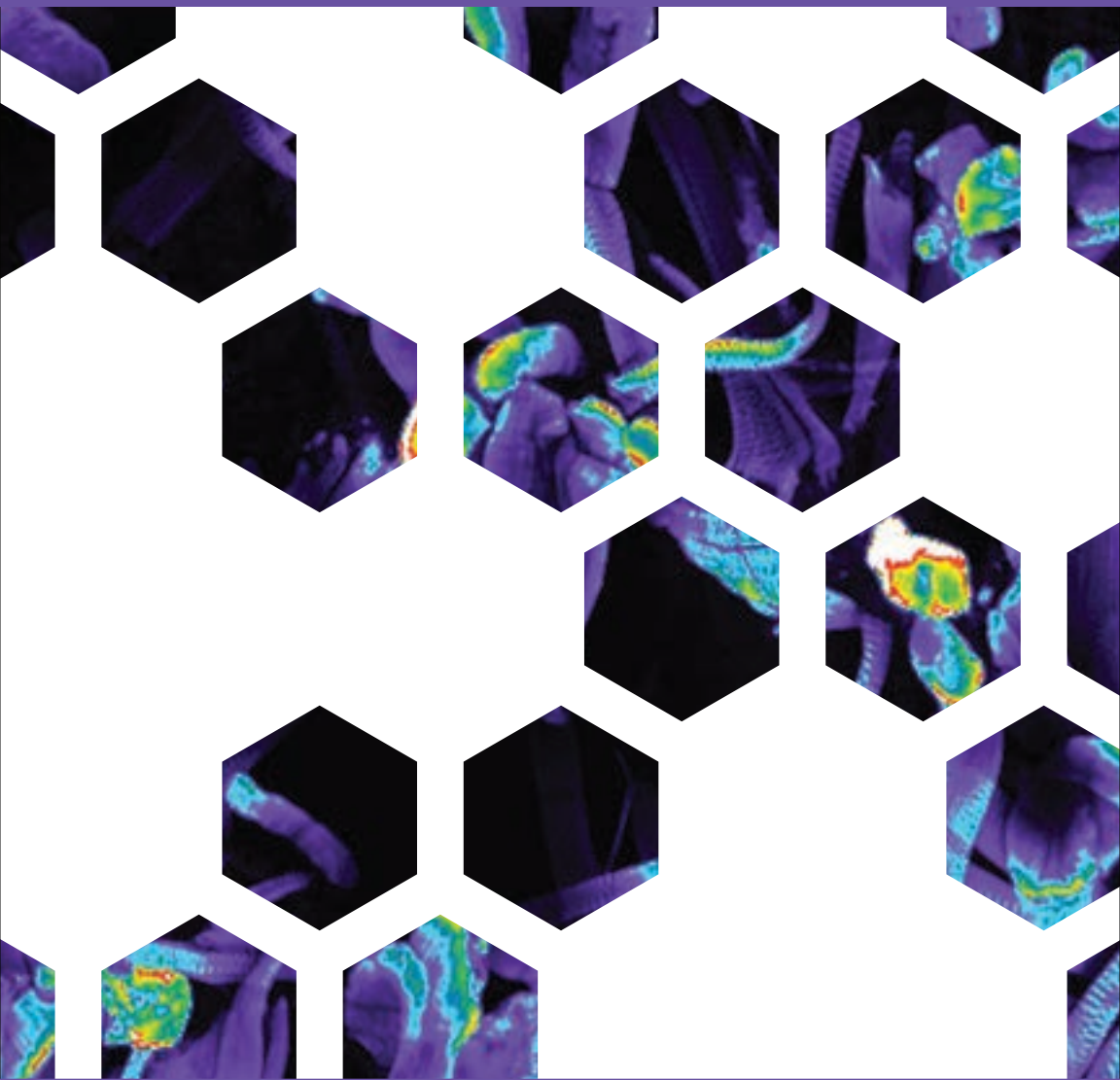




# 60<sup>th</sup> Annual Drosophila Research Conference

March 27-31, 2019 | Dallas, TX

## PROGRAM BOOK



GENETICS



Genetics Society of America





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# Meeting Organizers

Michael Buszczak, Chair

Rachel Cox

Helmut Kramer

Harmit Malik

**The Organizers would like to recognize and thank the following people who devoted countless hours to abstract review and programming:**

Laura Alto

Hilary Ashe

Helen Attrill

Erika Bach

Scott Barolo

Emily Behrman

Hugo Bellen

Rolf Bodmer

Juan Botas

Nichole Broderick

Karen Chang

Elizabeth Chen

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Georg Vogler

Yi-Wen Wang

Jennifer Zallen

Yingbiao Zhang

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# About the Genetics Society of America

The Genetics Society of America (GSA) is an international scientific society representing more than 5,000 researchers and educators around the world.

We work to advance the field and foster the research community. The Society has a deep commitment to supporting the next generation of geneticists, providing professional development opportunities, training, travel grants, and more. We work with our members and partner organizations to communicate the value of genetics and fundamental research to the public and policymakers; we advocate for our scientific community and the vital work they do.

As well as encouraging communication among researchers through conferences, GSA publishes two peer-edited scholarly journals:

GENETICS



GENETICS has been innovating since 1916, publishing high quality original research across the breadth of the field.

G3: Genes | Genomes | Genetics is an open access journal that publishes high quality, useful results regardless of perceived impact.

## 2019 GSA Board of Directors

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# Schedule of Events

WEDNESDAY, March 27		
9:00 a.m. - 6:00 p.m.	<b>New Faculty Forum</b> <i>Advanced registration required</i>	Press Club (Hotel 2nd Floor)
11:00 a.m. - 3:00 p.m.	<b>GENETICS Peer Review Training Workshop</b> <i>Advanced registration required</i>	Austin 2 (Hotel 2nd Floor)
1:00 p.m. - 11:00 p.m.	<b>Family/Nursing Mothers Room</b>	Pearl 3 (Hotel 2nd Floor)
2:00 p.m. - 5:00 p.m.	<b>Grants and Funding</b> <i>Advanced registration required</i>	Austin 3 (Hotel 2nd Floor)
2:00 p.m. - 5:00 p.m.	<b>Drosophila Board of Directors Meeting</b> <i>Open to Board Members and invited guests</i>	Austin 1 (Hotel 2nd Floor)
2:00 p.m. - 5:00 p.m.	<b>Ecdysone Workshop</b>	Houston Ballroom (Conference Center 3rd Floor)
3:00 p.m. - 6:30 p.m.	<b>Speaker Ready Room Open</b> <i>Presenters must upload and test talk 24 hours in advance</i>	Grand Hall (Conference Center 1st Floor)
3:30 p.m. - 9:00 p.m.	<b>Registration</b>	Grand Hall (Conference Center 1st Floor)
5:00 p.m. - 12:00 a.m.	<b>Posters Open 24 Hours beginning at 5:00 PM</b>	Grand Hall (Conference Center 1st Floor)
7:00 p.m. - 9:00 p.m.	<b>Opening General Session</b> <i>Chair: Michael Buszczak</i>	Dallas Ballroom (Conference Center 1st Floor)
7:00 p.m.	<b>Welcome</b>	
7:20 p.m.	<b>Larry Sandler Award Presentation</b> Daniel Barbash	
7:25 p.m.	<b>Larry Sandler Award Talk</b>	
7:55 p.m.	<b>Keynote Introduction</b> Harmit Malik	
8:00 p.m.	<b>What's love got to do with it? Stimulating reproduction and activating eggs in Drosophila</b> M.F. Wolfner, Cornell University	
9:00 p.m. - 11:00 p.m.	<b>Opening Mixer</b> <i>Sponsored by the GSA journals, GENETICS and G3: Genes   Genomes   Genetics</i>	Grand Hall (Conference Center 1st Floor)

## SCHEDULE OF EVENTS

THURSDAY, March 28		
12:01 a.m. - 12:00 a.m.	<b>Posters Open 24 Hours</b>	Grand Hall (Conference Center 1st Floor)
7:30 a.m. - 8:15 a.m.	<b>Continental Breakfast</b>	Grand Hall (Conference Center 1st Floor)
7:30 a.m. - 3:00 p.m.	<b>Speaker Ready Room Open</b> <i>Presenters must upload and test talk 24 hours in advance</i>	Grand Hall (Conference Center 1st Floor)
8:00 a.m. - 5:00 p.m.	<b>Registration Open</b>	Grand Hall (Conference Center 1st Floor)
8:00 a.m. - 10:00 p.m.	<b>Family/Nursing Mothers Room</b>	Pearl 3 (Hotel 2nd Floor)
8:30 a.m. - 12:00 noon	<b>Plenary Session I</b> <i>Chair: Rachel Cox</i>	Dallas Ballroom (Conference Center 1st Floor)
8:30 a.m.	<b>Image Award Presentation</b> Nasser Rusan, NIH	
8:35 a.m.	<b>Assembly and disassembly of germ plasm localized RNPs</b> Elizabeth R. Gavis, Princeton University	
9:05 a.m.	<b>The I of the fly</b> Bassem Hassan, ICM	
9:35 a.m.	<b>The gut microbiome: the driving and driven partners of <i>Drosophila</i></b> Angela Douglas, Cornell University	
10:05 a.m.	<b>Break</b>	
10:30 a.m.	<b>Interrogating centromere specification mechanisms</b> Barbara Mellone, University of Connecticut	
11:00 a.m.	<b>Tissue growth and metabolic sensing: from flies to humans</b> Aurelio Teleman, German Cancer Research Center (DKFZ), Heidelberg University	
11:30 a.m.	<b>Precision and plasticity in animal transcription</b> Angela DePace	
12:15 p.m. - 1:45 p.m.	<b>Community, Connections, and Lunch</b> <i>Ticket required</i>	Houston Ballroom (Conference Center 3rd Floor)
2:00 p.m. - 4:00 p.m.	<b>Exhibits Open and Poster Presentations</b> <i>2:00 pm EVEN Posters 3:00 pm ODD Posters</i>	Grand Hall (Conference Center 1st Floor)



## SCHEDULE OF EVENTS

4:30 p.m. - 6:30 p.m.	<b>CONCURRENT PLATFORM I</b>	
	<b>Immunity and the Microbiome</b> <i>Chairs: Neal Silverman and Nichole Broderick</i>	Dallas Ballroom A (Conference Center 1st Floor)
	<b>Evolution I</b> <i>Chairs: Amanda Larracuente, Erin Kelleher, and Emily Behrman</i>	Dallas Ballroom B (Conference Center 1st Floor)
	<b>Models of Human Disease I</b> <i>Chairs: Juan Botas, Rolf Bodmer, and Georg Vogler</i>	Dallas Ballroom D (Conference Center 1st Floor)
6:30 p.m. - 7:30 p.m.	<b>Education Platform Session</b>	Dallas Ballroom A (Conference Center 1st Floor)
7:45 p.m. - 9:45 p.m.	<b>CONCURRENT WORKSHOPS I</b>	
	<b>Spotlight on Undergraduate Research</b> <i>Sponsored by UT Southwestern Graduate School of Biomedical Sciences</i>	Dallas Ballroom D (Conference Center 1st Floor)
	<b>Equity and inclusion in the Drosophila research community</b>	Austin 2 (Hotel 2nd Floor)
	<b>Lipid signaling in development and disease: Lessons from our fly</b>	Pearl 4 (Hotel 2nd Floor)
	<b>Everything you ever wanted to know about sex</b>	Dallas Ballroom A (Conference Center 1st Floor)
	<b>Designing a CRISPR-Cas9 undergraduate lab course to generate knock-in alleles for the research community</b>	Austin 3 (Hotel 2nd Floor)
	<b>Intro to the Drosophila microbiome: How can I control the microbiome in my research?</b>	Austin 1 (Hotel 2 <sup>nd</sup> Floor)
9:00 p.m. - 11:00 p.m.	<b>Exhibits Open</b> <i>Cash bar</i>	Grand Hall (Conference Center 1st Floor)

## SCHEDULE OF EVENTS

FRIDAY, March 29		
12:01 a.m. - 12:00 a.m.	<b>Posters Open 24 Hours</b>	Grand Hall (Conference Center 1st Floor)
7:30 a.m. - 3:00 p.m.	<b>Speaker Ready Room</b> <i>Presenters must upload and test talk 24 hours in advance.</i>	Grand Hall (Conference Center 1st Floor)
8:00 a.m. - 10:00 p.m.	<b>Family/Nursing Mothers Room</b>	Pearl 3 (Hotel 2nd Floor)
8:15 a.m. - 5:00 p.m.	<b>Registration</b>	Grand Hall (Conference Center 1st Floor)
8:30 a.m. - 10:15 a.m.	<b>CONCURRENT PLATFORM II</b>	
	<b>Cell Division and Growth Control</b> <i>Chairs: Mary Lilly, Savraj Grewal, and Yingbiao Zhang</i>	Dallas Ballroom A (Conference Center 1st Floor)
	<b>Neural Development and Physiology</b> <i>Chairs: Karen Chang, Robin Hiesinger, and Laura Alto</i>	Dallas Ballroom B (Conference Center 1st Floor)
	<b>Regulation of Gene Expression I</b> <i>Chairs: Michael Eisen and Scott Barolo</i>	Dallas Ballroom D (Conference Center 1st Floor)
10:45 a.m. - 12:30 p.m.	<b>CONCURRENT PLATFORM III</b>	
	<b>Neural Circuits and Behavior I</b> <i>Chairs: William Joiner, Ellie Heckscher, and Yi-Wen Wang</i>	Dallas Ballroom A (Conference Center 1st Floor)
	<b>Physiology, Metabolism and Aging I</b> <i>Chairs: Tânia Reis, Akhila Rajan, and Elizabeth Rideout</i> <i>Sponsored by National Institute on Aging</i>	Dallas Ballroom B (Conference Center 1st Floor)
	<b>Regulation of Gene Expression II/ Chromatin, Epigenetics and Genomics I</b> <i>Chairs: Michael Eisen, Scott Barolo, Xin Chen, Erica Larschan, and Leila Rieder</i>	Dallas Ballroom D (Conference Center 1st Floor)
12:30 p.m. - 2:00 p.m.	<b>Publishing Q &amp; A</b> <i>Ticket required</i>	Houston Ballroom (Conference Center 3rd Floor)

## SCHEDULE OF EVENTS

2:15 p.m. - 4:15 p.m.	<b>CONCURRENT WORKSHOPS II</b>	
	<b>Collaborating with clinical researchers: expanding opportunities for <i>Drosophila</i> biologists in rare disease diagnosis and therapeutic research</b>	Austin 1 (Hotel 2nd Floor)
	<b>Feeding Behavior, Nutrition and Metabolism</b>	Dallas Ballroom D (Conference Center 1st Floor)
	<b>Developmental Mechanics</b>	Dallas Ballroom B (Conference Center 1st Floor)
	<b>Using <i>Drosophila</i> to bring authentic course-based undergraduate research experiences (CUREs) into the undergraduate classroom</b>	Austin 3 (Hotel 2nd Floor)
	<b>Maximize the impact of your curriculum vitae and resume workshop</b>	Austin 2 (Hotel 2nd Floor)
2:15 p.m. - 4:15 p.m.	<b>Exhibits Open and Poster Viewing</b>	Grand Hall (Conference Center 1st Floor)
4:30 p.m. - 6:30 p.m.	<b>CONCURRENT PLATFORM IV</b>	
	<b>Models of Human Disease II</b> <i>Chairs:</i> Juan Botas, Rolf Bodmer, and Georg Vogler	Dallas Ballroom A (Conference Center 1st Floor)
	<b>Physiology, Metabolism and Aging II</b> <i>Chairs:</i> Tânia Reis, Akhila Rajan, and Elizabeth Rideout <i>Sponsored by National Institute on Aging</i>	Dallas Ballroom B (Conference Center 1st Floor)
	<b>Neural Development and Physiology II/Neural Circuits and Behavior II</b> <i>Chairs:</i> Karen Chang, Robin Hiesinger, William Joiner, Ellie Heckscher, Yi-Wen Wang, and Laura Alto	Dallas Ballroom D (Conference Center 1st Floor)
8:00 p.m. - 10:00 p.m.	<b>Exhibits Open and Poster Presentations</b> <i>8:00 pm ODD Posters</i> <i>9:00 pm EVEN Posters</i>	Grand Hall (Conference Center 1st Floor)

