical - A part of Agilent	1806
Agena Bioscience*	**1227**
Agilent	1819
Alere	300
Altona Diagnostics USA, Inc.	505
American Proficiency Institute	311
Amoy Diagnostics	1628
AMP	AMP Central
Analytik Jena US	928
Anpac Biomedical Technology, Co. Ltd.	1808
Applied BioCode	1907
Applied Spectral Imaging	1600
ArcherDX	1827
ARUP Laboratories	900
Astrazeneca*	**1010**
Asuragen*	**1207**
ATCC	701
Bangs Laboratories	1529
Bayer Healthcare*	**401**
Beckman Coulter Life Sciences*	**807**
Biocartis	1309
Biocept, Inc	221
BioChain Institute, Inc.	428
BioFire Diagnostics, LLC	526
Biofortuna Ltd	223
BIOGENEX LABORATORIES INC	410
Bioline USA Inc.	202
BIOLYPH LLC	610
Biomatrica, Inc.	801
Bionano Genomics	604
Bioneer Inc.	825
Bio-Rad Laboratories*	**1427**
Biosearch Technologies	1722
BioView (USA) Inc.	1406
BIT Group	626
Bristol Myers Squibb*	**924**
Cancer Genetics	709
Canon BioMedical	903
CapitalBio Technology	1721
Caris Life Sciences	809
CellMax Life	804
CGM LABDAQ	506

DIRECTORY NAME	PRIMARY BOOTH
Children's Hospital Los Angeles	1029
ChromaCode	327
City of Hope Laboratories	1709
Cleveland Clinic Laboratories	400
ClinGen	805
Clinical Genomics Inc.	606
Clinical Omics	1701
Codexis Inc	1626
College of American Pathologists	1724
College of American Pathologists Periodicals	306
Color Genomics	1906
Congenica	1719
COPAN Diagnostics	1404
Coriell Institute for Medical Research	1510
Covaris Inc	1624
Curetis USA	1512
DiaCarta	608
DiaSorin Molecular	1000
Edge BioSystems	219
EGT-NA	1604
ELITechGroup Inc. Molecular Diagnostics	1610
EntroGen	1400
Enzo	1900
Epigenomics	910
Eppendorf	513
Exact Diagnostics	906
EZLife Bio Inc	1603
Fabric Genomics	1606
FORMULATRIX	1702
Fluidigm	1800
Fluxergy	403
GenePOC	1629
Genetic Signatures	308
GenMark Dx	1501
Genomenon, Inc	902
GenomeWeb	508
GenomOncology	1511
Genoptix	808
Genosity	1408
GenPath Diagnostics, BioReference Laboratories	1811
Golden Helix, Inc.	1801
Guardant Health	405
Hamilton Company	318
Health Decisions, Inc.	412
Hologic*	**1318**
Horizon Discovery	1812
HTG Molecular	1008
iCubate®	309

***Corporate Partners**

Exhibitor Listing

DIRECTORY NAME	PRIMARY BOOTH
Illumina	719
Incelldx, Inc	603
Integrated DNA Technologies	826
Invivoscribe	1519
Kiman Tech	1707
Kashi Clinical Laboratories	222
KMC Systems	218
LabWare, Inc.	425
Leica Biosystems	1726
LexaGene	1700
Loxo Oncology*	**119**
Luminex*	**1419**
Macrogen	1723
Maine Molecular Quality Controls, Inc.	905
Market Ready Rx	703
MedicalLab Management	423
Menarini Silicon Biosystems	1026
Merck*	**1911**
Meridian Bioscience, Inc.	206
MetaSystems Group, Inc.	313
Mission Bio	705
Molecular health	803
MRC-Holland	1623
MRIGlobal	824
NanoString Technologies*	**819**
Natera	1413
NeoGenomics	1728
NeuMoDx Molecular	627
New England Biolabs	1706
NIH Genetic Testing Registry / MedGen / ClinVar	1810
N-of-One, Inc	1405
Norgen Biotek Corp.	409
Omega Bio-tek	1502
Omni International	407
Opentrons Labworks	1807
OpGen, Inc.	1409
Oracle Health Sciences	827
Ovation.io	529
Oxford Gene Technology	1507
Paragon Genomics	1126
PerkinElmer	1401
Personal Genome Diagnostics	1327
Philips	519
Phosphorus	1605
PierianDx	800
Pillar Biosciences	503
PreAnalytiX	707

DIRECTORY NAME	PRIMARY BOOTH
Precision System Science USA, inc.	325
Primerdesign	527
Promega Corporation	319
Psyche Systems Corporation	1919
Q^2 Solutions | EA Genomics	725
QIAGEN*	**607**
Quest Diagnostics	201
Quidel Corporation	913
Qvella Corporation	424
RareCyte, Inc	1128
ResearchDx	602
Rheonix	1525
Roche*	**1001**
SCC Soft Computer	1601
Seegene Technologies Inc.	1506
Sekisui Diagnostics, LLC	402
SeraCare Life Sciences	1412
Siemens Healthineers	727
SmartGene	1625
SoftGenetics	1713
SOPHiA GENETICS	713
Staff Icons- A Biotech Recruitment Company	213
Standard Molecular, Inc.	1708
STEMCELL Technologies Inc	1305
STRATEC Biomedical AG	1027
Streck	312
Sunquest Information Systems	1818
Swift Biosciences	1301
T2 Biosystems	1313
TAI Diagnostics	1908
Takara Bio USA	1602
Tangen Biosciences, Inc.	904
Tecan	1500
Tempus	1822
The Jackson Laboratory	301
The Pathologist	322
Thermo Fisher Scientific*	**919**
TRANSLATIONAL SOFTWARE	522
TriCore Reference Laboratories	404
TriLink BioTechnologies	1503
Twist Bioscience	1303
Variantyx Inc	811
Vela Diagnositics*	**619**
Volpi USA	1504
XCR Diagnostics, Inc.	509
XIFIN, Inc.	524
ZeptoMetrix Corporation	810
Zymo Research Corp.	829

Exhibitor Descriptions

4titude
Booth #: 1704
www.4ti.co.uk
4titude, now part of Brooks Life Sciences, designs, manufactures and markets consumables and bench top instrumentation for the life sciences industry. With ISO certified processes and clean room production facilities, 4titude offers an ever growing range of innovative products. 4titude provides expertise for innovation to customers with specific needs, either under our own brand or as an OEM agreement.

Abbott Molecular
CORPORATE PARTNER
Booth #: 1201
www.molecular.abbott/us/en/home
Abbott Molecular is a leader in molecular diagnostics – the analysis of DNA and RNA at the molecular level. Abbott Molecular's tests can also detect subtle but key changes in patients' genes and chromosomes and have the potential to aid with early detection or diagnosis, can influence the selection of appropriate therapies and may assist with monitoring of disease progression.

AccuRef Diagnostics
Booth #: 907
www.accuref.com
AccuRef Diagnostics is a global provider of biologically-relevant molecular and cellular reference materials for use by genomics and molecular diagnostic laboratories for assay development and quality control. With over 2,600 products, our ONCOREF™ and Quan-Plex™ Products covers over 40 cancer genes that range from single-plex to digital PCR-verified quantitative multiplex panels. Our innovative new products including Fusion-Ref™ and Exo-Ref™ for exosomes.

Adaptive Biotechnologies
Booth #: 1607
www.adaptivebiotech.com
Adaptive Biotechnologies is a pioneer in combining high-throughput sequencing and expert bioinformatics to profile T-cell and B-cell receptors. Adaptive is bringing the accuracy and sensitivity of its immunosequencing platform to researchers and clinicians around the world to drive groundbreaking research in cancer and immune-mediated diseases. Adaptive's mission is to translate immunosequencing discoveries into diagnostics and therapeutics to improve patient care.

Admera Health
Booth #: 1910
www.admerahealth.com
Admera Health is a CLIA certified CAP accredited laboratory, utilizing Next-Generation Sequencing technology to advance the field of personalized medicine. Our expertise includes pharmacogenomics, cardiovascular disease, and non-invasive cancer screening. Diagnostic test results are delivered to physicians and patients in a distilled and manageable report, giving them the relevant information to make more informed treatment decisions.

Advanced Analytical - A part of Agilent
Booth #: 1806
www.aati-us.com
Advanced Analytical – A part of Agilent develops, manufactures and markets automated nucleic acid analysis systems. AATI's products are designed to streamline and improve processes within life science industries. Through a meticulous approach to design, AATI has reduced bottlenecks and improved the quality control analysis of DNA and RNA samples.

Agena Bioscience
CORPORATE PARTNER
Booth #: 1227
http://agenabio.com/
We Empower Precision Medicine. Agena Bioscience is a leader dedicated to enabling clinical laboratories worldwide to deliver affordable targeted genomic testing. Our advanced diagnostic platforms support timely, accurate and actionable results, to improve clinical decision making and laboratory economics.

Agilent
Booth #: 1819
www.agilent.com
Agilent is a leader in life sciences, diagnostics and applied chemical markets. The company provides laboratories worldwide with instruments, services, consumables, applications and expertise, enabling customers to gain the insights they seek. Agilent's expertise and trusted collaboration give them the highest confidence in our solutions.

Alere
Booth #: 300
www.alere.com
Alere is now Abbott. Abbott is a global leader in rapid diagnostic tests that deliver the right care, at the right time. Our comprehensive portfolio of tests for infectious disease, cardiometabolic disease and toxicology provide fast, reliable and actionable information that help improve quality of care and enable better clinical and economic health outcomes.

Exhibitor Descriptions

Altona Diagnostics USA, Inc.
Booth #: 505
www.altona-diagnostics.com
Altona Diagnostics USA, Inc. is a San Francisco, CA based company with headquarters in Hamburg, Germany. The company focuses on the sales and technical support of real-time PCR based reagents for the detection of pathogen specific DNA/RNA, developed and manufactured by their scientists in Hamburg.

American Proficiency Institute
Booth #: 311
www.api-pt.com
American Proficiency Institute (API), the leading innovator in proficiency testing programs for the clinical laboratory, provides superior value to the laboratory customer. To join the nearly 20,000 laboratories using API proficiency testing, contact us atwww.api-pt.com or call 1-800-333-0958.

