58th Annual Drosophila Research Conference

March 29-April 2, 2017

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Genetics Society of America

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Genetics Society of America

#DROS17

The Genetics Society of America
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MEETING ORGANIZERS

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Doris Bachtrog
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Amy Kiger

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Name
Alexis Nagengast

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Name	Region
Gary Hime	Australia/Oceania
Li-Mei Pai	Asia
Sarah Bray	Europe
Juan Riesgo-Escovar	Latin America

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

Cell Biology & Signal Transduction
- Jeff Axelrod
- Mihaela (Ela) Serpe
- Qi Wang

Cell Death & Immunity
- Kim McCall
- Henri Jasper
- Imilce Rodriguez-Fernandez

Cell Division & Growth Control
- Don Fox
- Sharon Gorski
- Jessica Sawyer

Chromatin & Epigenetics
- Melissa Harrison
- Mia Levine
- Danielle Hamm

Evolution & Populations Genetics
- Kristi Montooth
- Noah Whiteman
- Andy Gloss

Evolution of Development/RNA Biology
- Artyom Kopp
- Urs Schmidt-Ott
- Nick Sokol
- Emily Delaney
- Arthur Luhur

Gametogenesis
- Minx Fuller
- Alana O'Reilly
- Eric Lee

Intracellular Dynamics: Cytoskeleton, Organelles, and Trafficking
- Julie Brill
- Yohanns Bellaiche
- Jean-Francois Groulx

Models of Human Disease: Neurodegeneration & Neurological Disorders
- Serge Birman
- Doris Kretzschmar
- Sabi Abdul-Raouf Issa

Models of Human Disease: Developmental & Physiological Disorders
- Dirk Bohmann
- Rene Galindo
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Neural Circuits & Behavior
- Nilay Yapici
- Gwyneth Card
- Ryan Williamson

Neural Development & Physiology
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- Makoto Sato
- Tetsuo Yasugi

Patterning, Morphogenesis & Organogenesis I
- Jessica Treisman
- Leslie Pick
- Anja Katzemich

Physiology, Metabolism & Aging
- Daniel Promislow
- Benoit Biteau
- Rebecca Kreipke

Regulation of Gene Expression
- Bob Johnston
- Jack Bateman
- Caity Anderson
- Kayla Viets

Stem Cells
- Gary Hime
- Tina Mukarjee
- Nicole Siddall

Techniques & Technology Platform Session
- Hugo Bellen
- Julie Simpson
- Oguz Kanca

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GSA
Genetics Society of America

About the Genetics Society of America

The Genetics Society of America (GSA) is a professional scientific society with more than 5,000 members worldwide working to deepen our understanding of the living world by advancing the field of genetics. GSA represents the collective interests of the genetics and model organism communities.

GSA fosters an international community of geneticists by promoting interaction among researchers (including microbial, plant, animal, human, population, and theoretical geneticists). The Society has a deep and growing commitment to supporting the next generation of geneticists, providing career development resouces, travel grant programs, leadership opportunities, and symposia funding. GSA works with our members and allied organizations to communicate the value of genetics research to the public and policymakers, advocating for the research community and the vital work they do.

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Schedule of Events

WEDNESDAY, March 29		
9:00 am - 5:30 pm	**PI Early Career Forum** *Ticket required*	**Pacific Ballroom Salon 3**
12:00 noon - 6:00 pm	**Ecdysone Workshop**	**Golden Ballroom**
3:00 pm - 6:30 pm	**Speaker Ready Room**	**Terrace Salon 3**
3:30 pm - 9:00 pm	**Registration and Book/T-Shirt Pick Up Open**	**Atlas Foyer**
5:00 pm - 12:00 am	**Posters Open 24 Hours beginning at 5:00 pm**	**Grand Exhibit Hall**
7:00 pm - 9:00 pm	**Opening Session** *Moderator:* Leanne Jones	**Atlas Ballroom**
7:00 pm	**Opening Session** Leanne Jones, University of California, Los Angeles.	
7:10 pm	**GSA Welcome**	
7:20 pm	**The Larry Sandler Award** R. Hawley, Stowers Institute for Medical Research, Kansas City, MO.	
7:25 pm	**Presentation of The Larry Sandler Award** Bob Duronio, University of North Carolina, Chapel Hill.	
7:30 pm	**Larry Sandler Award Winner Talk**	
8:00 pm	**Introduction of Sean Carroll** Doris Bachtrog	
8:05 pm	**The Making and Unmaking of the Animal Kingdom** Sean Carroll	
9:15 pm - 11:00 pm	**Mixer/Reception** *Sponsored by the GSA journals, GENETICS and G3: Genes|Genomes|Genetics*	**Grand Exhibit Hall**
THURSDAY, March 30		
12:01 am - 12:00 am	**Posters Open 24 Hours**	**Grand Exhibit Hall**
7:00 am - 3:00 pm	**Speaker Ready Room**	**Terrace Salon 3**
7:15 am - 8:30 am	**Publishing Tips and Tricks Continental Breakfast**	**Golden Pacific Ballroom**
7:15 am - 8:30 am	**Continental Breakfast**	**Golden Pacific Ballroom Foyer**

8:00 am - 5:00 pm	**Registration Open**	**Atlas Foyer**
8:30 am - 12:00 noon	**Plenary Session 1** *Moderator:* Claude Desplan	**Atlas Ballroom**
8:30 am	**Image Award Presentation** David Bilder	
8:35 am	**The *Drosophila-Spiroplasma* interaction as a model to dissect the molecular mechanisms underlying insect endosymbiosis** Bruno Lemaitre	
9:05 am	**The Mutations behind Species Evolution** Virginie Courtier-Orgogozo	
9:35 am	**Simple Rules in Neural Circuit Assembly** Peter Robin Hiesinger	
10:05 am	**Break**	
10:30 am	**How the Gut Talks and Listens** Irene Miguel-Aliaga	
11:00 am	**Tissue refinement: a noisy path to order.** Buzz Baum	
11:30 am	**Orchestrating The Proliferation Differentiation Switch Of Adult Intestine Stem Cells** Francois Payre	
12:15 pm - 1:45 pm	**"Meet the Speakers" Careers Lunch** *Ticket required*	**Royal Palm Ballroom 4**
1:00 pm - 5:00 pm	**FlyBase Demo Room Open for Tutorials & Discussions** *Presentations:* *2:00-2:15 pm: New Features in FlyBase* *2:20-2:35 pm: Reaching across the MODs: enhanced orthology data and future prospects*	**Royal Palm Ballroom 1-3**
2:00 pm - 4:00 pm	**Exhibits Open & Poster Presentations** *Presentations* *2:00 pm EVEN Posters* *3:00 pm ODD posters*	**Grand Exhibit Hall**
4:30 pm - 6:30 pm	**Concurrent Platform Sessions**	
	Stem Cells *Moderators:* Gary Hime; Tina Mukarjee ; and Nicole Siddall	**Town & Country**
	Neural Circuits & Behavior *Moderators:* Nilay Yapici; Gwyneth Card; and Ryan Williamson	**San Diego**
	Models of Human Disease: Developmental & Physiological Disorders *Moderators:* Dirk Bohmann; Rene Galindo; and Drew Stenesen	**Golden West**
7:45 pm - 9:45 pm	**Concurrent Workshops**	

	Integrating Research and Teaching at PUIs using Drosophila melanogaster as a model organism	**Pacific Ballroom Salon 1**
	Wound Healing and Regeneration	**Pacific Ballroom Salon 3**
	Feeding Behavior, Nutrition and Metabolism	**Golden Ballroom**
	Everything You Ever Wanted to Know About Sex	**Pacific Ballroom Salon 2**
8:00 pm - 11:00 pm	**Exhibits Open & Poster Viewing**	**Grand Exhibit Hall**
FRIDAY, March 31		
12:01 am - 12:00 am	**Posters Open 24/7**	**Grand Exhibit Hall**
6:00 am - 11:00 pm	**Networking Lounge** *Select tables will be moderated during lunchtime.*	**Grand Exhibit Hall**
7:00 am - 3:00 pm	**Speaker Ready Room**	**Terrace Salon 3**
8:15 am - 5:00 pm	**Registration Open**	**Atlas Foyer**
8:30 am - 10:15 am	**Concurrent Platform Sessions**	
	Physiology, Metabolism & Aging I *Sponsored by National Institute on Aging* *Moderators:* Daniel Promislow; Benoit Biteau; and Rebecca Kreipke.	**Town & Country**
	Regulation of Gene Expression I *Moderators:* Bob Johnston; Jack Bateman; Caity Anderson; and Kayla Viets	**San Diego**
	Cell Biology & Signal Transduction I *Moderators:* Jeff Axelrod; Mihaela (Ela) Serpe; and Qi Wang	**Golden West**
10:15 am - 10:45 am	**Coffee Break**	**Atlas Foyer**
10:45 am - 12:30 pm	**Concurrent Platform Sessions**	
	Physiology, Metabolism & Aging II *Sponsored by National Institute on Aging* *Moderators:* Daniel Promislow; Benoit Biteau; and Rebecca Kreipke	**Town & Country**
	Regulation of Gene Expression II *Moderators:* Bob Johnston; Jack Bateman; Caity Anderson; and Kayla Viets	**San Diego**
	Cell Biology & Signal Transduction II *Moderators:* Jeff Axelrod; Mihaela (Ela) Serpe;	**Golden West**

	and Qi Wang	
1:00 pm - 6:00 pm	**FlyBase Demo Room Open for Tutorials & Discussion** *Presentations:* *3:45-4:00 pm: New Features in FlyBase* *4:05-4:20 pm: Reaching across the MODs: enhanced orthology data and future prospects*	**Royal Palm Ballroom 1-3**
1:45 pm - 3:45 pm	**Concurrent Workshops**	
	Navigating the Career Decision Making Process	**Pacific Salon 7**
	Spotlight on Undergraduate Research	**Pacific Ballroom Salon 1**
	Drosophila Microbiome	**Pacific Ballroom Salon 3**
	Developmental Mechanics	**Golden Ballroom**
	Biogenic Amines and Behaviors	**Pacific Ballroom Salon 2**
2:00 pm - 4:00 pm	**Open Poster and Exhibit Viewing**	**Grand Exhibit Hall**
4:30 pm - 6:30 pm	**Concurrent Platform Sessions**	
	Evolution of Development (talks 1-4), RNA Biology (talks 5-8) *Moderators:* Artyom Kopp; Urs Schmidt-Ott; Nick Sokol; Emily Delaney; and Arthur Luhur	**Town & Country**
	Intracellular Dynamics: Cytoskeleton, Organelles, and Trafficking *Moderators:* Julie Brill; Yohanns Bellaiche; and Jean-Francois Groulx	**San Diego**
	Neural Development & Physiology *Moderators:* Pelin Volkan; Makoto Sato; and Tetsuo Yasugi	**Golden West**
7:30 pm - 9:00 pm	**How I Fly (HIF) ScienceSlam**	**San Diego**
9:00 pm - 11:00 pm	**Exhibits Open & Poster Presentations** *Open Poster Viewing with Cash Bar (authors encouraged to be at their board)*	**Grand Exhibit Hall**
SATURDAY, April 1		
12:01 am - 3:30 pm	**Posters Open** *Close at 3:30 pm. Posters must be down by 4:00 pm*	**Grand Exhibit Hall**
6:00 am - 4:00 pm	**Networking Lounge** *Select tables will be moderated during lunchtime*	**Grand Exhibit Hall**

7:00 am - 3:00 pm	**Speaker Ready Room**	**Terrace Salon 3**
8:15 am - 3:00 pm	**Registration and Book/T-Shirt Pick Up Open**	**Atlas Foyer**
8:30 am - 10:15 am	**Concurrent Platform Sessions**	
	Evolution & Populations Genetics I *Moderators:* Kristi Montooth; Noah Whiteman; and Andy Gloss	**Town & Country**
	Patterning, Morphogenesis & Organogenesis I *Moderators:* Jessica Treisman; Leslie Pick; and Anja Katzemich	**San Diego**
	Gametogenesis *Moderators:* Minx Fuller; Alana O'Reilly; and Eric Lee	**Golden West**
10:15 am - 10:45 am	**Coffee Break**	**Atlas Foyer**
10:45 am - 12:30 pm	**Concurrent Platform Sessions**	
	Evolution & Populations Genetics II *Moderators:* Kristi Montooth; Noah Whiteman; and Andy Gloss	**Town & Country**
	Patterning, Morphogenesis & Organogenesis II *Moderators:* Jessica Treisman; Leslie Pick; and Anja Katzemich	**San Diego**
	Cell Death & Immunity *Moderators:* Kim McCall; Henri Jasper; and Imilce Rodriguez-Fernandez	**Golden West**
1:30 pm - 3:30 pm	**Exhibits Open & Poster Presentations** *Presentations* *1:30 pm ODD Posters* *2:30 pm EVEN posters*	**Grand Exhibit Hall**
4:00 pm - 6:00 pm	**Concurrent Platform Sessions**	
	Chromatin & Epigenetics *Moderators:* Melissa Harrison; Mia Levine; and Danielle Hamm	**Town & Country**
	Cell Division & Growth Control *Moderators:* Don Fox; Sharon Gorski; and Jessica Sawyer	**San Diego**
	Models of Human Disease: Neurodegeneration & Neurological Disorders *Moderators:* Serge Birman; Doris Kretzschmar; and Sabi Abdul-Raouf Issa	**Golden West**
7:30 pm - 10:00 pm	**Techniques & Technology Platform Session** *Moderators:* Hugo Bellen; Julie Simpson; and Oguz Kanca	**San Diego**

SUNDAY, April 2		
8:30 am - 12:00 noon	**Plenary Session II** *Moderator:* Amy Kiger	**Atlas Ballroom**
8:30 am	**Poster Awards**	
8:35 am	**Asymmetric signaling endosomes in asymmetric division** *Sponsored by EMBO* Marcos Gonzalez-Gaitan	
9:05 am	**Why the pause? Catching RNA polymerase II *in vivo*** Julia Zeitlinger	
9:35 am	**Circuits principles of memory-based behavioral choice** Marta Zlatic	
10:05 am	**Break**	
10:30 am	**Stem cell homeostasis in the *Drosophila* testis** Erika Bach	
11:00 am	**The conflicts that shape genomes, cells and species.** Nitin Phadnis	
11:30 am	**The piRNA pathway—a small RNA based genome defense system** Julius Brennecke	

Badges
Badges are required for admission to all sessions, posters, receptions, and the Exhibit Hall. Security will not allow individuals without badges to enter the Exhibit Hall. If you lose your badge, you may request a replacement badge at the conference registration desk.

Presenters — Speaker Ready Room, Terrace Salon 3
All those giving oral presentations must load and check their files the day before the start of their session in the Speaker Ready Room, Terrace Salon 3. **You will not be able to upload presentations in the meeting room, so checking in at the Speaker Ready Room is vital.** Terrace Salon 3 will be open at the following times:

Wednesday, March 29	3:00 pm – 7:30 pm
Thursday, March 30	7:00 am – 5:00 pm
Friday, March 31	7:00 am – 5:00 pm
Saturday, April	7:00 am – 5:00 pm

Poster Sessions and Exhibits, Grand Exhibit Hall
All posters and exhibits will be in the Grand Exhibit Hall. The Hall will be open to conference registrants on a 24 hour basis beginning at 5:00 pm, Wednesday, March 29 until 3:30 pm, Saturday, April 1. Security will be posted at the entrance to the Hall and only individuals with the official conference badge will be admitted. Posters must be removed by 4:00 pm on Saturday.

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

Wednesday, March 29	9:00 pm – 11:00 pm
Thursday, March 30	1:30 pm – 4:30 pm
Friday, March 31	2:00 pm – 4:00 pm 8:00 pm - 11:00 pm
Saturday, April 1	1:00 pm – 4:00 pm

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

Thursday, March 30	2:00 pm – 3:00 pm	Even-numbered posters
	3:00 pm – 4:00 pm	Odd-numbered posters
Friday, March 31	9:00 pm – 11:00 pm	Not required but recommended for authors to be present
Saturday, April 1	1:30 pm – 2:30 pm	Odd-numbered posters
	2:30 pm – 3:30 pm	Even-numbered posters

All posters must be removed from poster boards **no later than 4:00 pm on Saturday, April 1.** After that time, remaining posters will be removed and recycled. Posters may only be removed by their own authors. Unclaimed 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 (iOS and Android platforms). The mobile app provides the meeting at your fingertips. Once the app has been downloaded, you will not need internet access to access the Program and other features. An internet connection is only needed to download updates. Users of Blackberrys or Windows Mobile Devices have full access to the Program through the web version available at genetics-gsa.org/drosophila/2017/.

WiFi/Internet
Free WiFi will be available in guest rooms and in all meeting spaces at the Town & Country Resort & Convention Center.