## SCHEDULE OF EVENTS

<b>SATURDAY, March 30</b>		
12:01 a.m. - 10:30 p.m.	<b>Posters Open 24 Hours</b> <i>All posters must be removed by noon on Sunday</i>	Grand Hall (Conference Center 1st Floor)
7:30 a.m. - 3:30 p.m.	<b>Speaker Ready Room Open</b> <i>Presenters must upload and test talks 24 hours in advance</i>	Grand Hall (Conference Center 1st Floor)
8:00 a.m. - 12:00 noon	<b>Family/Nursing Mothers' Room</b>	Pearl 3 (Hotel 2nd Floor)
8:15 a.m. - 3:00 p.m.	<b>Registration</b>	Grand Hall (Conference Center 1st Floor)
8:30 a.m. - 10:15 a.m.	<b>CONCURRENT PLATFORM V</b>	
	<b>Cell Biology: Cytoskeleton, Organelles, Trafficking</b> <i>Chairs: Elizabeth Chen, Blake Riggs, and Donghoon Lee</i>	Dallas Ballroom A (Conference Center 1st Floor)
	<b>Chromatin, Epigenetics and Genomics II</b> <i>Chairs: Xin Chen, Erica Larschan, and Leila Rieder</i>	Dallas Ballroom B (Conference Center 1st Floor)
	<b>Signal Transduction</b> <i>Chairs: Jessica Treisman, Ken Moberg, and Helen Attrill</i>	Dallas Ballroom D (Conference Center 1st Floor)
10:45 a.m. - 12:30 p.m.	<b>CONCURRENT PLATFORM VI</b>	
	<b>Cell Death and Cell Stress</b> <i>Chairs: Don Ryoo, Gabor Juhasz, and Tamas Maruzs</i>	Dallas Ballroom A (Conference Center 1st Floor)
	<b>Patterning, Morphogenesis and Organogenesis I</b> <i>Chairs: Jennifer Zallen and Juan Riesgo-Escovar</i>	Dallas Ballroom B (Conference Center 1st Floor)
	<b>Stem Cells, Regeneration and Tissue Injury</b> <i>Chairs: Susan Parkhurst, Lucy Erin O'Brien, and Mitsutoshi Nakamura</i>	Dallas Ballroom D (Conference Center 1st Floor)
1:00 p.m. - 4:00 p.m.	<b>Exhibits Open</b>	Grand Hall (Conference Center 1st Floor)
1:30 p.m. - 3:30 p.m.	<b>Poster Presentations</b> <i>1:30 pm EVEN Posters 2:30 pm ODD Posters</i>	Grand Hall (Conference Center 1st Floor)
4:00 p.m. - 6:00 p.m.	<b>CONCURRENT PLATFORM VII</b>	
	<b>Evolution II</b> <i>Chairs: Amanda Larracuente, Erin Kelleher, and Emily Behrman</i>	Dallas Ballroom B (Conference Center 1st Floor)

## SCHEDULE OF EVENTS

	<b>Patterning, Morphogenesis and Organogenesis II</b> <i>Chairs:</i> Jennifer Zallen and Juan Riesgo-Escovar	Dallas Ballroom A (Conference Center 1st Floor)
	<b>Reproduction and Gametogenesis</b> <i>Chairs:</i> Hilary Ashe, Erika Bach, and Salvador Herrera	Dallas Ballroom D (Conference Center 1st Floor)
7:30 p.m. - 9:30 p.m.	<b>Techniques &amp; Technology</b> <i>Chairs:</i> Hugo Bellen, Lena Riabinina, and Julie Simpson	Dallas Ballroom (Conference Center 1st Floor)
7:30 p.m.	<b>New Tools and Methods for Neuronal Circuit Analysis in <i>Drosophila</i></b> G.M. Rubin, Janelia Research Campus, HHMI	
7:45 p.m.	<b>Spying on the dynamics of acetylcholine, dopamine, octopamine, and 5-HT in fly's brain by constructing new genetically-encoded GRAB sensors</b> Y. Li, Peking University School of Life Sciences	
8:00 p.m.	<b>Selectable, drug-based genetics and transgenesis in <i>Drosophila melanogaster</i></b> N. Matinyan, Baylor College of Medicine; Verna and Marrs Mclean, Baylor College of Medicine	
8:15 p.m.	<b>Bellymount: A novel, method for longitudinal, intravital imaging of abdominal organs in adult <i>Drosophila</i></b> L.A.J. Koyama, Stanford University	
8:30 p.m.	<b>GAL4s, LEGOs, and 3D-printers: the genetic toolbox of the 21st century <i>Drosophilist</i></b> G.F. Gilestro, Imperial College London	
8:45 p.m.	<b>Techniques and computational methods for single-cell regulatory genomics in <i>Drosophila</i></b> Stein Aerts, VIB-KULeuven	
9:00 p.m.	<b>FlyBase updates presentation</b> S. J. Marygold, University of Cambridge	
9:15 p.m.	<b>A Gene Disruption Project (GDP) update: using CRISPR with PCR-generated homology donors to knock-in Swappable Integration Cassettes in introns of genes in flies and in S2 cells</b> O. Kanca, Baylor College of Medicine	
9:30 p.m. - 10:30 p.m.	<b>Awards and Closing Mixer with Exhibitors</b>	Grand Hall (Conference Center 1st Floor)

## SCHEDULE OF EVENTS

<b>SUNDAY, March 31</b>		
8:00 a.m. - 12:00 noon	<b>Family/Nursing Mothers Room</b>	Pearl 3 (Hotel 2nd Floor)
8:30 a.m. - 12:00 noon	<b>Plenary II</b> <i>Chair:</i> Helmut Kramer	Dallas Ballroom (Conference Center 1st Floor)
8:30 a.m.	<b>p53 genes and the game of transposons</b> J. Abrams, UT Southwestern Medical Center	
9:00 a.m.	<b>Neural mechanisms for dynamic acoustic communication</b> Mala Murthy, Princeton University	
9:30 a.m.	<b>Y chromosome evolution in 400 <i>Drosophila</i> species</b> Bernardo Carvalho, Universidade Federal do Rio de Janeiro	
10:00 a.m.	<b>Break</b>	
10:30 a.m.	<b>Waking up “Sleeping” Neural Stem Cells</b> Hongyan Wang, Duke-NUS Medical School	
11:00 a.m.	<b>Towards a brain architecture for visual behavior selection</b> Gwyneth Card, HHMI Janelia Research Campus	
11:30 a.m.	<b>Upstream regulation of Hippo signaling in epithelial cells</b> Rick Fehon, University of Chicago,	

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## EXHIBITORS

### Alliance of Genome Resources and microPublication Biology

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The mission of the Alliance of Genome Resources is to maintain sustainable genome information resources that facilitate the use of model organisms in understanding the genetic basis of human biology and disease. microPublication Biology is a peer-reviewed, open-access journal that publishes single experimental results that are incorporated directly into Alliance and other databases.

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## Drosophila Genomics Resource Center (DGRC)

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*https://dgrc.bio.indiana.edu*

The Drosophila Genomics Resource Center (<https://dgrc.bio.indiana.edu>) serves the Drosophila community by collecting and distributing clones and cell lines of general interest and by assisting the community in using these materials. Visit our booth for information about upcoming services or to speak to DGRC personnel about our materials.

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[sales@percival-scientific.com](mailto:sales@percival-scientific.com)

[www.percival-scientific.com](http://www.percival-scientific.com)

Percival Scientific's cutting edge technology is at the core of our commitment to delivering the best products on the market today. This commitment is clear with the Percival DR-36 and DR-41 Series which are dedicated to offer the best features for *Drosophila* research.

## **Sable Systems International, Inc.**

### **Booth 330**

702/269-4445

[sales@sablesys.com](mailto:sales@sablesys.com)

[www.sablesys.com](http://www.sablesys.com)

Sable Systems International is the widely cited, international standard in high resolution metabolic screening and calorimetry. Our systems can measure *Drosophila* gas exchange in real time. Technical support is provided by published experts in insect respirometry. Please drop by our booth and discuss what we can do for your research.

## **Techshot**

### **Booth 229**

812/728-8136

[rboling@techshot.com](mailto:rboling@techshot.com)

[www.techshot.space](http://www.techshot.space)

Techshot provides all the equipment and services that investigators need to conduct *Drosophila* research in space aboard the International Space Station.

## **Vienna Drosophila Resource Center (VDRC)**

### **Booth 418**

[Office@vdrc.at](mailto:Office@vdrc.at)

[www.vdrc.at](http://www.vdrc.at)

The Vienna Drosophila Resource Center (VDRC) is a non-profit research organization promoting scientific discoveries in *Drosophila*. We maintain over 35,000 transgenic fly stocks including RNAi, GAL4, Tagged FlyFos TransgeneOme lines and other resources and distribute them to researchers worldwide. We also provide stock keeping and fly food services.

## Wellgenetics Inc.

### Booth 323

886 3 2651 1809

*info@wellgenetics.com*

*www.wellgenetics.com*

Wellgenetics is dedicated to providing research professional services in microinjection and gene knockout/knockin in fly and mosquito models. We are experts in molecular biology and in microinjection for generating a variety of genetic tools, such as gene deletion; point mutation; gene reports; tag knockin and RMCE knockin to level up your research quality.

## Zantiks Ltd

### Booth 422

*info@zantiks.com*

*www.zantiks.com*

Zantiks produces affordable equipment to enable animal behaviour to be measured simply. Zantiks units are fully integrated with a computer, software, camera and built-in stimuli to automate Drosophila studies. Each unit is networked and operated from any connected device where users can track and download real-time data and video.

# GENERAL INFORMATION

## Badges

For admission to the sessions, posters, exhibit hall, and reception, you must have an official conference badge. Security will not allow individuals without badges to enter the Exhibit Hall. If you lose your badge, you may request a replacement at the conference registration desk.

## Presenters - Speaker Ready Room, Grand Hall

If you are giving an oral talk in any platform or plenary sessions, you must upload and check your presentation ***the day before*** the start of your session in the Grand Hall, which will be open during the following hours:

Wednesday, March 27	3:00 p.m. – 6:30 p.m.
Thursday, March 28	7:30 a.m. – 3:00 p.m.
Friday, March 29	7:30 a.m. – 3:00 p.m.
Saturday, March 30	7:30 a.m. – 3:00 p.m.

**NOTE: Because you will not be able to upload presentations in the meeting room, checking in at the Speaker Ready Room is vital to the success of your talk.** If you are a workshop presenter, please coordinate with your workshop organizer.

## Poster Sessions and Exhibits – Grand Hall

All posters and exhibits will be in the Grand Hall on the first floor of the Sheraton Dallas Conference Center. The Hall will be open to conference registrants on a 24 hour basis beginning at 5 p.m., Wednesday, March 27 until noon, Sunday, March 31. Security will be posted at the entrance to the Hall and they will only admit individuals with an official conference badge. Posters must be removed by noon on Sunday.

Exhibit representatives will be at their booths during the following hours:

Wednesday, March 27	9:00 p.m. – 11:00 p.m.
Thursday, March 28	2:00 p.m. – 4:00 p.m. 9:00 p.m. – 11:00 p.m.
Friday, March 29	2:15 p.m. – 4:15 p.m. 8:00 p.m. – 10:00 p.m.
Saturday, March 30	1:00 p.m. – 4:00 p.m. 9:30 p.m. – 10:30 p.m.

## GENERAL INFORMATION

Authors should be at their posters to present according to the following schedule:

Thursday, March 28	2:00 p.m. – 3:00 p.m. 3:00 p.m. – 4:00 .pm.	Even-numbered posters Odd-numbered posters
Friday, March 29	8:00 p.m. – 9:00 p.m. 9:00 p.m. – 10:00 p.m.	Odd-numbered posters Even-numbered posters
Saturday, March 30	1:30 p.m. – 2:30 p.m. 2:30 p.m. – 3:30 p.m.	Even-numbered posters Odd-numbered posters

All presenters must remove their posters from poster boards **no later than noon on Sunday, March 31**. Only poster authors may remove their posters prior to noon on March 31. After that time, conference officials will remove and recycle any remaining posters. Remaining posters may not be taken by someone who is not an author on that poster.

### Mobile App

Download the GSA mobile app to your smartphone (available on both iOS and Android platforms) to have meeting information at your fingertips. Once you download the app, you will only need access to the internet to download updates. You will not need an internet connection to access previously downloaded information. Blackberry users and Windows Mobile Device users will have full access to the Program through the web version available at <http://conferences.genetics-gsa.org/drosophila/2019/index>

### Registration

You can pick up registration materials and Certificates of Attendance at the registration desk in the Grand Hall on level one of the Conference Center at the Sheraton Dallas Hotel during the following times:

Wednesday, March 27	3:30 p.m. – 9:00 p.m.
Thursday, March 28	8:00 a.m. – 5:00 p.m.
Friday, March 29	8:15 a.m. – 5:00 .pm.
Saturday, March 30	8:15 a.m. – 3:00 p.m.

### Social Media/Photo/Video Policy

You may live tweet presentations unless the speaker explicitly opts out by stating so at the start of his or her talk. You may only take or share photos or videos of posters with the presenter's consent during the assigned poster session. **Taking photos of posters while the presenter is not present is strictly prohibited.**

Please be respectful of your colleagues by turning off or muting your mobile devices before entering meeting rooms.

### **FlyBase Demonstrations (NEW THIS YEAR)**

FlyBase will have a booth located in the Exhibit Hall. Be sure to stop by! FlyBase personnel are available for discussions and demonstrations, and welcome your suggestions. FlyBase will also be presenting during the Saturday evening Techniques & Technology Plenary session.

### **Security/Lost and Found**

For all emergencies and lost and found items, contact hotel security by dialing 0 from any house phone. The conference registration desk can also assist you.

### **Meals**

Meals are not included in your registration fee. However, in addition to the restaurants on site, the hotel is connected to the Plaza of the Americas, which has a food court. Also, because of the hotel's downtown location, you will have access to dozens of other local dining options. The hotel concierge can help you find a place to dine that will satisfy your palate and budget.

### **Parking**

Parking is available at the hotel at a rate of \$23 for self-parking and \$31 for valet. Both rates do not include tax and include in-out privileges. Less expensive parking options are available in nearby parking garages and lots. The BestParking or SpotHero apps can help you find available parking locations and their respective costs when you arrive.

### **Childcare/Family Room**

On the second floor of the hotel in Pearl 3, there is a Family Room for nursing mothers. Please note that parents and guardians are responsible for providing infant care supplies. The Family Room is unsupervised, and the Genetics Society of America is not responsible for any accidents or injuries that may occur.

Onsite childcare services may be available by contacting the hotel concierge. Please check with your hotel for additional information.

The parent(s), guardian, legal guardian, or individual requesting childcare services is responsible for screening caregivers and determining whether caregivers are appropriate. The Genetics Society of America does not screen any of the childcare services and assumes no responsibility with respect to these services and accepts no liabilities. If you are having difficulty finding a babysitter, you can visit Care.com or contact Black Tie Babysitting at 214/450-1245. Please note that GSA has no affiliation with these services.