Amoy Diagnostics
Booth #: 1628
www.amoydiagnostics.com
Amoy Diagnostics Co., Ltd. (AmoyDx) is a molecular diagnostic manufacturer and service provider for oncology precision. With completely independent intellectual property rights of ADx-ARMS and Super-ARMS technologies, AmoyDx has a full portfolio of diagnostic kits including but not limited to KRAS, NRAS, BRAF, PIK3CA, EGFR, ALK, ROS1, HER2, which were all approved by CFDA and CE-IVD for different cancer types.

AMP
Booth #: AMP Central
www.amp.org
Visit AMP's booth in the Exhibit Hall, centrally located just past the main entrance to the hall. AMP Central features unique programming including career networking opportunities and the chance to meet current committee members. AMP Central is the best place to learn about all that AMP does and find out how you can get involved! For details on AMP Central Events, see event listings throughout this program.

Analytik Jena US
Booth #: 928
www.aj-us.com
Analytik Jena is a provider of instruments and products in the areas of analytical measuring technology and life science. Product highlight for AMP is the InnuPure®C16 for fully-automated isolation of nucleic acids. In addition to automated protocols for bacteria, viruses, as well as human, animal and plant tissues, customers can easily process complex forensic samples and highly processed food.

Anpac Biomedical Technology, Co. Ltd.
Booth #: 1808
www.anpacbio.com
Anpac Bio's proprietary Cancer Differentiation Analysis (CDA) technology detects early signals of threatening cancer—and the type of cancer (location in the body)—often before the threat becomes or grows into tumors. With a simple, non-invasive, blood test, CDA diagnostics identify over 20 types of cancers earlier, more accurately, and with greater sensitivity and specificity—without producing any side effects in patients.

Applied BioCode
Booth #: 1907
www.apbiocode.com
Applied BioCode® is excited to present Gastrointestinal Pathogen (GPP) syndromic panel for the 17 common pathogenic bacteria, viruses, and parasites tests. The automated high throughput BioCode® MDx 3000 system can process up to 188 GPP samples in an 8-hour shift. The system not only improves laboratory workflow efficiency, but also provide a comprehensive test panel at lower overall cost.

Applied Spectral Imaging
Booth #: 1600
www.spectral-imaging.com
ASI is a global leader in biomedical imaging with a comprehensive product portfolio and a global distribution footprint. The company's technology, powered by GenASIs, enables Pathology, Cytogenetics and Research laboratories to provide advanced diagnostics to patients. ASI has a wide portfolio of dedicated solutions for Brightfield, Fluorescence and Spectral imaging and analysis.

ArcherDX
Booth #: 1827
www.ArcherDX.com
ArcherDX advances molecular pathology with a robust technology platform for NGS-based genetic mutation detection. By combining proprietary Anchored Multiplexed PCR (AMP™) chemistry in an easy-to-use, lyophilized format and powerful bioinformatics software, the Archer® platform dramatically enhances genetic mutation identification and discovery. ArcherDX provides oncology-focused research products and is pursuing regulatory approval for multiple companion diagnostic assays.

Exhibitor Descriptions

ARUP Laboratories
Booth #: 900
www.aruplab.com
ARUP is a nonprofit, academic institution with a dedicated and passionate workforce that believes in collaborating, sharing knowledge, and contributing to laboratory science in ways that provide the best outcome for the patient. ARUP's test menu encompasses more than 3,000 tests, including highly specialized and esoteric assays, and comprehensive testing in genetics, molecular oncology, pediatrics, pain management, and more.

Astrazeneca
CORPORATE PARTNER
Booth #: 1010
www.astrazeneca.com
AstraZeneca is a global, innovation-driven biopharmaceutical business that focuses on the discovery, development and commercialization of prescription medicines, primarily for the treatment of cardiovascular, metabolic, respiratory, inflammation, autoimmune, oncology, infection and neuroscience diseases. AstraZeneca operates in over 100 countries and its innovative medicines are used by millions of patients worldwide.

Asuragen
CORPORATE PARTNER
Booth #: 1207
www.asuragen.com
Asuragen is a molecular diagnostic company changing the way patients are treated in genetics and oncology. The quality, sensitivity and simplicity of our products are key to delivering true precision medicine. The company's diagnostic systems, composed of proprietary chemistries and software, deliver powerful answers using widely available platforms.

ATCC
Booth #: 701
www.atcc.org
ATCC is the leading global provider of biological standards and reference material used for quality control in precision medicine. Visit booth #701 to learn more about how ATCC can source, manufacture, authenticate, standardize, and deliver solutions that meet your unique needs for molecular assays for infectious disease, precision medicine and tests including NGS and ddPCR(TM). www.atcc.org/services.

Bangs Laboratories
Booth #: 1529
www.bangslabs.com
Bangs Laboratories, Inc. supplies high quality microspheres for a variety of immunoassay, molecular and cell biology applications. These include polymer, silica, and superparamagnetic particles with a variety of dyes, surface functional groups and generic binding proteins. Bangs also offers an extensive catalog of flow cytometry, cell viability, count and size standards, as well as superior customer and technical service.

Bayer Healthcare
CORPORATE PARTNER
Booth #: 401
www.bayer.us.com
Bayer is a global Life Sciences leader in cardiopulmonology, hematology, neurology, oncology and women's health. Building on a 150-year legacy in healthcare, Bayer is committed to improving patient lives by developing innovative therapies and delivering first-in-class educational and support programs to meet their needs. For more information, visitwww.bayer.us.

Beckman Coulter Life Sciences
CORPORATE PARTNER
Booth #: 807
www.beckman.com/home
Beckman Coulter Life Sciences develops, manufactures and markets products that simplify, automate and innovate complex biomedical testing. For more than 75 years, our products have been making a difference in people's lives by improving the productivity of medical professionals and scientists, supplying critical information for improving patient health and delivering trusted solutions for research and discovery.

Biocartis
Booth #: 1309
www.biocartis.com/us
Biocartis' proprietary MDx Idylla™ platform is a fully automated sample-to-result, real-time PCR system that offers accurate, highly reliable molecular information from virtually any biological sample in virtually any setting.
More information on www.biocartis.com/us.

Exhibitor Descriptions

Biocept, Inc.
Booth #: 221
www.biocept.com
Biocept aims to improve the lives of patients through innovative cancer diagnostic products and services. By identifying specific molecular alterations in both circulating tumor cells (CTCs) and ctDNA, Biocept helps oncologists and pathologists open targeted and immunotherapy options for patients with cancer. Biocept also offers services to other laboratory testing providers.

BioChain Institute, Inc.
Booth #: 428
www.biochain.com
BioChain is a provider of liquid biopsy and biosamples for oncology research. We have an extensive collection of rare and custom frozen and FFPE, tissue blocks, slides, arrays from human normal, diseased, and tumor donors. Additionally, we provide DNA, RNA, and protein lysates from many different donors. BioChain also offers an automation platform for nucleic acid extractions.

BioFire Diagnostics, LLC
Booth #: 526
www.biofiredx.com
BioFire's FilmArray® System uses syndromic testing to identify infectious diseases with five FDA-cleared and CE-IVD marked assay specific reagent panels. The FilmArray System combines a broad grouping of probable pathogenic causes into a single, rapid test. Each panel simultaneously tests for a comprehensive set of targets in about an hour.

Biofortuna Ltd.
Booth #: 223
www.biofortuna.com
Biofortuna is an international IVD contract manufacturing and products business. It provides assay development and manufacturing services, specialising in assay stabilisation for IVD and other applications, including molecular diagnostics and immunoassays. It also offers a portfolio of molecular diagnostic products for applications including oncology, autoimmune conditions and infectious disease. The company is ISO13485 certified and registered with the FDA.

Biogenex Laboratories Inc.
Booth #: 410
www.biogenex.com
BioGenex offers a unique catalog of quality instruments and reagents, with fully automated systems for immunohistochemistry, ISH, FISH, Special stains, and in situ PCR for all sizes of clinical and research institutions. BioGenex delivers technology to change Precision Medicine, including the new SSNA system for miRNA in situ for characterization of Cancer of Unknown Primary (CUP), poorly/undifferentiated tumors, and sub-typing.

Bioline USA Inc.
Booth #: 202
www.bioline.com
Meridian Life Science provides innovative solutions and large-scale manufacturing of antibodies, viral antigens, recombinant proteins, PCR Enzymes and Master mixes, Lyo-Ready formulations, nucleotides and critical assay reagents to diagnostic and biotechnology companies. For more than 40 years Meridian has focused on offering products and services that advance the development of diagnostic assays.

BIOLYPH LLC
Booth #: 610
www.biolyph.com
BIOLYPH converts manufacturers' unstable reagents into Room Temperature stable, instantly rehydrating LyoSpheres™, providing years of shelf life and superior ease of use, reducing steps, errors, prep time, and manufacturing costs, and eliminating cold chain dependency. Please visit our booth to learn more about BIOLYPH's LyoSphere™ Technology and Complete Formulation, Stabilization, Lyophilization, and Packaging services.

Biomatrica, Inc.
Booth #: 801
www.biomatrica.com/
Biomatrica's line of sample collection products preserves biomarkers in saliva and blood (DNA, RNA, CTC, proteins) for the most demanding applications in infectious disease, molecular biopsy, cancer diagnostics, NIPT, and companion diagnostics. Biomatrica's chemistry also preserves reagents in diagnostics and lab-on-a-chip without refrigeration and at lower cost than lyophilization.

Exhibitor Descriptions

Bionano Genomics
Booth #: 604
www.bionanogenomics.com
Bionano Genomics, Inc. offers whole genome analysis tools to better understand the genome and its structure. Its high-throughput system Saphyr provides comprehensive structural variation (SV) calls with high sensitivities and when combined with orthogonal sequencing data, Bionano maps can provide the correct structure, order, and orientation to assemble reference-quality genomes.

