Join world-renowned leaders at The Liquid Biopsy Summit to share case studies, breakthroughs, and solutions that support and enhance research, and discuss process and technology refinements that will impact the future of precision medicine.
Short Courses

Please visit the conference website for more details.

PRE-CONFERENCE LUNCH SHORT COURSE
WEDNESDAY, JUNE 20 | 10:00 AM - 1:00 PM

SC1: Innovative Technologies for Imaging CTC Phenotype, Drug Response and Metastasis
This course covers advanced methods for isolating CTCs and imaging with high-resolution microscopy methods. Application of these techniques to live patient CTCs will be presented to both characterize CTC phenotype and drug responses. Whole-animal imaging techniques to trace CTC metastasis in mice and zebrafish will also be discussed.

Topics to be covered:
• Viable CTC capture technologies and propagation strategies
• Existing microscopy and flow-based imaging technologies
• Emerging confocal, light sheet and superresolution techniques
• Imaging CTC metastasis in zebrafish and mice
• Connecting CTC characteristics with patient outcome and drug response

Who should attend this course:
Oncologists, cancer researchers, pharmaceutical researchers, people involved in clinical trial design and patient selection for clinical trials (responsive vs. non-responsive population identification).

Instructor:
Stuart S. Martin, PhD, Professor of Physiology, Marlene and Stewart Greenebaum NCI Comprehensive Cancer Center, University of Maryland School of Medicine

1:00 - 1:30 pm Lunch Provided for Short Course Participants

PRE-CONFERENCE LUNCH SHORT COURSE
WEDNESDAY, JUNE 20 | 1:30 - 4:30 PM

SC2: Making the Most of Clinical Samples: Understanding the Methods of Standardized Blood Collection, Handling, and Processing to Optimize Circulating Biomarker Analysis
For liquid biopsies, optimal conditions for blood collection and sample preparation are critical to enabling accurate analysis. This short course discusses factors that are important to consider in reducing pre-analytical variability in the collection and handling of blood samples, cell-free DNA isolation and quality analysis. Through a case study reviewing the experiences in workflow optimization from a dedicated hands-on biomarker laboratory, some best practices and tips will be shared on implementing a standardized process.

Topics to be covered:
• Implementing appropriate blood collection and sample handling
• Understanding plasma preparation and cell-free DNA isolation options
• Choosing an appropriate cell-free DNA quality control/quantification method
• Maintaining standards and consistency with an eye for future clinical implementation

Who should attend this course:
Researchers and lab managers from pharma, biotech and academia working in fields such as molecular oncology, cancer biomarkers, molecular diagnostics, translational research, genetics, and research and development.

Instructors:
Rebecca (Becky) Suttmann, MS, Senior Scientific Researcher, Pharmacodynamic & Biomarker/Oncology, Genentech, Inc.
Phoebe Loh, Global Product Manager PreAnalytiX, Sample Technologies, QIAGEN

1:00 - 1:30 Lunch Provided for Short Course Participants

WEDNESDAY, JUNE 20

9:30 am Morning Coffee and Short Course Registration

10:00 am - 1:00 pm Pre-Conference Lunch Short Course
SC1: Innovative Technologies for Imaging CTC Phenotype, Drug Response and Metastasis

1:00 - 1:30 Lunch Provided for Short Course Participants

1:30 - 4:30 pm Pre-Conference Lunch Short Course
SC2: Making the Most of Clinical Samples: Understanding the Methods of Standardized Blood Collection, Handling, and Processing to Optimize Circulating Biomarker Analysis

4:00 Main Conference Registration

4:45 Organizer's Welcome
Mary Ann Brown, Executive Director, Conferences, Cambridge Healthtech Institute

4:50 Chairperson's Opening Remarks
Jamie Platt, PhD, MB(ASCP), Founder & Managing Director, BRIDGenomics, LLC

5:00 Keynote Presentation to be Announced

5:45 PANEL DISCUSSION: Enhancing the Science and Clinical Utility of Liquid Biopsies
All agree that the potential of liquid biopsies will allow for detection of disease faster, diagnosis of disease earlier, and tracking of disease progression and treatment response more efficiently. This panel discusses progress in:
• Collection, preservation, and storage of biosamples
• Advances in detection technologies
• Determining reference materials and standards
• Developing safe and effective blood profiling diagnostics
• Creating an open database of liquid biopsy results

