

slas  
2017

INTERNATIONAL  
CONFERENCE & EXHIBITION

**FEB. 4-8** WASHINGTON DC  
**SLAS2017.ORG**

WALTER E. WASHINGTON CONVENTION CENTER



# RESEARCH: THE POSSIBILITIES.

**SHORT COURSES:** February 4-5 | **CONFERENCE:** February 4-8 | **EXHIBITS:** February 6-8

**SLAS2017**

## Conference Preview

Register by **December 19** for advance discounts: **SLAS2017.org**

 #SLAS2017

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# RESEARCH: THE POSSIBILITIES.

**AT SLAS2017**

Life sciences research is evolving at a lightning-fast pace. CRISPR, flow cytometry, cellular biosensors, bioprinting, digital and droplet microfluidics, exploring the dark genome, and physiological-relevant models are but a few of the emerging areas that are changing the landscape on an almost daily basis. Attending **SLAS2017** enlightens you to the latest research, peer perspectives and tools you need to stay ahead of the curve.



**HEAR** lessons learned and best practices from the world's leading life sciences researchers



**SEE** the latest tools and technologies from more than 300 leading providers participating in the SLAS2017 Exhibition



**BOLSTER** your knowledge through an array of peer-selected technical presentations, workshops, Short Courses and scientific posters delivered in the SLAS2017 educational program



**BUILD** an expansive network of peers who can be looked to year-round to provide insight, answers and feedback



**FORTIFY** your career path with education and mentoring opportunities in SLAS Career Connections



**GET INSPIRED** with informative and inspirational keynotes

SLAS2017 is produced by life scientists for life scientists. Don't miss this unique annual opportunity to fast-track your knowledge and professional connections to make yourself a more valuable asset to your organization. See complete event details at **SLAS2017.org**.

# What's New at SLAS2017



## SPECIAL SESSIONS

### *Regenerative Medicine: Next Generation Treatments*

**SESSION CHAIRS:** **G. Sitta Sittampalam, Ph.D.**, National Center for Advancing Translational Sciences, National Institutes of Health; and **Marcie Glicksman Ph.D.**, ORIG3N, Inc.

Regenerative medicine is having a big impact on the future of medicine. Developments in stem cell technology, tissue engineering and molecular biology are pushing the frontiers of medicine by enabling cures through the use of cellular therapies. The next decade will see the rapid development of treatments that will employ human iPS cells, drugs and biologics as substrates for therapies in acute and chronic diseases. In this session, presentations will address recent advances in the generation, standardization, characterization and the mechanistic behavior of stem cells and their applications in regenerative medicine.

### *Whose Responsibility is Research Reproducibility?*

**SESSION CHAIR:** **Lenny Teytelman**, Protocols.io

There is a broad consensus among academic and industry researchers, funders, and other stakeholders that increasing reproducibility of published research is an important goal. However, questions of who should be responsible for validating research results are tricky. This panel features a conversation with both industry and academic perspectives on this challenging issue.

## NEW SHORT COURSES

One new full-day course and four new half-day courses shine an in-depth light on the latest in scientific technology. Offerings include:

- Pharmacology in Drug Discovery and Development: New Lives for Receptors as Drug Targets Through Allosteric and Biased Signaling (full-day)
- Data Analytic Concepts for High-Throughput Screening & Biomarker Applications (half-day)
- An Introduction to Mass Spectrometry and its Applications within Drug Discovery (half-day)
- Introduction to Flow Cytometry (half-day)
- Advanced Flow Cytometry (half-day)

## NEW SPECIAL INTEREST GROUP: ULTRA-HIGH-THROUGHPUT SCREENING (uHTS)

Members of the uHTS SIG will work together to improve the quality of uHTS data, the ease of use of uHTS automation systems and the exchange of best practices to further the initial stages of drug discovery to ultimately help patients. The uHTS SIG convenes for the first time at SLAS2017 as a forum for operators and managers of uHTS systems to present/discuss innovation, case studies and daily operations to build a community of uHTS researchers and professionals.

