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GSA is an international scientific society representing more than 5,000 researchers and educators around the world. As well as connecting researchers through conferences and career programs, we publish two peer-edited scholarly journals, GENETICS and G3: Genes | Genomes | Genetics. We encourage you to join GSA so you can make use of exclusive member benefits and get involved in the Society’s many programs, including professional development training, awards, advocacy, and more. Join us as we work to advance the field and serve our community. Visit genetics-gsa.org for more information.

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

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

2022 GSA Board of Directors

**Officers**
- E. Jane Hubbard, President
- Tracy Johnson, Vice President
- Hugo Bellen, Immediate Past President
- Swathi Arur, Secretary
- Michael Buszczak, Treasurer

**Directors**
- Maitreya Dunham
- Oliver Hobert
- Folami Iderabdullah
- Amanda Larracuente
- Irene Miguel-Aliaga
- Steven Munger
- C. Brandon Ogbunu
- Duojia (DJ) Pan
- Martha Soto
- Noah Whiteman
- Patricia J. Wittkopp

**Journal Editors**
- Brenda J. Andrews, Editor in Chief, G3: Genes | Genomes | Genetics
- Howard Lipshitz, Editor in Chief, GENETICS

**Early Career Representative**
- Jacob Ortega
- Nicole Torosin

**Executive Director**
- Tracey DePellegrin
Drosophila Board of Directors
## Officers

<table>
<thead>
<tr>
<th>Name</th>
<th>Office</th>
<th>Year</th>
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<tbody>
<tr>
<td>Tin Tin Su</td>
<td>President (2022)</td>
<td>2024</td>
</tr>
<tr>
<td>Mariana Wolfner</td>
<td>Past-President (2021)</td>
<td>2023</td>
</tr>
<tr>
<td>Mark Peifer</td>
<td>Past-Past-President (2020)</td>
<td>2022</td>
</tr>
<tr>
<td>Bruce Edgar</td>
<td>Past-Past-Past-President (2019)</td>
<td>2021</td>
</tr>
<tr>
<td>Jessica Treisman</td>
<td>Treasurer</td>
<td>2020</td>
</tr>
</tbody>
</table>

## Regional Representatives

<table>
<thead>
<tr>
<th>Name</th>
<th>Region</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liz Rideout</td>
<td>Canada</td>
<td>2024</td>
</tr>
<tr>
<td>Brian Lazzaro</td>
<td>Great Lakes</td>
<td>2024</td>
</tr>
<tr>
<td>Nadia Singh</td>
<td>Mountain</td>
<td>2023</td>
</tr>
<tr>
<td>Wu Min Deng</td>
<td>Southeast</td>
<td>2024</td>
</tr>
<tr>
<td>Leanne Jones</td>
<td>California</td>
<td>2022</td>
</tr>
<tr>
<td>Tânia Reis</td>
<td>Heartland</td>
<td>2024</td>
</tr>
<tr>
<td>Alexey Veraksa</td>
<td>New England</td>
<td>2023</td>
</tr>
<tr>
<td>Erika Bach</td>
<td>Mid-Atlantic</td>
<td>2022</td>
</tr>
<tr>
<td>Rachel Smith-Bolton</td>
<td>Midwest</td>
<td>2024</td>
</tr>
</tbody>
</table>
## Primarily Undergraduate Institution Representative

<table>
<thead>
<tr>
<th>Name</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Justin DiAngelo</td>
<td>2023</td>
</tr>
</tbody>
</table>

## International Representatives

<table>
<thead>
<tr>
<th>Name</th>
<th>Office</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kieran Harvey</td>
<td>Australia/Oceania</td>
<td>2023</td>
</tr>
<tr>
<td>Tatsushi Igaki</td>
<td>Asia</td>
<td>2022</td>
</tr>
<tr>
<td>Nic Tapon</td>
<td>Europe</td>
<td>2022</td>
</tr>
<tr>
<td>Helena Araujo</td>
<td>Latin America</td>
<td>2022</td>
</tr>
</tbody>
</table>