Moderator: Jamie Platt, PhD, MB(ASCP), Founder & Managing Director, BRIDGenomics, LLC
Panelists to be Announced

6:30 Welcome Reception in the Exhibit Hall with Poster Viewing

7:30 Close of Day
Isolating & Analyzing CTCs

2:00 Chairperson's Remarks
Richard J. Cote, MD, FRCPA, FCAP, Professor and Joseph R. Coulter Jr. Chair, Department of Pathology & Laboratory Medicine, University of Miami Miller School of Medicine

2:05 Rapid Analysis of Drug Responses in Live Patient CTCs Using Microfluidic Cell Tethering
Stuart S. Martin, PhD, Professor of Physiology, Marlene and Stewart Greenebaum NCI Comprehensive Cancer Center, University of Maryland School of Medicine

We have developed a microfluidic cell tethering device that secures CTCs for imaging and drug testing, while preserving the cytoskeletal dynamics of non-adherent cells. Using this tethering device, we can test the drug responses of patient tumor cells in less than one hour. Combined with emerging technologies that isolate live CTCs, microfluidic cell tethering provides a platform to rapidly test patient tumor cells and optimize treatments that reduce metastatic potential.

2:35 Droplet Biopsy Microarrays Based on Nanosurfaces: A New Method to Detect and Isolate Invasive Circulating Tumor Cells Based on Negative Selection
Balaji Panchapakesan, PhD, Associate Professor, Mechanical Engineering, Worcester Polytechnic Institute

We present a new method to isolate circulating tumor cells based on negative selection with high rate of recovery and high purity. The droplet biopsy chip with nanosurfaces enables easier isolation of CTCs with depletion of contaminating leukocytes. This is a new paradigm in isolation of CTC and to capture invasive CTCs that do not express any biomarkers.

3:05 Sponsored Presentation (Opportunity Available)

3:35 Refreshment Break in the Exhibit Hall with Poster Viewing

4:15 Noninvasive Liquid Biopsies: Culturing Cancer Cells from Urine and Blood CTCs for Precision Medicine
Xuefeng Liu, MD, Professor, Pathology, Georgetown University

We discuss: 1) culturing cancer cells from the urine of bladder cancer patients or circulating tumor cells (CTCs) from blood using conditional reprogramming (CR) technique, 2) characterization of CR cells at cellular and genetic levels, 3) therapeutic response of urine CR cells and tumor CR cells. This rapid, efficient and noninvasive method for generating cultures of bladder cancer cells and CTCs can be used potentially for high-throughput drug screening, predicting patient clinical responses, and for monitoring tumor initiation and recurrence.

4:45 Start-Up Spotlights
Explore emerging liquid biopsy platforms as presented by start-up companies. This is an unparalleled opportunity to compare and contrast promising platforms that are pushing the promise of personalized medicine.

Liquid Biopsy Testing Using 2PG’s MoM
Trevor J. Morin, PhD, CSO, Two Pore Guys, Inc.

2PG developed a handheld diagnostic device that allows the detection of any molecule of interest, including nucleic acids, proteins, metabolites, drugs, and small molecules. The technology employs solid-state nanopores that allow single molecule counting using purely electrical sensing, obviating the need for optics, chemistries, or electrochemical sensors. This presentation demonstrates how 2PG used the device to quantitate circulating tumor DNA from cancer positive clinical blood samples. Additional Start-Ups to be Announced

(If you are interested in being featured in the Summit’s Start-Up Spotlights, please contact Rod Eymael at 781-247-6286 or reymael@healthtech.com)

5:15 FEATURED PRESENTATION: Capture, Interrogation, Imaging, Automated Analysis and Culture of CTC: Strategies for the Development of a Transformative Tool to Understand Cancer
Richard J. Cote, MD, FRCPA, FCAP, Professor and Joseph R. Coulter Jr. Chair, Department of Pathology & Laboratory Medicine, University of Miami Miller School of Medicine

We present an integrated platform that combines all the steps of the liquid biopsy testing process, from sample capture and isolation to interrogation, imaging, and culture of CTCs. This platform enables the detection and characterization of CTCs in real-time, providing a comprehensive understanding of the cancer landscape at the individual level.