Bioneer Inc.
Booth #: 825
www.us.bioneer.com
Bioneer has established innovative technologies for advanced molecular diagnostic products. Magnetic AccuNanoBead is suitable for purification of biological materials, and easily adapted to automatic DNA/RNA extractor. MagListo ccfDNA kit greatly performs extraction of circulating cell-free DNA. Our product line-up also includes novel high-throughput MDx instrument, thermostable enzymes, and PCR/qPCR machines.

Bio-Rad Laboratories
CORPORATE PARTNER
Booth #: 1427
www.bio-rad.com
Depend on Bio-Rad for tools, technologies and expertise to enable genomic and proteomic analysis. Bio-Rad provides instrumentation and reagents for droplet digital, PCR, Conventional and real-time PCR, amplification reagents and primers, flow cytometry, xMAP technology, cancer biomarkers, electrophoresis, blotting-systems, chromatography, imaging, cell counting, cell imaging and antibodies.

Biosearch Technologies
Booth #: 1722
www.lucigen.com
Biosearch Technologies is the genomics division of LGC–a global leader in delivering genomic solutions for research, diagnostics, and applied markets. Now incorporating Lucigen, we provide best-in-class reagents, kits, enzymes, and instruments to support qPCR, DNA library prep, NGS, cloning and expression systems, and competent cells. Our GMP manufacturing facilities supplies mission critical oligonucleotides for LDTs, molecular diagnostics, and commercial products.

BioView (USA) Inc.
Booth #: 1406
www.bioview.com
BioView provides automated cell image analysis platforms for clinical and research laboratories. BioView offers capabilities in FISH, Circulating Tumor Cells, whole slide imaging, Digital tissue matching and computer-aided quantitative IHC scoring. Our customers leverage offline analysis and Web-based applications to collaborate and explore new business opportunities. BioView has received FDA clearance and CE Marking for a multitude of applications

BIT Group
Booth #: 626
www.bit-group.com
BIT provides contract product development, manufacturing and after-sales services, as well as hematology instruments, for life science, medical and IVD instrumentation OEMs. Quality and regulatory standards include GMP, FDA registered, ISO13485, QSR and CE IVD Directive.

Bristol Myers Squibb
CORPORATE PARTNER
Booth #: 924
www.bms.com
Bristol-Myers Squibb is a global biopharmaceutical company focused on discovering, developing and delivering innovative medicines for patients with serious diseases. We are focused on helping patients in disease areas including oncology, cardiovascular, immunoscience and fibrosis. Each day, our employees work together for patients – it drives everything we do.

Cancer Genetics
Booth #: 709
www.cancergenetics.com
Cancer Genetics, Inc. (CGI) is a leader in the field of personalized medicine, offering diagnostic products and services that enable precision medicine in the field of oncology.
Products and services being developed at CGI are poised to transform cancer patient management, increase treatment efficacy, and reduce healthcare costs.

Exhibitor Descriptions

Canon BioMedical
Booth #: 903
www.canon-biomedical.com
Canon BioMedical, Inc. is focused on empowering the biomedical research and healthcare communities by developing innovative technologies and solutions. The solutions developed will enable clinicians and scientists to improve our health and advance science.
Canon BioMedical is also the exclusive U.S. distributor for NEXTGENPCR, a PCR instrument capable of accomplishing a 30 cycle, 3 step, 2 minute PCR.

CapitalBio Technology
Booth #: 1721
www.capitalbiotech.com
CapitalBio Corporation is a leading life science company that develops and commercializes total health-care solutions. As a core subsidiary of CapitalBio Corporation, CapitalBio Technology provides comprehensive, top-quality products and services including microarray and microfluidic chips and related instruments, software and databases, reagents and consumables for basic and translational research, drug development, clinical diagnostics, biosafety and food safety, and molecular breeding.

Caris Life Sciences
Booth #: 809
www.carislifesciences.com
Caris Life Sciences® is a leading innovator in molecular science focused on fulfilling the promise of precision medicine. Caris Molecular Intelligence®, the company's Comprehensive Genomic Profiling Plus (CGP+) molecular testing service, assesses DNA, RNA and proteins to reveal a molecular blueprint to guide more precise and personalized treatment decisions. To learn more, please visitwww.CarisLifeSciences.com.

CellMax Life
Booth #: 804
www.cellmaxlife.com
CellMax Life is transforming cancer diagnostics with globally affordable non-invasive tests for early cancer detection and management. Our proprietary CTC and NGS technologies enable the most complete tests for hereditary cancer, cancer treatment selection and monitoring, including blood tests for MSI and PD-L1 expression. CellMax Life has 8 patents, 36 pubs, and has successfully commercialized tests in over 20 countries.

CGM LABDAQ
Booth #: 506
www.cgm.com/us
CGM LABDAQ®, from CompuGroup Medical, is a laboratory information system that empowers molecular labs to implement quickly, process with quality, and scale up over time. CGM LABDAQ® supports molecular workflows with plate mapping, reagents, analytics and more. With over one thousand clients in all sizes and specialties, CGM can support your ongoing growth.

Children's Hospital Los Angeles
Booth #: 1029
www.chla.usc.org/pathology-and-laboratory-medicine
CHLA's lab is a CAP/CLIA certified lab. We provide reference testing to hospitals, academic centers and researchers throughout California and the United States, including molecular genetic testing through our Center for Personalized Medicine. Our pathology and laboratory experts incorporate the latest technological advances in laboratory medicine and recruit experts in pediatric pathology.

ChromaCode
Booth #: 327
www.ChromaCode.com
ChromaCode's HDPCR multiplexing technology couples conventional chemistry with propriety software to enable a 3x-5x increase in multiplexing capabilities on commercially available real-time PCR (qPCR) and digital PCR (dPCR) instruments without any hardware changes.

City of Hope Laboratories
Booth #: 1709
www.cityofhope.org/lab-outreach
City of Hope Clinical Laboratory offers an extensive array of testing and diagnostic expertise in a customer-focused program with continuous scientific innovation. Our goal is to provide the community with exceptional care and high quality service. The Laboratory is fully accredited by the College of American Pathologists (CAP) and the State of California.

Cleveland Clinic Laboratories
Booth #: 400
www.clevelandcliniclabs.com
Cleveland Clinic Laboratories is a national reference laboratory based in Cleveland, Ohio, that specializes in anatomic, clinical, and molecular pathology as well as subspecialty consultative services.

Exhibitor Descriptions

ClinGen
Booth #: 805
www.clinicalgenome.org
The Clinical Genome Resource (ClinGen) is an NIH-funded initiative dedicated to identifying clinically relevant genes and variants for use in precision medicine and research.

Clinical Genomics Inc.
Booth #: 606
www.clinicalgenomics.com
Clinical Genomics is a leading provider of colorectal cancer testing and solutions, offering COLVERA®, a new liquid biopsy test identifying methylated circulating tumor DNA in patient's post-treatment for early detection of residual and recurrent cancer, and InSure® ONE™, a fecal immunochemical test used in screening programs to detect lower GI bleeding in healthy adults.

Clinical Omics
Booth #: 1701
www.clinicalomics.com
Clinical OMICs is the leading source of practical insights for pathologists, clinicians, researchers, and scientists working to translate important findings across the broad range of "omics" technologies to deliver on the promise of molecular and precision medicine for patients.

Codexis Inc
Booth #: 1626
www.codexis.com
Codexis is a Bay Area biotechnology company, with 15 years' experience and expertise in bioengineering proteins/enzymes for various markets. We develop, produce and manage the outsourcing of our products from our Redwood City, CA, headquarters.

College of American Pathologists
Booth #: 1724
The College of American Pathologists (CAP) provides meaningful connections for better patient care. We partner with laboratories to provide a comprehensive view of the laboratory quality process with insight, knowledge, and peer-based educational coaching. Our resources include proven quality management solutions, including CAP Surveys (proficiency testing) and accreditation, which guide you through every step in your quality improvement journey.

College of American Pathologists Periodicals
Booth #: 306
www.cap.org
The College of American Pathologists offers two monthly publications: CAP TODAY and the Archives of Pathology & Laboratory Medicine. CAP TODAY brings monthly business and medical news in the clinical laboratory. The Archives of Pathology & Laboratory Medicine is one of the best-read journals among pathologists and laboratory directors. Samples are available.

Color Genomics
Booth #: 1906
www.color.com
Color's affordable, clinical-grade genetic tests help people understand their risk for hereditary cancer and hereditary high cholesterol -- knowledge that they and their doctors can use to create personalized health plans. Color tests are physician-ordered and come with free board-certified genetic counseling for clients and healthcare providers.

Congenica
Booth #: 1719
www.congenica.com
Congenica is a leading provider of clinical decision support software and services who have developed the gold-standard platform, Sapientia, for analysis, interpretation and generation of clinically actionable reports on patient derived genomic data. Sapientia's underlying technology was spun out of the pioneering research from the Sanger Institute and the platform continues to evolve by the well-renowned scientific staff and advisers.

COPAN Diagnostics
Booth #: 1404
www.copanusa.com
COPAN's collaborative approach to innovation in pre-analytics has resulted in the original FLOQSwabs™, ESwab™, FecalSwab™, eNAT™, UTM™ and full laboratory automation. COPAN's collection and preservation systems have proven to advance the quality of traditional and contemporary microbiology assays, particularly for molecular applications. Our automation includes specimen processing, smart incubation, digital imaging, and algorithms.

Exhibitor Descriptions

Coriell Institute for Medical Research
Booth #: 1510
www.coriell.org
Coriell Institute is a leading biorepository delivering a diverse range of unique biospecimens. The Institute is committed to the highest standard in cell line quality services, as well as unlocking the promise of induced pluripotent stem cells and their role in disease research and drug discovery. For more information, visit catalog.coriell.org.

Covaris Inc
Booth #: 1624
www.covaris.com
Covaris is the recognized industry leader in NGS, utilizing its patented Adaptive Focused Acoustics® (AFA®) technology for DNA fragmentation. AFA-energetics™ is also used for a wide range of sample preparation applications including FFPE and cfDNA extraction, chromatin shearing, proteomics, epigenomics, cell lysis, and compound management. Please visitwww.covaris.com for more information.