## Postdoc and Student Representatives

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Year</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lydia Grmai</td>
<td>Postdoc Representative</td>
<td>2023</td>
<td>Johns Hopkins University</td>
</tr>
<tr>
<td>Ana-Maria Raicu</td>
<td>Student Representative</td>
<td>2023</td>
<td>Michigan State University</td>
</tr>
</tbody>
</table>
Drosophila Organizers and Session Chairs

Conference Organizers

Erika Bach, Chair
Justin DiAngelo
Ellie Heckscher
Sally Horne-Badovinac
Artyom Kopp

Session Chairs

Amanda Amodeo  Llewellyn Green  Marco Monroy
Andrew M Arsham  Ethan Greenblatt  Laura Musselman
Vanessa Auld  Lydia Grmai  Jessamyn Perlmutter (Jessie)
Erika Bach  Adrian Halme  Mahi Rahman
Todd Blankenship  Colleen Hannon  Blake Riggs
Nichole Broderick  Ellie Heckscher  Julie Secombe
Dahong Chen  John Hernandez  Sarah Siegrist
Yu-Chieh David Chen  Sally Horne-Badovinac  Rachel Smith-Bolton
Seyeon Chung  Andreas Jenny  Marie Suvar
Cécile Courret  Artyom Kopp  Gary Teeters
Tirtha Kamal Das  Oguz Kanca  Claire Thomas
Steven DeLuca  Karla Kaun  Deepika Vasudevan
Rafael Demarco  Kari Lenhart  Lesley Weaver
Wu-Min Deng  Xin Li  Benjamin White
Justin DiAngelo  Ana Llopard  Trisha Wittkopp
Geoffrey Findlay  Raj Loganathan  Daneila Zarnescu
Juliet Girard  Will Ludington  Jonathan Zirin
Rebekah Keating Godfrey  Jennifer Mierisch
Sponsors
Conference Sponsors

Genetics Society of America and the organizers gratefully acknowledge the following sponsors:

Sponsors

[Logos of sponsors]

Supporters

[Disease Models & Mechanisms]

[Development]
Exhibitor and Sponsor Information

GSA wishes to thank our fantastic group of exhibitor partners. Please be sure to visit the company representatives during the poster sessions.

Archon Scientific, Inc.
Booth 19
919-450-6744
sales@archonscientific.com
Fly Food ready when you need it. For 10 years labs like yours have depended on us for high quality Drosophila media: pre-cooked with no preparation needed. With an emphasis on batch-to-batch consistency, robust inventory availability, and rapid shipping, your flies can depend on the original Fly Food Made Easy™.

DroBot Biotechnology Limited Company
Booth 2
8869-2106-7865
service@drobot.com.tw
DroBot Biotechnology provides automatic devices and scientific services. By taking “flies are the vital assets of the lab” as our core value, we try our best to perfect the experiment process, including fly-keeping and large-scale experiments. DroBot keeps upgrading the AI fly-conserving system to give intact services for biotechnology research.

Drosophila Genomics Research Center
Booth 7
The Drosophila Genomics Resource Center serves the Drosophila community by collecting and distributing clones and cell lines of general interest and by assisting the community in using these materials. Visit our booth for information about upcoming services or to speak to DGRC personnel about our materials.

FlyBase
Booth 1
617-6784567
russo@morgan.harvard.edu
FlyBase will have a booth located in the Exhibit Hall. Be sure to stop by and learn about new features! FlyBase personnel are available for discussions and demonstrations, and welcome your suggestions.

FlyTabs
Booth 16
805-948-5665
flytabs@yahoo.com
FlyTabs is excited to present the latest innovation in Drosophila vial and bottle food filling. The Droso-Filler MAXX – is faster, more accurate, and takes far less effort. The MAXX retrofits on your existing Droso-Filler. The one finger, one button design is remarkably easy to use. Stop by for a demonstration!
Genesee Scientific
Booth 4
888-357-3597
support@geneseesci.com
Genesee Scientific is always innovating to provide Drosophilists with the most effective tools available. Our Flystuff® catalog showcases the most complete offering of Drosophila research supplies in the world, including our popular Nutri-fly® food formulations. Ask about our top-of-the-line, corrosion resistant INVICTUS NEXT-GEN® incubators at our booth!