4:45 Refreshment Break in the Exhibit Hall with Poster Viewing
Circulating tumor cells (CTCs) are important clinical biomarkers for cancer diagnosis, prognosis and target identification. Recently, we have described the presence of circulating Cancer Associated Fibroblasts (cCAF), which may have great importance. We discuss integrated platforms for capture and novel imaging of CTC/cCAF, efforts to automate the analysis of CTC/cCAF images, and live CTC capture, which could lead to expansion, propagation, and creation of an important new biospecimen for cancer discovery.

FRIDAY, JUNE 22

7:30 am Breakfast Breakout Discussion Groups
Chew over continental breakfast and provocative discussion topics with your peers. These are moderated discussions with brainstorming and interactive problem-solving, allowing conference participants from diverse backgrounds to exchange ideas and experiences and develop future collaborations around a focused topic. Please visit the conference website for more details.

Exploring Other Applications, Biofluids & Biomarkers

9:00 Chairperson’s Remarks
James Hicks, PhD, Professor, Department of Biological Sciences, University of Southern California

9:05 Presentation to be Announced

9:35 Validation of Aqueous Humor cfDNA as a Predictor of Tumor Response in Retinoblastoma
Jesse Berry, MD, Assistant Professor, Ophthalmology, University of Southern California
Retinoblastoma is a pediatric eye cancer initiated by a RB1 tumor suppressor gene mutation. Investigating the RB1 pathway has provided insight into the mechanism of tumorigenesis for virtually all human cancers. However, leveraging this knowledge for retinoblastoma has been elusive because we cannot biopsy the tumor for risk of extracocular spread. We recently overcame this barrier to biopsy by using the aqueous humor as a liquid biopsy.

10:05 Sponsored Presentation (Opportunity Available)

10:20 Coffee Break in the Exhibit Hall with Last Chance for Poster Viewing

11:00 EV Phosphoproteomics as the New Source of Biomarkers for Disease Diagnostics
Anton Iliuk, PhD, President and CTO, Tymora Analytical Operations
Recent discoveries in the field of extracellular vesicles (EVs) show promise in circumventing the problems plaguing current liquid biopsy methods, while retaining all the potential benefits. The vast majority of current EV studies, however, focus on microRNA and DNA, with virtually nothing reported on EV Phosphoproteomics as the New Source of Biomarkers for Disease Diagnostics.

11:30 FEATURED PRESENTATION: Tumor-Derived Exosome Detection
Lydia Sohn, PhD, Professor, Mechanical Engineering, University of California, Berkeley

12:15 pm Session Break

12:30 Luncheon Presentation (Sponsorship Opportunity Available) or Enjoy Lunch on Your Own

1:00 Session Break

1:30 Chairperson’s Remarks
Rebecca (Becky) Suttmann, MS, Senior Scientific Researcher, Pharmacodynamic & Biomarker/Oncology, Genentech, Inc.

1:35 FEATURED PRESENTATION: Circulating Tumor DNA Methylation Markers for Diagnosis and Prognosis of Hepatocellular Carcinoma
Kang Zhang, MD, PhD, Professor, Human Genetics and Nano-Engineering, Founding Director, Institute for Genomic Medicine, University of California, San Diego
We identified an HCC-specific methylation marker by comparing HCC tissue and normal blood leukocytes and showed that methylation profiles of HCC tumor DNA and matched plasma ctDNA are highly correlated. We constructed a diagnostic prediction model with high diagnostic specificity and sensitivity and was highly correlated with tumor burden, treatment response, and stage. Additionally, we constructed a prognostic prediction model that effectively predicted prognosis and survival.