Registration
Registrants can pick up registration materials and Certificates of Attendance at the registration desk in the Atlas Ballroom Foyer during the following times:

Wednesday, March 29	3:30 pm – 9:00 pm
Thursday, March 30	8:00 am – 5:00 pm
Friday, March 31	8:15 am – 5:00 pm
Saturday, April 1	8:15 am – 3:00 pm

Social Media/Photo/Video Policy

Live tweeting of presentations is allowed (#DROS17) unless the speaker explicitly opts out by stating so at the start of his or her talk. Taking or sharing photos or videos of posters is permitted only with the presenter's consent during the assigned poster session. Taking photos of posters while the presenter is not present is strictly prohibited. By attending a GSA conference, you grant GSA the right to use your photograph, name, and likeness for use in GSA educational, news, or promotional materials.

Attendees are asked to be respectful of their colleagues by turning off or muting all mobile devices before entering meeting rooms.

FlyBase Demonstrations
FlyBase invites all Conference registrants to come to the demo room to learn how to make the best use of the new FlyBase tools and features for your research and teaching. Throughout the afternoon, other than the scheduled group presentations noted below, FlyBase personnel are available in the demo room for one-on-one tutorials, troubleshooting and discussions. Any thoughts on improvements we can make to FlyBase are gratefully appreciated.

Thursday, March 30
1:00pm - 5:00pm Demo room open for tutorials and discussions

Presentations:
2:00pm-2:15pm: New Features in FlyBase
2:20pm-2:35pm: Reaching across the MODs: enhanced orthology data and future prospects

Friday, March 31
1:00pm - 6:00pm Demo room open for tutorials and discussions

Presentations:
3:45pm-4:00pm: New Features in FlyBase
4:05pm-4:20pm: Reaching across the MODs: enhanced orthology data and future prospects

Security/Lost and Found

For all emergencies and lost and found items, contact the Town & Country Resort & Convention Center Security by dialing 0 from any house phone. The conference registration desk will be able to assist you as well.

Meals

Meals are not included in your registration fee. However, in addition to the restaurants on site, there will also be cash concessions in the meeting space. Fashion Valley Mall is a five minute walk from the hotel and has a wide variety of dining options. There will be seating available in the Networking Lounge in the Exhibit Hall

Parking

Parking is available at the Town & Country for $10 per day which includes in and out privileges.

Childcare/Family Room

A Family Room for nursing mothers is located in the Sunset Room. 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.

It is the responsibility of the parents, guardian, legal guardian, or individual requesting childcare services to screen caregivers and to make a determination as to the appropriateness of the caregiver. 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 liability.

Children must be accompanied by a parent or guardian at all times in the Exhibit Hall. Parents or guardians may bring children under the age of 18 to educational and social events provided the children do not disrupt the event. Under no circumstances are children under the age of 18 allowed in the Exhibit Hall during set-up and dismantle times.

Code of Conduct

GSA expects attendees and exhibitors to respect each other, GSA staff, and hotel staff and behave in a courteous fashion. Attendees should respect common sense rules for public behavior, personal interaction, common courtesy, and respect for private property.

Abusive, harassing, or threatening behavior towards any other attendee, GSA staff, or convention center staff will not be tolerated. Please report any incidents in which an attendee of the meeting is abusive, insulting, intimidating, bothersome, or acting in an unsafe or illegal manner to GSA staff or security immediately. Please contact: sbrown@genetics-gsa.org and tracey.depellegrin@thegsajournals.org if you need to file a complaint.

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Plenary & Platform Sessions Listing

Wednesday, March 29 7:00 PM – 9:00 PM
Location: Atlas Ballroom
Opening Session
Moderator: **Leanne Jones**, UCLA

Presentations:

7:00 Opening Session **Leanne Jones**

7:10 GSA Welcome

7:20 The Larry Sandler Award **R. Hawley**

7:25 Presentation of The Larry Sandler Award **Bob Duronio**

7:30 Larry Sandler Award Winner Talk

8:00 Introduction of Sean Carroll **Doris Bachtrog**

8:05 The Making and Unmaking of the Animal Kingdom **Sean Carroll**

Thursday, March 30 8:30 AM – 12:00 NOON
Location: Atlas Ballroom
Plenary Session 1
Moderator: **Claude Desplan**, New York University, New York

Presentations:

8:30 Image Award Presentation **David Bilder**

8:35 The *Drosophila-Spiroplasma* interaction as a model to dissect the molecular mechanisms underlying insect endosymbiosis **Bruno Lemaitre**

9:05 The Mutations behind Species Evolution **Virginie Courtier-Orgogozo**

9:35 Simple Rules in Neural Circuit Assembly **P. Hiesinger**

10:05 - **Break**

10:30 How the Gut Talks and Listens **Irene Miguel-Aliaga**

11:00 Tissue refinement: a noisy path to order **Buzz Baum**

11:30 Orchestrating The Proliferation Differentiation Switch Of Adult Intestine Stem Cells **Francois Payre**

NOTES

Thursday, March 30 4:30 PM – 6:30 PM
Location: Town & Country
Stem Cells
Co-Moderators: **Gary Hime**, Univ. of Melbourne, Austrailia, and **Tina Mukarjee**, Institute for Stem Cell Biology, Bengaluru, India , and **Nicole Siddall**, Univ. of Melbourne, Austrailia

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1 - 4:30 A novel Hdac1/Rpd3-poised circuit balances continual self-renewal and rapid restriction of developmental potential during asymmetric stem cell division **Cheng-yu Lee**

2 - 4:45 Hedeghog and Insulin Balance Proliferation and Autophagy to Determine Follicle Stem Cell Lifespan **Alana O'Reilly**

3 - 5:00 Dietary lipid dependent regulation of the intestinal stem cell lineage by DHR96 and Notch **Rebecca Obniski**

4 - 5:15 Deciphering the biological role and molecular mechanism of germline de-differentiation in flies **Salvador Herrera**

5 - 5:30 Tricellular junctions regulate intestinal stem cell behavior to maintain homeostasis **Martin Resnik-Docampo**

6 - 5:45 Grainyhead regulates midgut stem cell function **Gary Hime**

7 - 6:00 The Tip60 complex interacts with Myc in *Drosophila* neural stem cell maintenance and polarity **Katja Rust**

8 - 6:15 4D dynamics of cell division, differentiation, and loss during midgut renewal in live adult Drosophila **Judy Martin**

Thursday, March 30 4:30 PM – 6:30 PM
Location: San Diego
Neural Circuits and Behavior
Co-Moderators: **Nilay Yapici**, Cornell University, Ithaca, NY, and **Gwyneth Card**, HHMI Janelia Research Campus, Ashburn, VA, and **Ryan Williamson**, HHMI Janeial Research Campus, Ashburn, VA

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9 - 4:30 Sexually dimorphic action selection of sex and sleep in *Drosophila* **Divya Sitaraman**

10 - 4:45 The gustatory basis of protein homeostasis **Samuel Walker**

11 - 5:00 Here come zombie flies: *Entomophthora muscae*, a model behavior-manipulating pathogen of *Drosophila melanogaster* **Carolyn Elya**

12 - 5:15 Clean up your action selection: How the brain organizes motor sequences in fly grooming **Julie Simpson**

13 - 5:30 Encoding of Larval Body Movements and Position by Directionally Selective On/Off Proprioceptive Neurons **W. Tracey**

14 - 5:45 Gut microbial modification of *Drosophila* locomotor behavior **Catherine Schretter**

15 - 6:00 Complex aminergic regulation of the *Drosophila* egg-laying circuit **Sonali Deshpande**

16 - 6:15 *"not my type":* a candidate gene for behavioral isolation in *Drosophila* **Tabashir Chowdhury**

Thursday, March 30 4:30 PM – 6:30 PM
Location: Golden West
Models of Human Disease: Developmental and Physiological Disorders
Co-Moderators: **Dirk Bohmann**, University of Rochester, NY, and **Rene Galindo**, University of Texas Southwestern Medical Center, Dallas, and **Drew Stenesen**, University of Texas Southwestern Medical Center, Dallas

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17 - 4:30 Investigating molecular mechanisms of microcephaly through mitotic spindle-independent pathways **Todd Schoborg**

18 - 4:45 The Polyadenosine RNA Binding Protein, Nab2, is a Functional Ortholog of the Human Intellectual Disability Gene ZC3H14 and Regulates Mushroom Body Development **Seth Kelly**

19 - 5:00 MARRVEL: Integration of public resources to prioritize human genetic variants for study in model organisms **Julia Wang**

20 - 5:15 Nrf2 and Epigenetic Aging **Dirk Bohmann**

21 - 5:30 *SLP-2* interacts with PINK1 in regulating mitochondrial function and bioenergetics in a *Drosophila* Parkinson's disease model **Sreehari Kalvakuri**

22 - 5:45 Microenvironmental autophagy promotes tumor growth **Nadja Katheder**

23 - 6:00 Systematic analysis of miRNAs in epithelial tumors reveals tumor enhancing and repressing miRNAs **Zhiqiang Shu**

24 - 6:15 Microbially-mediated ethanol sensitivity: A model system using *Drosophila*, its microbiome, and ingested ethanol **James Angus Chandler**

Friday, March 31 8:30 AM – 10:15 AM
Location: Town & Country
Physiology, Metabolism and Aging I
Co-Moderators: **Daniel Promislow**, Univ. of Washington, Seattle, and **Benoit Biteau**, Univ. of Rochester, NY, and **Rebecca Kreipke.** , Univ. of Washington, Seattle

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25 - 8:30 Regulation of adult lipid homeostasis by *Drosophila Estrogen-Related Receptor* **Katherine Beebe**

26 - 8:45 Sex differences in the regulation of triacylglycerol breakdown during starvation **Elizabeth Rideout**

27 - 9:00 Restoration of Metabolic Rhythms Ameliorates Obesity-Induced Progressive Striated Muscle Dysfunction in Drosophila **Girish Melkani**

28 - 9:15 Meep is a novel regulator of insulin signaling and diet-induced diabetes **Matthew Pereira**

29 - 9:30 Cell competition promotes developmental stability through a Dilp8/Lgr3-dependent mechanism **Laura Johnston**

30 - 9:45 Torso-like interacts with the insulin signalling pathway to regulate growth and developmental timing **Coral Warr**

31 - 10:00 Maintenance of proteostasis by an effector caspase. **Sharon Gorski**

Friday, March 31 8:30 AM – 10:15 AM
Location: San Diego
Regulation of Gene Expression I
Co-Moderators: **Bob Johnston**, John's Hopkins Univ., Baltimore, MD, and **Jack Bateman**, Bowdoin Univ., Brunswick, ME, and **Caity Anderson**, John's Hopkins Univ., Baltimore, MD, and **Kayla Viets**, John's Hopkins Univ., Baltimore, MD

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32 - 8:30 Coexpressed gene neighborhoods promote expression of newly created genes through chromatin architecture sharing in *Drosophila* **Kirill Borziak**

33 - 8:45 Natural variation in color perception in flies **Caitlin Anderson**

34 - 9:00 Translational regulation by ATF4-induced 4E-BP is essential for the innate immune response **Deepika Vasudevan**

35 - 9:15 Positive and negative functions of Polycomb binding sites in the *vestigial* gene region **Kami Ahmad**

36 - 9:30 Who is the Shadow? Developmental Shadow Enhancers Come in Two Flavors, Only One of Which Is Targeted by Su(H) and Other Polyglutamine-Rich Factors **Albert Erives**

37 - 9:45 Dual Readout of Regulatory Information Is a Common Feature of Transcriptional Silencers **Stephen Gisselbrecht**

38 - 10:00 A double assurance mechanism controls enhancer-promoter specificity at the *hunchback* locus **Jia Ling**

Friday, March 31 8:30 AM – 10:15 AM
Location: Golden West
Cell Biology and Signal Transduction I
Co-Moderators: **Jeff Axelrod**, Stanford Univ., CA, and **Mihaela (Ela) Serpe**, NIH/NICHD, Bethesda, MD, and **Qi Wang**, NIH/NICHD, Bethesda, MD

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39 - 8:30 Gap junctions are required for glia-glia communication, calcium signaling and survival in *Drosophila* peripheral nervous system (PNS) **Mriga Das**

40 - 8:45 A pulsatile EGFR signalling in the neighbouring somatic cells sets the pace of germ cell divisions in *Drosophila* testis **Purna Gadre**

41 - 9:00 Phosphorylation Potential of *Drosophila* E-Cadherin Intracellular Domain is Essential for Development and Regulating Adherens Junction Biosynthetic Dynamics **Yang Hong**

42 - 9:15 Actomyosin contractility modulates Wingless signaling through adherens junction stability **Eric Hall**

43 - 9:30 Actomyosin contractility is required for long-distance Notch signaling **Ginger Hunter**

44 - 9:45 Mechanical Stress Regulates Insulin Sensitivity Through Integrin-dependent Control of Insulin Receptor Localization **Jung Kim**

45 - 10:00 Occluding junctions regulate Hippo signalling to control blood cell differentiation in *Drosophila* **Rohan Khadilkar**

NOTES

Friday, March 31 10:45 AM – 12:30 PM
Location: Town & Country
Physiology, Metabolism and Aging II
Co-Moderators: **Daniel Promislow**, Univ. of Washington, Seattle, and **Benoit Biteau**, Univ. of Rochester, NY, and **Rebecca Kreipke**, Univ. of Washington, Seattle

46 - 10:45 Pharmaceutical inhibition of MEK/ERK cascade alleviates tumor-induced wasting effects **Wei Song**

47 - 11:00 Sestrin is required for exercise adaptations of flies and mice **Robert Wessells**

48 - 11:15 Key molecular regulators maintain metabolic and development balance during temperature fluctuations **Steven Kuntz**

49 - 11:30 Reversal of Hyperactive Wg Signaling-Dependent Fat Body Defects by Peptide Boronic Acids **Jun-Yuan Ji**

50 - 11:45 Bacterial Vitamin B6 Metabolism Promotes *Drosophila melanogaster* Lifespan on Calorie-Rich Diet **Melinda Koyle**

51 - 12:00 An Autonomous Metabolic Role for Split Ends in *Drosophila melanogaster* **Kelsey Hazegh**

52 - 12:15 The Gut as an Adaptable Interface: from Genetic Architecture to Physiological Consequences of Adaptive Growth of the *Drosophila* Gut. **Alessandro Bonfini**

Friday, March 31 10:45 AM – 12:30 PM
Location: San Diego
Regulation of Gene Expression II
Co-Moderators: **Bob Johnston**, John's Hopkins Univ., Baltimore, MD, and **Jack Bateman**, Bowdoin Univ., Brunswick, ME, and **Caity Anderson**, John's Hopkins Univ., Baltimore, MD, and **Kayla Viets**, John's Hopkins Univ., Baltimore, MD

53 - 10:45 The hormone-induced transcription factor E93 regulates temporal specific gene expression by controlling DNA regulatory element accessibility **Daniel McKay**

54 - 11:00 Properties of enhancer RNA during embryonic development **Olga Mikhaylichenko**

55 - 11:15 Redundant GA-binding early transcription factors regulate the *Drosophila* histone locus body **Leila Rieder**

56 - 11:30 Quantitative and predictive models of *even skipped* and *rhomboid* enhancers targeted by engineered transcription factors in the early *Drosophila* embryo **Garth Ilsley**

57 - 11:45 Histones Abundance Adjusts the Timing of the Mid-Blastula Transition in *Drosophila* **Amanda Amodeo**

58 - 12:00 Zelda binding sites as quantitative regulators of target gene transcription **Christine Rushlow**

59 - 12:15 Intra-nuclear concentration and DNA-binding kinetics of Zelda defines zygotic genome activation in Drosophila **Dimitrios Papadopoulos**

Friday, March 31 10:45 AM – 12:30 PM
Location: Golden West
Cell Biology and Signal Transduction II
Co-Moderators: **Jeff Axelrod**, Stanford Univ., CA, and **Mihaela (Ela) Serpe**, NIH/NICHD, Bethesda, MD, and **Qi Wang**, NIH/NICHD, Bethesda, MD

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60 - 10:45 Live cell imaging of secondary cells reveals the subcellular dynamics of secretory and endosomal compartment formation and maturation **Benjamin Kroeger**

61 - 11:00 Imaging Hedgehog, Patched and Smoothened during signal transduction **Ryo Hatori**

62 - 11:15 Adenosine receptor signalling contributes to Grindelwald-induced JNK signalling in *scribbled* mutant tissue **Ingrid Poernbacher**

63 - 11:30 Regulation of Dpp signaling by O-linked glycosylation **Matthew Moulton**

64 - 11:45 VEGFR/Pvr signaling regulates diverse responses during wound healing in *Drosophila* larvae **Chang-Ru Tsai**

65 - 12:00 Rho family GTPases respond to pattern established by RhoGEFs in cell wound repair **Mitsutoshi Nakamura**

66 - 12:15 The Tip60/Enhancer of Polycomb (E(Pc)) complex is a tumor suppressor that represses hematopoietic tumors by negatively regulating JAK/STAT signaling **Alessandro Bailetti**

NOTES

Friday, March 31 4:30 PM – 6:30 PM
Location: Town & Country
Evolution of Development (talks 1-4), RNA Biology (talks 5-8)
Co-Moderators: **Artyom Kopp**, UC Davis, California, and **Urs Schmidt-Ott**, Univ. of Chicago, IL, and **Nick Sokol**, Indiana University, Bloomington, and **Emily Delaney**, UC Davis, California, and **Arthur Luhur**, Indiana University, Bloomington

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67 - 4:30 Gene regulatory networks evolve at different nodes in different developmental contexts **Sebastian Kittelmann**

68 - 4:45 Interaction Of *Cis*-Regulatory Changes At Two Loci In The Evolution Of The *Drosophila prolongata* Sensory System. **David Luecke**

69 - 5:00 Conservation and evolution of maternally deposited and zygotically transcribed mRNAs in the early Drosophila embryo **Susan Lott**

70 - 5:15 Reverse-engineering the evolution of Drosophila mesoderm invagination **Steffen Lemke**

71 - 5:30 Stress-dependent miRNA-based regulation of Rbfox1/A2bp1 promotes RNP granule formation and cell survival **Halyna Shcherbata**

72 - 5:45 The N^6-methyladenosine (m^6A) RNA modification modulates neuronal functions and sex determination in *Drosophila melanogaster* **Tina Lence**

73 - 6:00 A sex-specific small peptide is encoded by a large "ncRNA" within the *Drosophila* bithorax complex **Clément Immarigeon**

74 - 6:15 TDRD5P, a component of cytoplasmic processing body promotes male germline sexual identity **Caitlin Pozmanter**

Friday, March 31 4:30 PM – 6:30 PM
Location: San Diego
Intracellular Dynamics: Cytoskeleton, Organelles, and Trafficking
Co-Moderators: **Julie Brill**, The Hospital for Sick Children, Toronto, Canada, and **Yohanns Bellaiche**, Institut Curie, Paris France, and **Jean-Francois Groulx**, Univ. of California, San Diego

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75 - 4:30 A new aspect of the mid-blastula transition: regulation of histone/lipid droplet interactions controls histone levels in the nucleus **Matthew Johnson**.

