Organized by Cambridge Healthtech Institute

Highlights from these Companies and Organizations

• CDC
• European Commission
• DKFZ (German Cancer Research Center)
• Harvard Medical School
• New Jersey Medical School
• NDA Analytics
• QuantiBact, Inc.
• LGC Ltd.
• Lawrence Livermore National Lab

Learn about

• Enhanced Multiplicity
• Assays of High Selectivity and Sensitivity
• Clinical Application of PCR
• Digital PCR
• Issues about Reference Genes
• Powerful RT-PCR Technologies

Premier Sponsors:

Luminex

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Plenary Keynotes

Wednesday, February 13 8:00 – 9:40 am
Personalized Oncology – Fulfilling the Promise for Today’s Patients

In honor of the 20th anniversary of the Molecular Medicine Tri-conference, CHI and Cancer Commons will present a plenary panel on Personalized Oncology. Innovations such as NGS and The Cancer Genome Atlas have revealed that cancer comprises hundreds of distinct molecular diseases. Early clinical successes with targeted therapies suggest that cancer might one day be managed as a chronic disease using an evolving cocktail of drugs. Representing all five conference channels, Diagnostics, Therapeutics, Clinical, Informatics, and Cancer, a panel of experts will lead a highly interactive exploration of what it will take to realize this vision in the near future.

Moderator: Marty Tenenbaum, Ph.D., Founder and Chairman, Cancer Commons; Prominent AI Researcher; Cancer Survivor

Tony Blau, M.D., Professor, Department of Medicine/Hematology and Adjunct Professor, Department of Genome Sciences, University of Washington; Attending Physician, Seattle Cancer Care Alliance; Co-Director, Institute for Stem Cell and Regenerative Medicine, University of Washington and the Program for Stem and Progenitor Cell Biology at the UW/FHCRC Cancer Consortium; Founder and Scientific Officer, Partners in Personal Oncology

Sarah Greene, Executive Director, Cancer Commons

Laurence Marton, M.D., Adjunct Professor, Department of Laboratory Medicine, University of California San Francisco; former Dean of Medicine, University of Wisconsin

Jane Reese-Coulbourne, MS, ChE, Executive Director, Reagan-Udall Foundation for the FDA; former Board Chair, Lung Cancer Alliance; Cancer Survivor

Anil Sethi, CEO, Pinch Bio; HL7 Pioneer and Health Informatics Entrepreneur

Joshua Stuart, Ph.D., Associate Professor, Department of Biomolecular Engineering, University of California Santa Cruz

Thursday, February 14 8:00 – 9:40 am
Plenary Keynote Panel: Emerging Technologies & Industry Perspectives

This session features a series of presentations on emerging and hot technologies in diagnostics, drug discovery & development, informatics, and oncology. Interactive Q&A discussion with the audience will be included.

Moderator: To be Announced

Gregory Parekh, Ph.D., CEO, Biocartis

Kevin Bobofchak, Ph.D., Pathway Studio Product Manager, Elsevier

Jeremy Bridge-Cook, Ph.D., Senior Vice President, Research & Development, Luminex Corporation

Panelist to be Announced, Remedy Informatics

Harry Glorikian, Managing Partner, Scientia Advisors, LLC

Lynn R. Zieske, Ph.D., Vice President, Commercial Solutions, Singulex, Inc.

Corporate Sponsors:
Conference Programs:
Feb 13-15

**Diagnostics Channel**
Molecular Diagnostics
Personalized Diagnostics
Cancer Molecular Markers
Circulating Tumor Cells
Digital Pathology – NEW
Companion Diagnostics – NEW

**Therapeutics Channel**
Mastering Medicinal Chemistry
Cancer Biologics
Clinical and Translational Science

**Clinical Channel**
Oncology Clinical Trials
Clinical and Translational Science
Clinical Sequencing – NEW

**Informatics Channel**
Bioinformatics in the Genome Era
Integrated R&D Informatics and Knowledge Management

**Cancer Channel**
Cancer Molecular Markers
Circulating Tumor Cells
Predictive Pre-Clinical Models in Oncology – NEW
Oncology Clinical Trials
Cancer Biologics

Symposia*:
Feb 11-12
Targeting Cancer Stem Cells
Genomics in Medicine – NEW
Point-of-Care Diagnostics
**Quantitative Real-Time PCR – NEW**
Next Generation Pathology