2:15 Can ctDNA Complement Mammography to Improve Breast Cancer Diagnosis?
Margaret Van Meter, MD, Director, Breast Oncology, Intermountain Healthcare
Using the recently launched CREST study as a framework for discussion, I review existing data on the prognostic and predictive value of ctDNA in breast cancer and discuss the rationale for exploring its use in the screening setting. I address analytic issues related to use of ctDNA in breast cancer screening as well as in the setting of known breast cancer.

2:45 Real-Time Application of ctDNA Testing for Patients with Gastrointestinal Malignancies
Pashtoon M. Kasi, MD, Assistant Professor, Oncology, College of Medicine, Mayo Clinic

3:15 Detecting DNA Methylation Patterns in Patient Plasma to Improve Cancer Diagnostics
Brendan Miller, Research Fellow, National Human Genome Research Institute, National Institutes of Health
We designed a technique that can detect rare methylated DNA fragments in plasma indicative of a tumor for a fraction of the cost, in less time, and using less material than current sequencing approaches and applied this on small amounts of plasma from patients with ovarian cancer. We correctly classified 65% of the samples as being positive for cancer using our threshold based on the background found in healthy individuals.

3:45 Real-World Results of Liquid Biopsy in Advanced/Metastatic Solid Tumors and Potential “Clinical Actionability”
Glen J. Weiss, MD, MBA, Clinical Associate Professor, Medicine, University of Arizona College of Medicine-Phoenix
When tumor tissue is exhausted, a new tumor biopsy is contraindicated, and/or there has been intervening targeted therapy, the minimally invasive liquid biopsy serves a unique niche in the clinic. Here we report initial liquid biopsy results from patients with advanced/metastatic solid tumors and review results for potential “clinical actionability”. This lecture highlights some of the current data on biomarkers being used and evaluated for treatment selection and monitoring along with cost implications.

4:15 Conference Wrap-Up
Mary Ann Brown, Executive Director, Conferences, Cambridge Healthtech Institute

4:30 Close of Conference
Podium Presentations — Available within Main Agenda!
Showcase your solutions to a guaranteed, targeted audience through a 15- or 30-minute presentation during a specific conference program, breakfast, lunch, or separate from the main agenda within a pre-conference workshop. Package includes exhibit space, on-site branding, and access to cooperative marketing efforts by CHI. For the luncheon option, lunches are delivered to attendees who are already seated in the main session room. Presentations will sell out quickly, so sign on early to secure your talk!

Invitation-Only VIP Dinner/Hospitality Suite
Sponsors will select their top prospects from the conference pre-registration list for an evening of networking at the hotel or at a choice local venue. CHI will extend invitations and deliver prospects, helping you to make the most out of this invaluable opportunity. Evening will be customized according to sponsor’s objectives (i.e.: Purely social, Focus group, Reception style, Plated dinner with specific conversation focus).

Exhibit
Exhibitors will enjoy facilitated networking opportunities with qualified delegates. Speak face-to-face with prospective clients and showcase your latest product, service, or solution.

One-on-One Meetings
Select your top prospects from the pre-conference registration list. CHI will reach out to your prospects and arrange the meeting for you. A minimum number of meetings will be guaranteed, depending on your marketing objectives and needs. A very limited number of these packages will be sold.

Additional branding and promotional opportunities are available, including:
- Conference Tote Bags
- Literature Distribution (Tote Bag Insert or Chair Drop)
- Badge Lanyards
- Padfolios
- Program Guide Advertisement

Looking for additional ways to drive leads to your sales team?
CHI’s Lead Generation Programs will help you obtain more targeted, quality leads throughout the year. We will mine our database of 800,000+ life science professionals to your specific needs. We guarantee a minimum of 100 leads per program! Opportunities include:
- Whitepapers
- Webinars
- Custom Market Research Surveys
- Podcasts

For sponsorship and exhibit information, please contact:
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**HOTEL & TRAVEL INFORMATION**

**CONFERENCE VENUE & HOTEL:**
Hotel Kabuki
1625 Post Street
San Francisco, CA 94115
Phone: 415-922-3200

Reservations:
Go to the travel page of LiquidBiopsySummit.com
Discounted Room Rate: $225 s/d
Discounted Room Rate Cut-off Date: May 23, 2018

Go to the travel page of LiquidBiopsySummit.com for additional information.