Parents or guardians must accompany children at all times in the Exhibit Hall. Under no circumstances are children under the age of 18 allowed in the Exhibit Hall during set-up and dismantle times.

### **GSA Code of Conduct January 2019**

The Genetics Society of America Conferences foster an international community of geneticists and provide an opportunity to discuss scientific advances and form new collaborations.

GSA values your attendance and wants to make your experience productive and inspiring by fostering an open exchange of ideas in a professional setting. Our Code of Conduct was established to communicate a transparent set of standards and guidelines for acceptable behavior at GSA Conferences and to provide a positive, safe, and welcoming environment for all attendees, vendors, volunteers, and staff.

All conference participants (regardless of their role) are expected to follow the Code of Conduct while attending any portion of the meeting, including but not limited to meeting rooms, the exhibit/poster hall, meeting areas in the official conference venue, and social events provided by the meeting or vendors.

### **Unacceptable Behaviors**

Unacceptable behaviors include, but are not limited to:

- Intimidating, harassing, abusive, discriminatory, derogatory, or demeaning speech or actions by any participant and at all related events
- Harmful or prejudicial verbal or written comments or visual images related to gender, gender expression, gender identity, marital status, sexual orientation, race, religion, political orientation, socioeconomic, disability or ability status, or other personal characteristics, including those protected by law
- Inappropriate use of nudity and/or sexual images in public spaces (including presentation slides and posters)
- Deliberate intimidation, stalking, or following
- Violating the rules and regulations of the conference hotel
- Sustained disruption of scientific sessions or other events
- Unwelcome and uninvited attention or contact
- Physical assault (including unwelcome touching or groping)
- Real or implied threat of physical harm
- Real or implied threat of professional or financial damage or harm
- Harassing or unwanted photography
- Photographing slides of oral presentations and posters without permission
- Recording of scientific and other sessions without permission



### Taking action or making a report

- If you feel threatened, witness someone being threatened, or observe behavior that presents an immediate or serious threat to public safety, please contact venue staff/security or call 911 immediately.
- GSA staff is available to assist participants in contacting hotel/university security or local law enforcement, and otherwise assist those experiencing harassment.
- If you see someone taking photographs or videos of a presentation or poster (where permission has not been granted), you may choose to remind them of the Code of Conduct policy and ask them to stop photographing the presentation or poster.
- You may also report unauthorized photography to GSA Staff.
- Need to file a complaint? Please contact any member of GSA Staff (indicated by red ribbon on their badge) or email Tracey DePellegrin at [tracey.depellegrin@genetics-gsa.org](mailto:tracey.depellegrin@genetics-gsa.org). All reports will be handled confidentially.

### Consequences of non-compliance

Anyone asked by GSA, the venue or security staff, or law enforcement officers to stop unacceptable behavior is expected to comply immediately. Retaliation toward GSA or toward someone reporting an incident or after experiencing any of the following consequences will not be tolerated and may result in additional sanctions.

The consequences of non-compliance with GSA's Code of Conduct may include:

- Immediate removal from the meeting without warning or refund
- Restrictions from future GSA meeting attendance
- Termination of GSA membership or positions on GSA Boards or Committees
- Incidents may be reported to the proper authorities

## Plenary, Platform, and Workshop Listings

Wednesday, March 27

9:00 a.m. – 6:00 p.m.

Press Club Hotel 2nd floor

### New Faculty Forum

Your first faculty appointment brings many new challenges. Network, learn, and find support at the New Faculty Forum, a one-day workshop designed for new faculty (those within the first five years of their appointment) and advanced postdocs. New this year, participants will have the option to register for different tracks: the basics of teaching and active learning or grant writing. Attendees will discuss common challenges, hear strategies for managing a laboratory, and have opportunities to learn about:

- tools and techniques for managing budgets effectively;
- tips for negotiating and establishing relationships with vendors;
- how to be a supportive mentor;
- and more!

This focused event will allow you to form a strong network of peers with whom you can continue to collaborate, commiserate, and celebrate long after the meeting ends. A closing networking social will also allow you to connect with more established researchers. Lunch will be provided.

*Advanced registration required*

Wednesday, March 27

11:00 a.m. – 3:00 p.m.

Austin 2 Hotel 2nd floor

### GENETICS Peer Review Training Workshop

This workshop will provide an introduction to peer reviewing for early career researchers, including graduate students. The workshop will cover best practices and a mock review. Becoming a better reviewer will help you to become a better author and to hone some of the skills central to scientific success, including critical thinking; evaluating research; providing helpful feedback; and understanding the mindset and expectations of peer reviewers and editors. Lunch will be provided.

*Advanced registration required.*

Wednesday, March 27

2:00 p.m. – 5:00 p.m.

Houston Ballroom, Conference Center 3<sup>rd</sup> Floor

### Ecdysone Workshop

The Ecdysone Workshop highlights the diverse roles of insect hormones (e.g., ecdysone, juvenile hormone, peptide hormones and insulin) and hormone receptors in development, growth, metamorphosis, reproduction, and metabolism. Presentations by trainees and new investigators will highlight recent findings in insect endocrinology, and foster discussion among individuals from diverse research interests. Topics include but are not limited to: hormone synthesis and secretion; hormone-controlled signaling and transcription; cross-talk between hormone signaling pathways; and hormonal control of differentiation, morphogenesis, growth, metabolism, reproduction, and behavior.

Wednesday, March 27  
3:00 p.m. – 6:00 p.m.  
Austin 3 Hotel 2nd floor

## Grants and Funding

Learn how funding decisions are made. This program aims to provide attendees important information related to grantsmanship and funding. During the program, attendees will hear talks and discussions from experienced investigators and program officers. Attendees will have the opportunity to learn about:

- The peer review process
- Reaching out to program officers
- Common errors
- Important considerations
- Funding for experimental organisms
- Framing significance and novelty

*Advanced registration required*

Wednesday, March 27  
7:00 p.m. – 9:00 p.m.  
Dallas Ballroom  
Conference Center 1st Floor

## Opening General Session

*Session Chair:*

**Michael Buszczak**

### Presentations:

7:00 Welcome. **Michael Buszczak**

7:20 Larry Sandler Award  
Presentation. **Daniel Barbash**

7:25 Larry Sandler Award Talk.

7:55 Keynote Introduction. **Harmit Malik**

8:00 What's love got to do with it? Stimulating reproduction and activating eggs in *Drosophila*. **Mariana Wolfner**

Thursday, March 28  
8:30 a.m. – 12:00 noon  
Dallas Ballroom  
Conference Center 1st Floor

## Plenary Session I

*Session Chair:*

**Rachel Cox**

### Presentations:

1 - 8:30 Image Award  
Presentation. **Nasser Rusan**

2 - 8:35 Assembly and disassembly of germ plasm localized RNPs. **Elizabeth Gavis**

3 - 9:05 The I of the fly. **Bassem Hassan**

4 - 9:35 The gut microbiome: the driving and driven partners of *Drosophila*. **Angela Douglas**

10:05 - **Break**

5 - 10:30 Interrogating centromere specification mechanisms. **Barbara Mellone**

6 - 11:00 Tissue growth and metabolic sensing: from flies to humans. **Aurelio Teleman**

7 - 11:30 Precision and plasticity in animal transcription. **Angela DePace**

# Download the 60th Annual Drosophila Research Conference **MOBILE APP NOW!**

[conferences.genetics-gsa.org/drosophila/2019/meeting-app](http://conferences.genetics-gsa.org/drosophila/2019/meeting-app)



See complete abstract and speaker info, personalize your schedule, view venue maps, take notes and more.



You can scan this code with a QR Reader on your device.

# FlyBook continues to grow

In October 2015, *GENETICS* launched FlyBook, a comprehensive compendium of review articles presenting the current state of knowledge in *Drosophila* research. Each month, *GENETICS* publishes one or two FlyBook articles spanning the breadth of biology, genetics, genomics, and evolution of *Drosophila*.

Here are the most recent entries to this exciting collection:

## Cell Signaling

### Wingless Signaling: A Genetic Journey from Morphogenesis to Metastasis

Amy Bejsovec

April 2018. 208: 1311-1336.

## Development and Growth

### *Drosophila* as a Genetic Model for Hematopoiesis

Utpal Banerjee, Juliet R. Girard, Lauren M. Goins, and

Carrie M. Spratford

February 2019. 211: 367-417.

### Triacylglycerol Metabolism in *Drosophila melanogaster*

Christoph Heier and Ronald P. Kühnlein

December 2018. 210: 1163-1184.

### Anatomy and Physiology of the Digestive Tract of *Drosophila melanogaster*

Irene Miguel-Aliaga, Heinrich Jasper, and Bruno Lemaitre

October 2018. 210: 357-396.

### Development and Function of the *Drosophila* Tracheal System

Shigeo Hayashi and Takefumi Kondo

June 2018. 209: 367-380.

## Ecology and Evolution

### Phylogeny of the Genus *Drosophila*

Patrick M. O'Grady and Rob DeSalle

May 2018. 209: 1-25.

## Genome Organization

### The *Drosophila* Dot Chromosome: Where Genes Flourish Amidst Repeats

Nicole C. Riddle and Sarah C. R. Elgin

November 2018. 210: 757-772.

## Methods

### Imaging Flies by Fluorescence Microscopy: Principles, Technologies, and Applications

Sebastian Dunst and Pavel Tomancak

January 2019. 211: 15-34.

### Functional Imaging and Optogenetics in *Drosophila*

Julie H. Simpson and Loren L. Looger

April 2018. 208: 1291-1309.

### RNA Interference (RNAi) Screening in *Drosophila*

Florian Heigwer, Phillip Port, and Michael Boutros

March 2018. 208: 853-874.

### Mosaic Analysis in *Drosophila*

Federico Germani, Cora Bergantinos, and Laura A. Johnston

January 2018. 208: 473-490.

### Advances in Engineering the Fly Genome with the CRISPR-Cas System

Ethan Bier, Melissa M. Harrison, Kate M. O'Connor-Giles, and Jill Wildonger

January 2018. 208: 1-18.

## Repair, Recombination, and Cell Division

### Female Meiosis: Synapsis, Recombination, and Segregation in *Drosophila melanogaster*

Stacie E. Hughes, Danny E. Miller, Angela L. Miller, and

R. Scott Hawley

March 2018. 208: 875-908.

## Stem Cells and Germline

### Protecting and Diversifying the Germline

Ryan J. Gleason, Amit Anand, Toshie Kai, and Xin Chen

January 2018. 208: 435-471.

### Subcellular Specialization and Organelle Behavior in Germ Cells

Yukiko M. Yamashita

January 2018. 208: 19-51.

**genetics.org/content/flybook**

Thursday, March 28  
4:30 p.m. – 6:30 p.m.  
Dallas Ballroom A  
Conference Center 1st Floor

## Immunity and the Microbiome

*Session Chairs:*

**Neal Silverman,**  
**Nichole Broderick**

**8 - 4:30** Putting a STING on *Drosophila*: Evolutionary Conservation of Antimicrobial Defense. **Alan Goodman**

**9 - 4:45** Tradeoffs between immune defense and resistance to environmental stress at a single amino acid polymorphism. **Andrea Darby**

**10 - 5:00** Role of Circular RNAs in Innate Immunity and Neurodevelopment. **Rui Zhou**

**11 - 5:15** Diet-induced microbiota adaptation is controlled by NF- $\kappa$ B-dependent regulation of 4EBP in *Drosophila*. **Crissie Vandehoef**

**12 - 5:30** Modeling Host-Pathogen Interactions with the DNA virus IIV-6. **Cara West**

**13 - 5:45** Two Nimrod receptors, NimC1 and Eater, synergistically contribute to phagocytosis in *Drosophila melanogaster*. **Claudia Melcarne**

**14 - 6:00** A resilience function for the Toll pathway in host defense against systemic *Aspergillus fumigatus* infection. **Dominique Ferrandon**

**197 - 6:15** A gut filling: The kinetics of the *Wolbachia* colonization in *Drosophila* guts. **Natalie Vaisman**

**200 - 6:17** Investigating the microbiome's role in female *Drosophila melanogaster* post-mating gene expression changes. **Sofie Delbare**

**202 - 6:19** Microbiome transfers adaptive potential in *Drosophila melanogaster*. **Lucas Henry**

**181 - 6:21** A tissue communication network coordinating innate immune response during muscle stress. **Erika Geisbrecht**

Thursday, March 28  
4:30 p.m. – 6:30 p.m.  
Dallas Ballroom B  
Conference Center 1st Floor

## Evolution I

*Session Chairs:*

**Amanda Larracuente,**  
**Erin Kelleher,**  
**Emily Behrman**

**15 - 4:30** Integrating cis and trans changes to analyze the evolution of Bcd dependent patterning network. **Pinar Onal**

**16 - 4:45** Genetics and genomics of gene expression variation in the *D. melanogaster* early embryo. **Nicolas Svetec**

**17 - 5:00** Convergent evolution of sex-limited pigmentation alleles in *Drosophila*. **Emily Delaney**

**18 - 5:15** Recurrent losses and rapid evolution of the condensin II complex in insects. **Thomas King**

**19 - 5:30** Patterns of genetic and transcriptional selection response under stress. **Simon Forsberg**

**20 - 5:45** New gene formation in hybrid *Drosophila*. **Rebekah Rogers**

**21 - 6:00** Adaptive evolution at a meiosis gene mediates species differences in the rate and patterning of recombination. **Cara Brand**

**251 - 6:15** *tartan* underlies the evolution of male genital morphology. **Alistair McGregor**

**257 - 6:17** Identifying the genetic changes driving network co-option during the evolution of a novel body part. **Gavin Rice**

**254 - 6:19** Rapid evolution of a transcription factor essential for development in *Drosophila*. **Bhavathanini Kasinathan**

**223 - 6:21** Meiotic drive and survival probability of newly inverted chromosomes. **Spencer Koury**

Thursday, March 28  
4:30 p.m. – 6:30 p.m.  
Dallas Ballroom D  
Conference Center 1st Floor

## Models of Human Disease I

*Session Chairs:*

**Juan Botas,**  
**Rolf Bodmer,**  
**Georg Vogler**

**22 - 4:30** Flies in the Diagnosis of Rare Disease: The Model Organisms Screening Center for the Undiagnosed Diseases Network. **Michael Wangler**

**23 - 4:45** Zika virus protein NS4A inhibits Ankle2, a primary microcephaly locus that regulates asymmetric division. **Nichole Link**

**24 - 5:00** Micropipette harpooning reveals a loss of physical coupling between the nucleus and cytoplasm in *Drosophila* models of muscular dystrophy. **Lori Wallrath**

**25 - 5:15** The cathepsin Cysteine protease-1/Cathepsin V regulates  $\alpha$ -synuclein mediated accumulation and neurotoxicity in a synucleinopathy model. **Tom Lee**

**26 - 5:30** Common and differential pathogenic mechanisms caused by

mutant Huntington expression in glia and neurons. **Tarik Onur**

**27 - 5:45** Hap40 is a conserved binding partner of HTT in *Drosophila*. **Sheng Zhang**

**28 - 6:00** Phagocytic glia mediate prion-like spreading of mutant huntingtin aggregates in *Drosophila* brains. **Margaret Pearce**

**770 - 6:15** The RNA export factor, Nxt1, is required for maintenance of muscle integrity, and for normal expression of mRNAs of genes that also generate circular RNAs. **Helen White-Cooper**

**727 - 6:17** The PINK1/Parkin pathway mediates dominant mitochondrial toxicity in CHCHD10-induced ALS-FTD. **Nam Chul Kim**

**730 - 6:19** *UQCRC1* regulates neurodegeneration in a fly model of Parkinsonism. **Yu-Chien Hung**

Thursday, March 28  
6:30 p.m. – 7:30 p.m.  
Dallas Ballroom A  
Conference Center 1st Floor

### Education Platform Session

**29 - 6:30** A Course-based Undergraduate Research Experience to investigate the neuronal subtype specificity of iPLA<sub>2</sub>-beta function. **Josefa Steinhauer**

**30 - 6:45** Using Theatre to Teach and Learn Biology: an Interdisciplinary Experiment in Science Communication. **Zachary Payne**

**31 - 7:00** iCURE: Interdisciplinary Course-based Undergraduate Research Experiences for all. **Jennifer Hackney**

**32 - 7:15** The Genomics Education Partnership: A community of practice that enhances research opportunities for students and faculty at diverse institutions. **Mollie Manier**

Thursday, March 28  
7:45 p.m. – 9:45 p.m.  
Dallas Ballroom D  
Conference Center 1<sup>st</sup> Floor

### Spotlight on Undergraduate Research

This session will highlight undergraduate research accomplishments from *Drosophila* research labs. Selected by faculty reviewers, student speakers will be selected by faculty reviewers to oral presentations on their projects. This undergraduate-specific session will demonstrate ways in which research has become an important part of the college experience through its integration into courses and mentoring in individual research labs.