Curetis USA
Booth #: 1512
www.curetisusa.com
NOW FDA APPROVED FOR LOWER RESPIRATORY TRACT INFECTIONS!
Curetis USA is focused on delivering fast, reliable and cost-effective molecular solutions to aid in diagnosing severe infectious diseases. Curetis' Unyvero™ system provides clinicians with rapid and critical information for the early detection of microorganisms and their associated antibiotic resistance markers.
Visit us at www.curetisusa.com to learn more.

DiaCarta
Booth #: 608
www.diacarta.com
DiaCarta is a translational genomics and personalized diagnostics company based in Richmond, California. With over 18,000 square feet dedicated to a GMP-compliant lab space as well as CLIA and ISO 13485 certifications, DiaCarta is changing the landscape of molecular diagnostics.

DiaSorin Molecular
Booth #: 1000
www.molecular.diasorin.com
DiaSorin Molecular LLC manufactures and distributes molecular diagnostic products worldwide helping laboratories to streamline workflow and improve patient management. Our Simplexa® molecular menu includes kits for HSV-1 & 2, Flu A/B & RSV, Group A Strep and C. difficile. Additionally, our menu includes over 50 primer pairs and general purpose molecular reagents.

Edge BioSystems
Booth #: 219
www.edgebio.com
Edge BioSystems manufactures a wide range of Sanger sequencing reagents and consumables to lower your overall cost of sequencing. Our new BrilliantDye™ Terminators, a direct substitute for BigDye® Terminators, and new NimaPOP polymer and running buffer provide you with cost-effective alternatives. Along with our Optima DTR™ products, and 5x Sequencing Dilution Buffer, EdgeBio is the Sanger sequencing reagents company.

EGT-NA
Booth #: 1604
www.egt-biotech.com
Eurogentec, part of Kaneka Corporation, supplies high-quality reagents, kits, specialty products and custom services for genomic and proteomic research. Our IVD Division (ISO 13485 certified and GMP-compliant) provides extensive technical and project support for contract manufacturing of custom GMP oligonucleotides, ASRs and Taq DNA polymerases for Molecular Diagnostic applications use.

ELITechGroup Inc. Molecular Diagnostics
Booth #: 1610
www.elitechgroup.com
ELITechGroup Molecular Diagnostics is showcasing the ELITe InGenius® Sample-to-Result System, an open, flexible and easy to use solution for standardizing complex real-time PCR assay workflows. By combining automated extraction, PCR set up, Thermal Cycling and Results interpretation, the ELITe InGenius provides unprecedented performance and efficiency for ELITechGroup products and laboratory developed procedures.

EntroGen
Booth #: 1400
www.entrogen.com
EntroGen is a Los Angeles-based biotechnology company with a primary focus on molecular diagnostics in the areas of hematology and oncology. EntroGen has a growing commercial portfolio of real-time PCR and NGS based tests, with many of its products being used to guide and monitor targeted therapies for various malignancies.

Exhibitor Descriptions

Enzo
Booth #: 1900
www.enzolifesciences.com
Enzo is a manufacturer of labeling and detection technologies from DNA to whole cell analysis. Enzo's products are backed by innovative technology platforms and a deep patent portfolio. With over 40 year's experience, Enzo continues to provide novel tools to advance your immunology research including proteins, antibodies, small molecules, labeling probes, dyes, and kits.

Epigenomics
Booth #: 910
www.epiprocolon.com
Epigenomics is a molecular diagnostics company focused on blood-based DNA methylation tests for the early cancer detection. Our lead product, Epi proColon, is the only FDA-approved blood-based test for colorectal cancer screening. For the 23 million unscreened patients, you can add Epi proColon to your rt-PCR. Provider and patient design/messaging available to quick-start your marketing outreach efforts.

Eppendorf
Booth #: 513
www.eppendorf.com
Eppendorf is a leading life science company that develops and sells instruments, consumables, and services for liquid-, sample-, and cell handling. Its product range includes pipettes and automated pipetting systems, centrifuges, mixers, spectrometers, thermal cyclers, ultra-low temperature freezers, fermentors, bioreactors, CO2 incubators, shakers, cell manipulation systems and all accompanying consumables.

Exact Diagnostics
Booth #: 906
www.exactdiagnostics.com
Exact Diagnostics is a molecular standards and controls company, utilizing droplet digital PCR for value assignment and sequencing data/information of our standards.

EZLife Bio Inc
Booth #: 1603
www.ezlife.bio
EZLife Bio Inc. is crafting the future of genetic testing. Using the novel EFIRM (electric field induced release and measurement) platform, EZLife's EFIRM method is PCR-free, and DNA extraction free: electrochemical biosensors are used to streamline testing. Only a drop (20 µL) of sample is needed to achieve accurate detection of ctDNA targets. EZLife Bio is simplifying molecular testing!

Fabric Genomics
Booth #: 1606
www.fabricgenomics.com
Fabric Genomics is making precision medicine a reality by facilitating clinical labs, hospital systems, and country-sequencing programs to develop, deploy, and scale genomic testing. Our AI approach to genome interpretation and SOP-based workflows enable rapid generation of physician-ready clinical reports for any genomic test.

Fluidigm
Booth #: 1800
www.fluidigm.com
Fluidigm partners with life science researchers and enterprises to provide simplified workflows for genomics and proteomics applications. Whether your quest is to understand the profiles and functions of single cells or to meet high-throughput data demands of a production-scale laboratory, you'll find a solution at fluidigm.com.

Fluxergy
Booth #: 403
www.fluxergy.com
Fluxergy is developing diagnostic innovations that allow doctors, researchers, and laboratory professionals to make confident decisions in time-critical situations. Fluxergy's flagship product, the Fluxergy Analyzer is an entire laboratory in a single device. Usher in a new era of point-of-care testing.

FORMULATRIX
Booth #: 1702
www.formulatrix.com
FORMULATRIX® collaborates with researchers to simplify the preparation and analysis of proteins and nucleic acids by designing solutions without boundaries and bringing novel cutting-edge technology to the life science industry. We are committed to researchers, their labs, and to the scientific discoveries that will improve the lives of generations to come.

GenePOC
Booth #: 1629
www.genepoc-diagnostics.com
Located in Québec City, Canada, GenePOC develops, produces and commercialises easy-to-use molecular tests to improve the diagnosis of infectious diseases closer to the patient. Based on a unique microfluidic technology, GenePOC PIEs are single-use disposables to be used with the design awarded revogene instrument. Stop by our booth and discover more about our FDA cleared assays!

Exhibitor Descriptions

Genetic Signatures
Booth #: 308
www.geneticsignatures.com
We are the developers of 3base™ technology which is the cornerstone of our EasyScreen™ Pathogen Detection Kits. Our proprietary technology provides hospital and pathology laboratories with the molecular tools to screen for a wide array of infectious pathogens in a rapid high-throughput environment.

GenMark Dx
Booth #: 1501
www.genmarkdx.com
GenMark Diagnostics is a leading provider of multiplex molecular diagnostic solutions designed to enhance patient care, improve key quality metrics, and reduce the total cost-of-care. GenMark's ePlex®: The True Sample-to-Answer Solution™ is designed to optimize laboratory efficiency and address a broad range of infectious disease testing needs, including respiratory, bloodstream, and gastrointestinal infections.

Genomenon, Inc
Booth #: 902
www.genomenon.com
Genomenon's Mastermind Genomic Search Engine enables faster, more comprehensive genomic testing for clinical labs. The world's first and only comprehensive genomic-specific search engine, Mastermind connects DNA profiles to the most impactful scientific genomic research for diagnosing and treating patients. Mastermind has the world's largest collection of medical articles cataloguing genetic relationships between DNA and human diseases, including cancer.

GenomeWeb
Booth #: 508
www.genomeweb.com
GenomeWeb is an independent online news organization based in New York. Since 1997, GenomeWeb has served the global community of scientists, technology professionals, and executives who use and develop the latest advanced tools in molecular biology research and molecular diagnostics.

GenomOncology
Booth #: 1511
www.genomoncology.com
GenomOncology (GO) enables real-time clinical decision making at the point of care for molecular pathology, oncology and cancer informatics teams. GO's solutions for molecular pathologists address the full range of requirements for precision medicine, including Assay Validation and a decision support tool that leads to an integrated and actionable report that also incorporates results from several test modalities (e.g., FISH).

Genoptix
Booth #: 808
www.genoptix.com
Since 1999, Genoptix has provided the vital insights Cancer Care Teams need to achieve the best possible outcome for each and every patient. Our testing services combine data from pathology expertise and next-generation testing into one tailored report for optimizing precision medicine. With over 1.7 million patients served, Genoptix sets a higher standard of quality, from science to service.

Genosity
Booth #: 1408
www.genosity.com
Genosity is a biotechnology company focused on providing tools and services for clinical and research applications of genomics in healthcare space. Our mission is to unlock the power of precision medicine in improving patient care by providing a technology platform to advance genomics and facilitate collaborative research.

GenPath Diagnostics, BioReference Laboratories
Booth #: 1811
www.genpathdiagnostics.com
GenPath is a CAP and CLIA accredited national laboratory whose expertise in cancer diagnostics is unmatched. GenPath continually invests in new technologies for optimal patient management, such as OnkoSight tumor sequencing, hereditary cancer testing, and the 4Kscore® Test. GenPath is a division of BioReference Laboratories, an OPKO Health Company.

Golden Helix, Inc.
Booth #: 1801
www.goldenhelix.com
Golden Helix has been delivering industry-leading bioinformatics solutions for the advancement of life science research and translational medicine since 1998. Our innovative technologies and analytic services empower scientists and healthcare professionals at all levels to derive meaning from the rapidly increasing volumes of genomic data produced from micro-arrays and DNA sequencing.

Guardant Health
Booth #: 405
www.guardanthealth.com
Guardant Health is focused on conquering cancer by using its breakthrough blood-based assays, vast data sets, and advanced analytics. Using both molecular and digital tools, Guardant Health is addressing challenges across the cancer care continuum.. Its first product, the Guardant360 assay, came to market in 2014, and is now the most widely ordered comprehensive liquid biopsy commercially available.