76 - 4:45 Complementary molecular cues ensure a robust microtubule-dependent nuclear positioning in the *Drosophila* oocyte **Antoine Guichet**

77 - 5:00 Global regulation of Pericentrin-Like-Protein transcript and protein controls its local positioning on the proximal end of centrioles **Jacob Ortega**

78 - 5:15 Novel concepts of cytoskeleton regulation during neuronal growth, maintenance and degeneration **Yue Qu**

79 - 5:30 Role of the formin Dia in formation of epithelial compartments **Anja Schmidt**

80 - 5:45 C-terminal Src kinase (Csk) regulates the tricellular junctional protein Gliotactin independent of Src **G.D.N.Gayathri Samarasekera**

81 - 6:00 Marf-mediated mitochondrial fusion is imperative for the development and functioning of the indirect flight muscles (IFMs) in *Drosophila* **Prasanna Katti**

82 - 6:15 The relationship between autophagy, Rab-mediated endosomal trafficking, and T-tubule remodeling in muscles **Tzu-Han Lin**

Friday, March 31 4:30 PM – 6:30 PM
Location: Golden West
Neural Development and Physiology
Co-Moderators: **Pelin Volkan**, Duke Univ., Durham, NC, and **Makoto Sato**, Kanazawa Univ. Japan, and **Tetsuo Yasugi** , Kanazawa Univ. Japan

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83 - 4:30 Social experience and hormone signaling modulate *fru*^{M} expression in the adult olfactory system **Songhui Zhao**

84 - 4:45 The Role of Highly Conserved miRNAs in Tuning Synaptogenesis through Target Regulation in Specific Tissue Compartments **Elizabeth McNeill**

85 - 5:00 Sidekick is required to establish the circuitry for visual motion detection in *Drosophila* **Jessica Treisman**

86 - 5:15 Frazzled promotes growth cone attachment at the source of a Netrin gradient in the *Drosophila* visual system **Orkun Akin**

87 - 5:30 Targeting without a target: How postsynaptic neurons guide photoreceptors in *Drosophila* visual map formation **Egemen Agi**

88 - 5:45 *slit* is required for proper lch5 chordotonal neuron morphology and migration in the Drosophila embryonic PNS **Madison Gonsior**

89 - 6:00 Depolarization-dependent hyperacidifcation of dopamine synaptic vesicles is mediated by VGLUT **Zachary Freyberg**

90 - 6:15 Draper Expression in Cortex Glia Is Required for Dead Neural Cell Removal in the Developing *Drosophila* Optic Lobe **Ryosuke Nakano**

NOTES

Saturday, April 1 8:30 AM – 10:15 AM
Location: Town & Country
Evolution and Populations Genetics I
Co-Moderators: **Kristi Montooth**, Univ. of Nebraska, Lincoln, and **Noah Whiteman**, UC Berkeley, CA, and **Andy Gloss**, UC Berkeley, CA

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91 - 8:30 Elucidating Recent Gene Flow Across Drosophila Species Using a Novel Machine Learning Approach **Daniel Schrider**

92 - 8:45 Reinforcement of conspecific sperm precedence weakens sexual selection in sympatric populations of *Drosophila* **Dean Castillo**

93 - 9:00 Unorthodox transmission modes of endosymbionts in hybrids and the symbiotic origin of speciation **Wolfgang Miller**

94 - 9:15 Global Patterns of Local Ancestry in Drosophila melanogaster **Russ Corbett-Detig**

95 - 9:30 Non-neutral species-specific gene death causes hybrid male sterility in *Drosophila* **Emily Landeen**

96 - 9:45 Genetic epistasis within regulatory regions acts to buffers the effect of segregating mutations during embryonic development **Mattia Forneris**

97 - 10:00 Contingency and convergence in the evolution of regulatory sequence: Dosage compensation in Drosophila **Christopher Ellison**

Saturday, April 1 8:30 AM – 10:15 AM
Location: San Diego
Patterning, Morphogenesis and Organogenesis I
Co-Moderators: **Jessica Treisman**, NYU, Skirball Inst., New York, and **Leslie Pick**, Univ. of Maryland, College Park, and **Anja Katzemich** , Schoeck lab, McGill, Montreal, Canada

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98 - 8:30 Determination of EGFR Signaling Output by Opposing Gradients of BMP and JAK/STAT Activity **Laura Nilson**

99 - 8:45 Proximodistal patterning of the fly leg relies on tight spatiotemporal regulation of two key EGFR inputs via leg disc-specific, non-redundant enhancers **Susan Tozier**

100 - 9:00 Dynamic patterning by the *Drosophila* pair-rule network reconciles long-germ and short-germ segmentation **Erik Clark**

101 - 9:15 The LIM protein Smallish associates with Bazooka/Par-3 and Src at adherens junctions to control epithelial morphogenesis **Andreas Wodarz**

102 - 9:30 Physical aspects of Drosophila gastrulation **Konstantin Doubrovinski**

103 - 9:45 Transcriptional regulation of ribosomal protein genes is associated with organogenesis of secretory epithelium **Rajprasad Loganathan**

104 - 10:00 Patterned Toll receptor expression organizes epithelial cell intercalation **Adam Pare**

Saturday, April 1 8:30 AM – 10:15 AM
Location: Golden West
Gametogenesis
Co-Moderators: **Minx Fuller**, Stanford Univ., CA, and
Alana O'Reilly, Fox Chase Cancer Center, Philadelphia, PA, and
Eric Lee, Fox Chase Cancer Center, Philadelphia, PA

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105 - 8:30 Transcription of the Y chromosome fertility factors – the role of intron gigantism and a potentially novel RNP granule **Jaclyn Fingerhut**

106 - 8:45 A lipid metabolism checkpoint regulates self-renewal and differentiation of germline stem cells **Rafael Demarco**

107 - 9:00 Zinc-Finger Transcription Factor Hindsight Regulates Ovulation Competency of *Drosophila* Follicles **Lylah Deady**

108 - 9:15 Sex-specific specification of the follicle stem cells in the developing *Drosophila* ovary **Abigail Fuchsman**

109 - 9:30 *Rap1* and Hippo pathway collaborate to polarize directional protrusions in *Drosophila* border cell migration **Yu-Chiuan Chang**

110 - 9:45 Evolutionary drivers of rapid, episodic molecular evolution of *bag of marbles* (*bam*) in *Drosophila*: evaluating functional diversification and a conflict with *Wolbachia* **Jaclyn Bubnell**

111 - 10:00 Micromanagement of stem cell proliferation by the *Drosophila* testis niche **Christian Boekel**

NOTES

Saturday, April 1 10:45 AM – 12:30 PM
Location: Town & Country
Evolution and Populations Genetics II
Co-Moderators: **Kristi Montooth**, Univ. of Nebraska, Lincoln, and **Noah Whiteman**, UC Berkeley, CA, and **Andy Gloss**, UC Berkeley, CA

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112 - 10:45 Population Genomics of Parallel Cold Tolerance Evolution Within *Drosophila melanogaster* **John Pool**

113 - 11:00 Genomics of adaptation coupled with a major dietary transition to herbivory in the Drosophilidae **Andrew Gloss**

114 - 11:15 The genetic basis of rapid adaptive shifts in pigmentation over seasonal time scales **Alan Bergland**

115 - 11:30 Rapid evolution of learning in natural populations of *Drosophila melanogaster* **Emily Behrman**

116 - 11:45 HP1 gene family diversification suggests recurrent innovation in paternal chromosome packaging across 250 million years of Diptera evolution **Quentin Helleu**

117 - 12:00 Recurrent gene duplication leads to diverse repertoires of centromeric histones in Drosophila species **Lisa Kursel**

118 - 12:15 Dynamics of a natural P-element invasion in experimentally evolving populations of *D. simulans* **Robert Kofler**

Saturday, April 1 10:45 AM – 12:30 PM
Location: San Diego
Patterning, Morphogenesis and Organogenesis II
Co-Moderators: **Jessica Treisman**, NYU, New York, and **Leslie Pick**, Univ. of Maryland, College Park, and **Anja Katzemich**, Schoeck Lab, McGill, Montreal, Canada

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119 - 10:45 *C*hitinase-like proteins disrupt tube morphogenesis **Sandra Zimmerman**

120 - 11:00 Organ sculpting by patterned extracellular matrix stiffness **Justin Crest**

121 - 11:15 Semaphorin-Plexin signaling regulates stress fiber dynamics during epithelial migration **Claire Stevenson**

122 - 11:30 The epithelial-specific zinc finger transcription factor Ichor is essential for seamless tube morphogenesis in the *Drosophila* tracheal system **Jeff Rosa**

123 - 11:45 Post-transcriptional downregulation of Bazooka-Par3 downstream of Snail in epithelial-mesenchymal transition **Joan Lee**

124 - 12:00 Dynamin regulates actin cytoskeletal organization during cell-cell fusion **Nathalie Gerassimov**

125 - 12:15 Systematic transcriptome analysis of flight muscle development reveals that Spalt major regulates a biphasic mode of sarcomere assembly **Maria Spletter**

Saturday, April 1 10:45 AM – 12:30 PM
Location: Golden West
Cell Death and Immunity
Co-Moderators: **Kim McCall**, Boston Univ., MA, and
Henri Jasper, Buck Institute for Research on Aging city, state, and
Imilce Rodriguez-Fernandez, Buck Institute for Research on Aging, Novato, CA

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126 - 10:45 Anastasis, a conserved cell survival strategy under stress **Gongping Sun**

127 - 11:00 Stretch Follicle Cells Utilize Lysosomal Proteins to Eliminate Nurse Cells by Phagoptosis **Albert Mondragon**

128 - 11:15 COPI–Arf1–lipolysis pathway regulates normal and transformed stem cells survival in adult *Drosophila* **Shree Ram Singh**

129 - 11:30 Src-MAPK, Hippo and TGFB signaling cooperatively regulate cytokine production in enterocytes upon bacterial infection **Philip Houtz**

130 - 11:45 Olfaction mediated neuronal control for immune competency in *Drosophila* blood cells via GABA-shunt **Sukanya Madhwal**

131 - 12:00 A new family of GTPases from virulence-linked extracellular microvesicles of a Drosophila generalist parasite **Mary Ellen Heavner**

132 - 12:15 PGRP-SD is an extracellular pattern recognition receptor that enhances peptidoglycan-mediated activation of the *Drosophila* Imd pathway **Igor Iatsenko**

NOTES

Saturday, April 1 4:00 PM – 6:00 PM
Location: Town & Country
Chromatin and Epigenetics
Co-Moderators: **Melissa Harrison**, Univ of Wisconsin, Madison, and **Mia Levine**, Univ. of Pennsylvania, Philadelphia, and **Danielle Hamm**, Univ of Wisconsin, Madison

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133 - 4:00 Phosphorylation of Threonine 11 in Histone H3 marks insulator elements and counteracts *Polycomb* dependent H3 Lysine 27 methylation **Alf Herzig**

134 - 5:15 Defining the Role of Heterochromatin and Insulator Partner Protein 1 (HIPP1) in Chromatin Insulator Function and Genome Replication **Emily Stow**

135 - 4:15 En route to a signature of *trans* inter-homolog pairing in haplotype-resolved genomes **Jelena Erceg**

136 - 4:30 Zelda and GAGA factor likely function to define the chromatin landscape necessary for genome activation **Katharine Schulz**

137 - 4:45 Repetitive sequences on the X chromosome guide dosage compensation **Victoria Meller**

138 - 5:00 Interaction between co-activators and PRC1 during development: A key transitional state? **Hyuck-Joon Kang**

139 - 5:30 Modulating *cis*-/*trans*-promoter competition in *Drosophila* **Jack Bateman**

140 - 5:45 Argonaute2 cooperates with LaminB to repress transcription at Lamin-associated domains in *Drosophila melanogaster* **Ezequiel Nazer**

Saturday, April 1 4:00 PM – 6:00 PM
Location: San Diego
Cell Division and Growth Control
Co-Moderators: **Don Fox**, Duke Univ. Medical Center, Durham, NC, and **Sharon Gorski**, Simon Fraser Univ. & BC Cancer Agency, Vancouver, Canada, and **Jessica Sawyer**, Duke Univ. Medical Center, Durham, NC

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141 - 4:00 Why there are no crossovers on chromosome 4 (and how to make them) **Jeff Sekelsky**

142 - 4:15 Novel role of nuclear periphery and nuclear 'shuttle' proteins in heterochromatic double strand break repair. **Taehyun Ryu**

143 - 4:30 Switching Injury Response: Polyploidy Associated Hypertrophy as An Alternative to Compensatory Proliferation **Erez Cohen**

144 - 4:45 Mitotic gene expression dictates the mechanism of tissue repair in *Drosophila* **Janelle Grendler**

145 - 5:00 Delineating the Mechanism of Compensatory Cellular Hypertrophy in Follicular Epithelium **Sarayu Row**

146 - 5:15 Large genetic screen identifies FGF signaling in the trachea as a regulator of body size in *Drosophila* **Anne Jørgensen**

147 - 5:30 The Mechanome of Asymmetric Cell Division **Tri Pham**

148 - 5:45 Interactions between Cell Division and Epithelial Cell Polarity **Gayaanan Jeyanathan**

Saturday, April 1 4:00 PM – 6:00 PM
Location: Golden West
Models of Human Disease: Neurodegeneration and Neurological Disorders
Co-Moderators: **Serge Birman**, ESPCI, Paris, France, and **Doris Kretzschmar**, Oregon Health & Science Univ., Portland, OR, and **Sabi Abdul-Raouf Issa** , ESPCI, Paris, France

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149 - 4:00 Defective glial phagocytosis results in cell corpse accumulation and age-dependent neurodegeneration **Johnny Elguero**

150 - 4:15 Dysfunctional VMAT potentiates selective loss of dopaminergic neurons in *parkin* mutant flies **Sheng Zhang**

151 - 4:30 Identification of a Neural Modulator of Locomotor Activity That Can Compensate for Loss of Dopamine **Karol Cichewicz**

152 - 4:45 Tip60 HAT/HDAC2 balance promotes neural health in an Alzheimer's disease *Drosophila* model **Priyalakshmi Panikker**

153 - 5:00 A rapid autophagy response is induced by axon injury and may mediate the signal transduction to axon degeneration **Yanshan Fang**

154 - 5:15 Seizure and ataxia-linked mutations in a Golgi t-SNARE cause synaptic retraction, frequency-dependent hyperexcitability and reduced dendritic growth in *Drosophila*. **James Jepson**

155 - 5:30 Dystroglycan, a non-integrin ECM receptor is required for selective permeability barrier in the brain **Andriy Yatsenko**

156 - 5:45 A *Drosophila* functional characterization of CNV genes that confer risk of schizophrenia. **Gianna Maurer**

NOTES

Saturday, April 1 7:30 PM – 10:00 PM
Location: San Diego
Techniques and Technology Platform Session
Co-Moderators: **Hugo Bellen**, Baylor College of Medicine, Houston, TX, and **Julie Simpson**, University of California, Santa Barbara, and **Oguz Kanca** , Baylor College of Medicine, Houston, TX

157 - 7:30 Implications of Active Genetics **Ethan Bier**

158 - 7:45 An update from the Genome Disruption Project (GDP): MiMICs, CRiMICS, and human cDNA transgenics **Hugo Bellen**

159 - 8:00 Re-purposing Existing Transgenic Reagents By Genomic HACKing **Christopher Potter**

160 - 8:15 Transgenic gRNA libraries for tissue-specific CRISPR/Cas9 knock-out screening in *Drosophila* **Fillip Port**

161 - 8:30 What's new in FlyBase (in its 25th year) **Steven Marygold**

162 - 8:45 Metabolomic Studies in *Drosophila* **Jason Tennessen**

163 - 9:00 Advances in monitoring calcium dynamics using genetically-encoded sensors in *Drosophila* **Yi Sun**

164 - 9:15 Whole-animal functional and developmental imaging with multi-view light-sheet microscopy **William Lemon**

165 - 9:30 Recombinase-facilitated Fine-mapping of Neural Circuits using Split Cre **Benjamin White**

Sunday, April 2 8:30 AM – 12:00 NOON
Location: Atlas Ballroom
Plenary Session II
Moderator: **Amy Kiger**, UC San Diego, California

Presentations:

8:30 Poster Awards.