Thursday, March 28  
7:45 p.m. – 9:45 p.m.  
Austin 2 Hotel 2nd floor

### Equity and inclusion in the *Drosophila* research community

Universities, professional societies, and funding agencies recognize that inclusive research communities are more equitable, productive, and creative. Cultivating inclusion in classrooms, laboratories, and conferences requires discussion and intention to build a sustained effort. A shared space at the conference for *Drosophila* researchers to come together and learn from each other about inclusive practices is valuable to the health of our community. This workshop is for individuals from all career stages and institutional profiles with the goal of creating a dedicated space for open discussion of barriers to inclusion and strategies to mitigate them in support of inclusive research and teaching practices.



Thursday, March 28  
7:45 p.m. – 9:45 p.m.  
Pearl 4 Hotel 2nd floor

### **Lipid Signaling in Drosophila**

Lipids are the major energy storage molecules in the cells and have emerged as important signaling molecules in neurobiology, development, and immunity. Despite a few basic metabolic pathways, we know very little about lipids. The main challenges are to identify specific lipid metabolites and understand their exact functions. Recently, increasing evidences proved that Drosophila models are highly valuable for lipid metabolism researches and notable progresses have been made in defining lipid metabolic regulation during Drosophila development and in Drosophila models of human disease. The workshop will focus on recent progress that Drosophila is bringing to the field of lipid biology.

Thursday, March 28  
7:45 p.m. – 9:45 p.m.  
Dallas Ballroom A Conference Center 1st Floor

### **Everything you ever wanted to know about sex**

The workshop will cover the molecular genetics, development, neurobiology, genomics, evolution, and population genetics of sexual dimorphism, with an emphasis on cross-disciplinary interactions. Presentations by invited speakers and selected abstracts from each discipline will be followed by moderated discussions. The speakers are encouraged to summarize the key ideas behind their research for people working in other fields, outline the main unsolved questions, offer their opinions about future directions, and suggest connections that could be built with other disciplines.

Thursday, March 28  
7:45 p.m. – 9:45 p.m.  
Austin 3 Hotel 2nd floor

### **Designing a CRISPR-Cas9 undergraduate lab course to generate knock-in alleles for the research community**

CRISPR-Cas9 has become a staple in research labs, but it has yet to be widely adopted in undergraduate lab courses. This workshop will equip educators how to design and lead a CRISPR-Cas9 undergraduate lab course that aims to crowd-source the generation of attP-DsRed knock-in alleles for the Drosophila research community. We will also discuss how to adapt the course as an undergraduate training program for research labs. This workshop also provides a forum in which attendees will discuss course design, common pitfalls, time constraints and budget constraints. Professors who have previously lead a CRISPR-Cas9 lab course are encouraged to present.

Thursday, March 28  
2:15 p.m. – 4:15 p.m.  
Austin 1 (Hotel 2<sup>nd</sup> Floor)

### **Intro to the Drosophila microbiome: How can I control the microbiome in my research?**

The workshop is structured as a boot camp on the microbiome. The first half includes review lectures with key background information on the Drosophila microbiome. The second half includes short talks from researchers addressing how they're incorporating new microbiome work into their established research program. We anticipate discussion of problems and solutions.

Friday, March 29  
8:30 a.m. – 10:15 a.m.  
Dallas Ballroom A  
Conference Center 1st Floor

## Cell Division and Growth

### Control

*Session Chairs:*

**Mary Lilly,**  
**Savraj Grewal,**  
**Yingbiao Zhang**

**33 - 8:30** Mechanics of Asymmetric Cell Division. **Tri Pham**

**34 - 8:45** FIP is a novel Chromosomal Passenger Protein that Regulates Fascetto (PRC1) to Ensure Proper Cytokinesis and Ploidy. **Rachel Ng**

**35 - 9:00** Neuronal ribosomal protein function regulates *Drosophila* growth and development. **Lisa Deliu**

**36 - 9:15** Headcase regulates tissue growth and cell cycle progression in response to nutrient restriction. **Jianzhong Yu**

**37 - 9:30** Single cell RNA-sequencing reveals a metabolic aspect of apoptosis in *Rbf* mutant. **Maxim Frolov**

**38 - 9:45** Investigation of intratumor heterogeneity in a *Drosophila* tumor model through single-cell transcriptomic analysis. **Yan Yan**

**558 - 10:00** The role of CENP-C in kinetochore building and chromosome segregation. **Jessica Fellmeth**

**556 - 10:02** Requirement for the Rcd4:Ana3 sub-complex for centriole duplication and centriole to centrosome conversion. **Pallavi Panda**

**550 - 10:04** Function of Nat9 acetyltransferase in microtubule stability and JNK signaling in *Drosophila*. **Jung Wan Mok**

**552 - 10:06** Segregation dynamics of the supernumerary B chromosomes of *D. melanogaster*. **Stacey Hanlon**

Friday, March 29  
8:30 a.m. – 10:15 a.m.  
Dallas Ballroom B  
Conference Center 1st Floor

## Neural Development and

### Physiology

*Session Chairs:*

**Karen Chang,**  
**Robin Hiesinger,**  
**Laura Alto**

**39 - 8:30** Cell-type specific patterned stimulus-independent neuronal activity in the *Drosophila* visual system during synapse formation. **Orkun Akin**

**40 - 8:45** Postsynaptic differentiation controlled by a specific Pix isoform mediates scaling growth of the neuromuscular junction. **Cheuk Ho**

**41 - 9:00** Post-transcriptional regulation by Syncrip/hnRNP Q modulates activity-dependent synaptic plasticity at the larval NMJ. **David Ish-Horowicz**

**42 - 9:15** Effects of altered gravity on the central nervous system of *Drosophila melanogaster*. **Siddhita Mhatre**

**43 - 9:30** Hereditary Spastic Paraplegia proteins model a continuous dynamic network of ER tubules in *Drosophila* motor neurons. **Cahir O'Kane**

**44 - 9:45** Hox miRNAs: tuning behavior to gene regulation. **Daniel Garaulet**

**658 - 10:00** *Tao* negatively regulates retrograde BMP signaling during neuromuscular junction development in *Drosophila*. **Pam Vanderzalm**

**646** - 10:02 The role of Rab11 GTPase in neuronal pruning of *Drosophila* sensory neurons. **Hao-Hsiang Kao**

**661** - 10:04 Expansion Microscopy(ExM) enables subcellular localization of neurotransmitter receptors to single neurites in the neurons of the *Drosophila* motion vision pathway. **Edward Rogers**

**680** - 10:06 Contribution of Phosphatidylserine Exposure in Engulfment of Dendrite Debris by Phagocytes. **Hui Ji**

Friday, March 29

8:30 a.m. – 10:15 a.m.

Dallas Ballroom D Conference Center 1st Floor

## Regulation of Gene Expression

I

Session Chairs:

**Michael Eisen,**  
**Scott Barolo**

**45** - 8:30 Continued activity of the pioneer factor Zelda is required to drive zygotic genome activation. **Tyler Gibson**

**46** - 8:45 Promoter-specific histone methylation and post-transcriptional regulation of the *foraging* gene modulate food-associated behavior in *Drosophila*. **Ina Anreiter**

**47** - 9:00 Investigating cis-regulatory evolution in *Drosophila*: Learning the rules of regulatory logic. **Alexandra Buffry**

**48** - 9:15 A novel tudor-domain protein promotes germline differentiation through post-transcriptional gene regulation in cytoplasmic RNA granules. **Caitlin Pozmanter**

**49** - 9:30 The contributions of optimal and suboptimal Bcd and Otd DNA binding sites to enhancer activity in the *Drosophila* embryo. **Rhea Datta**

**50** - 9:45 Activating and repressing stochastic gene expression between chromosomes. **Chaim Chernoff**

**366** - 10:00 Using Spineless gene expression to understand the Mechanisms of Transvection. **Adrienne Chen**

**362** - 10:02 CrebA directly activates regulators of secretion. **Dorothy Johnson**

**365** - 10:04 A novel role for Blimp-1 in the transcriptional repression of the Hippo pathway in postmitotic photoreceptors. **Joseph Bunker**

**384** - 10:06 Distinct patterns of combinatorial regulation by isoforms of the ETS activator Pointed confer specificity to retinal cell fate acquisition. **Chudong Wu**

Friday, March 29  
10:45 a.m. – 12:30 p.m.  
Dallas Ballroom A Conference Center 1st Floor

## Neural Circuits and Behavior I

*Session Chairs:*

**William Joiner,**  
**Ellie Heckscher,**  
**Yi-Wen Wang**

**51 - 10:45** Visual detection of parasitoid wasps is mediated through the lobula columnar 11 neurons. **Shaun Davis**

**52 - 11:00** Regulation of modulatory cell activity across olfactory neuropil in *Drosophila melanogaster*. **Quentin Gaudry**

**53 - 11:15** Starvation differentially modulates GABA signaling in olfactory receptor neurons. **Eryn Slankster**

**54 - 11:30** Feeding control via multimodal taste integration in pharyngeal taste neurons in adult *Drosophila*. **Yu-Chieh Chen**

**55 - 11:45** What makes a meal? Defining meals from bouts and identifying regulators of meal size. **Scarlet Park**

**56 - 12:00** The *nervy* gene modulates aggression levels through its function in the octopaminergic neurons. **Kenta Asahina**

**690 - 12:15** The neural circuitry of learning dialects in *Drosophila* species. **Balint Kacsoh**

**713 - 12:17** Investigation of neural circuits that mediate acquisition of new knowledge. **Daisuke Hattori**

**722 - 12:19** Bidirectional opponent thermosensors orchestrate euthermic regulation via cross-inhibition. **Luis Hernandez Nunez**

**720 - 12:21** *Neurologin3* is required for a response to the social environment in *Drosophila melanogaster*. **Ryley Yost**

Friday, March 29  
10:45 a.m. – 12:30 p.m.  
Dallas Ballroom B Conference Center 1st Floor

## Physiology, Metabolism and Aging I

*Session Chairs:*

**Tânia Reis,**  
**Akhila Rajan,**  
**Elizabeth Rideout**

**57 - 10:45** FOXO is a hypoxia-inducible transcription factor necessary for *Drosophila* tolerance to low oxygen. **Elizabeth Barretto**

**58 - 11:00** *Drosophila* HNF4 directs a switch in fatty acid metabolism that supports the transition to adulthood. **Gilles Storelli**

**59 - 11:15** Analysis of the Diurnal Transcriptomes of Young and Old *Drosophila* Heads Reveals Metabolic Shifts During Aging. **David Hendrix**

**60 - 11:30** Genome-wide analyses of lifespan and healthspan reveal a role for *decima* as a novel regulator of neuronal insulin-like peptide production. **Kenneth Wilson**

**61 - 11:45** Neural mechanisms underlying energy homeostasis: hormonal regulation of synaptic plasticity in fat-sensing neurons. **Ava Brent**

**62 - 12:00** Peroxisome-mediated inter-tissue communication during *Drosophila* aging. **Kerui Huang**

**617 - 12:15** Octopamine Receptors *OAMB* and *Octβ2R* are Required in Muscle for Exercise Adaptations. **Alyson Sujkowski**

**627** - 12:17 Neuropeptide F receptor acts in the *Drosophila* prothoracic gland to regulate body size and developmental timing. **Jade Kannangara**

**606** - 12:19 Sustaining mitochondrial genome integrity and robustness with age. **Pei-I TSAI**

**615** - 12:21 Regulation of Lifespan by dSirt6 in *Drosophila melanogaster*. **Jackson Taylor**

Friday, March 29  
10:45 a.m. – 12:30 p.m.  
Dallas Ballroom D  
Conference Center 1st Floor

## Regulation of Gene Expression II/ Chromatin, Epigenetics and Genomics I

*Session Chairs:*  
**Michael Eisen,**  
**Scott Barolo,**  
**Xin Chen,**  
**Erica Larschan,**  
**Leila Rieder**

**63** - 10:45 The *Drosophila* pioneer factor Zelda modulates the nuclear microenvironment of a Dorsal target enhancer to potentiate transcriptional output. **Peter Whitney**

**64** - 11:00 Regulatory crosstalk between ecdysone-induced transcription factors confers temporal specificity to chromatin-state & gene expression during metamorphosis. **Spencer Nystrom**

**65** - 11:15 *Trans* regulatory changes produce differences in maternal transcript deposition between closely related species of *Drosophila*. **Emily Cartwright**

**66** - 11:30 Dynamic identification of the dosage-compensated *Drosophila* male X-chromosome during early embryogenesis. **Leila Rieder**

**67** - 11:45 Unidirectional fork movement coupled with strand-specific histone incorporation ensures asymmetric histone inheritance. **Matthew Wooten**

**68** - 12:00 The global, multilayer structure of homolog pairing reflects a level of functional organization in the *Drosophila* genome. **Jumana AlHaj Abed**

**390** - 12:15 Brain-wide screen for protein and mRNA localization reveals that multiple post-transcriptional mechanisms contribute to synaptic protein enrichment. **Josh Titlow**

**379** - 12:17 A tsRNA-AGO1 autoregulatory feedback loop. **Feng He**

**406** - 12:19 Histone 3 lysine 14 is essential and required for wing patterning in *Drosophila*. **Mattias Mannervik**

**408** - 12:21 Dynamics of free and chromatin-bound histone H3 during early embryogenesis. **Amanda Amodeo**

Friday, March 29

2:15 p.m. – 4:15 p.m.

Austin 1 Hotel 2nd floor

### **Collaborating with clinical researchers: expanding opportunities for *Drosophila* biologists in rare disease diagnosis and therapeutic research**

The goal of this workshop is to increase the awareness of exciting opportunities for *Drosophila* biologists to be directly involved in clinical research. The Undiagnosed Diseases Network (UDN) and Rare Diseases Models & Mechanisms Network (RDMM) are using *Drosophila* to assess functions of genetic variants found in patients with rare diseases, understand disease mechanisms, and develop models to explore potential treatments. By sharing the lessons learned from researchers who have been collaborating with physicians and introducing web-based tools that can facilitate the identification of potential clinical collaborators, we hope to encourage *Drosophila* researchers to proactively engage in cross-disciplinary medical research.

Friday, March 29

2:15 p.m. – 4:15 p.m.

Dallas Ballroom D

Conference Center 1st Floor

### **Feeding Behavior, Nutrition and Metabolism**

*Drosophila* has emerged as a powerful model system for studying how diet and nutrition can influence a wide range of metabolic processes. This workshop is designed to assemble a diverse group of presentations that highlight recent advances in the field of nutrition and metabolism. The goal of this workshop is to foster discussions and encourage collaborations among individuals interested in topics ranging from food intake as a fundamental parameter of metabolism to the effects of diet on energy storage and utilization.