GSA
Booth 10
ruth.isaacson@thegsajournals.org
Come explore the resources and opportunities that GSA has to offer; meet members of the GSA staff and leadership; and find out about publishing in GENETICS and G3: Genes | Genomes | Genetics.

LabExpress
Booth 3
734-761-8148
sheila@lab-express.com
LabExpress provides weekly fresh-made drosophila food media to the fly community. There are four standard recipes, and multiple custom recipes. We also sell supplies used in the production including agar, peptone, polystyrene vials, square-bottom bottles etc. Visit: lab-express.com for more details.

microPublication Biology
Booth 22
contact@micropublication.org
microPublication Biology is a peer-reviewed open-access journal that publishes single experiment results, which are discoverable in PubMed and FlyBase. microPublication Biology publishes research findings that might otherwise remain unpublished and provides credit to those who did the work.

NIGHTSEA
Booth 6
781-791-9508
NIGHTSEA@NIGHTSEA.com
Economical fluorescence microscopy? Not an oxymoron any longer thanks to the NIGHTSEA Stereo Microscope Fluorescence Adapter for all your research, teaching, and outreach needs. Screen, sort, dissect on any existing microscope. Now with 5 available excitation/emission combinations plus ‘darkness on demand’. Stop by to see all the latest. Bring your own samples to test!

Percival Scientific
Booth 18
515-465-9363
mlyons@percival-scientific.com
Percival Scientific’s cutting edge technology is at the core of our commitment to delivering the best products on the market today. This commitment is clear with the Percival DR-36 and DR-41 Series which are dedicated to offer the best features for Drosophila research.
Vienna Drosophila Resource Center  
Booth 21
Office@vdrc.at
The Vienna Drosophila Resource Center (www.vdrc.at), part of Vienna BioCenter Core Facilities (www.vbcf.ac.at), is a non-profit bioresource promoting scientific discoveries in Drosophila. We maintain over 30,000 transgenic fly stocks and distribute to the Drosophila research community worldwide. Additional services include RNAi screening, private stock keeping, fly extract and fly food.

WellGenetics  
Booth 15
8861-2651-1809
info@wellgenetics.com
WellGenetics is dedicated to providing research professional services in microinjection and gene knockout/knockin in fly and mosquito models. We are experts in molecular biology and in microinjection for generating a variety of genetic tools, such as gene deletion; point mutation; gene reports; tag knockin and RMCE knockin to level up your research quality.
General Information
Registration Desk and Badges

You should have received your name badge in advance via email. You should print and trim this prior to coming to the meeting. Badges will not be printed onsite. In the registration area in the Town and Country Ballroom foyer, you will need to show your green check mark obtained from 42Chat (indicating you uploaded your vaccination verification and negative test results) and you will be given a badge holder and lanyard. For admission to the sessions, posters, exhibits, and receptions, you must have your official conference badge loaded into the badge holder and visible.

You can download the Program and Abstract Books on the conference website or access all the information in the Conference App. Certificates of Attendance and Participation can be picked up at the Registration Desk.

Registration Desk Schedule

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
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<tbody>
<tr>
<td>Wednesday, April 6</td>
<td>12:00 p.m. – 9:00 p.m.</td>
</tr>
<tr>
<td>Thursday, April 7</td>
<td>7:00 a.m. – 5:00 p.m.</td>
</tr>
<tr>
<td>Friday, April 8</td>
<td>8:00 a.m. – 4:30 p.m.</td>
</tr>
<tr>
<td>Saturday, April 9</td>
<td>8:00 a.m. – 2:00 p.m.</td>
</tr>
</tbody>
</table>

Conference App

In-person participants: Download the GSA Meetings app to your smartphone (available on both iOS and Android platforms) to have meeting information at your fingertips. Once you download the App, you will not need an internet connection to access previously downloaded information. You will only need an internet connection to download updates. Blackberry users and Windows Mobile Device users can access the App through the web desktop version available on the conference website.