Partnering Forum*:
Feb 11-12
Emerging Molecular Diagnostics

Short Courses*:
Feb 12
1:30-4:30pm
SC1 Identification & Characterization of Cancer Stem Cells
SC2 Commercialization Boot Camp: Manual for Success in the Molecular Diagnostics Marketplace
SC3 NGS Data and the Cloud
SC4 Best Practices in Personalized and Translational Medicine
SC5 Latest Advances in Molecular Pathology
SC6 Regulatory Approval of a Therapeutic & Companion Diagnostic: Nuts & Bolts
SC7 PCR Part I: qPCR in Molecular Diagnostics
SC8 Data Visualization
SC9 Methods for Synthesis & Screening of Macro cyclic Compound Libraries

5:00-8:00pm (Dinner)
SC10 PCR Part II: Digital PCR Applications and Advances
SC11 Sample Prep and Biorepositories for Cancer Research
SC12 Next-Generation Sequencing in Molecular Pathology: Challenges and Applications
SC13 Strategies for Companion Diagnostics Development
SC14 Patient-Derived Cancer Tissue Xenograph Models
SC15 Microfluidics Technology and Market Trends
SC16 Open Cloud & Data Science

*Separate reg required with a la carte pricing

**Co-located Event**
BayBio
Entrepreneur & Investor Roundtables
February 14, 2013, 4:00-7:00 pm
Connect with corporate venture, angel investors and VCs
www.baybiouroundtables.com

**TRI-CON All Access Package**
Get the best 5-day value! Our All Access Packages is a convenient, cost-effective way to attend each aspect of Molecular Med TRI-CON 2013. Package includes access to 1 Symposium or Partnering Forum, 2 Short Courses and 1 Conference Program.
MONDAY, FEBRUARY 11

7:30 am Registration and Morning Coffee

8:25 Chairperson’s Opening Remarks

Assays of Extraordinarily High Selectivity and Sensitivity

8:30 Anchor Primers for the Detection of Extremely Rare Sequence Variants
Fred Russell Kramer, Ph.D., Professor, Department of Microbiology and Molecular Genetics, Public Health Research Institute, New Jersey Medical School

9:00 Sensitive Platform for FUS-CHOP Transcripts Detection in Human Liposarcoma
Nitin S Patil, Ph.D., Scientist, Joint Unit-Molecular Oncology of Solid Tumors, German Cancer Research Center (DKFZ)

We describe a method using RT-PCR to identify and differentiate the fusion transcripts formed in the t(12;16)(p13;p11) chromosomal translocation. This was achieved using transcript individualized primers/probes, designed to detect specifically different variants in both frozen and FFPE tissues.

9:30 Quantification of RNA Degradation and its Use for Correct Quantification of RNA Transcript Number
Alexander Morley, M.D., Professor, Head, Minimal Residual Disease Group, Haematology & Genetic Pathology, Flinders University

We developed a simple PCR-based method for quantification of degradation and using the result to obtain the true level of mRNA transcripts in a sample. Compared to electrophoretic methods this is quantitative, more sensitive, quicker, cheaper and informative over a broader range of degradation.

10:00 Coffee Break with Exhibit and Poster Viewing

10:30 Technical Considerations for Diagnostic RT-QPCR
Chaminda Selgado, Ph.D., Head of Department, CMC Bioassay & Genomics, NDA-Analyitcs

This is a high level overview of the stages and issues associated with developing a RT-QPCR based diagnostic assay/ platform. The areas will cover sample storage, nucleic acid purification, reverse transcription strategies, real-time chemistry, platform choice, consumables, and analysis considerations.

11:00 Harmonized Quantification of the BCR-ABL Transcripts using Certified Reference Materials
Philippe Corbisier, Ph.D., Scientific Project Manager, Reference Material Unit, European Commission

For the first time DNA material has been certified for its absolute copy number at levels of 10 copies /µL. This material will allow to harmonize the quantification of BCR-ABL transcripts and allow a reliable diagnostic of chronic myeloid leukemia.

11:30 Democratization of Molecular Diagnostics: Bringing Simplified Multiplex Real Time PCR Assays to a Hospital Near You

Scott C. Johnson, Ph.D., Vice President, Product Development & Manufacturing, Luminex Corporation

The latest developments of Luminex’s upcoming open-platform sample-to-answer molecular diagnostic system will be discussed, including how a clear focus on end-user needs will enable this technology to bring Molecular Dx capabilities to more hospitals and labs than before.

12:00 pm Absolute DNA Copy Number Without Standards
John SantaLucia, Ph.D., CEO & President, DNA Software, Inc.