Friday, March 29

2:15 p.m. – 4:15 p.m.

Dallas Ballroom B

Conference Center 1st Floor

### **Developmental Mechanics**

Developmental biology has undergone a revolution over the last two decades, largely as a result of work in *Drosophila*, that placed biomechanical, quantitative imaging, and mathematical modeling approaches at the forefront of the study of tissue morphogenesis. In particular, the establishment of tools to measure and manipulate mechanical forces in living organisms has demonstrated that mechanical forces profoundly shape animal development. In this workshop, we will review the most recent technical advances to visualize and quantify force generation in *Drosophila*, and we will discuss the latest results demonstrating the interplay between physical forces, molecular dynamics and tissue morphogenesis.

Friday, March 29

2:15 p.m. – 4:15 p.m.

Austin 3 Hotel 2nd floor

### **Using *Drosophila* to bring authentic course-based undergraduate research experiences (CUREs) into the undergraduate classroom**

This workshop is designed to help instructors at Primarily Undergraduate Institutions (PUIs) bring authentic research experiences using *Drosophila* into the undergraduate classroom. Attendees will split into small groups and spend time creating semester-long experimental protocols that can be adapted to answer a variety of research questions. This workshop will focus on both the experimental approaches and the scientific questions, both of which are essential elements of a successful CURE.

Friday, March 29

2:15 p.m. – 4:15 p.m.

Austin 2 Hotel 2nd floor

### **Maximize the impact of your curriculum vitae and resume workshop**

Whether applying for a fellowship, funding, or position how you frame your accomplishments in your curriculum vitae and resume is important.

- Learn tips and tricks to communicate who you are as a scientific professional.
- Workshop your curriculum vitae or resume during the event.

To get the most out of the event, all attendees should bring a recent copy of their curriculum vitae or resume to the workshop.

Friday, March 29  
4:30 p.m. – 6:30 p.m.  
Dallas Ballroom A  
Conference Center 1st Floor

## Models of Human Disease II

*Session Chairs:*

**Juan Botas,**  
**Rolf Bodmer,**  
**Georg Vogler**

**69 - 4:30** A personalized approach to treat a KRAS mutant colorectal cancer patient using *Drosophila*. **Erdem Bangi**

**70 - 4:45** Diet-enhanced *Drosophila* Tumors Induce Muscle Wasting as a Nutrient-Scavenging Metabolic Program. **Holly Newton**

**71 - 5:00** A tumor-microbe self-enforcing loop promotes intestinal tumorigenesis. **Jun Zhou**

**72 - 5:15** Transgenerational inheritance model of high fat diet-induced lipotoxic cardiomyopathy. **Maria Guida**

**73 - 5:30** A conserved role for the N-glycosylation pathway in sleep and seizures. **Brittany Leger**

**74 - 5:45** The intellectual disability-associated SWI/SNF chromatin remodeling complex regulates structural plasticity of the *Drosophila* mushroom body during critical developmental transitions. **Jamie Kramer**

**75 - 6:00** A whole-animal platform to advance a clinical kinase inhibitor into new disease space. **Masahiro Sonoshita**

**739 - 6:15** The microbiome's effect on the pathogenesis of Alzheimer's disease. **Michael Zhu**

**748 - 6:17** Late-breaking news: Autophagy goes on strike! – Rampant immune response kills neurons! **Arvind Shukla**

**723 - 6:19** Loss-of-Function Variants in *IRF2BPL* are Associated with Neurological Phenotypes. **Paul Marcogliese**

**766 - 6:21** Multi-Model System Approach to Identifying Atrial Fibrillation Genes and Mechanisms. **James Kezos**

Friday, March 29  
4:30 p.m. – 6:30 p.m.  
Dallas Ballroom B Conference Center 1st Floor

## Physiology, Metabolism and Aging II

*Session Chairs:*

**Tânia Reis,**  
**Akhila Rajan,**  
**Elizabeth Rideout**

**76 - 4:30** Phosphatidic acid as a limiting host metabolite for the proliferation of the microsporidium *Tubulinosema ratisbonensis* in *Drosophila* flies. **Dominique Ferrandon**

**77 - 4:45** *Drosophila rab27* mediates longevity in mushroom body by downregulating TOR signaling. **Yi-Jhan Li**

**78 - 5:00** With no lysine (WNK) Kinase: A Potassium Sensor. **John Pleinis**

**79 - 5:15** An intestinal zinc sensor couples micronutrient availability with developmental growth through Tor signalling. **Siamak Redhai**

**80 - 5:30** *Drosophila melanogaster* sex peptide is a key regulator of female midgut morphology and physiology. **Melissa White**

**81 - 5:45** Activity of the nuclear receptor Seven up in different tissues controls distinct processes of oogenesis. **Lesley Weaver**



**82 - 6:00** Male-female differences in Dilp2 secretion contribute to sexual size dimorphism in *Drosophila*. **Elizabeth Rideout**

**621 - 6:15** Cellular heterogeneity underlying poly-functional fat body tissue in *Drosophila melanogaster*. **Vanika Gupta**

**580 - 6:17** Mir-969 regulates body fat mass through Gr47b. **Jin Seo**

**584 - 6:19** The role of RNA-binding protein alan shepard in whole organism metabolism regulation. **Claire Gillette**

**634 - 6:21** Epigenetic Inheritance of Alcohol Sensitivity in *Drosophila melanogaster*. **Jasmina Abdalla**

Friday, March 29

4:30 p.m. – 6:30 p.m.

Dallas Ballroom D

Conference Center 1st Floor

## Neural Development and Physiology II/Neural Circuits and Behavior II

*Session Chairs:*

**Karen Chang,**  
**Robin Hiesinger,**  
**William Joiner,**  
**Ellie Heckscher,**  
**Yi-Wen Wang,**  
**Laura Alto**

**83 - 4:30** Stromalin constrains memory acquisition by developmentally limiting synaptic vesicle pool size. **Anna Phan**

**84 - 4:45** Timing temporal transitions during brain development. **Anthony Rossi**

**85 - 5:00** The beta-alanine transporter *BalaT* localizes to visual lamina and sustains vision in extended light conditions. **Andrew Moehلمان**

**86 - 5:15** Sleep need is driven by a neural circuit involving stress-sensing peripheral neurons and the central brain. **William Joiner**

**87 - 5:30** The non-nuclear splice isoform of NFκB gene Dif modulates sensitivity to ethanol sedation in *Drosophila melanogaster*. **Thilini Wijesekera**

**88 - 5:45** Serotonergic modulation of goal-directed habituation during exploration in *Drosophila*. **Miguel de la Flor**

**89 - 6:00** Secrets of the zombie fly: Determining the neurological basis of behavioral manipulation in *Drosophila*. **Carolyn Elya**

**679 - 6:15** Dscam regulates lineage dependent repulsion during columnar unit formation in the medulla. **Chuyan Liu**

**656 - 6:17** The Transcription Factor Gooseberry, a pax3/pax7 homolog, interacts with Wingless to control neuronal function. **Marizabeth Perez**

**688 - 6:19** The neuronal design underlying consolidated Anesthesia-Resistance Memory (ARM). **Emmanuel Antwi-Adjei**

**683 - 6:21** Dopamine deficiency: how dopaminergic circuits compensate for loss of dopamine. **Ryan Sangston**

Saturday, March 30  
8:30 a.m. – 10:15 a.m.  
Dallas Ballroom A  
Conference Center 1st Floor

## Cell Biology: Cytoskeleton, Organelles, Trafficking

*Session Chairs:*

**Elizabeth Chen,**  
**Blake Riggs,**  
**Donghoon Lee**

**90 - 8:30** Crk adaptor protein containing multiprotein signaling complexes regulate actomyosin-dependent developmental processes. **Andrew Spracklen**

**91 - 8:45** Proteomic analysis of ovarian ring canals reveals the mechanism of ubiquitin-mediated regulation of the F-actin cytoskeleton. **Andrew Hudson**

**92 - 9:00** The significance of sequestering H2A, H2Av and H2B on lipid droplets. **Roxan Stephenson**

**93 - 9:15** Mechanotransduction at tricellular junctions. **Huapeng Yu**

**94 - 9:30** Wash functions in the nucleus to affect Nuclear Envelope budding. **Jacob Decker**

**95 - 9:45** Spectraplakins maintain perinuclear microtubule organization in polyploid cells. **Tianhui Sun**

**542 - 10:00** The p38 MAP kinase is critical for rapid embryonic wound closure. **Gordana Scepanovic**

**528 - 10:02** Regulation of Mitochondrial Network Organization in *Drosophila* Muscles. **Prasanna Katti**

**517 - 10:04** Endocytosis regulates Fog signaling to promote apical constriction during *Drosophila* salivary gland invagination. **Thao Le**

**549 - 10:06** Tubulin polymerization promoting protein, Ringmaker, and microtubule associated protein 1B homolog, Futsch, coordinate microtubule organization and synaptic growth. **Swati Banerjee**

Saturday, March 30  
8:30 a.m. – 10:15 a.m.  
Dallas Ballroom B  
Conference Center 1st Floor

## Chromatin, Epigenetics and Genomics II

*Session Chairs:*

**Xin Chen,**  
**Erica Larschan,**  
**Leila Rieder**

**96 - 8:30** Epigenetic effects of transposable elements in 3D nuclear space impact genome function. **Grace Lee**

**97 - 8:45** The Polycomb silencing switch during germline development. **Steven DeLuca**

**98 - 9:00** H3K9me3-mediated gene silencing and female fate maintenance in *Drosophila* germ cells. **Helen Salz**

**99 - 9:15** Satellite DNA Regulation in *Drosophila melanogaster*. **Xiaolu Wei**

**100 - 9:30** Diversification and collapse of the *Drosophila* telomere elongation mechanism. **Bastien Saint-leandre**

**101 - 9:45** Chromatin reprogramming by the histone H3.3 K27M oncomutation during DNA replication. **Kami Ahmad**

**412 - 10:00** Lysine 27 of replication-independent histone H3.3 is required for Polycomb target gene silencing but not for gene activation. **Daniel McKay**

**413** - 10:02 Centromere organization and evolution in the simulans clade. **Amanda Larracuent**

**431** - 10:04 An evolutionary perspective on gene expression and regulatory dynamics at the single-cell level. **Li Zhao**

**430** - 10:06 Meiotic sex chromosome inactivation in the *Drosophila melanogaster* male germ line. **Miriam Akeju**

Saturday, March 30  
8:30 a.m. – 10:15 a.m.  
Dallas Ballroom D  
Conference Center 1st Floor

## Signal Transduction

*Session Chairs:*

**Jessica Treisman,**  
**Ken Moberg,**  
**Helen Attrill**

**102** - 8:30 A membrane transporter is required for steroid hormone uptake in *Drosophila*. **Naoki Yamanaka**

**103** - 8:45 Patronin regulates organ growth through Hippo signaling pathway in *Drosophila*. **Dae-Wook Yang**

**104** - 9:00 Regulation of epidermal cell differentiation by the Hippo pathway. **Heya Zhao**

**105** - 9:15 Chromatin modeling protein Hat-trick is a novel regulator of Notch signaling in *Drosophila melanogaster*. **Ankita Singh**

**106** - 9:30 Making new connection between TOR, autophagy, and metabolism. **Hong-Wen Tang**

**107** - 9:45 The TGF- $\beta$ /Activin ligand Act- $\beta$ , but not Dawdle, is required for survival under chronic nutrient deprivation. **Heidi Bretscher**

**501** - 10:00 Suppression of store-operated calcium entry components *dStim* and *dOrai* results in dilated cardiomyopathy. **Courtney Petersen**

**505** - 10:02 New signaling intensity-dependent regulation of the MAPK pathway revealed through an oncogenic KRAS *Drosophila* model. **Jessica Sawyer**

**497** - 10:04 NF- $\kappa$ B Shapes Metabolic Adaptation by Attenuating Foxo-mediated Lipolysis in *Drosophila*. **Maral Molaei**

**495** - 10:06 Wound-induced polyploidization is dependent on Intergrin-Hippo signaling. **Rose Besen-McNally**

Saturday, March 30  
10:45 a.m. – 12:30 p.m.  
Dallas Ballroom A  
Conference Center 1st Floor

## Cell Death and Cell Stress

*Session Chairs:*

**Don Ryoo,**  
**Gabor Juhasz,**  
**Tamas Maruzs**

**108 - 10:45** Stabilized Acinus manages cellular stress by elevating basal levels of autophagy. **Nilay Nandi**

**109 - 11:00** The sphingolipid-synthesizing enzyme *infertile crescent* engages *crumbs* for neuronal maintenance through redox signaling cascade. **Fei-Yang Tzou**

**110 - 11:15** *Drosophila* G3BP, RASPUTIN, is sufficient but not necessary for stress granule formation in intestinal progenitor cells. **Kasun Buddika Jayawardhana Koomangodage**

**111 - 11:30** Loss of Peroxisomal ACOX1 induces autoimmunity whereas a *denovo* gain of function variant induces elevated ROS and glial loss in humans and flies. **Hyunglok Chung**

**112 - 11:45** Non-canonical translation initiation factors regulate the expression of ATF4 in response to cellular stress. **Deepika Vasudevan**

**113 - 12:00** Damage to the basement membrane by ROS and JNK recruit hemocytes to overgrown tissue. **Neha Diwanji**

**164 - 12:15** Analyzing the importance of ubiquitin-dependent selective protein aggregation in *Drosophila*. **Gabor Juhasz**

**166 - 12:17** Loss of the ER metalloprotease CG14516 rescues retinal degeneration by reducing ER stress-induced apoptosis in a *Drosophila* model of retinitis pigmentosa. **Rebecca Palu**

**174 - 12:19** Ionizing radiation induces regenerative properties in a caspase-dependent manner in *Drosophila*. **TinTin Su**

**172 - 12:21** Follicle cell actin dynamics and calcium bursts during nurse cell death. **Pelagia Candelas**

Saturday, March 30  
10:45 a.m. – 12:30 p.m.  
Dallas Ballroom B  
Conference Center 1st Floor

## Patterning, Morphogenesis and Organogenesis I

*Session Chairs:*

**Jennifer Zallen,**  
**Juan Riesgo-Escovar**

**114 - 10:45** The Alary Muscles. A keystone of the heart. **Alain Vincent**

**115 - 11:00** The mechanisms of dynamin-actin interaction. **Ruihui Zhang**

**116 - 11:15** Actomyosin cables prevent premature tissue internalization in the *Drosophila* embryo. **Jessica Yu**

**117 - 11:30** Photoreceptor apical domain remodeling coordinates epithelial elongation during retinal morphogenesis. **Xiao Sun**

**118 - 11:45** A new member of an elite group: Clamp as a novel regulator of Zygotic Genome Activation (ZGA) in *Drosophila melanogaster* embryos. **Megan Colonna**

**119** - 12:00 Regulation of inductive signaling output by antiparallel morphogen gradients during epithelial patterning in the *Drosophila* ovary. **Laura Nilson**

**481** - 12:15 Force-dependent tendinous ECM remodeling during flight muscle Development. **Wei-Chen Chu**

**454** - 12:17 Mob family proteins and the nuclear Dbf2-related kinase, Tricornered, are required for tube formation in the ovarian follicular epithelium. **Juan Duhart**

**452** - 12:19 The BTB/POZ domain factor Ribbon has a dual role as the transcriptional regulator of both organ growth and morphogenesis in the embryonic epithelium. **Rajprasad Loganathan**