Virtual participants: Virtual attendees will use the App to participate in the conference. Sign into the App using your registration badge ID number and last name. The App is available in two formats: Desktop App (for desktop and laptop computers), or Mobile App (for Apple iOS and Android mobile devices).

You can find your registration badge ID in your conference registration confirmation email, which was sent from the address NoReply@Convention-Mail.com.
Oral Presenters

All speakers must come to the Speaker Ready Room in Sunset I 24 hours before the start of your session to upload and review your presentation and become familiar with the equipment that will be used in the session room. You will NOT be able to use your own computer or upload your presentation in the session room. The day of your presentation, arrive 30 minutes before the start of your session (not your talk) and let the session chair know that you are there.

Poster Presentations

Posters are available from March 31 to May 1 as a PDF with an (optional) 2-minute audio overview in the Conference App. Be sure to view all the posters in the app and leave feedback. To view a poster, look for the “Virtual Poster” link near the bottom of each poster’s entry in the App. If provided, the presenter’s personal calendar link is included so that you can set up individual meetings with them.

Posters for the in-person session should be no larger than 3’8” wide by 3’10” tall. Posters that are larger than 3’8” wide by 3’10” tall will be removed. Please note that the posters should be formatted in a vertical (portrait) layout.

Please keep personal items with you at all times. GSA cannot be responsible for items left in the hall including but not limited to poster tubes, purses, backpacks, etc.

All in-person posters will be located in the Golden State Ballroom at the Town and Country. You must be wearing your official meeting badge to enter the exhibits and posters. Poster presenters who are attending the conference in-person have been assigned a presentation time according to the schedule below.
In-person Poster Presentations

<table>
<thead>
<tr>
<th>A Posters</th>
<th>Wednesday, April 6</th>
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<tbody>
<tr>
<td></td>
<td>5:00 p.m.</td>
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<td>5:00 p.m. – 10:30 p.m.</td>
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<table>
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<tr>
<th>A Posters</th>
<th>Thursday, April 7</th>
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<tr>
<td></td>
<td>2:00 p.m. – 4:00 p.m.</td>
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<td>4:00 p.m.</td>
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<tr>
<th>B Posters</th>
<th>Thursday, April 7</th>
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<tbody>
<tr>
<td></td>
<td>4:15 p.m.</td>
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<td>4:15 p.m. – 10:00 p.m.</td>
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<tr>
<th>C Posters</th>
<th>Friday, April 8</th>
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<td>4:15 p.m.</td>
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<td>4:15 p.m. – 10:00 p.m.</td>
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<tr>
<th>C Posters</th>
<th>Saturday, April 9</th>
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<tr>
<td></td>
<td>1:30 p.m. – 3:30 p.m.</td>
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<td></td>
<td>3:30 p.m.</td>
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Viewing Sessions Online

Remote attendees can view sessions via the App:

All Keynote, Plenary and Platform sessions will be streamed live. Log in to the Online Planner on your laptop for the best viewing experience. You will also be able to access the live sessions through the App. Five minutes before a session starts, log in using your registration badge ID number and last name. Tap the “Join Webinar” button on the session. The Join Webinar button will be visible ten minutes before the start of the session. A recording of each session will be available in the session listings on the App within 24 hours after the session ends. The recordings will be available until May 1.

Poster Sessions - To view a poster, look for the “Virtual Poster” link near the bottom of each poster’s entry in the App.
Exhibitor and Sponsor Directory

Please be sure to visit with the company representatives during the poster sessions.