Assays of Enhanced Multiplicity

1:25 Chairperson’s Remarks

1:30 Highly Divergent Gene Families are Efficiently Amplified Using Low-Concentration Initiator Primers
Kenneth E. Pierce, Ph.D., Senior Research Scientist, Department of Biology, Brandeis University

Detecting sequences of divergent bacterial or viral genes can be challenging. We demonstrate consistent amplification of each subfamily of the CTX-M antibiotic resistance genes using low concentration initiator primers (i Primers) in combination with a single pair of consensus LATE-PCR primers.

2:00 TOCE: A Technology for Changing the Molecular Diagnostics Paradigm
David L. Dolinger, Ph.D., Executive Vice President, Business Development & Technology Realization, Seegene, Inc.

A new chemistry has been developed to fully exploit real-time PCR in high multiplex analysis. This chemistry provides the ability to detect multiple targets in a single fluorescence channel. TOCE is a highly specific and versatile chemistry that greatly expands the capabilities of currently installed widely-used real-time platforms.

2:30 New Developments in Detection of Rare Mutations Using Real Time COLD-PCR and DiSsCeT Technology
G. Mike Makrigiorgos, Ph.D., Director, Biophysics Laboratory and Medical Physics Division, Dana Farber Cancer Institute, Harvard Medical School

Multiplex detection of low-level mutant alleles in the presence of wild-type DNA is very useful e.g. for cancer, prenatal diagnosis and infectious diseases. We present new technologies, DiSsCeT and COLD-PCR that, when combined lead to detection of traces of mutations in cancer and circulating DNA.

3:00 Refreshment Break with Exhibit and Poster Viewing

3:30 Sloppy Molecular Beacon®: A New Paradigm in Rapid Pathogen Identification and Molecular Drug Susceptibility Testing
Soumitesh Chakravorty, Ph.D., Instructor, Center for Emerging Pathogens, NJMS, UMDNJ

Sloppy molecular beacons are mis-match tolerant fluorescent DNA probes which can identify a wide range of DNA sequences...
by generating probe-target hybrid “Tm signatures”. This approach enables rapid and definitive identification of bacterial pathogens and MDR and XDR tuberculosis.

**Digital PCR**

4:00 Considerations for Using Digital PCR as a Diagnostics Tool
Alexandra S. Whale, Ph.D., Researcher, LGC Ltd.

dPCR offers the potential to revolutionize molecular diagnostics by improving technical reproducibility and analytical sensitivity, all using an unambiguous digital output. We are defining dPCR efficacy to provide guidelines for using this approach in order to facilitate maximum diagnostic impact.

4:30 Digital PCR Capabilities vs. Cost
Reginald Beer, Ph.D., Medical Diagnostics Initiative Leader, Center for Micro and Nanotechnologies, Lawrence Livermore National Laboratories

Digital PCR has shown promise in tumor and metastasis detection, copy number variation, and absolute quantitation, but it is still widely misunderstood, expensive, and dependent on the prerequisite amplification. In this talk we discuss costs and benefits of digital PCR.

5:00 Breakout Discussions (See Web for Details)
6:00 Close of Day

TUESDAY, FEBRUARY 12

8:00 am Morning Coffee

CASE STUDIES

8:25 Chairperson’s Remarks

8:30 Detection of Bacterial and Fungal Pathogens Using Novel Platform Molecular Diagnostics
Target Technologies
Terry Smith, Ph.D., Professor and Vice President for Research, Natural Sciences, National University of Ireland Galway

Detection and identification of bacterial and fungal pathogens using quantitative real time PCR assays provide a rapid, sensitive and specific alternative to traditional infectious disease diagnostic test methods. The Molecular Diagnostics Research Group (MDRG) at NUI Galway, Ireland, have identified, exemplified and patented a suite of novel molecular targets for microorganism identification.

Using the molecular targets identified, including the ssrA (Riboseq), rps 7 (MycoSEQ) and LepA (RiboTech) gene targets, a number of nucleic acid tests (NAT) for the sensitive and specific identification of bacterial and fungal pathogens of clinical significance have been developed. While numerous assays for organisms from a range of clinical fields have been developed, this presentation will outline real-time PCR –based assays for the organisms associated with hospital acquired and respiratory tract infections, including for example: Pseudomonas aeruginosa; Klebsiella pneumonia; Enterobacter aerogenes; Bordetella pertussis; Staphylococcus aureus; Candida species; and Aspergillus species.