8:35 Asymmetric signaling endosomes in asymmetric division **Marcos Gonzalez-Gaitan**

9:05 Why the pause? Catching RNA polymerase II *in vivo* **Julia Zeitlinger**

9:35 Circuits principles of memory-based behavioral choice **Marta Zlatic**

10:05 - **Break**

10:30 Stem cell homeostasis in the *Drosophila* testis **Erika Bach**

11:00 The conflicts that shape genomes, cells and species **Nitin Phadnis**

11:30 The piRNA pathway—a small RNA based genome defense system **Julius Brennecke**

NOTES

Workshops

Workshop applications were submitted and approved by the conference organizers. The workshop organizers created the program.

Wednesday, March 29 9:00 AM – 5:30 PM
Location: Pacific Ballroom Salon 3
PI Early Career Forum
Advance Registration Required
Organizers: **Guy Tanentzapf**, University of British Columbia, and
Amy Bejsovec, Duke University

The PI Early Career Forum is designed for new PIs, within the first 5 years of setting up a lab, working on Drosophila. The purpose of this event is to provide an opportunity for early career PIs to meet one another, showcase the research pursued in their new labs, network with more senior members of the fly community, and take part in a discussion about how to navigate the challenges that accompany the process of starting a new lab. *Ticketed Event*

Wednesday, March 29 12:00 NOON – 6:00 PM
Location: Golden Ballroom
Ecdysone Workshop
Organizers: **Rebecca Spokony**, Baruch College, CUNY, and
Elizabeth Ables, East Carolina University

The Ecdysone Workshop welcomes all those interested in insect endocrinology. Importantly, this workshop is a forum to discuss the role of different hormones (e.g., 20-hydroxyecdysone, juvenile hormone, peptide hormones, insulin) and the crosstalk between their signaling pathways. The topics covered include, but are not limited to, hormone synthesis and secretion, and hormonal control of transcription, differentiation, morphogenesis, growth, metabolism, timing and behavior.

Thursday, March 30 7:45 PM – 9:45 PM
Location: Pacific Ballroom Salon 1
Integrating Research and Teaching at PUIs using Drosophila melanogaster as a model organism
Organizers: **Afshan Ismat**, University of St. Thomas, and
Norma Velazquez Ulloa, Lewis & Clark College, and
Judy Leatherman, University of Northern Colorado

The workshop will have two components, lightning talks followed by breakout sessions, described below: Lightning talks: These talks will be 10 minutes long and the session will last one hour. The focus will be on ideas for integrating open-ended research into course laboratories. Talks will include speakers that teach a variety of courses with inter-related topics including Genetics, Developmental Biology, Cell Biology, Molecular Biology, and Bioinformatics. Breakout sessions: Attendees will split into small groups according to the course topic they are most interested in, and will discuss ideas for implementing the strategies discussed in the talks in their own courses.

Thursday, March 30 7:45 PM – 9:45 PM
Location: Pacific Ballroom Salon 3
Wound Healing and Regeneration
Organizers: **Adrian Halme**, University of Virginia School of Medicine, and
Rachel Smith-Bolton, University of Illinois, Urbana-Champaign

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Drosophila has become an important model system for understanding both wound healing and regeneration of tissues and organs. The goal for this workshop is to bring together presentations from researchers studying tissue repair, regeneration, and compensatory growth in diverse tissue contexts. This workshop will highlight the use of the various model systems in this field including, but not limited to, tissue repair and regeneration in embryos, the larval and adult cuticle, neurons, and imaginal discs. Common themes that will be discussed include the roles of stem cells, cell biological and mechanical mechanisms, inflammatory and innate immune systems, gene regulatory networks, signal transduction, and energy homeostasis.

Thursday, March 30 7:45 PM – 9:45 PM
Location: Golden Ballroom
Feeding Behavior, Nutrition and Metabolism
Organizers: **Tânia Reis**, University of Colorado School of Medicine, and
William W. Ja, The Scripps Research Institute

Drosophila has become 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.

Thursday, March 30 7:45 PM – 9:45 PM
Location: Pacific Ballroom Salon 2
Everything You Ever Wanted to Know About Sex
Organizers: **Mark Van Doren**, Johns Hopkins, and
Michelle Arbeitman, Florida State University, and
Artyom Kopp, UC Davis

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.

Friday, March 31 1:45 PM – 3:45 PM
Location: Pacific Salon 7
Navigating the Career Decision Making Process
Organizer: **Sonia Hall**, Genetics Society of America, Bethesda, MD

This interactive career planning workshop will engage participants in thinking about how their skills, interests, and values can be used to inform their career planning and decisions.

Friday, March 31 1:45 PM – 3:45 PM
Location: Pacific Ballroom Salon 1
Spotlight on Undergraduate Research
Organizers: **Eric Stoffregen**, Lewis-Clark State College, and
Kimberly A. Carlson, University of Nebraska at Kearney, and
Jennifer Jemc Mierisch, Loyola University, and
Catherine Silver Key, North Carolina Central University

This session will highlight undergraduate research accomplishments from Drosophila research labs. Selected by faculty reviewers, 5 student speakers will deliver ten-minute oral presentations. The undergraduate plenary session will illustrate ways in which research has become an important part of the college experience through its integration into courses and mentoring in individual research labs.

Friday, March 31 1:45 PM – 3:45 PM
Location: Pacific Ballroom Salon 3
Drosophila Microbiome
Organizers: **Will Ludington**, UC Berkeley, and
Brooke McCartney, Carnegie Mellon University, and
Nichole Broderick, University of Connecticut

The microbiome is a complex ecosystem within a complex organism, neither of which we understand completely on their own, let alone in combination. Drosophila studies have shown that the microbiome affects metabolism, immunity, pathogenesis, neurobiology and behavior, ecology and evolution, and aging. Combining the Drosophila genetic model with its naturally simple microbiome gives us our best chance of understanding the complex relationship between host and microbial community. The goal of this workshop is unite Drosophila researchers across disciplines and to build a shared set of defined host-microbiome tools to accelerate Drosophila microbiome research.

Friday, March 31 1:45 PM – 3:45 PM
Location: Golden Ballroom
Developmental Mechanics
Organizers: **Rodrigo Fernandez-Gonzalez**, University of Toronto, and
Guy Tanentzapf, University of British Columbia

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 effort to understand tissue morphogenesis. In particular the establishment of tools to measure and manipulate mechanical forces in living organisms has demonstrated that mechanical forces profoundly shape tissue morphogenesis. In this workshop, we will review the most recent technical advances to visualize and quantify force generation during Drosophila development, and we will discuss the latest results demonstrating the interplay between physical forces, molecular dynamics and tissue morphogenesis.

Friday, March 31 1:45 PM – 3:45 PM
Location: Pacific Ballroom Salon 2
Biogenic Amines and Behaviors
Organizers: **Sonali A. Deshpande**, University of California, Los Angeles, and
Seth Tomchik, The Scripps Research Institute, FL , and
Kyung-An Han, University of Texas, El Paso

Drosophila is widely used as a model system for studying neurological disorders and neuronal mechanisms involved in behavioral regulation. This workshop welcomes a diverse group interested in discussing the role of biogenic amines in various behaviors. The goal of this workshop is to provide a forum for investigators working on biogenic amines to encourage discussions and collaborations.

Posters

Poster Session Listings

Intracellular Dynamics: Cytoskeleton, Organelles & Trafficking

166A The Role of CG31345 in Regulating Microtubule Polymerzation **Safiyah Alzahrani**.

167B Identification of gene interactions with the tyrosine kinase Abl during cell migration **Alexandra Byrd**.

168C Characterization of a novel actin regulator, HtsRC **Juli Gerdes**.

169A Molecular guillotine: a novel approach to inhibit kinesin motor activity **Zhiyi Lv**.

170B Spire and Cappuccino Team Up to Establish Body Axes During Oogenesis **Margot Quinlan**.

171C Filamin actin-binding and dimerization domain fulfill distinct functions in Z-disc cohesion **Frieder Schoeck**.

172A Dynamic regulation of the cell polarity protein Crumbs during epithelial morphogenesis **Anna Bajur**.

173B Scribbled mediates tricellular junction formation **Zohreh Sharifkhodaei**.

174C Apnoia, a new Crumbs regulator for proper breathing in flies **Kassiani Skouloudaki**.

175A The *Merlin* and *expended* genes are involved in Spiny-legs induced planar cell polarity reversal. **Jun Wu**.

176B The Role of the Retromer Subunit Vps26 in Vesicular Trafficking During *Drosophila* Oogenesis **Rebecca Starble**.

177C Effect of the small GTPase, Rab10 on membrane growth and cellularization of the early *Drosophila* embryo. **Elliott Holt**.

178A Dissolution of electron-dense plaques during myoblast fusion **Stefanie Lübke**.

179B Identification of proteins required for prefusion complex dissolution. **Michaela Papendieken**.

180C Roles of catalytic and noncatalytic class II PI3K splice variants in autophagy **Jean-Francois Groulx**.

181A The Sorting Nexin *Snazarus* regulates autophagosome-lysosome fusion **Steve Jean**.

182B Cdk5 enhances Basal Autophagy by phosphorylating Acinus **NILAY NANDI**.

183C Zonda is a novel early component of the autophagy pathway **Pablo Wappner**.

184A Manipulation of targeted mitochondrial DNA double strand breaks in a *Drosophila* model **Adam Spierer**.

185B Uncovering the subcellular trafficking routes of secreted molecules within secondary cells **Felix Castellanos**.

186C Sequential trafficking events target White transporter to pigment granules **Sheng Zhang**.

187A *ER Stress Delays the Cell Cycle in Drosophila Syncytial Embryos* **Ryan Kyger**.

188B Fic-mediated AMPylation of the ER chaperone BiP is required to maintain visual neurotransmission **Andrew Moehlman**.

189C Modeling of axonal endoplasmic reticulum network by spastic paraplegia proteins **Cahir O'Kane**.

190A A deficiency screen for genetic interactors of Jagunal in the Drosophila compound eye **Nicole Rodrigues**.

191B A Novel Role of VCP in Maintaining the Nuclear Structure and Function of End-Dividing Cells **Ya-Chu Chang**.

192C Nuclear Wash functions in multiple nuclear complexes to affect nuclear morphology and processes. **Jeffrey Verboon**.

193A Stratum, a Homolog of the Human GEF Mss4, Partnered with Rab8 Controls the Basal Restriction of Basement Membrane Proteins in Polarized Epithelial Cells **Olivier Devergne**.

194B X-ray crystallography and computational molecular dynamics of *Drosophila* striated muscle myosin II isoforms predict a basis for isoform-specific properties **James Caldwell**.

195C Defining the role of mechanotransduction downstream of prostaglandin signaling in regulating border cell migration **EMILY TOOMBS**.

Cell Biology & Signal Transduction

196A Hedgehog signaling modulates intercellular calcium waves through an incoherent feed-forward loop in the wing disc **Pavel Brodskiy**.

197B Characteristics and differential spatio-temporal profiling of Shaggy protein isomers revealed by CRISPR genome engineering **Dagmara Korona**.

198C Building a functional regulator of Wg signaling: The β-catenin destruction complex **Kristina Schaefer**.

199A The exon junction complex regulates the splicing of cell polarity gene dlg1 to control Wingless signaling in development **Alan Zhu**.

200B Generating a new genetic tool for investigation of the requirements for *Mothers against dpp (Mad)* **Sheila Mosallaei**.

201C The phosphatase Dullard dephosphorylates Mad to terminate BMP signaling **Hugo Urrutia**.

202A The *Drosophila* xylosyltransferase Shams modulates the balance between Notch *cis*-inhibition and *trans*-activation by Delta. **Ashutosh Pandey**.

203B Tribbles interacts with Neuralized to regulate Notch signaling **Anna Shipman**.

204C An overexpression screen identifies genes that regulate intercellular signaling **Moe Wada**.

205A An aberrant Notch signaling controls metabolic reprogramming during tumor formation **Cheng-Wei Wang**.

206B A feedback loop linking Notch signaling and epigenetic silencing **Alan Zhu**.

207C Hipk induces tumorigenesis in Drosophila **Esther Verheyen**.

208A A *miR-285*-Yki/Mask double-negative feedback loop mediates blood-brain barrier integrity in *Drosophila* **Xiaolin Bi**.

209B Role of ubiquitination in trafficking of Fat signaling pathway components **Jyoti Misra**.

210C *In vitro* and *in vivo* Yki protein interactome in *Drosophila melanogaster* **Heya Zhao**.

211A Ras is Required for Toll Signalling in the Drosophila Embryo **Jay Lusk**.

212B Distinct Transcriptional Mechanisms Account for the Autonomous and Nonautonomous Inhibition of Growth Induced by Fat Body Toll Signaling. **Nigel Muhammad**.

213C Somatic activation of Rolled/ERK, downstream of EGFR, synchronizes spermatogonial proliferation in *Drosophila* testis **Samir Gupta**.

214A Germ cell transit amplification is non-autonomously regulated by the EGFR downstream target, miRNA bantam, in *Drosophila* testis **Chetanchandra Joshi**.

215B Search for a novel small molecule inhibitor of PLCγ **Chitra Naidu**.

216C Capicua preferentially binds to dually phosphorylated ERK by recognizing altered conformation of the hydrophobic pocket of the ERK DRS domain **Sayantanee Paul**.

217A Characterization of novel epidermal growth factor receptor target genes implicated in *Drosophila* development **Sergey Svintozelskiy**.

218B The “gatekeeper” function of *Drosophila* Seven-in-Absentia (SINA) E3 ligase and its human homologs, SIAH1 and SIAH2, is highly conserved for proper RAS signal transduction **Robert Van Sciver**.

219C Sequential Activation of Pointed Initiates Oenocyte Specification **GUOLUN WANG**.

220A Nutrient regulated spargel/dPGC1 expression is essential for *Drosophila* oogenesis **MOHAMMAD BASAR**.

221B Structure-function analysis of β-arrestin Kurtz reveals its role in epithelial morphogenesis as a regulator of the Fog-Mist signaling pathway **Fei Chai**.

222C Improving the Molecular Toolkit to Study Muscle Differentiation **Emily Czajkowski**.

223A Defining the interactions of Aret and Vasa in muscle fiber specific alternative splicing **Sandy Oas**.

224B *canB2*, a calcium binding subunit of Calcineurin, is required for maintaining calcium homeostasis in indirect flight muscles of Drosophila **Ruchi Jhonsa**.

225C Histamine Recycling Is Mediated by CarT, a Carcinine Transporter in *Drosophila* Photoreceptors **Ying Xu**.

226A Adult muscle formation requires *Drosophila* importin-7 for proliferation of wing disc-associated muscle precursors **Kumar Vishal**.

227B Overactivation of innate immune processes disrupts muscle homeostasis in *Drosophila melanogaster* **Nicole Green**.

228C The organization & development of tricellular junctions in *Drosophila* epithelia **Till Matzat**.

229A Dissecting the interaction between APC2 and ApepP in regulation of Beta-catenin protein levels **Hannah Kolev**.

Cell Division and Growth Control

230B The Role of Actin-Microtubule Crosslinker Shortstop in Cell Division **Evan Dewey**.

231C Function of the Iron-sulfur Cluster Assembly Protein Ciao1 in Growth Regulation in Drosophila **Jean Jung**.

232A Differential regulation of Cyclin E by Yorkie-Scalloped signaling in organ development **Zhiqiang Shu**.

233B Genetic Control of Tissue-Specific Growth in the Larval Trachea of *Drosophila* **Kayla Wilson**.

234C Spindle Orientation: How Complex is the Complex? **Daniel Bergstralh**.

235A Break-induced replication in the *Drosophila* germline **Travis Karg**.

236B Investigating the Mcm10/RecQ4 genetic interaction in Drosophila Melanogaster **Christopher Knuckles**.

237C FLYINGLOW: biological effects of protracted low radiation doses in *Drosophila melanogaster* **Giovanni Cenci**.

238A Highways for repair: nuclear actin and myosin drive the relocalization of heterochromatic DNA damages to the nuclear periphery during homologous recombination. **Irene Chiolo**.

239B Impact of chromatin modifications on heterochromatic double strand break repair **laetitia Delabaere**.