Exhibitor Descriptions

Hamilton Company
Booth #: 318
www.hamiltoncompany.com
Hamilton Company specializes in the development, manufacturing and customization of precision measurement devices, automated liquid handling workstations, sample management systems, and OEM solutions.
Hamilton offers fully automated solutions for sample preparation, drugs of abuse testing, toxicology, pain management testing, next-generation sequencing (NGS), ELISA, and more.

Health Decisions, Inc.
Booth #: 412
www.healthdec.com
Health Decisions is a specialty diagnostics CRO that enables developers to bring new products to market with quality, speed and efficiency. We have successfully conducted studies of a variety of IVDs and LDTs, including studies that resulted in PMA approval, 510(k) clearance or dual 510(k)/CLIA waiver. Health Decisions has extensive operational expertise and site relationships across the therapeutic spectrum.

Hologic
CORPORATE PARTNER
Booth #: 1318
An innovative medical technology company primarily focused on improving women's health and well-being, Hologic enables healthier lives everywhere, every day, with clinical superiority that delivers life-changing diagnostic, detection, surgical and medical aesthetic products rooted in science and driven by technology. Hologic: The Science of Sure in action.

Horizon Discovery
Booth #: 1812
www.horizondiscovery.com
Horizon is a world-leading provider of high quality, cell line-derived Reference Standards.
We provide clinically relevant variants, at different allelic frequencies, in a variety of formats, giving you confidence, consistency and control of your workflow.
Our products are suitable for validation of NGS and PCR-based assays and can help in the development of novel assay technologies.

HTG Molecular
Booth #: 1008
www.htgmolecular.com
HTG is focused on next-generation sequencing based molecular profiling. The company's proprietary HTG EdgeSeq technology and assays automates complex, highly multiplexed molecular profiling from solid and liquid samples, even when limited in amount. HTG's customers use its technology to identify biomarkers important for precision medicine, to understand the clinical relevance of these discoveries, and ultimately to identify treatment options.

iCubate®
Booth #: 309
www.icubate.com
iCubate® (icubate.com) is a molecular diagnostic company with a mission of providing rapid, high performing and affordable assays to microbiology laboratories. iCubate uses novel armPCR technology on an integrated, fully-automated and reliable platform. iCubate's first FDA-cleared assay is for Gram-positive blood cultures and has a robust assay pipeline to meet the clinical needs today and in the future.

Illumina
Booth #: 719
www.illumina.com
Serving customers in the clinical, research, and applied markets, Illumina technology is responsible for generating more than 90% of the world's sequencing data.* Illumina is fueling groundbreaking advancements in oncology, reproductive health, genetic disease, and beyond. By empowering large-scale analysis of genetic variation and function, Illumina is enabling studies that were not imaginable just a few years ago.

IncellDx, Inc
Booth #: 603
www.incelldx.com
IncellDx, Inc. is a single cell diagnostic company committed to advancing Precision Medicine by offering transformative diagnostic and prognostic clinical patient information based on an innovative technology platform that enables simultaneous cell classification and single cell analysis of proteomic and genomic biomarkers.

Exhibitor Descriptions

Integrated DNA Technologies
Booth #: 826
www.idtdna.com
Integrated DNA Technologies (IDT) is the world leader in delivering custom nucleic acid products for life sciences and medical research, serving academic, clinical, biotechnology, pharmaceutical development, and agricultural research communities. IDT product applications include qPCR, gene construction, CRISPR genome editing, next generation sequencing, and functional genomics.

Invivoscribe
Booth #: 1519
Invivoscribe® is an ISO13485 compliant cGMP manufacturer of standardized reagents and bioinformatics software used by LabPMM clinical labs and >700 customers. Products include the FDA-approved LeukoStrat® CDx FLT3 Mutation Assay, RUO, and CE-marked assays for capillary and NGS platforms. Kits, gene panels, and MRD assays (Ig, TCR, FLT3, NPM1) are used to stratify/enroll subjects and track malignancies in clinical trials.

Kashi Clinical Laboratories
Booth #: 222
www.kashilab.com
Kashi Clinical Laboratories is a fully-accredited laboratory that specializes in a range of genomic healthcare services from Bone Marrow Transplants to UA toxicology and genetic testing. We promote well-being and quality of life by delivering the highest standard of laboratory work because we recognize our service as more than a test result.

KimanTech
Booth #: 1707
www.kimantech.com
KimanTech is a developer of novel laboratory sample processing systems. The Alluvia(TM) System is being debuted for dilution and transfer of PCR products into multiple secondary wells, and subsequent loading into disposable electrophoresis gels. The system interfaces with standard equipment and consumables and all transfer steps are continuously contained. Several applications demonstrating advantages of multiplex nested PCR are being presented.

KMC Systems
Booth #: 218
www.kmcsystems.com
KMC Systems partners with leading instrument companies to successfully bring complex molecular diagnostic instrumentation to market. As an engineering and manufacturing firm, KMC has expertise in full hardware, software and electrical design, chemistry integration, thermal analysis & control, robotics, optics, fluidics, precision automation, complex assembly, integration and testing. Visit KMCSystems.com

LabWare Inc.
Booth #: 425
www.labware.com
LabWare is recognized as a global leader in providing enterprise-scale Laboratory Information Management Systems (LIMS) and ELN solutions. Our Enterprise Laboratory Platform combines the award-winning LabWare LIMS™ solution with LabWare ELN™, a comprehensive Electronic Laboratory Notebook application, enabling laboratories to quickly respond to changing business needs, optimize compliance, improve quality, increase productivity and reduce costs.

Leica Biosystems
Booth #: 1726
www.leicabiosystems.com
Leica Biosystems (LeicaBiosystems.com) is a cancer diagnostics company and a global leader in workflow solutions, offering the most comprehensive portfolio from biopsy to diagnosis. Our mission of "Advancing Cancer Diagnostics, Improving Lives" is at the heart of our corporate culture. Our easy-to-use and consistently reliable offerings help improve workflow efficiency and diagnostic confidence.

LexaGene
Booth #: 1700
www.lexagene.com
LexaGene is a biotechnology company developing a fully automated pathogen detection platform for use at the site of sample collection, which offers unprecedented ease-of-use, sensitivity, and breadth of pathogen detection. LexaGene's technology aims to transform the way organizations prevent and diagnose disease in multi-billion dollar markets such as food safety, veterinary diagnostics, and more.

Loxo Oncology
CORPORATE PARTNER
Booth #: 119
www.loxooncology.com
Loxo Oncology is dedicated to developing highly-selective medicines for patients with genomically defined cancers. Our pipeline is focused on purpose-built medicines designed to selectively and potently inhibit oncogenic drivers of cancer. We believe that this approach, combined with tumor genomic testing to identify appropriate patients, will allow us to develop medicines that deliver on the promise of precision medicine.

Exhibitor Descriptions

Luminex
CORPORATE PARTNER
Booth #: 1419
www.luminexcorp.com
Luminex Corporation is committed to creating innovative, breakthrough solutions to help our customers improve health and advance science worldwide. Our goal is to transform global healthcare and life science research through the development, manufacturing, and marketing of proprietary instruments and assays that deliver cost-effective, rapid results to clinicians and researchers.

Macrogen
Booth #: 1723
www.macrogenlab.com
Macrogen has been the corporate partner of choice on genomic sequencing for many academic and commercial organizations. Our superior quality, cost-effective business model, and customer focused services allowed us to expand and grow into an international organization. Our twenty years of sequencing experience uniquely position us to contribute as a next-generation genomic sequencing service provider.

Maine Molecular Quality Controls, Inc.
Booth #: 905
www.mmqci.com
MMQCI designs and markets unique quality controls for molecular testing for inherited disease, pharmacogenetics and infectious disease. Easy-to-use controls contain multiple targets and can be extracted like patient samples, are non-infectious, stable and provide consistent results. INTROL CF Panel I is the first FDA-cleared quality control for genetic testing. Custom orders are welcome at our cGMP facility in Saco, Maine.

Market Ready Rx
Booth #: 703
www.marketreadyrx.com
Market Ready Rx is a marketing consultancy supporting IVD marketing professionals to execute seamless commercial programs. We support global diagnostic companies with market entry strategic roadmaps, voice-of-the-customer research informing product design or strategy, and execute full commercial launches of molecular tests. We are passionate about the commercial success of our clients and enhancing the quality of patient care.

MedicalLab Management
Booth #: 423
www.MedLabMag.com
MedicalLab Management, a print and digital publication, is a peer-to-peer information source for clinical laboratory management. It provides clinical laboratory managers and directors with unbiased articles, practical, actionable, real-world examples, purchasing research, decision-making processes and new products in the marketplace.

Menarini Silicon Biosystems
Booth #: 1026
www.siliconbiosystems.com
A biotech company with a passion to advance healthcare and personalized medicine with its DEPArray™ system and, the CELLSEARCH® Circulating Tumor Cell System - only clinically validated blood test cleared by the FDA for detecting and enumerating CTCs to help manage patients with metastatic breast, prostate, and colorectal cancers.

Merck
CORPORATE PARTNER
Booth #: 1911
www.merck.com
For more than a century, Merck has been inventing for life, bringing forward medicines and vaccines for many of the world's most challenging diseases. Today, MSD continues to be at the forefront of research to deliver innovative health solutions and advance the prevention and treatment of diseases around the world.

Meridian Bioscience, Inc.
Booth #: 206
www.meridianbioscience.com
Meridian Bioscience is a leading manufacturer of innovative diagnostic tests, purified reagents and biopharmaceutical enabling technologies that help deliver answers. Our products provide accuracy, simplicity and speed for the early diagnosis and treatment of medical conditions, such as C. difficile, Group B Streptococcus, H. pylori, foodborne diseases and respiratory infections.

MetaSystems Group, Inc.
Booth #: 313
www.metasystems.org
MetaSystems is a leading manufacturer of genetic imaging (high throughput) slide scanning systems and high quality DNA FISH probes for clinical laboratories. We offer innovative solutions for automated interphase FISH spot counting with RapidScore technology, TissueFISH and TMA analysis in fluorescence and brightfield, pathology whole slide imaging, metaphase search, and automatic karyotyping.