9:00 Next-Generation PCR
Uffe Vest Schneider, M.D., Ph.D., CSO, Quantibact A/S

9:30 Enhancing Genetic Analysis Through Droplet Digital PCR
Yann Jouvenot, Ph.D., Staff Scientist, Bio-Rad Laboratories

10:00 Coffee Break with Exhibit and Poster Viewing

10:30 Intraoperative PCR for Detection of Metastatic Head and Neck Cancer
Robert L. Ferris, M.D., Ph.D., FACS, Professor and Chief, Division of Head and Neck Surgery; Associate Director, Translational Research; Co-Leader, Cancer, Immunology Program, University of Pittsburgh Cancer Institute

This outlines the selection of relevant tumor gene markers, design and validation of their concordance using PCR with standard pathologic detection of metastatic carcinoma in regional lymph nodes, and the potential clinical application of PCR for nodal assessment within an intraoperative time frame.

11:00 Application of Taqman Array Cards (TAC) for Multipathogen Detection in Clinical Specimens
Jonas Winchell, Ph.D., Laboratory Chief, Pneumonia Response and Surveillance Laboratory, Division of Bacterial Diseases, Respiratory Diseases Branch, Centers for Disease Control and Prevention (CDC)

TAC is a microfluidic, RT-PCR multipathogen detection technology which the CDC used to rapidly screen for potential etiologies of unexplained respiratory disease outbreaks. CDC is spearheading a variety of studies designed to assess the utility of this technology in both domestic and international settings.

11:30 Droplet Digital PCR (ddPCR) as a Highly Sensitive Method for Copy Number Measurement in Cancer
Hatice Duchess, Ph.D., Clinical Molecular Genetics Fellow, Harvard Medical School & Brigham and Women’s Hospital; Laboratory for Molecular Medicine; Partners Healthcare Center for Personalized Genetic Medicine

We have validated ddPCR as a highly sensitive and accurate copy number estimation method in a CLIA-certified environment at Laboratory for Molecular Medicine. The data has been produced using DNA from formalin fixed paraffin embedded tissue of a variety of different cancer types, originating from cell lines or primary tumors, and compared with data acquired by FISH, MLPA and aCGH. Stepwise validation process, covering 12 target and 3 reference loci, and the data will be shared with the audience.

12:00 pm Close of Symposium

Recommended Programs:

Main Conference
- Molecular Diagnostics
- Digital Pathology
- Personalized Diagnostics

Short Courses
- PCR Part 1: qPCR in Molecular Diagnostics
- PCR Part 2: Digital PCR Applications and Advances
Hotel Information

Reserve your hotel and save $100 off your conference registration*  

*You must book your reservation under the Tri-Conference room block for a minimum of 4 nights at the Marriott or the Intercontinental Hotel. One discount per hotel room.

Conference Venue:  
The Moscone North Convention Center  
747 Howard Street  
San Francisco, CA 94103  
www.moscone.com

Host Hotel:  
San Francisco Marriott Marquis  
55 Fourth Street  
San Francisco, CA 94103  
(T) 415-896-1600  
Reservations: 888-575-8934  
Discounted Group Rate: $229 s/d  
* Cutoff Date: January 14, 2013  
* Room Rate includes complimentary internet access in your guestroom

Additional Recommended Hotel:  
InterContinental San Francisco Hotel  
888 Howard Street  
San Francisco, CA 94103  
(T) 415-616-6500  
Discounted Group Rate: $235 s/d  
Cut Off Date: January 14, 2013

Sponsorship & Exhibit Opportunities

CHI offers comprehensive sponsorship packages which include presentation opportunities, exhibit space and branding, as well as the use of the pre and post-show delegate lists. Signing on early will allow you to maximize exposure to hard-to-reach decision makers.

Breakfast & Luncheon Presentations
Opportunities may include a 15 or 30-minute podium presentation during the main agenda. Boxed lunches are delivered into the main session room, which guarantees audience attendance and participation. Packages include: exhibit space, on-site branding, and more.

Invitation-Only VIP Dinner/Private Receptions
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. Evening will be customized according to sponsor’s objectives.

Exhibit
Exhibitors will enjoy facilitated networking opportunities with 3,000 highly-targeted delegates at the overall event. Speak face-to-face with prospective clients and showcase your latest product, service, or solution.

Looking for additional ways to drive leads to your sales team? CHI can help!
We offer clients numerous options for custom lead generation programs to address their marketing and sales needs, including:
• Live Webinars  
• White Papers  
• Market Surveys  
• Podcasts and More!