## TUESDAY NIGHT CELEBRATION AT THE NEWSEUM (SEE PAGE 10)

## KEYNOTE PRESENTATIONS



Monday | February 6  
**Jennifer Lippincott-Schwartz**

Section Chief of the Cell Biology and Metabolism Branch, NICHD, NIH and NIH Distinguished Investigator



Wednesday | February 8  
**Rachel Swaby**

Renowned Author of *Headstrong: 52 Women Who Changed Science—and the World*



# Scientific Program

The SLAS2017 scientific program represents original research, case studies, and innovative technology advancement in the life sciences that will inspire, challenge and accelerate your own research. The program includes 140 podium presentations across seven in-depth tracks, hundreds of posters, and 21 Short Courses. See complete details on [SLAS2017.org](http://SLAS2017.org).

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## ADVANCES IN BIOANALYTICS, BIOMARKERS AND DIAGNOSTICS

Track Chair(s): Dieter Drexler, *Bristol-Myers Squibb* and Melanie Leveridge, *GlaxoSmithKline*

- **High Throughput Label Free Bioanalytical Techniques for Hit Identification and Optimisation**  
Session Chair: Melanie Leveridge, *GlaxoSmithKline*
- **Targeted Biomarker Analysis with Clinical Relevance**  
Session Chair: Dieter Drexler, *Bristol-Myers Squibb*
- **Target Identification After Phenotypic Screens**  
Session Chair: Shaun McLoughlin, *AbbVie*

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## ASSAY DEVELOPMENT AND SCREENING

Track Chair(s): Cathy Tralau-Stewart, *University of California, San Francisco* and Edward Ainscow, *Carrick Therapeutics*

- **Phenotypic, Model Organism and High-Content Screening Assays**  
Session Chair: Susanne Heynen-Genel, *Sanford Burnham Prebys Medical Discovery Institute*
- **Biochemical and Biophysical Screening Assays**  
Session Chair: Razvan Nutiu, *Genomics Institute of the Novartis Research Foundation*
- **Cellular Biosensors and Genome Editing in Screening Assay Design**  
Session Chair: Ralph Garippa, *Sloan Kettering*
- **Assay Platforms for Biologics**  
Session Chair: Rob Howes, *MedImmune*
- **Screening the Undruggable**  
Session Chair: John Lazo, *University of Virginia*
- **Rational Screen Design**  
Session Chair: Edward Ainscow, *Carrick Therapeutics*

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## AUTOMATION AND HIGH-THROUGHPUT TECHNOLOGIES

Track Chair(s): Craig Schulz, *Amgen* and Taosheng Chen, *St. Jude Children's Research Hospital*

- **High-Content and High-Throughput Automation**  
Session Chair: Louis Scampavia, *Scripps*
- **Screening Automation: Modular Systems vs. Highly Integrated Systems**  
Session Chair: Paul Anderson, *Genomics Institute of the Novartis Research Foundation*
- **Automating Phenotypic and Target Based Discovery using Parallel Automated Approaches**  
Session Chair: Robin Felder, *University of Virginia*
- **Using Physiologically-Relevant Models for Automated Screens**  
Session Chair: Shane Horman, *Genomics Institute of the Novartis Research Foundation*
- **Automating Novel Analytical Tools for PKA, Drug-Drug Combination and Synergy Assays, Drug Repurposing**  
Session Chair: Wei Zheng, *National Institutes of Health*
- **In-House Automation: Devices and Software Developed Internally**  
Session Chair: Rob Keyser, *Amgen*



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## CELLULAR TECHNOLOGIES

Track Chairs: John Doench, *The Broad Institute* and Benjamin Haley, *Genentech*

- **Advances in Genome Editing Technologies**  
Session Chair: Gregory Davis, *MilliporeSigma*
- **Development of Cellular Models for Phenotypic Screening**  
Session Chair: Joel Klappenbach, *Merck*
- **Genetic Screens for Target Discovery and Validation**  
Session Chair: Lou Staudt, *NIH*

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## DATA ANALYSIS AND INFORMATICS

Track Chairs: Lenny Teytelman, *Protocols.io* and Margaret DiFilippo, *Dotmatics*

- **Informatics for Translational Medicine**  
Session Chair: Rajarshi Guha, *NCATS*
- **The Challenges and Benefits of Collaboration**  
Session Chair: Farida Kopti, *Merck & Co. Inc.*
- **Rethinking Research Workflow and Utilizing Data to Improve Reproducibility**  
Session Chair: Tim Gardner, *Ryffin*
- **Making Scientific Data 100x Easier to Use**  
Session Chair: Megean Schoenberg, *Merck & Co. Inc.*
- **Informatics of Drug Design and Compound Life Cycle Management**  
Session Chair: Dmitry Lupyan, *Schrodinger*
- **The Digital Dark Hole: Publishing Large-Scale Data and Analysis**  
Session Chair: Laurie Goodman, *GigaScience*