Exhibitor Descriptions

Mission Bio
Booth #: 705
www.missionbio.com
Mission Bio helps researchers and clinicians unlock single-cell biology to enable the discovery, development, and delivery of precision medicine with Tapestri, the Precision Genomics Platform. With industry-first single-cell DNA analysis capability, Tapestri enables the accelerated detection of genetic heterogeneity within and across cell populations. With Mission Bio, researchers have a highly sensitive, targeted, and customizable solution, moving precision medicine forward.

Molecular health
Booth #: 803
www.Molecularhealth.com
Molecular Health is a computational biomedicine company focused on big-data curation, integration and analytics to enable precision medicine. Its technology Dataome™ integrates clinico-molecular drug and disease databases to generate novel and actionable insights for stakeholders across the healthcare ecosystem. Molecular Health's scientific and commercial teams are based in Heidelberg, Germany and Boston, MA in the US.

MRC-Holland
Booth #: 1623
www.mlpa.com
Multiplex Ligation-dependent Probe Amplification (MLPA®) is the gold standard for DNA copy number quantification and is used worldwide to study both hereditary disorders and tumours. MLPA can also be applied to investigate the methylation status of DNA sequences. Up to 60 DNA sequences can be analysed in a single reaction in high-throughput manner, with results being available within 24h.

MRIGlobal
Booth #: 824
www.mriglobal.org
MRIGlobal's diagnostic services span across all stages of clinical diagnostic product development process, from assay, method and platform development, through clinical validation, including FDA 510(k), Pre-Market Notification (PMN), and CE Mark Submissions. These services provide a turn-key, outsourcing solution for commercial companies and government agencies to accelerate product development, moving product into the market and capabilities into the field.

NanoString Technologies
CORPORATE PARTNER
Booth #: 819
www.nanostring.com
NanoString is a life sciences company focused on cancer research and diagnostics. Proven in over 2,000 peer-reviewed publications, the nCounter® System can combine with 3D biology™ technology to create novel biomarkers. The Prosigna® Breast Cancer Prognostic Gene Signature Assay provides FDA 510(k)-cleared diagnostics with the nCounter Dx Analysis System.

Natera
Booth #: 1413
www.natera.com
Natera is a worldwide genetic testing and diagnostics company that's changing how doctors and patients manage genetic disease. Natera develops and commercializes non-invasive methods for analyzing DNA. We operate a CAP-accredited laboratory certified under the Clinical Laboratory Improvement Amendments (CLIA) in San Carlos, California, and offer a host of proprietary genetic testing services.

NeoGenomics
Booth #: 1728
www.neogenomics.com
NeoGenomics Laboratories is comprised of a national team of experts in developing and delivering laboratory diagnostic and clinical trial services with a focus in cancer. We save lives by improving patient CARE through Communication, Accuracy, Reliability, and Efficiency. We work to solve the medical, scientific, and logistical challenges of making precise diagnoses, aiding in bringing new therapies to market.

NeuMoDx Molecular
Booth #: 627
www.neumodx.com
NeuMoDx Molecular has developed a novel molecular diagnostic system for clinical laboratory customers. The Company's patented, 'sample-to-result' platforms offer market-leading ease of use, true continuous, random access, with rapid turnaround time with low total cost. Initial test menu is focused on women's health and quantitative tests for blood born viruses along with the ability to efficiently perform Laboratory Developed Tests.

Exhibitor Descriptions

New England Biolabs
Booth #: 1706
www.neb.com
For over 40 years, New England Biolabs, Inc. has led the industry in the supply of molecular biology reagents. In addition to products for genomics, NEB continues to expand its offering into areas related to PCR and qPCR, gene expression, sample preparation for next gen sequencing, synthetic biology, glycobiology, genome editing, epigenetics and RNA analysis.

NIH Genetic Testing Registry / MedGen / ClinVar
Booth #: 1810
www.ncbi.nlm.nih.gov/guide/genetics-medicine/
The National Center for Biotechnology Information (NCBI) at NIH advances science and health by providing access to biomedical and genomic information. NCBI will be highlighting their resources for medical genetics including GeneReviews™, MedGen, The NIH Genetic Testing Registry (GTR) and ClinVar, as well as important human variation tools and resources such as dbSNP, dbGaP, OSIRIS and SPDI.

N-of-One, Inc
Booth #: 1405
www.n-of-one.com
N-of-One is the leader in identifying patient-specific therapeutic options for precision medicine in oncology by leveraging its proprietary knowledgebase and its team of oncologists and Ph.D. scientists to integrate molecular data from multiple tests. N-of-One solutions has standardized and accelerated genomic clinical interpretation and molecular decision support for leading hospital systems, cancer centers, and commercial labs around the world.

Norgen Biotek Corp.
Booth #: 409
www.norgenbiotek.com
Norgen Biotek provides researchers with innovative kits for Sample Collection/ Preservation [cf-DNA from Blood/Plasma/Serum, Urine, Saliva], Molecular Diagnostics (MDx), and microRNA/RNA/DNA/Protein Purification. Our kits feature exceptional quality, ease-of-use and sensitivity. Norgen Biotek provides researchers worldwide with the tools to address any sample preservation and preparation challenge.

Omega Bio-tek
Booth #: 1502
www.omegabiotek.com
Since its founding in 1998, Omega Bio-tek has been at the forefront of nucleic acid purification by offering products for clinical and basic research, biotechnology, and agricultural applications. DNA and RNA extraction is the first step for so many downstream analyses, and our goal is to offer high quality products to help improve your workflows.

Omni International
Booth #: 407
www.omni-inc.com
Omni International's homogenizers have been a laboratory staple for over 60 years. Omni sets the industry standard with a commitment to outstanding design, performance and a uniquely diversified solution-based product line. We offer a complete portfolio of homogenizers and reagents for sample preparation in pharmaceutical, life science, biotechnology, agricultural, microbiology and chemical research laboratories.

Opentrons Labworks
Booth #: 1807
opentrons.com
We make robots for biologists. Our mission is to provide the scientific community with a common platform to easily share protocols and reproduce each other's results. Our robots automate experiments that would otherwise be done by hand, allowing our community to spend more time pursuing answers to some of the 21st century's most important questions.

OpGen, Inc.
Booth #: 1409
www.opgen.com
OpGen is harnessing the power of informatics and genomic analysis to protect patients against infectious diseases in hospitals and healthcare networks. Our Acuitas® rapid test (RUO) and Acuitas Lighthouse® (RUO) detect and track resistance to 9 antibiotic classes. Our FDA-cleared AdvandDx QuickFISH® products rapidly identify pathogens in positive blood cultures.

Oracle Health Sciences
Booth #: 827
www.oracle.com/industries/health-sciences/index.html
Oracle Health Sciences, a recognized leader in the health sciences industry, breaks down barriers and opens new pathways to unify people and processes by providing healthcare solutions that support data management and analysis to positively impact outcomes and reduce costs.

Exhibitor Descriptions

Ovation.io
Booth #: 529
www.ovation.io
Ovation is a scientific data company transforming the way a LIMS supports the critical functions of molecular diagnostic laboratories because it is not enough to just track samples and manage workflows. To be successful, labs have to attend to physicians, patients, sales teams, lab operations, revenue cycle management, and business performance. Ovation is here to help with all of it.

Oxford Gene Technology
Booth #: 1507
www.ogt.com
Oxford Gene Technology (OGT) provides world-class genetics research solutions to leading institutions worldwide. Our integrated product portfolio enables accurate identification of variation to facilitate understanding of genetic disease. Visit the OGT booth to learn more about our focus on customised solutions and high-quality Cytocell® FISH probes, SureSeq™ next generation sequencing (NGS) panels, and CytoSure™ array products.

Paragon Genomics
Booth #: 1126
www.paragongenomics.com
Paragon Genomics specializes in sample preparation for targeted next-generation sequencing (NGS). It develops and commercializes reagents and molecular diagnostic tools designed for genomics analysis of clinically-relevant samples. Our CleanPlex® and CleanPlex® UMI NGS panels combine superior primer design and innovative library preparation chemistry to eliminate non-specific PCR products, incorporate molecular identifiers, and achieve superior target enrichment and variant detection performance.

PerkinElmer
Booth #: 1401
www.perkinelmer.com
PerkinElmer, Inc. offers automated solutions which improve the efficiency of genomic and proteomics workflows. With our nucleic acid isolation technology, liquid handlers, library preparation kits, automated nucleic acid and protein analysis systems, and solutions for single cell genetic analysis, PerkinElmer is eliminating the challenges associated with genomic and proteomic analysis.

Personal Genome Diagnostics
Booth #: 1327
www.pgdx.com
Personal Genome Diagnostics (PGDx) is empowering the fight against cancer by unlocking actionable information from the genome. We are committed to developing a portfolio of regulated tissue-based and liquid biopsy genomic products for laboratories worldwide.

Philips
Booth #: 519
www.philips.com/genomics
Philips Intellispace Precision Medicine empowers next NGS workflow. Our comprehensive and customizable architecture provides the pathologist, oncologist and bioinformatician with intuitive workflow tools to help rapidly sift through the information to make informed decisions. Access cases whenever and wherever, select and prioritize treatment recommendations for molecular tumor boards. Focus on patient care while we provide a secure and scalable infrastructure.

Phosphorus
Booth #: 1605
www.phosphorus.com
Phosphorus is a computational genomics company with the vision to create a world where every healthcare decision is optimized with genomics. Phosphorus offers clinical genetic tests in a range of clinical areas from its CLIA-certified laboratory. We also develop powerful software that enables labs around the world to deliver the most advanced genetic tests.

PierianDx
Booth #: 800
www.pieriandx.com
At PierianDx we empower progressive health institutions and diagnostic laboratories to build world-class precision medicine programs. Our industry-leading clinical genomics technologies and expertise deliver the most integrated, trusted, and collaborative approach across the clinical care spectrum. From genomic sequencing and biomedical informatics in the laboratory to reporting and decision at the patient's bedside, we drive the clinical adoption of genomics.