**447** - 12:21 Analysis of Defective Heart Patterning in akirin Mutants. **Hayley Milner**

Saturday, March 30  
10:45 a.m. – 12:30 p.m.  
Dallas Ballroom D  
Conference Center 1st Floor

## Stem Cells, Regeneration and Tissue Injury

*Session Chairs:*

**Susan Parkhurst,**  
**Lucy Erin O'Brien,**  
**Mitsutoshi Nakamura**

**120** - 10:45 “Survival of the fittest”: Determining the mechanism by which *BenA* causes hypercompetition in the follicle stem cell niche. **Sumitra Tatapudy**

**121** - 11:00 Hsp83/Hsp90 physically associates with Insulin Receptor to promote neural stem cell reactivation. **Jiawen Huang**

**122** - 11:15 Shavenbaby isoforms orchestrate the proliferation *versus* differentiation switch of intestinal stem cells. **Sandy Al hayek**

**123** - 11:30 Hematopoietic “Intermediate Progenitors” represent a distinct and novel cell type that marks the transition of a true progenitor to a differentiated fate. **Carrie Spratford**

**124** - 11:45 Local role for steroids in regenerative growth in *Drosophila*. **Douglas Terry**

**125** - 12:00 Evolutionarily conserved Wingless signaling pathway is regulated by newly identified *Newt* genes to trigger regeneration response in *Drosophila*. **Abijeet Mehta**

**286** - 12:15 Caliban regulates mitochondria integrity to maintain intestine homeostasis. **Xiaolin Bi**

**291** - 12:17 TGFβ/Activin signaling is a switch between homeostasis and stem cell regeneration in the *Drosophila* testis. **Salvador Herrera**

**282** - 12:19 A novel mutation in *brain tumor* causes both neural over-proliferation and neurodegeneration in adult *Drosophila*. **Stanislava Chtarbanova**

**288** - 12:21 An SH3PX1-dependent endocytosis/autophagy network restrains intestinal stem cell proliferation by counteracting EGFR signaling. **Peng Zhang**

Saturday, March 30  
4:00 p.m. – 6:00 p.m.  
Dallas Ballroom A  
Conference Center 1st Floor

## Evolution II

*Session Chairs:*

**Amanda Larracuente,**  
**Erin Kelleher,**  
**Emily Behrman**

**126 - 4:00** Functional analysis of *de novo* evolved genes in male *Drosophila* reproduction. **Brendan Kelly**

**127 - 4:15** Save our sons: Surprising roles for RNAi to resolve intragenomic sex chromosome conflict. **Chun-Ming Lai**

**128 - 4:30** Diapause-associated SNPs vary clinally but not seasonally in natural populations of *D. melanogaster*. **Priscilla Erickson**

**129 - 4:45** Genome-wide signatures of non-random mating suggest extreme micro-environment population structure in *Drosophila santomea* and other species. **Peter Andolfatto**

**130 - 5:00** X-chromosome meiotic drive in *Drosophila simulans*: Genetic basis drive suppression. **Cécile Courret**

**131 - 5:15** Male recombination created geographically distributed haplotypes of the young neo-Y chromosome of *Drosophila albomicans*. **Kevin Wei**

**132 - 5:30** Host-virus co-evolution in *Drosophila innubila* highlights non-RNAi pathways as key to antiviral response. **Tom Hill**

**267 - 5:45** Genotype-by-temperature interactions maintain polygenic sex determination in the housefly. **Kiran Adhikari**

**217 - 5:47** Trans-complementing system uncovers fine workings of CRISPR-based gene drives. **Victor Lopez del Amo**

**210 - 5:49** CRISPR Knockout and Functional Analysis of Three Y Chromosome Genes in *D. melanogaster*. **Yassi Hafezi**

**245 - 5:51** Fitness consequences of long sperm and sperm storage organs of *Drosophila melanogaster*. **Halli Weiner**

Saturday, March 30  
4:00 p.m. – 6:00 p.m.  
Dallas Ballroom B  
Conference Center 1st Floor

## Patterning, Morphogenesis and Organogenesis II

*Session Chairs:*

**Jennifer Zallen,**  
**Juan Riesgo-Escovar**

**133 - 4:00** Precise regulation of RhoA promotes proper tissue curvature. **Adam Martin**

**134 - 4:15** Crumbs-complex directed apical membrane dynamics controls epithelial cell ingression. **Sergio Simoes**

**135 - 4:30** The LRR receptor Tartan establishes polarity at tissue compartment boundaries during convergent extension. **Adam Pare**

**136 - 4:45** Linking tissue morphogenesis and patterning to the data mining framework: a proposal and a proof of concept. **Tomer Stern**

**137 - 5:00** Septate junction proteins maintain tissue integrity during dorsal closure. **Clinton Rice**

**138 - 5:15** Septate junctions coordinate epithelial integration with growth of stem cell progeny during intestinal turnover. **Paola Moreno-Roman**

**139 - 5:30** A quantitative analysis of EGFR dynamics during early *Drosophila* development. **Nicole Revaitis**

**465 - 5:45** Tissue-scale mechanical coupling reduces morphogenetic noise to ensure precision during epithelial folding. **Anthony Eritano**

**444 - 5:47** Wingless counteracts epithelial folding in *Drosophila* wing discs by increasing mechanical tension at basal cell edges. **Liyuan Sui**

**440 - 5:49** Growth Regulatory Pathway collaborates with Axial Patterning Genes to regulate Patterning and Growth in *Drosophila* Eye. **Neha Gogia**

**463 - 5:51** Feedback between actomyosin and microtubules stabilizes intercellular force transmission during tissue folding. **Clint Ko**

Saturday, March 30

4:00 p.m. – 6:00 p.m.

Dallas Ballroom D Conference Center 1st Floor

## Reproduction and

## Gametogenesis

*Session Chairs:*

**Hilary Ashe,**  
**Erika Bach,**  
**Salvador Herrera**

**140 - 4:00** The Dynamics of Germline Mutations and DNA Repair in Single-cell RNA-seq of Adult *Drosophila* Testis. **Evan Witt**

**141 - 4:15** GCNA preserves genome integrity and fertility across species. **Courtney Goldstein**

**142 - 4:30** Centromere clustering promotes meiotic homolog pairing. **Talia Hatkevich**

**143 - 4:45** Neuropeptide Dh31 signaling regulates early germline cyst survival during adult *Drosophila* oogenesis. **Tianlu Ma**

**144 - 5:00** Epithelial cell gene expression and function during developmental nurse cell clearance in *Drosophila melanogaster* ovaries. **Diane Lebo**

**145 - 5:15** Sex-specific specification of the follicle stem cells in the developing *Drosophila* ovary. **Abigail Dove**

**146 - 5:30** Adaptive evolution of piRNA pathway proteins affects piRNA biogenesis but not TE transcripts. **Luyang Wang**

**347 - 5:45** Directing testis specific gene expression: Nucleosome dynamics and transcriptional regulators. **Katia Jindrich**

**352 - 5:47** A robust transposon-domesticating response from germline stem cells. **Sungjin Moon**

**351 - 5:49** *Drosophila* accessory gland secondary cells and post-mating sperm dynamics. **Ben Hopkins**

**303 - 5:51** *Dm* Ime4 is required for somatic cyst cell permeability barrier function during spermatogenesis. **Antonio Rockwell**

Saturday, March 30  
7:30 p.m. – 9:30 p.m.  
Dallas Ballroom  
Conference Center 1st Floor

## Techniques & Technology

*Session Chairs:*

**Hugo Bellen,**  
**Lena Riabinina,**  
**Julie Simpson**

### Presentations:

**147** - 7:30 New Tools and Methods for Neuronal Circuit Analysis in *Drosophila*. **Gerald Rubin**

**148** - 7:45 Spying on the dynamics of acetylcholine, dopamine, octopamine, and 5-HT in fly's brain by constructing new genetically-encoded GRAB sensors. **Yulong Li**

**149** - 8:00 Selectable, drug-based genetics and transgenesis in *Drosophila melanogaster*. **Nick Matinyan**

**150** - 8:15 Bellymount: A novel, method for longitudinal, intravital imaging of abdominal organs in adult *Drosophila*. **Leslie Ann Koyama**

**151** - 8:30 GAL4s, LEGOs, and 3D-printers: the genetic toolbox of the 21<sup>st</sup> century *Drosophilist*. **Giorgio Gilestro**

**152** - 8:45 Techniques and computational methods for single-cell regulatory genomics in *Drosophila*. **Stein Aerts**

**153** - 9:00 FlyBase updates presentation. **Steven Marygold**

**154** - 9:15 A Gene Disruption Project (GDP) update: using CRISPR with PCR-generated homology donors to knock-in Swappable Integration Cassettes in introns of genes in flies and in S2 cells. **Oguz Kanca**

Sunday, March 31  
8:30 a.m. – 12:00 noon  
Dallas Ballroom  
Conference Center 1st Floor

## Plenary II

*Session Chair:*

**Helmut Kramer**

### Presentations:

**155** - 8:30 p53 genes and the game of transposons. **John Abrams**

**156** - 9:00 Neural mechanisms for dynamic acoustic communication. **Mala Murthy**

**157** - 9:30 Y chromosome evolution in 400 *Drosophila* species. **Bernardo Carvalho**

10:00 - **Break**

**158** - 10:30 Waking up "Sleeping" Neural Stem Cells. **Hongyan Wang**

**159** - 11:00 Towards a brain architecture for visual behavior selection. **Gwyneth Card**

**160** - 11:30 Upstream regulation of Hippo signaling in epithelial cells. **Rick Fehon**



## **Poster Session Listings**

<b>Cell Stress and Cell Death.....</b>	<b>161-178</b>
<b>Immunity and the Microbiome.....</b>	<b>179-209</b>
<b>Evolution .....</b>	<b>210-277</b>
<b>Stem Cells, Regeneration and Tissue Injury .....</b>	<b>278-301</b>
<b>Reproduction and Gametogenesis .....</b>	<b>302-352</b>
<b>Regulation of Gene Expression .....</b>	<b>353- 398</b>
<b>Chromatin, Epigenetics and Genomics .....</b>	<b>399-436</b>
<b>Patterning, Morphogenesis and Organogenesis.....</b>	<b>437-486</b>
<b>Signal Transduction .....</b>	<b>487-505</b>
<b>Cell Biology: Cytoskeleton, Organelles and Trafficking .....</b>	<b>506-549</b>
<b>Cell Division and Cell Growth.....</b>	<b>550-577</b>
<b>Physiology, Metabolism and Aging .....</b>	<b>578-638</b>
<b>Neural Development and Physiology .....</b>	<b>639-681</b>
<b>Neural Circuits and Behavior.....</b>	<b>682-722</b>
<b>Models of Human Disease.....</b>	<b>723-798</b>
<b>Techniques and Technology.....</b>	<b>799-824</b>
<b>Educational Initiatives.....</b>	<b>825-829</b>

## Poster Sessions

### Cell stress and cell death

**161** Anti-apoptotic function of ecdysone signaling in *Drosophila*. **Jae Park**

**162** Using whole genome sequencing as a tool to identify novel regulators of apoptosis. **Alicia Shields**

**163** Evaluation of *spitz* in cell survival after telomere loss. **Molly Brakhane**

**164** Analyzing the importance of ubiquitin-dependent selective protein aggregation in *Drosophila*. **Gabor Juhasz**

**165** The Fbox protein CG6758 regulates Xbp1-induced cell death in the *Drosophila* eye. **Pedro Domingos**

**166** Loss of the ER metalloprotease CG14516 rescues retinal degeneration by reducing ER stress-induced apoptosis in a *Drosophila* model of retinitis pigmentosa. **Rebecca Palu**

**167** Regulation of the Unfolded Protein Response by Fic-mediated AMPylation and deAMPylation of BiP protects photoreceptors from light-dependent degeneration. **Amanda Casey**

**168** Analysis of Gp210 function during ER stress responses in *Drosophila melanogaster*. **Sean Speese**

**169** Deciphering the physiological role of IRE1 signaling in *Drosophila* eye development. **Sahana Mitra**

**170** The GATOR2 complex regulates the dynamic recruitment of TSC to lysosomes. **Yngbiao Zhang**

**171** Identifying the Secretome and Transmembrane Proteins of Non-Professional Phagocytes. **Anoush Calikyan**

**172** Follicle cell actin dynamics and calcium bursts during nurse cell death. **Pelagia Candelas**

**173** Establishment of an Adult Onset Model of Defective Phagocytosis to Study Neurodegeneration. **Heena Gandevia**

**174** Ionizing radiation induces regenerative properties in a caspase-dependent manner in *Drosophila*. **TinTin Su**

**175** Death by Splicing: Alternative splicing regulated by DOA kinase induces cell death. **Leonard Rabinow**

**176** Decoupling developmental apoptosis and neuroblast proliferation in *Drosophila*. **Katherine Harding**

**177** The Dark Side of Light: Effects of Light Exposure on Aging Phenotypes. **Jadwiga Giebultowicz**

**178** Influences on developmental homeostasis of eye facet number using DGRP sequenced strains. **James Thompson**

### Immunity and the microbiome

**179** Regulation of Hemocyte Activation by Reactive Oxygen Species. **Catherine Brennan**

**180** Role of Lysosome in Immune Priming of Hemocytes. **Ching-On Wong**

**181** A tissue communication network coordinating innate immune response during muscle stress. **Erika Geisbrecht**

**182** Dissecting the impact of chronic infection on tolerance towards secondary infection in *Drosophila melanogaster*. **Francesco Satriale**

**183** Identification and characterisation of molecularly-distinct *Drosophila* macrophage subpopulations with enhanced inflammatory responses to injury. **Jonathon Coates**

**184** Using the *Drosophila* Genetics Reference Panel to Identify Host Factors Associated with *Coxiella burnetii* Infection. **Zachary Howard**

**185** Exploiting a cyclic dinucleotide-mediated immune response to reduce the burden of *Coxiella burnetii* infection. **Rosa Guzman**

**186** Immunity divergence in *D. simulans* and *D. mauritiana*. **Mariaelena Nabors**

**187** Profiling sex dimorphism of immune gene expression in *Drosophila*. **MD Mursalin Khan**

**188** Balancing selection in *Drosophila* AMPs may be maintained via functional diversity amongst alleles. **Joanne Chapman**

**189** Determining the causes and consequences of genetic variation in Dipteracin, a *Drosophila* antimicrobial peptide. **Sarah Mullinax**

**190** Regulation of post-mating immune response in female *Drosophila melanogaster*. **Kathleen Gordon**

**191** Parasitic nematode FAR proteins play a key role in modulating host immunity. **Sophia Parks**

**192** The role of intestinal TOR signaling following pathogenic bacterial infection in *Drosophila*. **Rujuta Deshpande**

**193** The nematode-associated bacterium *Xenorhabdus innexi* has increased virulence when co-injected with secreted nematode protein. **Valentina Alonso**

**194** A survey of the microorganisms colonizing three *Drosophila* species in the wild. **Emma Pagella**

**195** Effects of spaceflight and simulated microgravity on a host-pathogen system. **Rachel Gilbert**

**196** Male-Killing *Spiroplasma* Densities in *Drosophila* Exposed to Resistant Parasitoid Wasps. **Anika Stankov**

**197** A gut filling: The kinetics of the *Wolbachia* colonization in *Drosophila* guts. **Natalie Vaisman**

**198** The gut microbiome as a driver of host dietary preference in *Drosophila melanogaster*. **Tanner Call**

**199** The influence of natural diet and microbiota community on metabolic phenotype of *Drosophila melanogaster*. **Andrey Bombin**

**200** Investigating the microbiome's role in female *Drosophila melanogaster* post-mating gene expression changes. **Sofie Delbare**