For sponsorship & exhibit information, please contact:
Companies A-K  
Jon Stroup, Manager, Business Development  
781-972-5483 • jstroup@healthtech.com

Companies L-Z  
Joseph Vacca, Manager, Business Development  
781-972-5431 • jvacca@healthtech.com

Please visit TriConference.com to make your reservations online or call the hotel directly to reserve your sleeping accommodations. You will need to identify yourself as a Molecular Med Tri-Con attendee to receive the discounted room rate with the host hotel. Reservations made after the cut-off date or after the group room block has been filled (whichever comes first) will be accepted on a space- and rate-availability basis. Rooms are limited, so please book early.
**Pricing and Registration Information**

**TRI-CON ALL ACCESS PACKAGE- BEST VALUE! (FEB 11-15)**

<table>
<thead>
<tr>
<th>Includes 1 Symposium or Partnering Forum, 2 Short Courses, and 1 Conference Program.</th>
<th>Commercial</th>
<th>Academic, Government, Hospital-affiliated</th>
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<tr>
<td>Advance Registration until January 18, 2013</td>
<td>$3250</td>
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**Regular Pricing – A La Carte Options**

**Partnering Forum (Monday, Feb 11 – Tuesday, Feb 12)**

Emerging Molecular Diagnostics $1450

**Symposia (Monday, Feb 11 – Tuesday, Feb 12)**

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<tr>
<th>S1 Targeting Cancer Stem Cells</th>
<th>S2 Genomics in Medicine</th>
<th>S3 Point-of-Care Diagnostics</th>
<th>S4 Quantitative Real-Time PCR</th>
<th>S5 Next Generation Pathology</th>
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**Short Courses (Tuesday, Feb 12)**

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<th>1 Short Course</th>
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**Conference Programs (Wednesday, Feb 13- Friday, Feb 15)**

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**Diagnostics Channel**

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<tr>
<th>P1 Molecular Diagnostics</th>
<th>P2 Personalized Diagnostics</th>
<th>P3 Cancer Molecular Markers</th>
<th>P4 Circulating Tumor Cells</th>
<th>P5 Digital Pathology – NEW</th>
<th>P6 Companion Diagnostics – NEW</th>
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**Therapeutics Channel**

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<th>P7 Mastering Medicinal Chemistry Summit</th>
<th>P9 Cancer Biologics</th>
<th>P11 Clinical and Translational Science</th>
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**Clinical Channel**

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<th>P10 Oncology Clinical Trials</th>
<th>P11 Clinical and Translational Science</th>
<th>P12 Clinical Sequencing – NEW</th>
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**Informatics Channel**

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<th>P13 Bioinformatics</th>
<th>P14 Integrated R&amp;D Informatics &amp; Knowledge Management</th>
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**Cancer Channel**

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<th>P3 Cancer Molecular Markers</th>
<th>P4 Circulating Tumor Cells</th>
<th>P5 Predictive Pre-Clinical Models in Oncology – NEW</th>
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**Conference Discounts**

- Poster ($50 Off) / Alumni (20% Off) / BayBio (20% Off)
  - Alumni and BayBio Discount cannot be combined. Discounts not applicable on Event Short Courses
  - Alumni Discount SAVE 20%. We appreciate your past participation at the Molecular Med TRI-CON. Through loyalty like yours, this event has become a must-attend for senior level decision makers. As a result of your great loyalty, we are pleased to extend this exclusive opportunity to save an additional 20% off the registration rate.
  - Hotel Discount ($100 Off): Reserve your hotel and save $100 OFF your conference registration *you must book your reservation under the Tri-Conference room block for a minimum of 4 nights.

**Poster Submission:** Discount ($50 Off) Dedicated poster sessions for Symposia and Conference Programs. Present your poster at both. **Poster abstracts are due by December 21, 2012.** Once your registration has been fully processed, we will send an email containing a unique link allowing you to submit your poster abstract. If you do not receive your link within 5 business days, please contact jring@healthtech.com.

**CHI reserves the right to publish your poster title and abstract in various marketing materials and products.**

**One poster discount per registration.**

**Register 3 - 4th is Free:** Individuals must register for the same conference or conference combination and submit completed registration form together for discount to apply. Additional discounts are available for multiple attendees from the same organization. For more information on group rates contact David Cunningham at +1-781-972-5472

How to Register: **TriConference.com** reg@healthtech.com • P: 781.972.5400 or Toll-free in the U.S. 888.999.6288

Please use keycode QPC F when registering!