240C Utilization of transient secondary-structure forming sequences during alternative end joining repair of double-strand breaks **Terrence Hanscom**.

241A Dicentric Ring-X chromosomes have clustered breakpoints indicating fragile regions. **Hunter Hill**.

242B The role of DmBlm in repair of simple DNA double-strand breaks **Jeannine LaRocque**.

243C Cell cycle re-entry in the optic lobes of the adult *Drosophila* brain **Shyama Nandakumar**.

244A Role of Polyploid Glial Cells in the Peripheral Nervous System **Laura Frawley**.

245B Variant cell cycles ensure a functional blood-brain barrier in Drosophila **Jessica Von Stetina**.

246C *Jim lovell* (*lov*) is a Regulator of Larval Endopolyploid Growth **Fanli Zhou**.

247A Investigating the role of inflammatory cytokines on tumor progression and metastasis in a *Drosophila* cancer model **Kirti Snigdha**.

248B The Hippo Pathway Acts as a Gatekeeper to Restrict EGFR/Ras Driven Tumorigenesis **Fisun Hamaratoglu**.

249C A non-apoptotic function of the caspase Ice regulates Drosophila tracheal length downstream of Hippo signaling **Saoirse McSharry**.

250A Warts signaling coordinates organ growth with body size through regulation of ecdysone **Kim Rewitz**.

251B Maintenance of tissue homeostasis by mechanical stress sensing **Kenta Morimoto**.

252C *Drosophila* imaginal disc growth factor 2 is involved in energy balance, detoxification, and defense **Michal Zurovec**.

Cell Death and Immunity

253A IAP-antagonist expression is not sufficient to induce caspase activation during *Drosophila* endogenous cell death **Sarah Neuman**.

254B Using DGRP sequenced genomes to identify modifiers of cell death in *Drosophila* eyes **Jacob Khoussine**.

255C Effect of Adenosine Signaling on Apoptosis in Imaginal Disc Cells **Lucie Kucerova**.

256A *spargel/dPGC-1* knockdown protects epithelial cell death in the wings like a proapoptotic gene. **Tomilowo Abijo**.

257B ABC Transporters are required for nurse cell corpse clearance in *Drosophila melanogaster.* **Clarissa Santoso**.

258C Identification of novel regulators of apoptosis **Alicia Shields**.

259A Cell Cycle Regulation of Apoptosis in *Drosophila melanogaster* **Ananya Chakravarti**.

260B Overgrowth promoting role of *Drosophila* macrophages **Neha Diwanji**.

261C Role of hemocyte autophagy in modulating inflammatory responses to infection in the fat body **Mobina Roshandell**.

262A Hemocytes promote a local Antimicrobial Peptide response in the Respiratory Epithelium and Fat Body of adult *Drosophila* **Rowan Baginsky**.

263B The Drosophila Chitinase-Like Protein IDGF3 is involved in Protection against Nematodes and in Wound Healing **Ulrich Theopold**.

264C *miR-34* Modulates Innate Immunity and Ecdysone Signaling in *Drosophila* **XIAOPENG XIONG**.

265A Using the *Drosophila* Genetic Reference Panel to identify novel genes utilized in the immune response to the West Nile virus subtype Kunjin virus **Laura Ahlers**.

266B Production and detection of Vago and virus induced RNA-1 (vir-1) in *Drosophila melanogaster* using monospecific antisera during Nora virus infection **Wilfredo Lopez**.

267C Pathogenicity of Nora virus in Germ-free *Drosophila melanogaster* **Makayla Nemecek**.

268A Precise Regulation of Developmental Apoptosis in *Drosophila* Neural Stem Cells **Antoine Borensztejn**.

269B Identifying Enhancers in a Novel Cluster of Immune-Responsive Genes in *Drosophila melanogaster* **Marley Hilleger**.

270C Role of brain-specific NF-κB-dependent mmunity in Drosophila lifespan determination and age-related neurodegeneration **Stanislava Chtarbanova**.

271A Physical interactions between larval hemocytes and fat body are affected by infection and nutrient status, with regulation of the interaction depending on different pathways in the two tissues, as well as on metabolic and immune status of the animal **Eniola Ogundipe**.

272B Dynamic interplay between bacterial growth and the host immune response generates a stochastic outcome of infection **Nicolas Buchon**.

273C Investigating the impact of chronic infection on male reproduction in *Drosophila melanogaster* **Moria Chambers**.

274A How EF, a cAMP-inducing toxin from *Bacillus anthracis*, blocks Rab11-dependent trafficking **Annabel Guichard**.

275B *Coxiella burnetii* infection in *Drosophila melanogaster*: key factors in pathogenesis **Zachary Howard**.

276C Comparative Transcriptomics of the *D. melanogaster* Response to Bacterial Infection **Brian Lazzaro**.

277A The transcription factor *CrebA* promotes disease tolerance upon bacterial infection **Katia Troha**.

Physiology, Metabolism & Aging

278B Trade-offs between fecundity and survival in starvation-selected fly populations **Tammara Beeghly**.

279C Physiological Evolution in Starvation-Selected Drosophila **Allen Gibbs**.

280A Hypergravity, Endoplasmic Reticulum Stress, and the Unfolded Protein Response in *Drosophila*. **Ravikumar Hosamani**.

281B The effects of altered lactate dehydrogenase expression on aging in *Drosophila melanogaster* **Dani Long**.

282C Exposing Adult Flies to Daily Intoxicating Doses of Ethanol Affects their Midgut Morphology and the Tolerance of their Progeny to the Drug **Mariano Loza-Coll**.

283A The control of fat storage by splicing factor 2 (SF2) in *Drosophila* **Ryan Bennick**.

284B Evaluation of the effect of resveratrol on genotoxicity of nicotine, by wing spot test in *Drosophila melanogaster* **Mauro Magaña-Acosta**.

285C The regulation of lipid storage by TRA and TRA2 in *Drosophila* **Cezary Mikoluk**.

286A Genetics and plasticity of physiological performance in *Drosophila* across development **Kristi Montooth**.

287B Constructing a Graphical Model of the *Drosophila melanogaster* metabolome **Vishal Oza**.

288C Functional analysis of the DHR78 nuclear receptor in adults **Sophia Praggastis**.

289A Closing the Genotype-Phenotype Gap with Metabolomics **Daniel Promislow**.

290B Unique Lifestyle and Metabolism of *Drosophila lutzii*, a Floridosa Species Group Fly **Juan Riesgo-Escovar**.

291C The microRNA *miR-33* is a regulator of lipid homeostasis in *D. melanogaster* **Dan Fu Ruan**.

292A MicroRNAs controling body fat content **Jin Seo**.

293B The *Drosophila* HNF4 nuclear receptor is required in the oenocytes for cuticular integrity and adult survival **Gilles Storelli**.

294C Biochemical and physiological analyses of *Drosophila* fat body and heart during overnutrition **Bryon Tuthill**.

295A *Mondo*/*dChREBP* functions in the Dsk neurons to regulate nutrient storage in *Drosophila* **Niahz Wince**.

296B Microbial quantity contributes to *Drosophila* nutrition. **Erin Keebaugh**.

297C Localization of histamine to specific regions of the gut in *Drosophila melanogaster*. **Daniel Beachnau**.

298A An Anti-Stress Command Peptide Regulating Reproduction in *Drosophila melanogaster* **Matthew Meiselman**.

299B Roles of *Drosophila* Lipin in the Control of Normal Development **Xeniya Rudolf**.

300C Juvenile hormone mimic methoprene regulates the ecdysone response by modifying Ecdysone Receptor function **Rebecca Spokony**.

301A The Effect of Gut Microiota on Starvation Resistance. **Rachel Hughes**.

302B Mechanisms Regulating Tolerance to Oxidative Stress in *Drosophila melanogaster* **Dan Zhou**.

303C Mitonuclear interactions alter the impact of diet restriction on starvation resistance, and aging in Drosophila **Brian Franklin**.

304A Regulation of mitochondrial function by the Condensin II complex **Michelle Longworth**.

305B Sexual Asymmetry in dTOR Regulation of Mitochondria **John Santiago**.

306C Epigenetic effects of aging on the germline of *Drosophila melanogaster* **Alexandra Erwin**.

307A Gut Bacteria Supplements – Best Frenemies? **Kaitlyn Grayson**.

308B Neuronal expression of an evolutionary conserved metallophosphodiesterase regulates *Drosophila* lifespan. **Kriti Gupta**.

309C Proteasome Subunit Overexpression Reduces Protein Aggregates and Extends Lifespan **Jae Hur**.

310A Intestinal Microbes Shorten The Host Lifespan With Increased Intestinal Permeability In Drosophila melanogaster **Hye-Yeon Lee**.

311B Escargot is Required for Accumulation of Atypical Intestinal Cells Caused by Aging **Charles Choi**.

312C Two Cytochrome p450s Essential for Peritrophic Matrix Synthesis **Sean Conway**.

313A The effect of male and female genotype n post-mating gut remodeling in female *Drosophila melanogaster* **Melissa White**.

314B Tissue-specific insulin signaling mediates female sexual appeal **Tatyana Fedina**.

315C Innate immune signaling in the *Drosophila* larval fat body disrupts nutrient storage **Brittany Martinez**.

316A Activin-Beta/TGF-Beta signaling in skeletal muscle controls insulin/TOR signaling, metabolism, and body size **Lindsay Moss-Taylor**.

317B Fat body insulin signaling and the immune response **Laura Musselman**.

318C High fat diet-induced TGF-β/Gbb signaling provokes insulin resistance through the tribbles expression **Kweon Yu**.

319A Functional study of P450 enzymes controlling development in Drosophila **Ruoying Lu**.

320B The microbiota affects Alcohol Dehydrogenase protein levels and the response to alcohol **Malachi Blundon**.

321C A Neuroendocrine Network Connecting Gustatory Signals to Developmental Timing in *Drosophila* **Mikkal Blick**.

322A GWAS as a tool for identifying exercise response genes in *Drosophila Melanogaster* **Louis Watanabe**.

323B Host metabolism in determining microbiome composition using *Drosophila* mitonuclear introgression lines **Bianca Brown**.

324C Characterization of female reproductive tract secretions in *Drosophila melanogaster* **Caitlin McDonough**.

Gametogenesis

325A Molecular Analysis of the Role of SOLO in Meiotic Sister Chromatid Cohesion **Elsie Adams**.

326B Role of *drop dead* in Spermatogenesis **Anika Benske**.

327C Characterizing the role of *Ecdysone induced protein 74EF* in the length of sperm in males and seminal receptacle in females of *D. melanogaster* **Sharif Chebbo**.

328A Two novel related genes required for post-meiotic mitochondrial shaping in *Drosophila* spermatogenesis **Katherine Copenhaver**.

329B Mitochondrial-Nuclear Interactions and the Thermal Sensitivity of Male Reproduction **Abhilesh Dhawanjewar**.

330C Dynamic expression of an architectural protein Suppressor of Hairy-wing is required in spermatogenesis **Tingting Duan**.

331A Characterization and rescue of *mulet*, a mutation that disrupts spermatid individualization in *Drosophila melanogaster* **James Fabrizio**.

332B Characterization of a *Drosophila* ortholog of *SLC25A46* which is required for mitochondrial shaping during spermatogenesis **Vivienne Fang**.

333C Fertility and sperm storage in aged *Drosophila* males **Solomon Friedman**.

334A Characterizing the Role of Rough Deal (Rod) Protein in *Drosophila* Male Meiosis **Qiutao He**.

335B Investigating spermatogenesis in the haplodiploid jewel wasp Nasonia vitripennis **Angel Jing**.

336C Evaluating ring canal function during spermatogenesis **Ronit Kaufman**.

337A Testis-specific ATP synthase subunits associated with shaping mitochondrial membranes in the nebenkern **Jonathan Lim**.

338B Defective *Drosophila* spermatogenesis in *CG4701* and *nmd* mutants possibly connected to faulty protein transport and peroxisome biogenesis **Papa Kwadwo Morgan-Asiedu**.

339C Characterizing the effects of *kayak* knockdown on post-copulatory sexual selection in *D. melanogaster* **Jai Photavath**.

340A Small Ubiquitin-like Modifier (SUMO) Posttranslational Modifications Mediate Critical Regulatory Events during *Drosophila* Spermiogenesis and Spermatogenesis **Janet Rollins**.

341B Identification of Lipid-Processing Genes Required for Eggshell Formation in *Drosophila* **Kalyn Gackowski**.

342C Autocrine Jak/Stat signaling is required in the polar cells **Michelle Giedt**.

343A Genetic Determinants of Germline Stability **Ethan Greenblatt**.

344B Regulation of Dlp cleavage by *Drosophila* Mmp2 **Indrayani Waghmare**.

345C Null mutants for calcium independent phospholipase A_2 show normal male fertility but reduced female fertility **Adina Wakschlag**.

346A Defining the RNAs of Drosophila germ cell precursors throughout development **Paul Albosta**.

347B Understanding the *cis*- and *trans*-regulation of *Sex lethal* in the *Drosophila melanogaster* germline **Raghav Goyal**.

348C Chinmo prevents Tra^F production in adult male somatic gonadal cells to preserve sex identity and fertility. **Lydia Grmai**.

349A Sex-specific development of the germline stem cell niche is regulated by a novel *doublesex* - *fruitless* regulatory interaction **Hong Zhou**.

350B The PAR Complex is Required in Somatic Cyst Cells for Germ Cell Survival **Susanna Brantley**.

351C Identification of genes involved in oocyte specification and differentiation in *Drosophila* **Julie Merkle**.

352A The role of CTP synthase in regulation of cell migration **Li-Mei Pai**.

Stem Cells

353B BMP Regulation Of Germline Development During Testis Stem Cell Niche Formation **Merci Best**.

354C Sexual identity in the germline controls niche-germline stem cell communication **Pradeep Bhaskar**.

355A Epigenetic Inheritance of Centromeres in Germline Stem cells (EpICS) **Anna Dattoli**.

356B Ecdysone signaling controls germline stem cell maintenance by promoting expression of distinct RNA-binding proteins. **Danielle Finger**.

357C A transcriptomic approach to identify new genes required for Germline Stem Cell maintenance in *Drosophila melanogaster* **María Lobo-Pecellín**.

358A Signaling via a G-protein coupled receptor increases male germline stem cell division frequency in response to mating. **Manashree Malpe**.

359B The role of H1 in germline stem cells maintenance **Jianquan Ni**.

360C Wuho controls mitosis accuracy of germ cells for meiosis entry in drosophila females **Elham Rastegari**.

361A Characterizing Chinmo: Structure-Function Analysis of a Stem Cell Sex-Maintenance Factor **Leanna Rinehart**.

362B Thickveins, a BMP receptor, determines the Size of the Primordial Germ Cell Pool via the Soma through a Non-Canonical BMP signaling **Chen Yuan Tseng**.

363C Control of germline stem cell differentiation by Polycomb and Trithorax group genes in the niche microenvironment. **Fu Yang**.

364A Drosophila intestinal stem cells express multiple autocrine and paracrine ligands to maintain homeostasis **David Doupé**.

365B The Chromatin Remodeling Factor Kismet/CHD7 Controls Intestinal Stem Cell Proliferation **Louis Gervais**.

366C A New Bioinformatics Tool to Integrate Data from Genome-wide Screens into Cytoscape Networks **Armen Halajyan**.

367A Mitochondrial Pyruvate Metabolism Suppresses Stem Cell Proliferation **Dona Wisidagama**.

368B Post-transcriptional regulation of Ttk69 by Sina and Phyl promotes enteroendocrine cell specification **Chang Yin**.

369C Regulation of crystal cells by Activinβ signaling and neuronal activity **Itrat Batool**.

370A Transcriptional changes in *Drosophila* hemocytes following cholinergic stimulation **Leire Herboso**.

371B Exploring cell type specific gene expression profiles within the adult *Drosophila* gonads **Miriam Akeju**.

372C Cell-Cell Adhesion Controlled by Hedgehog Signaling Establishes Precursors for Germline Stem Cell Niches **Chun-Ming Lai**.

373A A Switch in Cortical Binding Mode is Essential for Asymmetric Segregation of Fate Determinants in *Drosophila* neural stem cells. **Matthew Hannaford**.

374B Investigating Mechanisms of Asymmetric Cell Division and Epigenetic Inheritance Patterns at Specific Genomic Loci **Elizabeth Kahney**.

375C Ribosomal DNA sequence is required for nonrandom sister chromatid segregation during asymmetric division of *Drosophila* male germline stem cells **George Watase**.

376A A Tunable Rate of Commitment Enables Stem Cell Scaling During Resizing of Adult Organs **XinXin Du**.

Neural Development and Physiology

377B A novel role for Plexin A in photoreceptor axon guidance **Jessica Douthit**.

378C Dscam1 signaling and function in growth cones. **Azadeh Izadifar**.

379A The PP2A serine/threonine phosphatase complex functions in regulating dendritic diversification **Shatabdi Bhattacharjee**.

380B Motor neuron-glial interactions require distinct contribution from BMP ligands, Dpp and Gbb **Mathieu BARTOLETTI**.

381C Secreted Notum Coordinates Synaptogenesis via Extracellular Regulation of Wnt Wingless *Trans*-synaptic Signaling **Danielle Kopke**.