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## DRUG TARGET STRATEGIES

Track Chairs: David Swinney, *iRND3* and Chun-wa Chung, *GlaxoSmithKline*

- **Hard Targets - Success Through Collaborations**  
Session Chair: Chun-wa Chung, *GlaxoSmithKline*
- **Uniting Phenotypic and Target Based Drug Discovery**  
Session Chair: Fabien Vincent, *Pfizer*
- **Non-Traditional Modalities as Therapeutics**  
Session Chair: Stephen Hale, *Ensemble Therapeutics*

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## MICRO- AND NANOTECHNOLOGIES TRACK

Track Chairs: Sindy Tang, *Stanford University* and Andrew deMello, *Institute for Chemical and Bioengineering*

- **Digital and Droplet Microfluidics**  
Session Chair: Adam Abate, *UCSF*
- **Commercialization Perspectives for Micro and Nanofluidic Devices**  
Session Chair: Sammy Datwani, *LABCYTE*
- **Single Cell Analyses**  
Session Chair: Daniel Chiu, *University of Washington*
- **Making Micro-Volume Biology Work: Tools, Techniques & Secrets**  
Session Chair: Daniel Sipes, *Genomics Institute of the Novartis Research Foundation*
- **Bioprinting: Multidimensional Microscale Cellular/Tissue Engineering**  
Session Chair: Markus Rimann, *ZHAW School of Life Sciences and Facility Management*
- **Microphysiological Systems**  
Session Chair: Daniel Huh, *University of Pennsylvania*

Visit [SLAS2017.org](http://SLAS2017.org) for complete details on the scientific program, including presentation titles, abstracts, presenter bios and to build your agenda.

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# Short Courses

Short Courses kick-off SLAS2017 on Saturday–Sunday, February 4-5. Short Course attendance is limited and requires an additional registration fee. For more on Short Courses, instructors, abstracts, costs and schedules, visit [SLAS2017.org](http://SLAS2017.org).

## FULL-DAY COURSES: Saturday | February 4 | 8:30 am - 4:30 pm

### 3D Cell-Based Assays for Drug De-Risking

**Instructors:** Helena Hogberg, *Center for Alternatives to Animal Testing (CAAT), Johns Hopkins Bloomberg School of Public Health*; Jens M. Kelm, *InSphero AG*

### Digital Image Processing and Analysis for the Laboratory Scientist:

**Theory and Application** (Laptop Required)

**Instructors:** Matthew Fronheiser, Mark Russo

### Introduction to Laboratory Automation

**Instructors:** Steven Hamilton, *SLAS*; James Gill

### Lab-on-a-Chip: From Technology to Bioanalysis on Chip

**Instructors:** Sabeth Verpoorte, *Groningen Research Institute of Pharmacy, University of Groningen*; Johan Nilsson, *Lund University*; Jörg P. Kutter, *University of Copenhagen*

## FULL-DAY COURSES: Sunday | February 5 | 8:30 am - 4:30 pm

### Affinity-based, Biophysical Methods for Screening and Mechanistic Studies: How to Effectively Use a Growing Biophysical Toolbox to Find and Characterize Chemical Leads

**Instructors:** Christine C. Genick, *Novartis*; Stefan Geschwindner, *Discovery Sciences, AstraZeneca R&D Mölndal*

### Data Management in the Age of Big Data, Mobile and the Cloud

**Instructors:** Burkhard Schaefer, *BSSN Software GmbH*

### Derivation, Maintenance and Characterization Techniques for Human iPS Cells Used in Drug Discovery and Disease Modeling

**Instructors:** Kamal Garcha, *GFY Biotech Consulting*; David J. Kahler, *NYU High-Throughput Biology Core*

### Establishing Cell-Based Assays for Screening

**Instructors:** Terry L. Riss, *Promega Corporation*; Geoffrey Bartholomeusz, *University of Texas MD Anderson Cancer Center*; Eric N. Johnson, *Wuxi AppTec*; Lisa Minor, *In Vitro Strategies, LLC*