<table>
<thead>
<tr>
<th>Booth #</th>
<th>Company</th>
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<tbody>
<tr>
<td>1</td>
<td>FlyBase</td>
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<td>2</td>
<td>Drobot Biotechnology Limited</td>
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<tr>
<td>3</td>
<td>LabExpress</td>
</tr>
<tr>
<td>4</td>
<td>Genesee Scientific</td>
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<tr>
<td>6</td>
<td>NIGHTSEA</td>
</tr>
<tr>
<td>7</td>
<td>Drosophila Genomics Resource Center (DGRC)</td>
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<tr>
<td>9</td>
<td>Genesee Scientific</td>
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<tr>
<td>10</td>
<td>Genetics Society of America</td>
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<td>15</td>
<td>WellGenetics</td>
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<td>16</td>
<td>FlyTabs</td>
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<td>18</td>
<td>Percival</td>
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<td>19</td>
<td>Archon Scientific</td>
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<td>21</td>
<td>Vienna BioCenter Core Facilities</td>
</tr>
<tr>
<td>22</td>
<td>microPublication</td>
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</tbody>
</table>
Safety Protocols

In-person attendees are required to wear the most protective masks they can access, ideally N95s or KN95s, while attending the conference. If you do not have access to a high-quality mask, a limited supply of complimentary masks are available at the Registration Desk in the Town & Country Ballroom foyer.

All rooms will be set with maximum seating so that attendees can sit at the spacing with which they are comfortable. The large keynote and plenary sessions will be held in Town & Country A and streamed in Town & Country B for those who want to spread out a little more.

Hand sanitizers will be available in all the meeting rooms and public spaces.

Coffee breaks will be available on the Flamingo Lawn outside of the conference center. Please keep your mask on while in line and only remove to drink your coffee.

Daily self monitoring: If you experience any of the symptoms listed below, do not enter the meeting space. Those staying at the conference hotel should contact the front desk and gsaconferences@genetics-gsa.org to have a rapid test brought to you. Symptoms requiring a rapid test: fever or chills, cough, shortness of breath, fatigue, muscle or body aches, headache, new loss of taste or smell, sore throat, congestion or runny nose, nausea, vomiting or diarrhea.

COVID-19 Testing

Onsite rapid antigen and PCR COVID tests are available for a fee and by appointment for attendees who need or want to be tested (e.g. to comply with international travel regulations). The testing site will be in Palm Room 8 and open during the times listed below. Registrants are responsible for signing up and paying for any testing they require.

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wednesday, April 6</td>
<td>3:00 p.m. – 5:00 p.m.</td>
</tr>
<tr>
<td>Thursday, April 7</td>
<td>12:00 a.m. – 3:00 p.m.</td>
</tr>
<tr>
<td>Friday, April 8</td>
<td>12:00 a.m. – 3:00 p.m.</td>
</tr>
<tr>
<td>Saturday, April 9</td>
<td>12:00 a.m. – 3:00 p.m.</td>
</tr>
</tbody>
</table>

Complimentary rapid antigen tests will be available to attendees who feel unwell or experience symptoms outside of the hours posted above.
General Information

Meals

Meals are not included in the conference registration fee but there are plenty of dining options at the hotel and in the Fashion Valley Mall behind the hotel (accessible via a walkway behind the Royal Palm Tower). There will also be a pop up market available near the meeting space with breakfast, lunch and dinner options including meal packages and an a la carte menu. If you are staying at the hotel you can make charges to your room.

Wi-Fi Access

Complimentary Wi-Fi is available in the meeting rooms.

Network: Genetics Society of America
Password: #DROS22Fly (case sensitive)

Job and Meeting Postings

Individuals and institutions offering or seeking employment and organizers of meetings may post notices and resumes on the “Community Notices” bulletin board in the Poster Sessions. Employers are also welcome to post listings in the #jobs channel in the #Dros22 Slack workspace.

Presenting Author Index

To search for specific oral and poster presenters, use the search function in the Conference App around shared interests.