382A Tao negatively regulates *Drosophila* neuromuscular junction formation **Ryan Salemme**.

383B Orchestrating neurons that derive from different neuronal progenitor pools in the fly visual center **Makoto Sato**.

384C NF-Y acts in a temporal cascade in *Drosophila* medulla neuroblasts to control neural fates **Thinh Tran**.

385A The effect of developmental exposure to nicotine on dopamine expression in *Drosophila melanogaster* **Norma Velazquez Ulloa**.

386B Susceptibility *Lipid Phosphate Phosphatase gene* possibly involved in Glial morphogenesis. **Jin-Hyeon Choi**.

387C Molecular Mechanisms Regulating Glial Development **Jennifer Jemc**.

388A Effects of Hippo signaling pathway genes on glia proliferation during *Drosophila* embryogenesis. **Yejin Park**.

389B Assessment of Developmental Toxicity Potential of Glyphote-Based Herbicides Using *Drosophila melanogaster* Primary Embryonic Stem Cell Cultures **Jesse Argueta**.

390C Role of JAK/STAT signaling in the Optic Lobe Development **Tetsuo Yasugi**.

391A Regulation of *Drosophila* Glutamate receptor subunit abundance by *optimus-prime*, a novel mRNA associated gene **Dina Beeler**.

392B Formin-mediated regulation of dendritic cytoskeletal architecture and behavior in a model of Charcot-Marie-Tooth sensory neuropathy **Jenna Harris**.

393C N-terminal Gcm Confers Specific Degradation Signals That Regulate *Drosophila* Gliogenesis **Xi Xiao**.

394A Glia-derived ubiquitin E3 ligase dSmurf regulates glia-MB axon interactions and *Drosophila* behaviors via Fused **Changyan Chen**.

395B Basic and invertebrate neuroscience funding at NINDS **Daniel Miller**.

Neural Circuits and Behavior

396C Serotonin Receptors Modulate Responses to Methamphetamine and Cocaine **Charles Nichols**.

397A Nitric oxide signaling and ethanol sensitivity in *Drosophila* **Rebecca Schmitt**.

398B Role of Eclosion Hormone in *Drosophila* Ecdysis **Valeria Silva Moeller**.

399C Executive and Adaptive Components of a Motivated Behavior Are Differentially Governed by Distinct Isoforms of a Hormone Receptor **Feici Diao**.

400A The gut microbiota affects learning and immunity in *Drosophila* **Michael DeNieu**.

401B Parallel Hormonal Pathways in *Drosophila* Courtship Memories **Sang Soo Lee**.

402C Assessing motivational drive to attain ethanol in *Drosophila melanogaster.* **Nicholas Mei**.

403A Ras acts as a memory suppressor in the *Drosophila* mushroom body. **Nathaniel Noyes**.

404B Octopaminergic activity mediates state-dependent alcohol reward memory expression. **Kavin Nunez**.

405C The nuclear receptor *Hr46/DH3* is required in the blood brain barrier for male courtship **Brigitte Dauwalder**.

406A Characterization of a novel gene required for *Drosophila melanogaster* mating **Sadaf Zaki**.

407B Dystonia-gene homologues regulate sleep robustness and synaptic development in *Drosophila* **James Jepson**.

408C Regulation of sleep by the IGF-II mRNA-binding protein (Imp) in *Drosophila* **zhenxing liu**.

409A Excessive food intake after starvation increases sleep in *Drosophila melanogaster* **Josue Regalado**.

410B Identification of Neural Circuitry and Genes that Control Sleep Need **Lawrence Satterfield**.

411C A novel screen identifies a role for the histone variant H3.3 and its chaperone Hira in *Drosophila* aggressive behavior **Shaun Davis**.

412A Geotaxis Analysis of Nora virus Infected *Drosophila melanogaster* **Amanda McCown**.

413B Octopamine drives endurance exercise adaptations in *Drosophila* **Alyson Sujkowski**.

414C Novel olfactory coding mechanisms in response to DEET and other compounds **Jonathan Clark**.

415A Odorant sensitivity is regulated by Orco phosphorylation in Drosophila **Hao Guo**.

416B A broad-spectrum olfactory neuron for odorant valence determination through statistical modeling **Joel Kowalewski**.

417C Olfactory Preferences and Parasite-Host Interactions of the Mushroom Fly *Drosophila falleni* and its Parasitic Nematode *Howardula aoronymphium* **James Cevallos**.

418A The Cellular Basis of Behavioral Responses to Odor-Mixtures in *Drosophila* larvae **Scott Kreher**.

419B Organization and Function of *Drosophila* Odorant Binding Proteins **Jennifer Sun**.

420C Dissection of Bitter sensing Gustatory Receptors in *Drosophila melanogaster* **Seeta Poudel**.

421A Modeling alcoholism in the fly: Circuit mapping of sexually-dimorphic alcohol behaviors **Annie Park**.

422B Neural Modulation of *Drosophila* Oviposition Circuit **Daniel Suto**.

423C Circadian rhythm affected by temperature control of *Drosophila melanogaster* **SUMMER GUL**.

424A Translational profiling of the Drosophila head fat body yields insights into the function of the adipose tissue clock **Amy Yu**.

425B Cellular and molecular dissection of cold nociception in *Drosophila* **Atit Patel**.

426C CNS glia in adult *Drosophila* alcohol sensitivity **Kristen Lee**.

427A Characterization of a novel mediator of nociception in adult *Drosophila melanogaster* **Bu-Guk Pil**.

428B Genes Underlying Behavioral Immunity Identified by Genome-Wide Association **Michael Martin**.

Models of Human Disease: Neurodegeneration and Neurological Disorders

429C Parallel screens in *Drosophila* and human cell lines to identify modifiers of tau accumulation **Hilary Chester**.

430A p62/SQSTM1 is required for neurotoxicity in a *Drosophila* model of C9orf72-ALS. **Kathleen Cunningham**.

431B Effects of *insomniac* Knockdown on Alzheimer's-like Pathology in $A\beta_{42}$-expressing *Drosophila* **Jerry DeWitt**.

432C Effects of Estriol on Aβ-induced Pathology in a *Drosophila* Model of Alzheimer's Disease **Shiron Drusinsky**.

433A Profiling the brain transcriptome and proteome in a *Drosophila* model of Alzheimer's disease **CAIWEI GUO**.

434B Light-Dependent Endolysosomal Defects in a Photoreceptor Model of Alzheimer's Disease **Adam Haberman**.

435C BMP signaling improves locomotion and survival in a *Drosophila* model of Amyotrophic Lateral Sclerosis (ALS) **Aaron Held**.

436A A new *Drosophila* lysosomal protein with functions in stress resistance and neuroprotection in Parkinson disease models **Abdul-Raouf Issa**.

437B *Presenilin* and *Nicastrin* knockdon in adult neurons of *Drosophila* causes age-dependent neurodegeneration, behavioral deficits and shrotend lifespan **Jongkyun Kang**.

438C Synthetic lethal screen in *Drosophila* reveals connections between Huntington's disease and ALS **Kavitha Kannan**.

439A Functional validation of an Alzheimer's disease susceptibility gene network **Tom Lee**.

440B Large-scale functional analysis in HD *Drosophila* model of CAG-dependent genes identified in mouse models of HD **Lifang Li**.

441C Protein Network Extension to Identify Novel Modifiers of Huntington's Disease **Tarik Onur**.

442A Effects of genetic variation on retinal degeneration in *Drosophila* **Rebecca Palu**.

443B A comparison of lifespan in two *Drosophila* models of Alzheimer's disease and the effects of expression of the human chaperone protein HSP70 **Erin Patterson**.

444C Developing a *Drosophila* ALS model to reveal pathogenic mechanisms and test novel therapeutic approaches. **Sarah Perry**.

445A Ecdysone (Ec) signaling pathway activation can block Aβ42 mediated neurodegeneration **Matthew Riccetti**.

446B Understanding the role of Wingless (Wg) signaling pathway in Amyloid-beta 42 (Aβ42) mediated neurodegeneration in Alzheimer's Disease **Ankita Sarkar**.

447C The Use of *Drosophila melanogaster* as a model to Investigate the Underlying Cellular and Molecular Basis of TBI **Ivan Silva**.

448A Mechanism of neurodegeneration in CMT2C caused by TRPV4 mutations **Brian Woolums**.

449B Tip60 increases histone acetylation levels and protects against neuronal apoptosis in the Aβ neurodegenerative *Drosophila* brain **Haolin Zhang**.

450C PINK1-dependent Phosphorylation of PINK1 and Parkin Is Essential for Mitochondrial Quality Control **Na Zhuang**.

451A *Determining pathogenicity of variants observed in CMG/UDN patients and molecular mechanisms associated with mutations in CACNA1A* **Xi Luo**.

452B Identification and characterization of novel modifiers for Spinal Muscular Atrophy **Graziadaniela Raffa**.

453C To investigate the impact of traumatic brain injury (TBI) in *Drosophila* models of ALS **Aditi Singh Singh**.

454A Defining the transcriptional & behavioral defects of KDM5 mutations associated with Intellectual Disability. **sumaira zamurrad**.

455B The Effect of *Rhodiola rosea* on a *Drosophila melanogaster* Model of Huntington's Disease **Jasmin Arabit**.

456C Phosphorylation of serine residues of mutant huntingtin contributes to metabolic function in Huntington's disease in *Drosophila* **Megha Chatterjee**.

457A Detrimental effects of mutant huntingtin beyond neurons: Alteration of metabolic activity in *Drosophila* **Priya Lakra**.

458B Prion-like transmission of mutant huntingtin aggregates in *Drosophila* brains **Margaret Pearce**.

459C Drug Screening in *Drosophila* **Tom Hartl**.

460A A clinically proven chemical inhibitor rescues Down-syndrome-related phenotypes by inhibition of DYRK1A/minibrain **Kyu-Sun Lee**.

461B Drug screening in *Drosophila* **Tamy Portillo Rodriguez**.

462C The loop region of Presenilin is essential for Glycogen synthase Kinase-3β mediated axonal transport in *Drosophila* larval axons **Rupkatha Banerjee**.

463A The Effects of Rapamycin and Alpha-tocopherol in Lethality and Toxicity of *sdhA* Mutants **Rheba Sam**.

464B Rapamycin as a potential treatment for succinate dehydrogenase deficiency **Eugenia Villa-Cuesta**.

465C Cell-specific translatomic analysis of injury induced nociceptive sensitization **Kyle Beauchemin**.

466A Regulators of BMP signaling control injury induced nociceptive sensitization **Courtney Brann**.

467B Thermal injury results in nociceptive sensitization **Giselle Dion**.

468C SCF^{Slmb} recognizes a conserved degron within the survival motor neuron (SMN) self-interaction domain to mediate ubiquitylation of SMN and SMNΔ7 isoforms **A. Gregory Matera**.

Models of Human Disease: Developmental and Physiological Disorders

469A Abberant planar spindle orientation induces epithelial plasticity in *Drosophila* **Yuichiro Nakajima**.

470B The role of planar cell polarity (PCP) signaling in tumor progression in *Drosophila* **Joy Wan**.

471C Modulation of autophagy and Nrf2 signaling ameliorate defects caused by cardiac expression of mutant lamins **Shruti Bhide**.

472A Nascent polypeptide Associated Complex-alpha is required for cardiac morphogenesis, particularly during cardiac remodeling in Drosophila. **Analyne Schroeder**.

473B Hypertrophic and Dilated Cardiomyopathy Myosin Mutations Cause Severe Striated Muscle Defects in a *Drosophila* Model **Adriana Trujillo**.

474C Neuropeptide F is a Target of Developmental Ethanol Exposure in *Drosophila melanogaster* **Amanda Guevara**.

475A The effect of dietary modifications on the expression of fetal alcohol syndrome in *Drosophila melanogaster* **Patricia Khouderchah**.

476B Identification of rare disease patients with variants in *TBX2*, *TBX3*, and molecular functional studies by using *Drosophila* **ning liu**.

477C Establishing *Drosophila melanogaster* as a model for the identification of environmental chemicals that confer risk of autism in genetically susceptible individuals **Kimberly Nguyen**.

478A Genetic and environmental modifiers of lethality in a *Drosophila* model of *NGLY1* deficiency indicate potential therapeutic approaches **Katie Owings**.

479B Regulation of Dpp release by Irk2 is required for proper *Drosophila* wing development **Sarala Pradhan**.

480C O-glycosylation is required for peritrophic membrane formation to maintain gut homeostasis in *Drosophila* **Liping Zhang**.

481A Exploring the molecular mechanism of *Drosophila*Thin/dTRIM32 implicated in the pathogenesis of Limb Girdle Muscular Dystrophy 2H. **SIMRANJOT BAWA**.

482B Genetic Basis and Amelioration of Mutant Lamin-Induced Progressive Skeletal Muscle Dysfunction **Sahaana Chandran**.

483C Stress and DGC collaboratively regulate muscle dystrophy pathways **Ibrahim Omer Cicek**.

484A *Locomotor activity of dystrophy mutant larvae of Drosophila melanogaster* **Nataliia Holub**.

485B Effects of Protein Expression Manipulation on Muscle Structure and Function in Inclusion Body Myopathy-3 **Kimberley Manalo**.

486C Genetic Variation for Diabetic-like Traits in the Fly Disease Model **Xuan Zhuang**.

487A RNA-Sequencing of *Drosophila melanogaster* Head Tissue on Various Obesogenic Diets **Wayne Hemphill**.

488B Gently induced exercise in adult *Drosophila* exhibits genetic- and sex-specific interactions with larval diet **Kelsey Lowman**.

489C The Effects of a High Fat Diet on Memory, Olfaction and Transcriptional Response of the Head in *Drosophila melanogaster.* **Osvaldo Rivera**.

490A SOCS36E, Neurobehavioral Traits and Lifespan, in the *Drosophila Melanogaster* High Sugar Obesity-like State **Silvienne Sint Jago**.

491B The *Drosophila* TNFα ortholog Eiger regulates tissue tension and cell shape changes through the Crumbs complex to facilitate macrophage tissue invasion **Daria Siekhaus**.

492C β-catenin is a pH Sensor with Decreased Stability at Higher pH **Bree Grillo-Hill**.

493A From Gut to Brain: The behavioral consequences of atrazine exposure on the Drosophila microbiome **Siti Nur Sarah Morris**.

494B Loss of mitochondrial tRNA processing as a model for mitochondrial disease **Aditya Sen**.

Evolution & Population Genetics

495C New *Drosophila* reference genomes reveal previously hidden genetic variation **Mahul Chakraborty**.

496A Functional Study of Nuclear-Encoded Mitochondrial Duplicated Genes with Testis-biased Expression in *Drosophila melanogaster* **Mohammadmehdi Eslamieh**.

497B Selection Across Environmental Gradients Leads to the Establishment of Chromosomal Inversions in Populations **Zach Fuller**.

498C Transposable element expression over embryonic development in male and female embryos of *Drosophila pseudoobscura* and *D. miranda* **Lauren Gibilisco**.

499A The recombination landscape of *Drosphila virilis* under hybrid dysgenesis **Lucas Hemmer**.

500B The impact of regional climate variables on genome size evolution in *Drosophila* species **Carl Hjelmen**.

501C Functional analyses of the transposable element-derived genes *DPLG1* and *DPLG4* in *Drosophila melanogaster* **Diwash Jangam**.

502A Lessons learned from an examination of genome size variation in inbred lines of D. melanogaster **J. Spencer Johnston**.

503B Investigating the function of *Drosophila* zinc finger genes in transposable element silencing **Bhavathanini Kasinathan**.

504C The geographic and haplotypic structure of polymorphisms in centromeric regions. **Charles Langley**.

505A Functional Analysis of *Dntf-2r* and *Ran-like* Nuclear Transport Retrogenes in *Drosophila melanogaster.* **Ayda Mirsalehi**.

506B A major role for retrotransposons in the expansion of the *Drosophila ananassae* F element **Laura Reed**.

507C Temporally Varying Selection and its Influence on Genetic Variation **Alyssa Bangerter**.

508A The role of detoxification gene *Cyp12d1* in resistance to caffeine in *Drosophila* **Dianarys Hernandez-Aquino**.

509B Effects of saturation deficit on water balance related traits in seasonal populations of a tropical drosophilid-*Zaprionus indianus* **Bhawna Kalra**.

510C Probabilistic invasion dynamics in the fly gut microbiota **Benjamin Obadia**.

511A Genetic structure of *Drosophila mediopunctata* populations in remnants of Brazilian Atlantic forest using microsatellite markers located on chromosomes without inversions **Rafael Penha**.

512B Functional genomic landscape reveals population differentiation and adaptation in reproductive proteins **Craig Stanley**.

513C Introgression-derived segregation distortion promotes unlikely gene flow **Christopher Leonard**.

514A Investigating the chromosomal and nuclear organization of the Neo-Y chromosome of *Drosophila Miranda* with Hi-C **Kevin Wei**.

515B Molecular changes responsible for *de novo* gene origination **Logan Blair**.