### High-Content Screening: An Introduction to Instrumentation, Assay Development, Screening, Image and Data Analysis

**Instructors:** Steffen Jaensch, *Janssen R&D, Pharmaceutical Companies of Johnson & Johnson*; Eberhard Krausz, *VIB - Discovery Sciences*

### Liquid Handling Essentials (Interactive Course)

**Instructors:** Dana Campbell, *Artel, Inc.*; Nathaniel Hentz, *NC State University BTEC*; Lisa Knapp, *Agilent Technologies*



**Multi Parametric Analysis of High-Content Screening Data** (Laptop Required)

**Instructors:** Marc Bickle, *MPI-CBG*; Antje Janosch, *MPI-CBG*

**Next Generation Sequencing Technology Fundamentals and Applications**

**Instructors:** Abizar Lakdawalla, *Proxeom*; Dawei Lin, *NIH/NIAID*

**Pharmacology in Drug Discovery and Development: New Lives for Receptors as Drug Targets Through Allostery and Biased Signaling (NEW!)**

**Instructors:** Terry Kenakin, *UNC School of Medicine*

**Sample Management: Best Practice, Trends and Challenges**

**Instructors:** Susan Crimmin, *Glaxo SmithKline*; Kathi E. Shea, *Brooks BioStorage Technologies*

## HALF-DAY COURSES: Sunday | February 5 | 8:30 am - 4:30 pm

**Data Analytic Concepts for High-Throughput Screening & Biomarker Applications (NEW!) | 8:30 am - Noon**

**Instructors:** Viswanath Devanarayan, *AbbVie, Inc.*

**Introduction to Flow Cytometry (NEW!) | 8:30 am - Noon**

**Instructors:** John Nolan, *Scintillon Institute*; Paul Robinson, *Purdue University*

**Lead Generation: A Critical Discussion of Hypothesis & Empirical Strategies | 8:30 am - Noon**

**Instructors:** Jonathan Lee, *Eli Lilly*; David C. Swinney, *Institute for Rare and Neglected Diseases Drug Discovery*

**Advanced Flow Cytometry (NEW!) | 1:00 - 4:30 pm**

**Instructors:** John Nolan, *Scintillon Institute*; Paul Robinson, *Purdue University*

**An Introduction to Mass Spectrometry and its Applications within Drug Discovery (NEW!) | 1:00 - 4:30 pm**

**Instructors:** Jonathan Wingfield, *AstraZeneca, Discovery Sciences*; Ian Sinclair, *AstraZeneca, Discovery Sciences*

**Gene Editing for Drug Discovery | 1:00 - 4:30 pm**

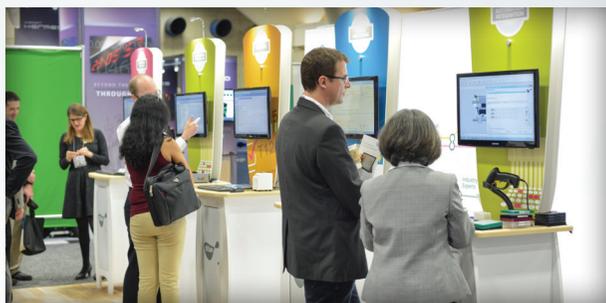
**Instructors:** John G. Doench, *The Broad Institute of MIT and Harvard*; Samuel A. Hasson, *Pfizer, Inc.*



## TWO-DAY SHORT COURSE: Sat-Sun | February 4-5 | 8:30 am - 4:30 pm

**Getting Started With Excel & VBA in the Laboratory** (Laptop Required)

**Instructors:** William Neil, *BMS*; Martin Echols, *EcholsTech*



# The Exhibition

The SLAS2017 Exhibition is an all-in-one venue to see the latest scientific technologies and to visit with product experts and developers from more than 300 leading multinational providers. From robotics to reagents, the SLAS2017 Exhibition presents a unique opportunity to see the latest scientific technologies “in action” as well as to speak directly to product developers and experts about your specific environment – and the tools available to reach your objectives.

## The SLAS2017 Exhibition includes:

- State-of-the-art exhibits that showcase the latest scientific technologies in functional lab settings
- Exhibitor-led tutorials that complement your technical education experience
- Innovation AveNEW, a dedicated area of the floor that hosts a select group of emerging companies offering high-potential new technologies
- The SLAS2017 Scientific Poster Gallery, including opportunities to interact with poster authors
- The SLAS New Product Award (NPA) that recognizes up to three new products being showcased in the SLAS2017 Exhibition

Visit **SLAS2017.org** for the latest list of exhibiting companies, company descriptions, an exhibition floorplan and a schedule of events in the SLAS2017 Exhibition.