**201** Effect of Nora virus infection on native gut bacterial communities and lifespan of *Drosophila melanogaster*. **Makayla Nemecek**

**202** Microbiome transfers adaptive potential in *Drosophila melanogaster*. **Lucas Henry**

**203** Microbiota's effect on development in a *Drosophila* Parkinson's disease model. **Gerald Call**

**204** Priority effects dictate microbiota composition and influence host lifespan. **William Ludington**

**205** Effect of bacterial genetics on persistence in *D. melanogaster*. **Sarah Gottfredson**

**206** Establishment and persistence of probiotics in *Drosophila melanogaster*. **Alexander Barron**

**207** Characterization of partitiviruses infecting *Drosophila melanogaster*. **Shaun Cross**

**208** Immunity costs associated with meiotic drive. **Jenna Lea**

**209** Purge of hemolymphatic lipid by Malpighian tubules during infection protects *Drosophila* from ROS damage. **Xiaoxue Li**

## Evolution

**210** CRISPR Knockout and Functional Analysis of Three Y Chromosome Genes in *D. melanogaster*. **Yassi Hafezi**

**211** Identification of transposable elements contributing to large Y chromosomes in *D. pseudoobscura*. **Alison Nguyen**

**212** A Nuclear-Encoded Mitochondrial Duplicated Gene, *CG10396*, Is Essential for Spermatogenesis in *Drosophila melanogaster*. **Mohammadmehdi Eslamieh**

**213** Massive repeats of Wolbachia DNA from lateral gene transfer in the *Drosophila ananassae* genome. **Julie Dunning Hotopp**

**214** The evolution of centromere-associated retrotransposons in *D. melanogaster* populations. **Lucas Hemmer**

**215** Thoracic underreplication predicts minimal *Drosophila* genome size. **J. Spencer Johnston**

**216** Natural variation in sugar tolerance associates with changes in signalling and mitochondrial ribosome biogenesis. **Richard Melvin**

**217** Trans-complementing system uncovers fine workings of CRISPR-based gene drives. **Victor Lopez del Amo**

**218** Characterizing evolutionary strategies in wild *Drosophila* thermal preference via high resolution temporal sampling and broad geographic collections. **Denise Yoon**

**219** Population Genomics of *Drosophila pseudoobscura*. **Richard Meisel**

**220** Tuning gene drive activity with a small molecule. **Valentino Gantz**

**221** How gene conversion events shape nucleotide diversity within chromosomal inversions in *Drosophila pseudoobscura*. **Stephen Schaeffer**

**222** Effects of suppressors on *Segregation Distorter* in *Drosophila melanogaster*. **Taylor Mouton**

**223** Meiotic drive and survival probability of newly inverted chromosomes. **Spencer Koury**

**224** Structural Variation in the *Drosophila* *Nasuta* Clade. **Dat Mai**

**225** Chromosomal structural variants in *D.yakuba* and *D.santomea* and their role in gene formation. **Brandon Turner**

**226** Molecular mechanisms underlying evolution of testis-specific expression of *de novo* genes. **Shrinivas Dighe**

**227** Do chromatin changes underlie *de novo* gene origin? **Logan Blair**

**228** Minimal effects of proto-Y chromosomes on house fly gene expression in spite of evidence that selection maintains stable polygenic sex determination. **Jae Hak Son**

**229** Spermatogenesis expression analysis of *Drosophila*'s Y-linked genes. **Carolina Mendonca**

**230** Off again, on again: The complex relationships between transposon insertions, piRNA silencing and flanking gene expression. **Kelley Van Vaerenbergh**

**231** A meta-analysis suggests distinct genetic adaptation mechanisms underlying clinal and seasonal adaptation in *D. melanogaster*. **Yang Yu**

**232** Adaptive evolution and function of uORFs in *Drosophila*. **Jian Lu**

**233** Adaptation of A-to-I RNA editing in *Drosophila*. **Jian Lu**

**234** *Drosophila* species as a model system to study the response to high sugar content diet. **Nestor Nazario-Yepiz**

**235** Genomic dissection of natural variation in resistance to copper poisoning. **Elizabeth Everman**

**236** The genetic basis of exploration tendency in a multiparent population of *Drosophila melanogaster*. **Zachary Elkins**

**237** Genomewide Expression Analysis of the Adult Female Gut in the *Drosophila* Synthetic Population Resource. **Stuart Macdonald**

**238** Does *fruitless* affect mate discrimination by *Drosophila sechellia* females against *D. melanogaster* males? **Masatoshi Tomaru**

**239** Tri-hybrid cross identifies new hybrid incompatibility loci between *D. melanogaster* and *D. sechellia*. **Jacob Cooper**

**240** Partial behavioral isolation between a DDT-resistant population of *Drosophila melanogaster* and its unselected control population, and their mating potential with other wild type populations. **Phillip Barnes**

**241** Genetic dissection of X-linked hybrid male sterility between *Drosophila simulans* and *D. mauritiana*. **Rodolfo Villegas**

**242** Examining the molecular mechanisms of hybrid incompatibilities. **Sarah Gross**

**243** A dynamic repertoire of male meiotic actin-related proteins arose in the *Obscura* group. **John Valenzuela**

**244** Sexual selection rewires reproductive protein networks. **Timothy Karr**

**245** Fitness consequences of long sperm and sperm storage organs of *Drosophila melanogaster*. **Halli Weiner**

**246** Discerning the historical and genetic relationship between the *Drosophila* germline stem cell gene *bag of marbles* and the bacteria *Wolbachia*. **Miwa Wenzel**

**247** Determining how *Drosophila* Experimental Evolution Affects and is Affected by Associated Microbes. **Yasamin Heydary**

**248** The genetic evolution of reproductively isolating male pheromone preference in *Drosophila simulans* and *sechellia*. **Michael Shahandeh**

**249** Accurate, ultra-low coverage genome reconstruction and association studies in Hybrid Swarm mapping populations. **Cory Weller**

**250** Genetic basis of variation in high sugar induced diabetic-like traits in *Drosophila*. **Xuan Zhuang**

**251** *tartan* underlies the evolution of male genital morphology. **Alistair McGregor**

**252** A mosaic of independent innovations involving eyes shut are critical for the evolutionary transition from fused to open rhabdoms. **Andrew Zelhof**

**253** Two recently evolved PDZ domain proteins have diverging functions in stabilizing muscle myofibrils. **Frieder Schoeck**

**254** Rapid evolution of a transcription factor essential for development in *Drosophila*. **Bhavathanini Kasinathan**

**255** A novel gene specifies species-specific variation in a sexually-selected trait. **John Masly**

**256** Natural variation in the maternal and zygotic mRNA complements of the early embryo in *Drosophila melanogaster*. **Anna Feitzinger**

**257** Identifying the genetic changes driving network co-option during the evolution of a novel body part. **Gavin Rice**

**258** Dissecting the shared and divergent genetic architectures of a novel male genital structure and a novel female genital structure. **Eden McQueen**

**259** Changes in Phenotypic frequencies and the analysis of stress related traits of *Drosophila takahashii*: a study of seasonal acclimation. **Seema Ramniwas**

**260** Behavioral and morphological evolution of pest activity in *Drosophila suzukii*. **Sylvia Durkin**

**261** Convergent evolution of dopaminergic gene expression underlying an adaptive trait. **Rebecca Tarnopol**

**262** Evaluating functional conservation of the rapidly evolving germline stem cell genes, *bam* and *bgn*. **Jaclyn Bubnell**

**263** Fine-scale temporal sampling shows evidence of cryptic population structure in a single *Drosophila melanogaster* population. **Alyssa Bangerter**

**264** Comparative transcriptomics provides insights into reticulate and adaptive evolution of *Heliconius* butterflies. **Wei Zhang**

**265** Effects of genotype by diet interaction on quantitative traits in *Drosophila melanogaster*. **Danyue Kang**

**266** Sex-specific influences of the microbiota on *Drosophila melanogaster* life history traits. **Rachel Hughes**

**267** Genotype-by-temperature interactions maintain polygenic sex determination in the housefly. **Kiran Adhikari**

**268** Pattern of heredity of carbohydrate, lipid, and protein contents in different nutritional environments. **Anna Perinchery**

**269** Epistasis and genotype-by-environment interaction have shared regulatory roles in the transcriptional response to hypoxic and dietary stress among mitonuclear genotypes in *Drosophila*. **David Rand**

**270** Interactions between the sexual identity of the nervous system and the social environment mediate lifespan in *Drosophila melanogaster*. **Stuart Wigby**

**271** Distinct contributions of sperm and seminal proteins to male reproductive ageing in *Drosophila*. **Irem Sepil**

**272** A rapidly evolving actin-related protein dynamically localizes to critical meiotic structures in the testis. **Courtney Schroeder**

**273** Sex-specific differences in desiccation resistance and the use of energy metabolites as osmolytes in *Drosophila melanogaster* flies acclimated to dehydration stress. **Divya Singh**

**274** Estimating the timing of multiple admixture pulses during local ancestry inference. **Paloma Medina**

**275** Environment, but not thermosensation, dictates *Drosophila melanogaster* cold hardening ability. **Helen Stone**

**276** Examination of meiotic drive on karyotype evolution in *Drosophila virilis* subgroup. **Theresa Miorin**

**277** Testing the role of genes, within a conspecific sperm precedence locus, on sperm competition in *Drosophila*. **Gurman Grewal**

## Stem cells, regeneration and tissue injury

**278** Activating mutations in FGFR btl leads to a competitive advantage in *Drosophila* germline stem cells. **Kathy Le**

**279** Role of prostaglandins in *Drosophila* germline stem cell maintenance. **Nicole Green**

**280** Adipocyte amino acid sensing in the control of ovarian germline stem cell maintenance. **Subhshri Sahu**

**281** Rbp9 promotes germline stem cell progeny differentiation in the *Drosophila* ovary by directly regulating mRNA translation. **Kazuo Ishihara**

**282** A novel mutation in *brain tumor* causes both neural over-proliferation and neurodegeneration in adult *Drosophila*. **Stanislava Chtarbanova**

**283** Searching for transcription factors associated with Pros and neurodegeneration in the larval brain of *Drosophila*. **Rong Sang**

**284** Characterization of the role of *Similar to deadpan* gene in *Drosophila* neural stem cells. **Arjun Rajan**

**285** Tumor cell fate plasticity in neural stem cell-derived tumors. **Hannah Truong**

**286** Caliban regulates mitochondria integrity to maintain intestine homeostasis. **Xiaolin Bi**

**287** Caliban regulates mitochondria integrity to maintain the homeostasis in *Drosophila* intestine. **Xiaolin Bi**

**288** An SH3PX1-dependent endocytosis/autophagy network restrains intestinal stem cell proliferation by counteracting EGFR signaling. **Peng Zhang**

**289** Sox100B: a Stress Responsive Transcription Factor that Coordinates ISC Proliferation and Differentiation with a Dosage-Dependent Function in *Drosophila*. **Zhen Jin**

**290** Regulation of blood cell transdifferentiation by sensory neuron activity. **Katja Brückner**

**291** TGF $\beta$ /Activin signaling is a switch between homeostasis and stem cell regeneration in the *Drosophila* testis. **Salvador Herrera**

**292** Using single cell RNA sequencing to probe the genetic profiles of niche cells in the *Drosophila* testis. **Katie Conlon**

**293** Using single cell RNA sequencing to probe the genetic profiles of niche cells in the *Drosophila* testis. **Katie Conlon**

**294** The interplay between N-cadherin and E-cadherin is critical for stem cell niche maintenance. **Renjun Tu**

**295** Identification of Eys as a new regulator of intestinal homeostasis. **Clothilde Penalva**

**296** EGFR signaling mediates regeneration after injury in the *Drosophila* testis stem cell niche. **Margaret de Cuevas**

**297** The translational repressor Brat constrains regenerative growth to ensure proper patterning after tissue damage. **Rachel Smith-Bolton**

**298** Genetic and epigenetic manipulation of regeneration in *Drosophila* imaginal discs. **Rob Harris**

**299** Validating changes in expression of candidate genes due to acute injury in the embryonic *Drosophila* Ventral Cord. **Arvind Bussetty**

**300** Polyploid cell growth restores tissues mechanics post injury. **Kayla Gjelsvik**

**301** MMPs in *Drosophila* basement membrane homeostasis and repair. **Kimberly LaFever**

## Reproduction and gametogenesis

**302** Combover is required for spermatogenesis independently of the Planar Cell Polarity Pathway. **Josefa Steinhauer**

**303** *Dm* Ime4 is required for somatic cyst cell permeability barrier function during spermatogenesis. **Antonio Rockwell**

**304** Testis-specific sugar transporters of *D. melanogaster*. **Mark Hiller**

**305** *Tob* is an X-linked gene required for post-meiotic male germ cell maturation. **Gary Hime**

**306** Pif1A, the *Drosophila* homolog of human CCDC157, is essential for spermatogenesis and may underlie idiopathic NOA. **Huimei Zheng**



**307** Role for *nmd* in mitochondria-peroxisome interactions during *Drosophila melanogaster* spermatogenesis. **Willow Pagon**

**308** Role for the *SLC25A46* ortholog *CG5755* in *Drosophila* spermatogenesis. **Caroline Phan**

**309** Small Ubiquitin-like Modifier (SUMO) posttranslational modifications play critical roles in sperm development and transfer to seminal vesicles during *Drosophila* spermatogenesis. **Janet Rollins**

**310** Roles for *CG5050* and *CG5043* during spermatogenesis in *Drosophila melanogaster*. **Caroline Miller**

**311** Role of *CG4701* during mitochondria and peroxisome shaping in *Drosophila melanogaster* spermatogenesis. **Elizabeth Young**

**312** The role of *center divider* on sperm length in males and seminal receptacle length in females of *Drosophila melanogaster*. **Madeline Stimson**

**313** Arms are required for swimming: The role of Wampa in spermatogenesis. **Elisabeth Baurerly**

**314** Regulation of Somatic Cyst Stem Cell Behavior in *Drosophila* Testes by Chinmo Interacting Proteins. **Morgan Claybrook**

**315** Cell non-autonomous regulation of male germ cell proliferation in spermatogenesis. **Hiroyuki Kose**

**316** Elucidating the role of *mip120* in *D. melanogaster* oogenesis and beyond. **Harmony Folse**

**317** Prostaglandins regulate nuclear actin during oogenesis. **Tina Tootle**

**318** A germline stem cell quality control checkpoint is linked to the structural integrity of the nuclear lamina. **Rebecca Cupp**

**319** The *Drosophila* ribosomal protein paralogue RpS5b functions specifically in germ cells. **Seoyeon Jang**

**320** Neuronal Octopamine - Matrix metalloproteinase signaling regulates germline stem cell proliferation in female *Drosophila melanogaster*. **Yuto Yoshinari**

**321** Novel structures in the germ line of *Drosophila* ovaries. **Anthony Mahowald**

**322** Cytoplasmic polyadenylation as a mechanism for translational regulation of *gurken* (*grk*) mRNA during oogenesis. **Amanda Norvell**

**323** Defining the dynamic changes in mitochondrial metabolism that drive cellular quiescence. **Sibiao Yue**

**324** Different programs of oogenesis for *Drosophila melanogaster* and the jewel wasp *Nasonia vitripennis*. **Patrick Ferree**

**325** Molecular chaperone *Tetratricopeptide repeat protein 2* (*Tpr2*) is essential for germline stem cell self-renewal and timely cyst divisions in *Drosophila* oogenesis. **morgan Phillips**

**326** Cell atlas of the *Drosophila* ovary by single cell sequencing. **Katja Rust**

**327** Nuclear hormone receptor *ftz-f1* is necessary in both the germline and soma to promote oocyte development. **Samantha McDonald**