516C Resolving Copy Number, Order, And Expression Differences Within Highly-Similar, Tandemly-Repeated Multigene Families: *Sdic*, A Case Study **Bryan Clifton**.

517A The fourth chromosome's impact on genome-wide patterns of gene expression **Christopher Kimber**.

518B Has *jim* contributed to wing shape divergence in Drosophila? **Jennifer Lachowiec**.

519C Precise genetic basis of quantitative function evolution of the model gene *Alcohol dehydrogenase* **David Loehlin**.

520A Mitonuclear Epistasis Modifies Gene Expression in *Drosophila* **James Mossman**.

521B Epistasis in quantitative traits controlled by sexual differentiation in *Drosophila melanogaster* **Daniel McNelis**.

522C Genomic Regulation of Limited Lifespan and Reproductive Senescence **Grace Parker**.

523A Population genomics of incipient speciation in the *Drosophila athabasca* species complex **Ryan Bracewell**.

524B The molecular basis of hybrid sterility in two subspecies of *Drosophila pseudoobscura* **Nora Brown**.

525C The Ever Evolving Hybrid Incompatibilty of *D. melanogaster* and the *D. simulans* Clade **Jacob Cooper**.

526A The Demographic History of the Drosophila nasuta Subgroup and Contributors to Reproductive Isolation **Dat Mai**.

527B *Drosophila melanogaster* is associated with distinct yeast communities within winery environments **Allison Quan**.

528C Genome-wide association study on the behavioral isolation in *Drosophila melanogaster* **Chau-Ti Ting**.

529A Deficiency mapping of female mate discrimination factors in *Drosophila sechellia* **Masatoshi Tomaru**.

530B Gene Expression Profiling in the Larval Fat Body of Desiccation Selected *Drosophila melanogaster* **Adriana Charles**.

531C Physiological and genomic effects of experimental evolution for desiccation resistance on *Drosophila melanogaster* **Julianne Kim**.

532A Coordination of resource availability with allocation in a natural population: lifespan and its heritability across dietary regimes **Enoch Ng'oma**.

533B Patterns of physiological decline due to age and selection in Drosophila melanogaster **Parvin Shahrestani**.

534C Reassessment of linkage disequilibrium patterns in *Drosophila* three decades later **Fabiana Uno**.

535A Characterization of Genetic Basis of Adult Reproductive Diapause in *Drosophila melanogaster*. **Sreesankar Easwaran**.

536B The hybrid swarm: whole genome association studies from ultra-shallow sequencing of a large, randomly outbred population **Cory Weller**.

537C Adaptation of Baculovirus via recurrent positive selection and gene turnover **Thomas Hill**.

538A Temperature influence on the altitudinal distribution of two sibling species of *Drosophila* from the Neotropical *tripunctata* group **Marcos Batista**.

Evolution of Development, other Species

539B The genetic and developmental basis of rapid trait evolution between *Drosophila* species **Joanna Hagen**.

540C The developmental transcriptome of *Musca domestica* embryos reveals the origin of new elements of Dpp gene regulatory network in *D. melanogaster.* **Christian Hodar**.

541A Evolutionary Dynamics of a Robust Developmental Trait: Segment Allometry across 12 *Drosophila* Species **Gizem Kalay**.

542B Functional Evolution of a Morphogenetic Gradient **Chun Wai Kwan**.

543C Comparative approaches to reveal underlying constraints on enhancer sequence divergence in the *Drosophila* Montium clade **Ciera Martinez**.

544A Evolution of Bicoid involved epistatic interactions between two specific amino acids in its DNA-binding domain **Pinar Onal**.

545B *Drosophila* pair-rule gene orthologs in the sequentially segmenting insect *Oncopeltus fasciatus* (Hemiptera: Lygaeidae). **Katie Reding**.

546C Microhabitat preferences of some *Drosophila* species, including *Drosophila melanogaster* and *Drosophila simulans*, in southeastern Connecticut **Phillip Barnes**.

547A Influence of the microbiota on life history adaptation in *Drosophila melanogaster* **Amber Wise**.

548B Plasticity of expression and plasticity of phenotype: temperature-modulation of *ebony* expression may underlie the variation of dark spots on the abdomen of *Drosophila mediopunctata* **Felipe Rocha**.

549C Proteomics and Functional Genomics of the *D. grimshawii* Sperm and Associated Male Reproductive Tract Tissues **Timothy Karr**.

550A Characterizing RNA transcripts from a "selfish" B chromosome in the jewel wasp *Nasonia vitripennis* **John Aldrich**.

551B *White* gene from *Aedes aegypti* mosquitoes is sex -linked and is involved in the toxicity of Cry4B toxin from *Bacillus thuringiensis* subsp. *israelensis* **Jianwu Chen**.

552C Butterfly eye evo-devo: stochastic patterning and expanded color vision **Michael Perry**.

553A The Conserved Pair-Rule Gene *odd-paired* Functions as Anterior Determinant in the Moth Fly *Clogmia albipunctata* Via Alternative Transcription **Yoseop Yoon**.

Patterning, Morphogenesis and Organogenesis

554B Classic Meiotic Mapping Meets Illumina Sequencing to Identify New Regulators of *gurken* Translation **Elias Jacobs**.

555C Semaphorin-1b is required for oocyte re-polarization in *Drosophila melanogaster* **Julia Wittes**.

556A Multiple Forkhead (Fkh)-domain proteins repress Bicoid-dependent gene activation in anterior regions of the developing embryo **Timothy Bishop**.

557B Finding transcriptional coregulators of Hox proteins in *Drosophila melanogaster* **Narendra Singh**.

558C Elimination of cells with inappropriate positional identity during *Drosophila* wing development **Olga Klipa**.

559A The extracellular protease *AdamTS-B* negatively regulates wing vein patterning through BMP signaling **Mark Schuweiler**.

560B Growth regulatory pathway collaborates with axial patterning genes to regulate patterning growth in *Drosophila eye* **NEHA GOGIA**.

561C Pax6 and Trithorax Group Proteins Together Regulate Cell Fate and Patterning in the Drosophila Eye **Gary Teeters**.

562A Drosophila Pax6 promotes eye antenna disc development ensuring proper head formation **Jinjin Zhu**.

563B Identification of systemic injury response genes in *Drosophila melanogaster* **Jennifer Hackney**.

564C Identification of genes that regulate pattern duplication during regeneration **Shilpi Verghese**.

565A Broad and ecdysone are required for the regulation of critical morphogenetic genes in leg discs at the onset of metamorphosis in *Drosophila melanogaster* **Clinton Rice**.

566B Mrtf has an early SRF-independent role in adult muscle development **Tracy Dohn**.

567C Abnormal cardiac patterning and development in *akirin* mutant embryos **Madison Hupp**.

568A Identification of Akirin-interacting partners during embryonic myogenesis **Kristina Palermino-Rowland**.

569B Is RAS/MAPK signaling required for muscle founder cell specification? **Sarah Popadowski**.

570C Identifying Novel Interacting Partners for the UNC-45 Chaperone in *Drosophila melanogaster* **Daniel Smith**.

571A Interaction between Akirin and Mute during embryonic myogenesis **Courtney Willett**.

572B Effect of Nutritional Stress on Fecundity and Maternal Provisioning of Oocytes in *Drosophila melanogaster* **Kamryn Gerner-Mauro**.

573C *eyeless*/Pax6 Controls Eye Development Through Initiation of the Morphogenetic Furrow **Luke Baker**.

574A How Males and Females Differ: Effector Genes of the Sexual Differentiation Pathway in Drosophila melanogaster **Zach Farrow**.

575B Trithorax Group proteins interact with Pax6 factor to control proper organ number in the *Drosophila* eye-antennal disc **Alison Ordway**.

576C Teashirt and Tiptop control growth, specification, and developmental plasticity of the Drosophila eye-antennal disc **Sneha Palliyil**.

577A Molecular Fate Mapping of the *Drosophila* Eye-Antennal Imaginal Disc **Bonnie Weasner**.

578B *Macroglobulin complement-related* (*Mcr*) is required for multiple morphogenetic events during *Drosophila oogenesis* **Haifa Alhadyian**.

579C Turnover and remodelling of the *Drosophila* heart requires matrix metalloprotease-2 (MMP2). **Chris Hughes**.

580A Uncovering how Premature Cell Divisions Inhibit Ventral Furrow Formation in *Drosophila E*mbryos **Shi Jun Ko**.

581B JAK/STAT signaling is necessary for cell monosis prior to epithelial cell apoptotic extrusion in the follicular epithelium of the Drosophila ovary **Anne-Marie Pret**.

582C Protein Phosphatase 1 activity promotes a collective rather than single cell mode of migration **Yujun Chen**.

583A The role of the ECM protein *fibulin (fbl)* on migration of the caudal visceral mesoderm (CVM) during Drosophila embryogenesis **Olivia Londo**.

584B Null Mutations in *Imaginal disc growth factor 6* Result in Aberrant Tube Formation During *Drosophila* Oogenesis **Liesl Strand**.

585C The extracellular protease *AdamTS-B* plays an important role in tracheal migration during Drosophila embryogenesis **Abigail Thuringer**.

586A Same cells, different tubes: Dorsal appendage formation in Drosophila and Scaptodrosophila **Rachel Dam**.

587B Possible Functions of Obscurin (Unc-89) in Non-muscle Tissue **Anja Katzemich**.

588C Characterization of eggshell diversity among *Drosophilidae* species: signaling, patterning, and morphogenesis **Alessio Russomanno**.

589A Cytonemes Mediate Contact-Dependent FGF Dispersion And Gradient Formation **Sougata Roy**.

590B Analysis of Imaginal Disc Growth Factors (IDGF) mutants **Anne Sustar**.

591C Downstream targets of forkhead domain transcription factors mediating cardiogenesis **Andrew Kump**.

592A Uncoupling apical constriction from tissue invagination **Se-Yeon Chung**.

593B The *speck* gene, first identified in 1910, is a mutation in a transcript of the *Dopamine acetyltransferase* (*Dat*) gene. **Eric Spana**.

594C Terminal Axon Arborization In The Neuromuscular Junction Is Critically Dependent On Neuronal Expression Of Miles-To-Go (Mtgo), A Drosophila FNDC3-Like Protein **J. Marsh**.

595A Self-organized Notch dynamics generate stereotyped sensory organ patterns **Francois Schweisguth**.

596B Transcriptional bursting in *Drosophila* development: stochastic dynamics of *eve* stripe 2 expression **David Holloway**.

597C Dynamics of BMP gradient formation and interpretation **Aydin Beseli**.

598A Prospero promotes scolopale cell differentiation by repressing cap cell differentiation genes in the chordotonal organ **Adel Dunayevskyy**.

599B Expression of *d4* and *tth* Genes during *Drosophila* Development **Ilya Mertsalov**.

600C *In vivo* expansion of functionally integrating GABAergic interneurons by targeted increase of neural progenitors **Rita Sousa-Nunes**.

601A The role of CDK8-CycC in regulation of *Drosophila* wing vein patterning **Xiao Li**.

Regulation of Gene Expression

602B Examining the role of promoter-proximal BEAF in gene expression. **Yuankai Dong**.

603C Cell-fate specification in the accessory glands of *Drosophila melanogaster* **Giovanni Hanna**.

604A The gene *tfiia-s-2* encodes a testis-specific TFIIA subunit homolog in *Drosophila melanogaster* **Joseph Mohammadi**.

605B Genome-wide analysis of the conserved transcription factor Grainy head reveals stable binding to target genes over development **Markus Nevil**.

606C The modERN Project - Genome-wide binding profiles of Transcription Factors **Alec Victorsen**.

607A Mutational Analysis of the *Drosophila* Pol II CTD **Feiyue Lu**.

608B Age-related transcription changes in photoreceptor neurons are light-dependent **Vikki Weake**.

609C Deciphering the mechanisms of maternal versus zygotic Zelda **Danielle Hamm**.

610A A dual kinetic switch underlies the function of the Drosophila Hox transcription factor Sex combs reduced **Dimitrios Papadopoulos**.

611B *Drosophila* Nora Virus ORF1 Protein is Localized to the Nucleus **Larissa Attema**.

612C A heterodimer-based regulatory role for *Drosophila* truncated dADAR protein isoform function **Fatemeh Kohram**.

613A Broadly-expressed repressors integrate patterning across two embryonic axes through temporal control of enhancer action **Theodora Koromila**.

614B Control of Hox transcription factor concentration and cell-to-cell variability by an auto-regulatory switch **Dimitrios Papadopoulos**.

615C Maternal-effect RNAi screen for genes that affect enhancer activity in the *Drosophila* embryo **Ashley Albright**.

616A Using live imaging of mRNA synthesis to explore selection on enhancer activity in *D. melanogaster* embryos **Augusto Berrocal**.

617B Modeling Enhancer Evolution in the *Drosophila montium* Species Subgroup **Michael Bronski**.

618C A relay mechanism between the K50 homeodomain proteins Bcd and Otd controls temporal and spatial patterning of distinct target genes in anterior regions of the Drosophila embryo **Rhea Datta**.

619A Regulation of sexually dimorphic pigmentation alleles in the *Drosophila montium* subgroup **Emily Delaney**.

620B Genomic dimensions of Su(H)-targeted regulatory belts in *Drosophila* **Timothy Fuqua**.

621C *REDfly*: The Regulatory Element Database for *Drosophila* **Marc Halfon**.

622A Sequence determinants of enhancer-promoter specificity in a shared intergenic space **Tim Howes**.

623B Salivary gland specific DNA binding of CrebA **Dorothy Johnson**.

624C The co-activator, co-repressor, Su(H) concentration ratios are a major determinant of cell-specific Notch transcriptional outputs in *Drosophila.* **Yi Kuang**.

625A An enhancer's length and composition are shaped by its regulatory task **Lily Li**.

626B Determinants of Transcriptional Enhancer Function in *D. melanogaster* Embryos **Xiao-Yong Li**.

627C Transcriptional dynamics of *trans*- vs. *cis*-acting enhancers in *Drosophila* **Grace McKenzie-Smith**.

628A Dissecting intertwined enhancers driving distinct patterns of CNS-specific transcription for the divergent genes dCORL and twin of eyeless on chromosome 4 **Stuart Newfeld**.

629B Single Molecule Imaging of RNA polymerase and Transcription Factors in Developing *Drosophila* Embryos **Michael Stadler**.

630C Regulation of αFtz-F1 Pair-Rule Function by Transcriptional Corepressors **Alys Cheatle Jarvela**.

631A Discrete regulatory domains control the expression of simple patterns during oogenesis **Nicole Revaitis**.

632B Roles of the *dA2BP1* in maintaining structural protein stoichiometry and fiber diversity of *Drosophila* muscles **KETAKI KAMBLE**.

633C Alcohol dynamically alters alternative splicing in the brain **Sarah Signor**.

634A Translational regulation of *cyclin B* during G2 prophase of meiosis in *Drosophila* males **Catherine Baker**.

635B Engineering Genetic Tools to Study *Drosophila* Development **Thomas Jacobsen**.

636C The mechanism of transcriptional activation by two different transcriptional activators through a single binding site **Koichi Miyagawa**.

637A Characterization of a Possible IRES Site in the Nora Virus Genome **Alexis Page**.

638B A feedback role for *Drosophila* RNP-4F protein in regulation of its own translation during development **Divya Soundararajan**.

639C Uncovering a Role for Nucleoporin Megator as a Nuclear Scaffold Component **Jennifer Aleman**.

640A Disruption of X Chromosome Suppression in *Drosophila melanogaster* Males Lacking a Y Chromosome **Kathleen Gordon**.

641B The *Drosophila* Lysine-specific Demethylase 2, dKdm2, is not Required for Normal Development **Jun-Yuan Ji**.

642C Genome transcriptional activity under stress in *Drosophila melanogaster*: the role of the *limk1* gene **Ekaterina Nikitina**.

643A The Activation of Cryptic *lawc* Gene Promoter by Small dsRNA in *Drosophila* S2 Cells **Olga Simonova**.

644B Regulation of Transcript Levels During the Maternal to Zygotic Transition Across Species of *Drosophila* **Emily Cartwright**.

645C Model Organism Encyclopedia of Regulatory Networks (modERN) **Susan Celniker**.

646A A Comprehensive *Drosophila* melanogaster Transcription Factor Interactome **Leila Shokri**.

647B The *ab initio* design of sythetic sequences driving expression of *even-skipped* stripe 2 **Kenneth Barr**.

648C Measuring the Influence of *cis*-Acting Changes on the Transcriptional Response to Infection in *Drosophila melanogaster* **Bryan Ramirez-corona**.

649A Interchromosomal pairing and regulation of a stochastically expressed gene in the fly retina **Kayla Viets**.

650B The role of Hox-cofactor interactions in vivo **Siqian Feng**.

651C Optogenetic activation of gene transcription with spatiotemporal resolution **Lorena De Mena**.

652A The genomic mechanisms of transcriptome turnover in Drosophila **Ammon Thompson**.

653B Dissecting the gut-microbiota-brain connection in Drosophila **Scott Keith**.

Chromatin and Epigenetics

654C Studying heterochromatin formation in Drosophila using single embryo ChIP **Carolus Chan**.