## Networking

A hallmark of the SLAS experience is intelligent network building. SLAS is a global community, and participants consistently cite the friendliness, cooperation and open spirit of collaboration as a reason they return to this conference year after year. Networking activities at SLAS2017 include daily meals and receptions in the exhibit area, evening functions, a fun run with fellow attendees, Special Interest Groups (SIGs), special programming for students, early career professionals and international guests, and much more. See details on [SLAS2017.org](http://SLAS2017.org) as they are announced.

## Evening Celebration at the Newseum

Tuesday | February 7

Sponsored by:

**HAMILTON**

An international attraction of the U.S. capital city, the Newseum has welcomed more than six million guests since it opened in its current location in 2008. The Newseum promotes, explains and defends free expression and the five freedoms of the First Amendment of the U.S. Constitution: religion, speech, press, assembly and petition. On the evening of Tuesday, February 7, SLAS2017 attendees enjoy three hours of exclusive access to this world-class cultural institution, featuring seven stories of interactive exhibits, 15 galleries and 15 theatres. Complimentary transportation, food, drink and museum access is provided.



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# Sponsors

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## Special Interest Groups (SIGs)

SLAS SIGs allow you to connect directly with peers who share similar interests and expertise in specific scientific technology disciplines. SIGs are a great way to discuss leading-edge trends, meet recognized experts and collaborate with peers. SIGs scheduled to meet at SLAS2017 appear below. For descriptions and a meeting schedule, visit **SLAS2017.org**.

- Academic Drug Discovery
- ADMET
- Automated Sample Preparation of Pharmaceutical Dosage Forms
- Automation Quality Control
- Drug Repurposing
- HCS/HCA Data and Informatics
- Informatics
- Labware Leachables
- Phenotypic Drug Discovery
- Sample Management
- Screen Design and Assay Technology
- Standards Initiatives
- Stem Cells and 3D Microtissues
- Technology Transfer and CRO/CMO Project Management
- Ultra-High-Throughput Screening (*NEW for SLAS2017*)
- Women Professionals in Science and Technology



## slas CAREER+CONNECTIONS™

# Career Connections

SLAS2017 delivers a host of unique resources to help you accelerate your career and distinguish yourself in a competitive profession.

## CAREER SERVICES

Review job postings in the Career Connections area of the SLAS Member Center. Discreetly share your resume with prospective employers. Participate in an individual career coaching session, or have your CV reviewed by a scientific career expert.

## MENTORING

Benefit from a mentoring session with an established professional scientist. Practicing life sciences professionals are on hand to provide advice for those looking to pursue a career in life sciences research and technology. Advance sign-up is offered through [SLAS2017.org](http://SLAS2017.org).

## CAREER WORKSHOPS

Multiple interactive workshops are led by recognized scientific career experts to help you refine your job search skills and distinguish yourself in a competitive job market. Watch [SLAS2017.org](http://SLAS2017.org) for workshop themes and for advance sign-up where appropriate.



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## REGISTRATION

- Deepest early-bird discounts available for SLAS members who register by **October 31**. *(Become an SLAS member to take advantage of these discounts, plus receive year-round member benefits through the end of 2017.)*
- Advance registration discounts available through **December 19**.
- Significant registration discounts available for groups of five (5) from the same organization and student participants.

For complete rates and deadlines, visit **[SLAS2017.org/registration](http://SLAS2017.org/registration)**.

## HOTEL & TRAVEL

SLAS has negotiated discounted rates at two of DC's premier conference hotels: Marriott Marquis Washington, DC and the Renaissance Washington, DC Downtown. The Marriott Marquis Washington, DC, the official SLAS2017 headquarters hotel, is the closest to the SLAS meeting space within the convention center and is connected to it via an indoor underground walkway. See complete details and access the unique SLAS attendee reservation link on **[SLAS2017.org](http://SLAS2017.org)**. Information on discounted air travel, car rental, airport transportation and parking can also be found on **[SLAS2017.org](http://SLAS2017.org)**.

**FOR THE LATEST INFORMATION AND TO REGISTER, VISIT [SLAS2017.ORG](http://SLAS2017.ORG).**