Exhibitor Descriptions

Pillar Biosciences
Booth #: 503
www.pillar-biosciences.com
Pillar Biosciences develops and manufactures targeted next-generation sequencing (NGS)-based assays and software for today's high-throughput specialty NGS laboratories. The simplicity and elegance of SLIMamp NGS target enrichment technology provides a streamlined and efficient workflow with minimal sample input in a single reaction well. Coupled with Pillar's proprietary PiVAT™ bioinformatics analysis pipeline, SLIMamp™ produces highly sensitive and consistently reproducible results.

PreAnalytiX
Booth #: 707
www.PREANALYTIX.COM
PreAnalytiX, a joint venture between BD and QIAGEN, develops, manufactures and sells integrated and standardized systems for collection, stabilization and purification of RNA, microRNA, DNA and cfDNA from blood, bone marrow and tissue specimens. The company provides a broad array of manual and automated products.

Precision System Science USA, Inc.
Booth #: 325
www.pss.co.jp/english
Precision System Science, for over 20 years an OEM leader in automated, self-contained instrumentation meeting the rigors of today's IVD market. We provide clinical diagnostic laboratories with solutions for extraction, purification as well as versatile sample-to-answer instruments. Complete systems with user friendly software interface, consumables and reagents. Simple, fast solutions for improving the healthcare around the world.

Primerdesign
Booth #: 527
www.primerdesign.co.uk
Primerdesign, part of the Novacyt Group, provides the World's broadest menu of >600 genesig real-time PCR detection kits, and fast development of new assays on demand. Additionally, we design, validate and manufacture genesigPLEX multiplex qPCR kits, Precision qPCR Master Mixes, controls, and oasig lyophilised qPCR reagents. Our qPCR instrument, the genesig q16, is small, portable and easy to use.

Promega Corporation
Booth #: 319
www.promega.com
Promega is a global leader in providing solutions and technical support to life scientists in academic, industrial and government settings. Promega products are used by life scientists asking fundamental questions about biological processes and those applying their knowledge to diagnose and treat diseases, discover new therapeutics, and use genetics and DNA testing for human identification. Visit us at booth 319!

Psyche Systems Corporation
Booth #: 1919
www.psychesystems.com
Psyche Systems Corporation is a private, profit-driven software company that, since 1976, has been offering best-of-breed products designed to meet the specific needs of Anatomic Pathology, Cytology, Histology, Dermatopathology, GI, Toxicology, Microbiology and Molecular laboratories. Psyche works closely with existing customers during product development to ensure that the highest quality products and services are delivered at a competitive price.

Q² Solutions | EA Genomics
Booth #: 725
www.q2labsolutions.com
Q2 Solutions is a global clinical trials laboratory services organization that helps biopharmaceutical, medical device and diagnostics customers improve human health through innovation that transforms science and data into actionable medical insights. With comprehensive end-to-end anatomic pathology and genomic services to support drug discovery, precision medicine and clinical development, we provide solutions for smarter clinical studies.

QIAGEN
CORPORATE PARTNER
Booth #: 607
www.qiagen.com
QIAGEN is known to more than 500,000 customers around the world for our innovation, engagement, integrity, quality and passion. Our mission is to deliver Sample to Insight solutions enabling QIAGEN customers to unlock valuable molecular insights faster, better and more efficiently – from the raw biological sample to the final interpreted result.

Exhibitor Descriptions

Quest Diagnostics
Booth #: 201
www.questdiagnostics.com
Quest Diagnostics empowers people to take action to improve health outcomes. Derived from the world's largest database of clinical lab results, our diagnostic insights reveal new avenues to identify and treat disease, inspire healthy behaviors and improve health care management. We serve half of the physicians and hospitals in the United States.

Quidel Corporation
Booth #: 913
www.quidel.com
Quidel® is committed to enhancing health and well-being through innovative diagnostic solutions. Assays use lateral-flow, direct fluorescent antibody, molecular and other technologies to improve patient outcomes and give economic benefits to healthcare providers. Leading brands - QuickVue®, Solana®, Sofia®, Triage®, Virena®, AmpliVue®, Lyra®, Thyretain®, InflammaDry®, AdenoPlus®, MicroVue™, and D3® Direct Detection™, aid in detection and diagnosis of critical diseases/conditions.

Qvella Corporation
Booth #: 424
www.qvella.com
At Qvella we are committed to Defining Rapid™ in microbiological testing. The FAST-ID™ BSI Panel is designed to detect the presence of over 80 sepsis-causing bacterial and candida pathogens in less than 60 minutes. Our technology has the potential to enable tailoring initial antimicrobial therapy for the management of sepsis earlier. Join us for a hands-on demonstration.

RareCyte, Inc
Booth #: 1128
www.rarecyte.com
RareCyte provides integrated instruments, consumables, and staining kits that enable rare cell analysis. Our open, end to end platform makes rare cell detection, image analysis, and cell retrieval a reality for your lab. Count, characterize, phenotype, and perform omics analyses on rare cells for a variety of applications.

ResearchDx
Booth #: 602
www.researchdx.com
ResearchDx is the leading provider of Diagnostic Development Services. We build diagnostic assays for a multitude of applications, including Biomarker Discovery, Laboratory Developed Testing (LDT's), and in vitro Diagnostic Devices (IVD's). Additionally, we perform a wide array of diagnostic testing in our CAP/CLIA accredited and GxP compliant facility.

Rheonix
Booth #: 1525
www.rheonix.com
The Rheonix Encompass Optimum™ workstation is a fully automated liquid handling system that now integrates and automates nucleic acid purification and NGS library preparation directly from raw samples, enabling labs to begin same shift sequencing with very limited technician time. Rheonix workstations, technologies, and multiplexed sample-to-answer molecular assays are used throughout the world in clinical, food safety and brewing industries.

Roche
CORPORATE PARTNER
Booth #: 1001
www.roche.com
Roche provides innovative PCR- and next generation sequencing-based solutions that empower your lab. Our diverse portfolio for clinical diagnostics and research increases lab productivity and enables faster, more confident decisions in virology, infectious diseases, STIs/women's health, genomics, and oncology. Visit booth 1001 to learn more about these and other solutions for nucleic acid extraction and CLIA-waived PCR testing for POC.

SCC Soft Computer
Booth #: 1601
www.softcomputer.com
The world's largest LIS vendor, SCC Soft Computer is at the forefront of laboratory, genetics, outreach, and blood services information systems software development. Committed to supplying innovative technologies, SCC designs, develops, and delivers full suites of integrated laboratory and genetics information management system solutions for hospitals, large IDNs, and laboratories.

Seegene Technologies Inc.
Booth #: 1506
www.seegene.com
Seegene Technologies uses proprietary multiplex PCR technologies, DPO™, TOCE™ and MuDT™, to provide 25-plex semi-quantitative and 10-plex quantitative real-time PCR assay solutions. With unparalleled sensitivity and specificity, our catalog and custom assays simultaneously detect an unprecedented number of targets including infectious viruses, bacteria and other relevant pathogens and mutations.

Exhibitor Descriptions

Sekisui Diagnostics, LLC
Booth #: 402
www.sekisuidiagnostics.com
For over 35 years Sekisui Diagnostics has been committed to providing innovative medical diagnostics to physicians and laboratories. We develop, manufacture, and supply billions of tests each year to the global healthcare market. Our product lines include clinical chemistry and coagulation systems and reagents, point-of-care molecular, rapid tests and immunoassay system as well as enzymes and specialty biochemicals

SeraCare Life Sciences
Booth #: 1412
www.seracare.com
SeraCare is a leading partner to global IVD manufacturers and clinical testing laboratories. Our expanding portfolio of QC products and technologies for genomic diagnostics includes reference materials for tumor sequencing, germline mutation testing, NIPT, and infectious disease. Today, SeraCare is advancing data integration with products for better QC and regulatory compliance.

Siemens Healthineers
Booth #: 727
www.siemens.com/healthineers
Siemens Healthcare helps providers meet clinical, operational and financial challenges. A global leader in medical imaging, laboratory diagnostics and IT, we understand the entire care continuum—from prevention and early detection to diagnosis and treatment.

SmartGene
Booth #: 1625
www.smartgene.com
SmartGene is a bio-informatics application service provider (ASP), delivering secure, integrated, software solutions for the analysis, interpretation and data management of genetic sequences. SmartGene provides specific medical, clinical research and epidemiological surveillance applications, focusing on the rapid identification, typing and analysis of pathogens.

SoftGenetics
Booth #: 1713
www.softgenetics.com
Featuring NextGENe software for analysis of all NGS data now including CNV, HLA, and Somatic Analysis modules; Geneticist Assistant NGS Workbench, a knowledge base for the archiving of variant predictions; GeneMarker with new Fragile X module; ChimerMarker, Chimerism Analysis software and Mutation Surveyor software for the analysis of Sanger Sequences. SoftGenetics is providing no cost trials of each program.

SOPHiA GENETICS
Booth #: 713
www.sophiagenetics.com
SOPHiA GENETICS has developed SOPHiA AI, a universal technology for genomic data analysis. By enabling the rapid adoption of genomic testing worldwide, turning data into actionable insights, and sharing knowledge through its community, SOPHiA GENETICS is democratizing Data-Driven Medicine sophiagenetics.com

Staff Icons- A Biotech Recruitment Company
Booth #: 213
www.stafficons.com
Staff Icons specializes matching top talented professionals with companies globally. We do full cycle recruiting in the biotech/pharmaceutical/ healthcare industry & service direct hire, short & long term staffing requirements. We represent both clients & candidates & we recruit for the following disciplines: Cytogenetics Molecular Genetics Histology Flow Cytometry Microbiology Engineering AND many more specialties.

Standard Molecular, Inc.
Booth #: 1708
www.standardmolecular.com
Standard Molecular delivers to oncologists, through our enterprise scale genomic information platform, actionable clinical data that complements and supports the diagnosis and treatment of patients fighting cancer

STEMCELL Technologies Inc
Booth #: 1305
www.stemcell.com
EasySep™ by STEMCELL Technologies allows fast and easy immunomagnetic isolation of cells to increase assay sensitivity. The EasySep™ RBC Depletion Kit isolates leukocytes by depleting red blood cells (RBC) from samples without lysis, centrifugation or other pre-processing steps that can alter cellular function or interfere with downstream applications. EasySep™ can be automated using RoboSep™, the fully automated cell separation platform.