655A The Fbox protein CG6758 regulates LaminB to suppress Xbp1 induced cell death in the Drosophila eye **Pedro Domingos**.

656B ATAC-seq on sectioned *D. melanogaster* embryos reveals spatially uniform chromatin **Jenna Haines**.

657C Enhancer priming and decommissioning in the two major germ layers during embryonic cell fate decisions **James Reddington**.

658A SAGA complex modularity and chromatin interactions **George Dialynas**.

659B *Chd1* as a modifier of position effect variegation **P. Tram Bui**.

660C Chromatin remodelers, nuclear bodies and neurodegenerative diseases: from fly to humans. **Maria Cristina Onorati**.

661A The role of TnaA on *Hox* gene expression in third instar larvae of *Drosophila melanogaster*. **Marco Rosales-Vega**.

662B Y chromosome sequence diversity, repeat content, and phenotypic variation in the Global Diversity Lines **Emily Brown**.

663C Single embryo ChIP in Drosophila allows for detection of subtle changes of chromatin in embryogenesis **Carolus Chan**.

664A Overexpression of HP1B and HP1C and their effects on healthspan **Tandy Dolin Petrov**.

665B How heterochromatin is formed at repeats and how some genes are able to function in this restrictive environment **Sarah Elgin**.

666C X-autosome translocations and the dominant disruption of male fertility **James Kennison**.

667A Identifying sequence interactions that underlie ring chromosome-induced embryonic lethality **Nitin Kuppanda**.

668B Spatial associations between genomic regions enriched with heterochromatic marks **Grace Lee**.

669C An RNA Topoisomerase Complex Interacts with RNAi Machinery to Promote Heterochromatin Formation and Transcriptional Gene-silencing **Seung Kyu Lee**.

670A Heterochromatin-induced Gene Silencing is Decided Early and Set Late. **Keith Maggert**.

671B Heterochromatin formation in *D. miranda* during embryonic development **Shivani Mahajan**.

672C Testing the heterochromatin sink hypothesis through genome size variation **Alison Nguyen**.

673A Elba and Insensitive are involved with GAF into Fab-7 boundary activity **Francois Karch**.

674B ATR and ATM Modulate Chromatin Insulator Activity and Genome Stability Through Phosphorylation of Histone H2Av at Insulator Sites **Mariano Labrador**.

675C *Drosophila O-GlcNAcase* Deletion Globally Perturbs Chromatin *O*-GlcNAcylation **Ilhan Akan**.

676A De novo recruitment of PcG proteins at *giant* **Jumana AlHaj Abed**.

677B The recognition of target gene transcriptional state by Polycomb Group proteins. **Elnaz Ghotbi Ravandi**.

678C Epigenetics Factors Involved in Feedback Regulation of Hox Homeostasis **Devendran Sadasivam**.

679A Investigating the role of nuclear pore proteins in regulating chromatin structure and gene expression **Terra Kuhn**.

680B Dosage compensation complex as a target of male killing *Spiroplasma* in *Drosophila melanogaster* **Becky Cheng**.

681C Small RNAs and the epigenetics of X-recognition **Nikita Deshpande**.

682A *roX1* and *roX2* in *Drosophila melanogaster* are redundant but have distinct functions in dosage compensation **Maria Kim**.

683B A luciferase reporter for recruitment of dosage compensation in *Drosophila melanogaster* **Reem Makki**.

684C Developing hybrid cell lines as a model for understanding homolog pairing **Jumana AlHaj Abed**.

685A A DNA-FISH Investigation of the Relationship between Homologous Chromosome Pairing and Transvection in *Drosophila* **Thomas King**.

686B Combined Ectopic Expression of Myb and Mip120 Causes Tumors in *Drosophila* Larvae **Paul Vorster**.

687C Chromatin remodelers involved in HP1a telomeric localization **Viviana Valadez**.

688A Condensin II subunit Cap-H2 is required for maintenance of telomere stability **Heather Wallace**.

689B The histone demethylase KDM5 as a potential new anti-apototic factor. **Coralie Drelon**.

690C DNA methylation is dynamic and undergoes changes during *Drosophila* development. **Saniya Deshmukh**.

691A The Tet-dependent epitranscriptome: the role of 5-hydroxymethyl Cytosine (5hmrC) in Development. **Joseph Kramer**.

RNA Biology

692B *Drosophila mir-274* regulates invasive cell migration in wing epithelia **Chih-Hsuan Chang**.

693C Understanding phased primary-piRNA biogenesis in *Drosophila* **Daniel Tianfang Ge**.

694A The interplay of Piwi and heterochromatin proteins in transposable element silencing in the germline. **Mikhail Klenov**.

695B Co-dependent assembly of piRNA cluster chromatin and piRNA precursor RNPs in *Drosophila* Ovaries **GEN ZHANG**.

696C Analyzing the expression and RNA Localization of long non-coding RNAs in *Drosophila* adult Gonads **Ronit Wilk**.

697A Temporal regulation of the Smaug RNA-binding protein in the early embryo **Wen Xi Cao**.

698B Role of *Dscam1* 3' UTR extension in axon guidance **Pedro Miura**.

699C Structure-Function Analysis of *gurken* IRES Activity **Joshua Blundon**.

700A Cytoplasmic polyadenylation of *grk* mRNA regulates the spatial distribution of Grk protein during oogenesis **Amanda Norvell**.

701B Ras/Erk-signaling regulates tRNA synthesis and cell proliferation through RNA polymerase III repressor Maf1 in *Drosophila* **Shrivani Pirahas**.

Techniques and Technology

702C Long term *ex vivo* culture and live imaging of *Drosophila* larval imaginal discs **CHIA-KANG TSAO**.

703A Recent efforts to map mutations in Bloomington stocks **Lily Kahsai Golden**.

704B CRISPR/Cas9 survey of Drosophila modENCODE cell lines **Andrew Zelhof**.

705C A Genetic Toolkit for Dissecting Dopamine Circuit Function **Tingting Xie**.

706A Characterizing the genetic basis of behavioural isolation between *Drosophila melanogaster* and *Drosophila simulans* using CRISPR/Cas9. **Jalina Bielaska Da Silva**.

707B Quantification of Drive Efficiency and Resistance Allele Creation in CRISPR Gene Drives **Jackson Champer**.

708C Investigating parameters affecting efficiency of CRISPR guide RNAs **JAMES KWON**.

709A New from the TRiP: transgenic *Drosophila* sgRNA libraries for gene overexpression and knockout by CRISPR-Cas9 **Jonathan Zirin**.

710B EC-Tagging Allows Cell Type-Specific RNA Analysis **Mohamed Aboukilila**.

711C Ilastik- and Matlab-based computational tools for analyzing biological tubes in 3-D **Ran Yang**.

712A Large-scale functional genomics in *Drosophila*: Reagents and tools for assays, analysis, and integration. **Stephanie Mohr**.

713B flyDIVaS v2.0: An updated comparative genomics resource for lineage-specific divergence and selection in Drosophila **Craig Stanley**.

714C Using UniProtKB to aid Drosophila research **Kate Warner**.

715A Developing M-TRAIL: A tool to track cell migration *in vivo* **Dong-Yuan Chen**.

716B Method for Measuring Metabolism of Whole Larval Brains in *Drosophila* and Beyond **Mia Klekos**.

717C New stocks and resources at the Bloomington Drosophila Stock Center **Cale Whitworth**.

718A Induced Cessation of Feeding in *Drosophila Melanogaster* **Anthony Salvato**.

Educational Initiatives

719B Characterization of the Putative Sugar Transporter Encoding Genes, *SUT3* and *SUT4*, from *Drosophila melanogaster* **Stephanie Hrabar**.

720C Inquiry-Based Laboratory Education Using *Drosophila* Molecular Methods **Jay Lusk**.

721A The Genomics Education Partnership: A Bioinformatics Course-based Undergraduate Research Experience **Jamie Sanford**.

722B Examining the Relationship between Perception of the Flipped Learning Environment and Performance in an Undergraduate Genetics Course. **Judith Leatherman**.

723C Immersion Science Program: Inclusion of High School Students in Novel Laboratory Research **Alana O'Reilly**.

Author Index

A

B

C

D

E

F

G

H

I

J

K

L

M

P

Q

R

S

T

U

V

W

X

Y

Z

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Keyword Index

The following index is composed of keywords selected by presenting authors from a list on the Abstract Submission Site. Abstract program numbers follow each keyword.

Cell Division and Growth Control

Chromatin and Epigenetics

Educational Initiatives

Evolution & Population Genetics

Models of Human Disease: Developmental and Physiological Disorders

Models of Human Disease: Neurodegeneration and Neurological Disorders

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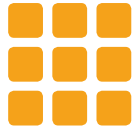

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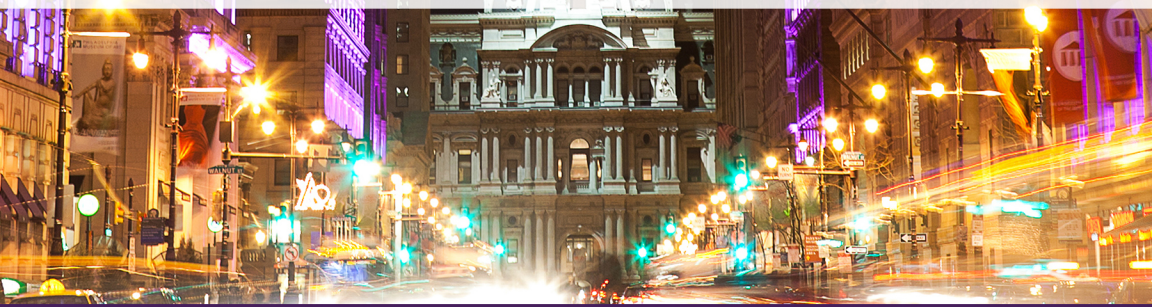

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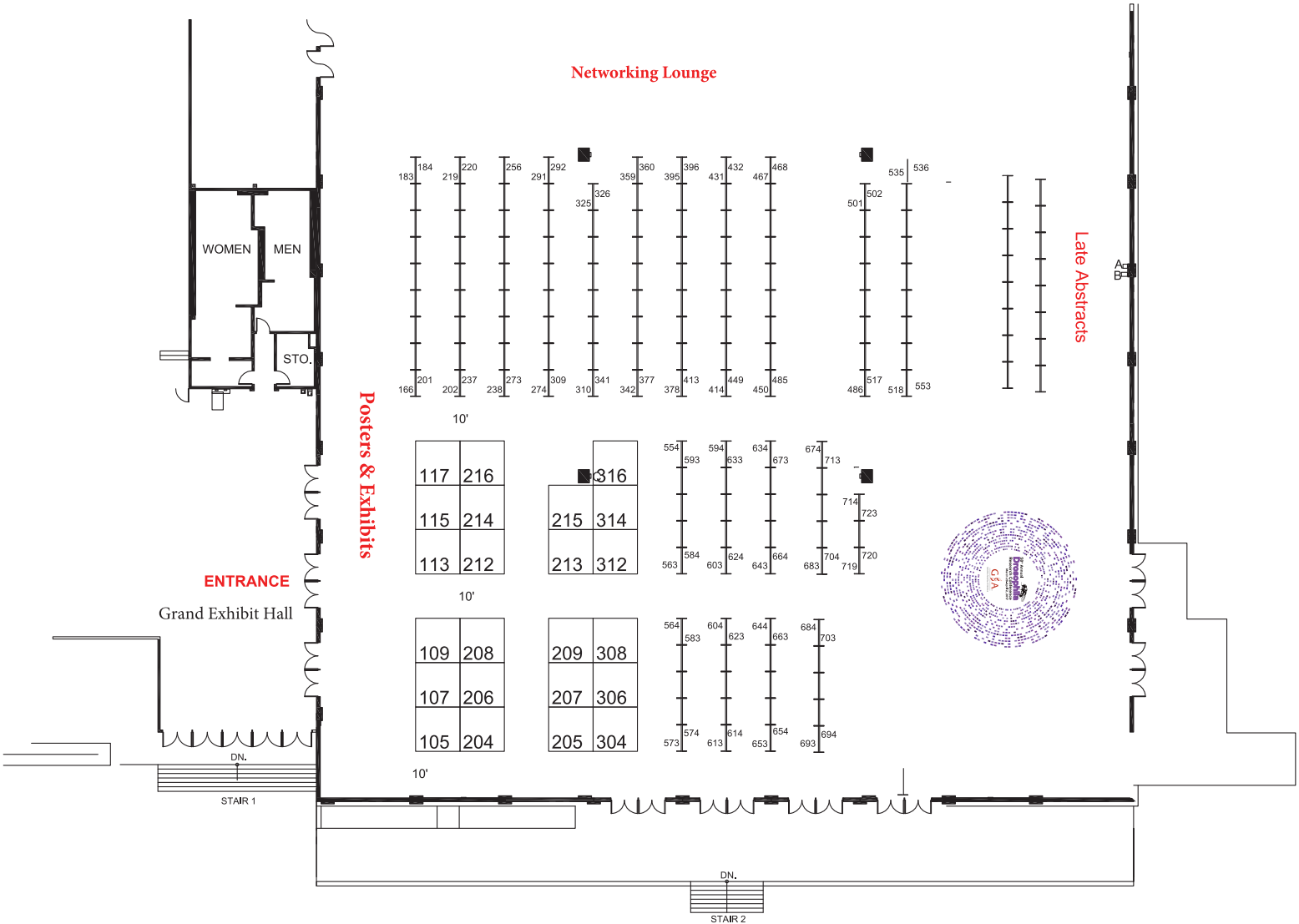
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Late Abstracts
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Grand Exhibit Hall
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115 214
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316
215 314
213 312
109 208
107 206
105 204
209 308
207 306
205 304
DN.
STAIR 1
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STAIR 2

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ABBREVIATED SCHEDULE OF EVENTS

(full schedule pages 3-8)

WEDNESDAY, March 29		
3:00 pm - 6:30 pm	**Speaker Ready Room**	**Terrace Salon 3**
3:30 pm - 9:00 pm	**Registration**	**Atlas Foyer**
7:00 pm - 9:00 pm	**Opening Session**	**Atlas Ballroom**
9:15 pm - 11:00 pm	**Mixer/Reception**	**Grand Exhibit Hall**
THURSDAY, March 30		
12:01 am - 12:00 am	**Posters Open 24 Hours**	**Grand Exhibit Hall**
7:00 am - 3:00 pm	**Speaker Ready Room**	**Terrace Salon 3**
7:15 am - 8:30 am	**Publishing Tips & Tricks Continental Breakfast**	**Golden Pacific**
7:15 am - 8:30 am	**Continental Breakfast**	**Golden Pacific Foyer**
8:00 am - 5:00 pm	**Registration**	**Atlas Foyer**
8:30 am - 12:00 noon	**Plenary Session 1**	**Atlas Ballroom**
12:15 pm - 1:45 pm	**"Meet the Speakers" Careers Lunch**	**Royal Palm Ballroom 4**
1:00 pm - 5:00 pm	**FlyBase Demo Room Open**	**Royal Palm Ballroom 1**
2:00 pm - 4:00 pm	**Exhibits & Poster Presentations**	**Grand Exhibit Hall**
4:30 pm - 6:30 pm	**Concurrent Platform Sessions**	**Atlas Ballroom**
7:45 pm - 9:45 pm	**Concurrent Workshops**	**Golden Pacific**
8:00 pm - 11:00 pm	**Exhibits Open & Poster Viewing**	**Grand Exhibit Hall**
FRIDAY, March 31		
12:01 am - 12:00 am	**Posters Open 24 Hours**	**Grand Exhibit Hall**
7:00 am - 3:00 pm	**Speaker Ready Room**	**Terrace Salon 3**
8:15 am - 5:00 pm	**Registration**	**Atlas Foyer**
8:30 am - 12:30 pm	**Concurrent Platform Sessions**	**Atlas Ballroom**
1:00 pm - 6:00 pm	**FlyBase Demo Room Open**	**Royal Palm Ballroom 1**
1:45 pm - 3:45 pm	**Concurrent Workshops**	**Golden Pacific**
2:00 pm - 4:00 pm	**Exhibits Open and Poster Viewing**	**Grand Exhibit Hall**
4:30 pm - 6:30 pm	**Concurrent Platform Sessions**	**Atlas Ballroom**
7:30 pm - 9:00 pm	**How I Fly (HIF) ScienceSlam**	**San Diego**
9:00 pm - 11:00 pm	**Exhibits & Posters** *Cash Bar*	**Grand Exhibit Hall**
SATURDAY, April 1		
7:00 am - 3:00 pm	**Speaker Ready Room**	**Terrace Salon 3**
8:30 am - 12:30 pm	**Concurrent Platform Sessions**	**Atlas Ballroom**
1:30 pm - 3:30 pm	**Exhibits & Poster Presentations**	**Grand Exhibit Hall**
4:00 pm - 6:00 pm	**Concurrent Platform Sessions**	**Atlas Ballroom**
7:30 pm - 10:00 pm	**Techniques & Technology Session**	**San Diego**
SUNDAY, April 2		
8:30 am - 12:00 noon	**Plenary Session II**	**Atlas Ballroom**