**328** Spermatogenic stage-specific expression in *Drosophila* species by next generation sequencing. **Camila Avelino**

**329** Investigating the impact of genetic background in synaptonemal complex maintenance. **Katherine Billmyre**

**330** Investigating the impact of genetic background in synaptonemal complex maintenance. **Emily Wesley**

**331** *Sina* interactions during female meiosis. **Alyssa Jones**

**332** Determining requirements for pairing and conjunction between the X and Dp(1;3) chromosomes in male meiosis. **Christopher Hylton**

**333** Identifying new synaptonemal complex components. **Camila Aponte**

**334** The Role of Rough deal (ROD) in Meiosis of Male *Drosophila*. **Qiutao He**

**335** dTopors RING domain is required for nuclear structure and chromosome segregation in male meiosis. **Andrea Binder**

**336** The beta-karyopherin protein Ipo9 is required for meiosis in *Drosophila*. **Victor Palacios**

**337** *Sex lethal* activation in the female germline is dependent on the transcription factor Sisterless A. **Raghav Goyal**

**338** Atypical Chitinases regulates cell-cell signaling in the ovary. **Pradeep Bhaskar**

**339** An anciently conserved protein is required for sperm motility in *Drosophila melanogaster*. **Fiona Busser**

**340** Investigating the role of octopamine and *Tdc2*<sup>+</sup> neurons in female sperm discrimination. **Shengxi Chen**

**341** Sex-specific ecdysone signaling

regulates gonad stem cell niche development. **Lydia Grmai**

**342** Male-specific small peptides are encoded by a large "ncRNA" within the *Drosophila* Bithorax complex. **Clément IMMARIGEON**

**343** Fighting flies with context. **Jeroen Alkema**

**344** Satellite Repeats Are Associated with Host Tolerance of an Active Transposable Elements. **Jyoti Lama**

**345** Structure-function analysis of germ granule nanoparticles in *Drosophila*. **Alexey Arkov**

**346** Downregulation of homeodomain transcription factor Cut is essential for follicle maturation and ovulation. **Elizabeth Knapp**

**347** Directing testis specific gene expression: Nucleosome dynamics and transcriptional regulators. **Katia Jindrich**

**348** RNAseq reveals a role for accessory gland proteins and long non-coding RNAs in sperm length variation in *D. melanogaster*. **Mollie Manier**

**349** *Drosophila* CTP synthase regulates collective cell migration through an endosomal-recycle pathway. **Li-Mei Pai**

**350** Investigating the function of mucin-type O-glycosylation in the *Drosophila* reproductive system. **Liping Zhang**

**351** *Drosophila* accessory gland secondary cells and post-mating sperm dynamics. **Ben Hopkins**

**352** A robust transposon-domesticating response from germline stem cells. **Sungjin Moon**

## Regulation of gene expression

**353** A modERN project update: transgenic GFP lines and Transcription Factor ChIP-seq. **Alec Victorson**

**354** Analysis of the sequential activation of downstream targets of Notch signaling during *Drosophila melanogaster* egg chamber development. **Molly Rowe**

**355** Downregulated Broad is required for proper border cell migration. **Shawna Defreitas**

**356** Pointed is necessary and sufficient for establishing the posterior end of the follicular epithelium. **Cody Stevens**

**357** MEF2 and Tinman collaborate to generate the lumen of the heart in *Drosophila* by activating the collagen gene Multiplexin. **TyAnna Lovato**

**358** Stop codon readthrough of a POU/Oct transcription factor regulates *Drosophila* development. **Yunp o Zhao**

**359** Effects of cooperative HP1 binding at transcription start sites. **John Schoelz**

**360** Transcriptional hubs in genome activation. **Christine Rushlow**

**361** A DNA/RNA dual-activity topoisomerase stimulates transcription of RNA polymerase II. **Seung Kyu Lee**

**362** CrebA directly activates regulators of secretion. **Dorothy Johnson**

**363** Uncovering isoform-specific roles of GAGA Factor and its function during early embryo development. **Marissa Gaskill**

**364** Diversification of retinoblastoma protein function associated with cis and trans adaptations. **David Arnosti**

**365** A novel role for Blimp-1 in the transcriptional repression of the Hippo pathway in postmitotic photoreceptors. **Joseph Bunker**

**366** Using Spineless gene expression to understand the Mechanisms of Transvection. **Adrienne Chen**

**367** *REDfly*: The regulatory element data base for *Drosophila*. **Marc Halfon**

**368** A Vestigial myoblast enhancer is positively regulated by Twist and Notch signaling whereas cut signaling suppresses enhancer activity during the development of *Drosophila* thoracic muscles. **Praveen Paudel**

**369** Using natural variation in *Drosophila* to uncover how genetic architecture impacts heat-shock recovery and hormesis. **Katie Owings**

**370** Investigating the evolutionary conservation of insulator sequences in *Drosophila*. **Laya Manoj**

**371** Investigating the post-embryonic role and regulation of *Ultrabithorax*. **Alexandra Buffry**

**372** The ecdysone hormone receptor directs the spatial and temporal activity of target enhancers. **Christopher Uyehara**

**373** Enhancer decommissioning during *Drosophila* wing development. **Matthew Niederhuber**

**374** Affect of E93 DNA binding domain on chromatin accessibility in *Drosophila melanogaster* during development. **Martina Savage**

**375** Dynamic interplay between enhancer-promoter topology and gene activity. **Hongtao Chen**

**376** Role of the Mediator complex in regulating SREBP-dependent gene expression. **Xiao Li**

**377** *Drosophila* tsRNAs suppress general translation machinery *via* antisense pairing and participate in cellular starvation response. **Jian Lu**

**378** Identifying chromatin modifiers that regulate stochastic Spineless expression in *Drosophila* retinas. **Luorongxin Yuan**

**379** A tsRNA-AGO1 autoregulatory feedback loop. **Feng He**

**380** Probing the role of early and transient ncRNAs into opening of the segment-specific regulatory domains of the BX-C. **Francois Karch**

**381** How do changes in DNA lead to changes in tissue function? **Giovanni Hanna**

**382** Identification of enhancer elements and factors binding to these elements in the proximal and intergenic non-coding regions of *dmyc* Gene. **Jasmine Kharazmi**

**383** Transcriptional silencers in *Drosophila* serve a dual role as transcriptional enhancers in alternate cellular contexts. **Stephen Gisselbrecht**

**384** Distinct patterns of combinatorial regulation by isoforms of the ETS activator Pointed confer specificity to retinal cell fate acquisition. **Chudong Wu**

**385** Two distinct pathways are involved in the THO/TREX-mediated piRNA biogenesis in *Drosophila* testis. **Chulsung Park**

**386** The *Drosophila* CLAMP regulator of dosage compensation co-localizes with group of RNA binding proteins in a tissue-specific manner in both sexes. **Mukulika Ray**

**387** Post-transcriptional control of gene expression in the early *Drosophila* embryo. **Craig Smibert**

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**788** Screens in *Drosophila* and cell line models implicates *GPR21* as a suppressor of neurodegeneration. **Matthew Avalos**

**789** Traumatic injury induces stress granules formation and perturbs nucleocytoplasmic transport in *Drosophila*. **Udai Pandey**

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**806** A toolbox for tissue-specific CRISPR-mediated deletion of circadian clock genes in *Drosophila*. **Rebecca Delventhal**

**807** A new CRISPR/Cas9 based screening method for isolating randomly induced recessive lethal mutations in a gene of interest by phenotype selection within the F1 progeny of a single genetic cross. **Bruce Reed**

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**813** *In-silico* definition of the matrisome of *Drosophila melanogaster*. **Sally Horne-Badovinac**

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**816** Finding GAL4 drivers and other transgenic tools in FlyBase. **Sian Gramates**

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**827** Flies across the curriculum: Engaging students in molecular biology and biochemistry lab courses in authentic research. **Rebecca Kurzals**

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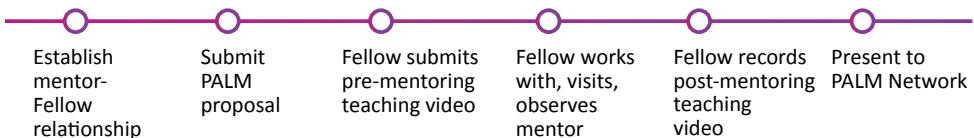


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- Gain mentorship from leaders in undergraduate biology teaching and learning
- Learn best practices in teaching and in assessing active learning
- Create an original teaching module that engages students in active learning
- Join a community of scientists dedicated to active teaching and learning, and share ideas and support
- Participate in Fellow-mentor journal clubs, meetings, and networking opportunities
- Obtain invaluable career development for faculty careers
- Be part of a network of scientific societies dedicated to supporting scientists in teaching and learning careers

## Apply to be a PALM Fellow



For more information, including eligibility requirements, application details, and to learn about how to be paired with a mentor if you don't have one in mind, visit

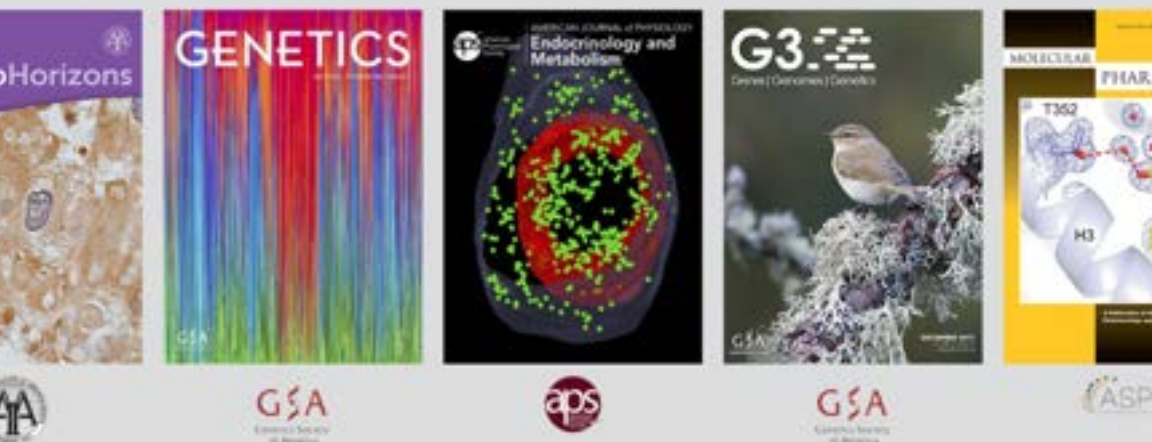
[palmnetwork.org](http://palmnetwork.org)

**2019 Application Deadlines: January 30, April 30, July 30, and October 30**



PALM is funded by NSF Research Coordination Network in Undergraduate Biology Education grant #1624200.

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**Software  
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Describe novel  
software for genetic  
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[g3journal.org/content/article-types](http://g3journal.org/content/article-types)

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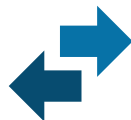
Your manuscripts will be handled by practicing scientists—like you—who understand from experience what it takes to tell a significant story, to create a useful method or resource, or to extract meaning from large datasets. Rather than simply tallying reviewer “votes,” your editor synthesizes the reviews into a clear decision letter that offers guidance and explains rationales for all decisions, helping to improve your paper's impact. Still have questions? Contact the editorial office or the editor. Speak with a real person who'll be up front with you.



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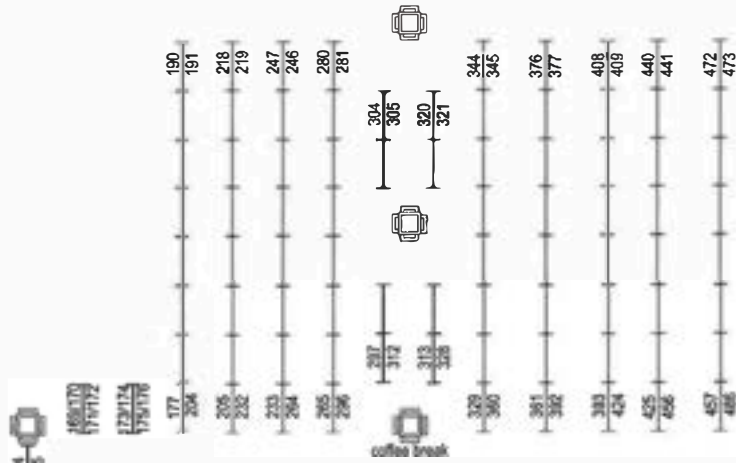


D

Dallas Ballroom C/B

A

Late Abstracts



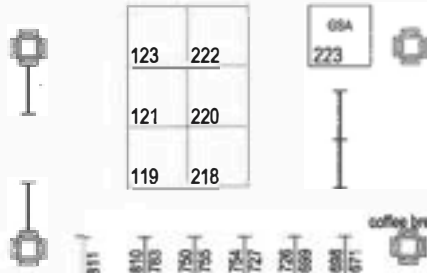
133	232	233	332	333	432
131	230	231	330	331	430
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20'

To Scientific Sessions



123	222	223	323	422
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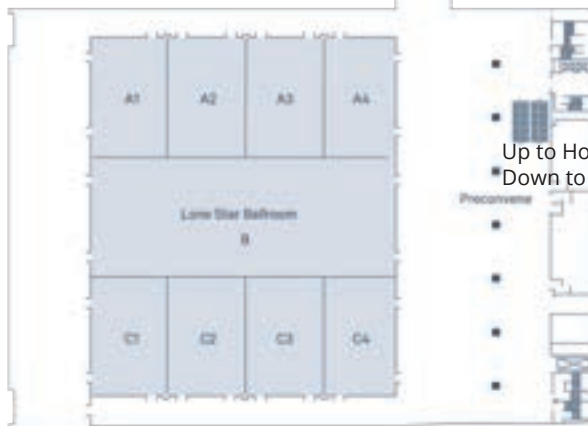
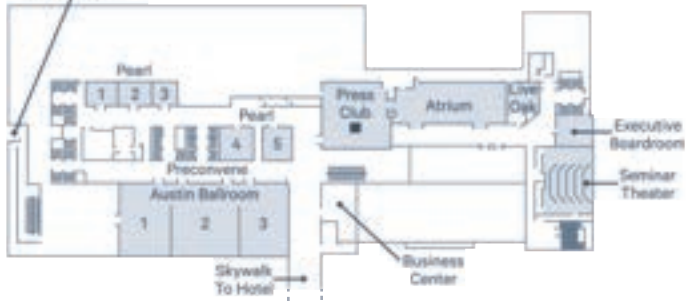


Speaker Ready Room



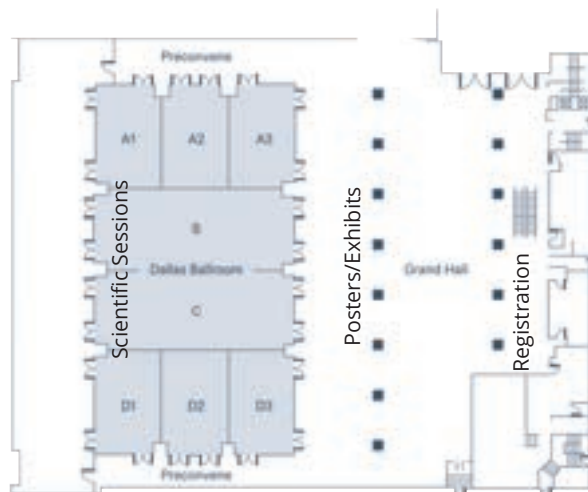
Sky Bridge To  
Marriott City Center  
Hotel & Plaza Of  
The Americas

## Second Floor - Hotel



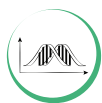
Up to Houston Ballroom  
Down to posters

## Second Floor - Convention Center



## First Floor - Convention Center

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