STRATEC Biomedical AG
Booth #: 1027
www.stratec.com
STRATEC Molecular, part of the STRATEC group, offers products for manual and automated DNA and RNA extraction from different samples starting with sample collection, stabilization and purification. At the exhibition STRATEC Molecular will present a suite of innovative products which enable to process liquid biopsy and FFPE samples for a standardized and robost workflow, especially in the areas of oncology.

Exhibitor Descriptions

Streck
Booth #: 312
www.streck.com
Streck is an industry leader in the development of laboratory products including kits for the detection of Gram-negative antibiotic resistance genes, a hot-start enzyme specifically formulated for rapid thermal cycling conditions and a line of unique hybrid plastic blood collection tubes that standardize methods for sample collection, stabilization and transport.

Sunquest Information Systems
Booth #: 1818
sunquestinfo.com
Sunquest Information Systems provides enterprise laboratory information solutions for clinical, anatomic and molecular pathology, enabling interoperability for world-class labs, including multi-site, multi-disciplinary support for complex anatomic, molecular and genetic testing. Since 1979, Sunquest has helped over 1,700 labs and healthcare organizations across the world enhance efficiency, patient care and financial results. For more information go towww.sunquestinfo.com

Swift Biosciences
Booth #: 1301
www.swiftbiosci.com
Swift Biosciences develops novel library preparation solutions for emerging applications based on next-generation sequencing. We are an energetic, highly innovative company that delivers better tools to accelerate genomic discoveries and to deliver superior science. Our products are designed to help customers analyze samples faster, easier, and with greater sensitivity and accuracy. Learn how Swift NGS workflows can revolutionize your lab.

T2 Biosystems
Booth #: 1313
www.t2biosystems.com
T2 Biosystems offers the T2Sepsis Solution™ for the direct-from-whole-blood identification of organisms causing bloodstream infections in 3 to 5 hours. With the faster availability of more accurate results independent of blood culture, hospitals are realizing shortened ICU and hospital lengths of stay and reduced use of unnecessary antimicrobials.

TAI Diagnostics
Booth #: 1908
www.taidiagnostics.com
TAI Diagnostics, Inc. is a leading biotechnology company focused on providing non-invasive and highly sensitive diagnostic tests to monitor the health of transplanted organs in patients who have received solid organ transplants.

Takara Bio USA
Booth #: 1602
www.takarabio.com
Takara Bio USA, Inc., (TBUSA; formerly Clontech Laboratories, Inc.) is a wholly owned subsidiary of Takara Bio Inc. that manufactures and distributes kits, reagents, and instruments for life sciences research applications, including NGS, PCR, gene delivery, genome editing, stem cell research, nucleic acid and protein purification, and automated sample preparation.

Tangen Biosciences, Inc.
Booth #: 904
www.tangenbio.com
Tangen Biosciences, Inc., is a Connecticut-based biotechnology company developing isothermal molecular diagnostics for the direct detection of pathogens from blood, sputum, saliva, and other readily accessible body fluids. Initial assays include fungal and bacterial pathogen detection from blood. Tangen is beginning to conduct clinical studies for eventual FDA clearance in 2019. Additional applications in R&D will move to clinical studies.

Tecan
Booth #: 1500
www.tecan.com
Tecan is a leading global provider of automated laboratory instruments and solutions. Our systems and components help people working in clinical diagnostics, basic and translational research and drug discovery bring their science to life.

Tempus
Booth #: 1822
www.tempus.com
At Tempus, we are on a mission to redefine how genomic data is used in a clinical setting. Our goal is for each patient to benefit from the treatment of others who came before by providing physicians with tools that learn as we gather more data. ajsjasajsald aldnasna adnald adnad alkdna sladnd alda daldna dalnda kaldal adlnadladalda danda aldkad alda

The Jackson Laboratory
Booth #: 301
www.jax.org
The Jackson Laboratory (www.jax.org) is an independent, nonprofit biomedical research institution with a National Cancer Institute-designated Cancer Center, with facilities in Bar Harbor, ME, Sacramento, CA and a new genomic medicine institute in Farmington, CT. Its mission is to discover precise genomic solutions for disease, empowering the global biomedical community in the shared quest to improve human health.

Exhibitor Descriptions

The Pathologist
Booth #: 322
The Pathologist empowers those involved in disease diagnostics to speak up for themselves and their profession. We give them a platform to discuss their work, its advances and advantages, and the changing face of medicine and medical education. By presenting our content in a conversational tone we make pathology accessible to laboratory medicine professionals everywhere. You can register at thepathologist.com/register

Thermo Fisher Scientific
CORPORATE PARTNER
Booth #: 919
www.thermofisher.com
Thermo Fisher Scientific is the world leader in serving science. Sharing the pursuit to enable personalized care and improve life, we help clinical laboratories uncover meaningful genetic information with trusted Applied Biosystems™ and Ion Torrent™ research and diagnostic systems, service and support for next-generation sequencing, real-time PCR and Sanger sequencing.

TRANSLATIONAL SOFTWARE
Booth #: 522
www.translationalsoftware.com
Translational Software provides genomic decision support solutions to advance precision medicine. The company's proprietary knowledge-base of rigorously curated, evidence-based pharmacogenetics content provides comprehensive genetic test reporting, actionable decision support and critical alerts to guide patient treatment. TSI's platform can be tailored to a variety of clinical specialties including cardiovascular, psychiatric, pain, internal medicine, and geriatrics.

TriCore Reference Laboratories
Booth #: 404
www.tricore.org
TriCore is more than a lab; we are the Southwest's clinical information company offering expertise in population health management and targeted intervention. We play an active role in New Mexico's community by providing quality laboratory services, innovative research technologies, and a data repository that enables actionable clinical knowledge.

TriLink BioTechnologies
Booth #: 1503
www.trilinkbiotech.com
TriLink BioTechnologies specializes in the synthesis and production of complex and highly-modified nucleic acids for research, diagnostics, pre-clinical therapeutic and pharmaceutical applications. Since 1996, TriLink has been developing and manufacturing custom oligonucleotides, mRNA transcripts, nucleotides, PCR & RT-PCR reagents, NGS library preparation kits, bioconjugation, custom chemistry, and other small molecules.

Twist Bioscience
Booth #: 1303
www.twistbioscience.com
At Twist Bioscience, we work in service of people who are changing the world for the better. In fields such as medicine, agriculture, industrial chemicals and data storage, our unique silicon-based DNA Synthesis Platform provides precision at a scale that is otherwise unavailable to our customers.

Variantyx Inc
Booth #: 811
www.variantyx.com
Variantyx provides Variantyx Unity™ whole genome testing services to clinicians for collaborative diagnosis of rare inherited disorders. We also enable hospitals and labs to profitably expand their test menu with validated genomic diagnostic solutions using our automated Genomic Intelligence® platform for simplified NGS data analysis, interpretation and clinical reporting.

Vela Diagnositics
CORPORATE PARTNER
Booth #: 619
www.veladx.com
Vela Diagnostics is a worldwide supplier of integrated life sciences and diagnostic solutions that help provide customers with valuable molecular information. From scientists striving to make research advances to technicians reporting the information necessary to identify, monitor and treat diseases, Vela is a trusted partner for research and clinical laboratories around the globe.

Exhibitor Descriptions

Volpi USA
Booth #: 1504
www.volpi-group.us
Volpi focuses on the design, development, and manufacturing of customized optical measurement modules for IVD and Life Sciences, As a one-stop shop, Volpi offers on module level all services along the entire value chain, thus reducing complexity for B2B customers. Our facilities are ISO 13485 certified, set highest standards in quality and have cleanrooms in manufacturing.

XCR Diagnostics, Inc.
Booth #: 509
www.xcrdiagnostics.com
We have developed patented amplification technology known as Xtreme Chain Reaction (XCR®) – an extremely fast and efficient nucleic acid amplification methodology. Combining our XCR DNA/RNA amplification chemistry with an affordable, single-use consumable and cost effective diagnostic instrument for worldwide near patient diagnostic testing, we can significantly improve the quality of human lives.

XIFIN, Inc.
Booth #: 524
www.xifin.com
XIFIN is a health information technology company that leverages diagnostic information to improve the quality and economics of healthcare. The XIFIN technology platform facilitates connectivity and workflow automation for accessing and sharing clinical and financial diagnostic data, linking healthcare stakeholders in the delivery and reimbursement of care.

ZeptoMetrix Corporation
Booth #: 810
www.zeptometrix.com
ZeptoMetrix™ is a leader in the design, development, and delivery of innovative, quality solutions to the Infectious Disease Diagnostics Market. Our expertise and abilities in Molecular Diagnostics, including External Quality Controls, Verification Panels, Proficiency Panels, Customized and OEM Products/Services has set the industry standard for performance and reliability and made us the preferred choice for independent 3rd party QC materials.

Zymo Research Corp.
Booth #: 829
www.zymoresearch.com
Since 1994, Zymo Research has been offering innovative, quality and easy-to-use tools for nucleic acid purification and Epigenetics research. Our innovative products and services simplify complex processes while at the same time improving results. All of our products are supported by unparalleled customer support. Zymo Research – Innovation. Quality. Simplicity.

Innovation Spotlight Stages

Now in its 3rd year, this crowd favorite returns with a new and creative format. This year's Innovation Spotlight Stages will continue to provide a unique opportunity for exhibiting companies to showcase products or services, but this year the Stages will also feature cutting-edge AMP produced content. The TWO Innovation Spotlight Stages are located in the main cross aisle on the right and left corners of the Exhibit Hall. Innovation Spotlight presentations are open to all Meeting Registrants and seating will be on a first come, first served basis. Schedules for this program are available in your meeting bag, on the Mobile App or on signage located outside the seating of each Stage.

NOTES

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