Slack Chat Channels

The #Dros22 Slack workspace is the place to meet other attendees online during the conference. You can join and create chat channels based on your interests. There are channels for getting technical help, discussing new papers and preprints, sharing job ads, and connecting with other attendees around shared interests.

Security/Lost and Found

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

In addition to the many outdoor spaces, the following rooms will be open from 8:00 a.m. – 9:00 p.m., Thursday – Saturday for you to watch sessions remotely on your own computer, meet with colleagues, or just take a break. Space is available on a first come, first served basis. Please wear your mask.

Palm Room 1
Palm Room 2
Palm Room 3
Golden State Boardroom

Parking

The discounted parking rate for conference attendees is $15 per day. If you are staying at the Town & Country, that includes in and out privileges. Just let the front desk know you will have a car when checking in.
Conference Policies
Conference Policies

Code of Conduct

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

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

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

Unacceptable Behaviors

Unacceptable behaviors include, but are not limited to:

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

Need to file a complaint? For instructions on how to confidentially report a Code of Conduct violation, please visit genetics-gsa.ethicspoint.com. In addition, GSA staff is available to assist participants in contacting our Ethics Committee to make a report. Please email Tracey DePellegrin, GSA Executive Director, at tracey.depellegrin@genetics-gsa.org.

Consequences of Non-compliance

Anyone asked by GSA staff, a Session Chair, Workshop Leader, Moderator, Presenter, or Zoom representative to stop unacceptable behavior is expected to comply immediately. Retaliation toward GSA or toward someone reporting an incident or after experiencing any of the following consequences will not be tolerated and may result in additional sanctions.

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

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

Accessibility

GSA is committed to assisting attendees with special needs. If you have accessibility questions or requests, please email gsaconferences@genetics-gsa.org.

Diversity and Inclusion

GSA is committed to promoting equality, diversity, and inclusion to create greater opportunity for any individual to fulfill their scientific potential, irrespective of their background, gender, or circumstances. This diversity leads to innovation by attracting the widest possible talent to the community and fostering a greater diversity of ideas, approaches, and perspectives. The Organizing Committee aims to select speakers and session chairs that represent the breadth and diversity of the discipline and conference participants. GSA especially encourages the Committee to select excellent speakers from groups traditionally underrepresented in science.

Social Media/Photo/Video Policy

Live tweeting of presentations is allowed unless the speaker explicitly opts out by stating so at the start of their 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.
Schedule of Events
### WEDNESDAY, April 06

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
</table>
| 12:00 p.m. – 9:00 p.m. | **Registration/Information Desk Open**  
Show your green check mark to pick up your conference materials. | Town and Country Ballroom Foyer             |
| 1:00 p.m. – 4:00 p.m. | **Drosophila Board of Directors Meeting**  
Open to Board members and invited guests | Palm Room 1                                 |
| 1:00 p.m. – 5:00 p.m. | **Speaker Ready Room Open**  
All plenary and platform presenters must check in at the speaker ready room and upload their talk 24 hours in advance of their session. | Sunset 1-2                                  |
| 1:30 p.m. – 4:30 p.m. | **Ecdysone Workshop** | Pacific Ballroom C                          |
| 2:30 p.m. – 3:00 p.m. | **Getting Involved in GSA’s Early Career Professional Development** | Pacific Ballroom A                          |
| 3:00 p.m. – 5:00 p.m. | **COVID-19 Testing**  
By appointment | Palm Room 8                                 |
| 3:30 p.m. – 4:30 p.m. | **Conference Success Tips and Welcome from the Early Career Leadership Program** | Pacific Ballroom A                          |
| 4:00 p.m. – 7:00 p.m. | **Virtual Posters**  
Take time to view the posters that are being presented virtually through the app and leave a question for the author. Virtual posters will be available through May 1. | Online                                      |
| 4:45 p.m. – 5:45 p.m. | **Multilingual Networking** | Pacific Ballroom A                          |
| 7:00 p.m. – 9:00 p.m. | **Opening General Session**  
Need a little more space? This session will also be broadcast in Town & Country B  
Session Chairs: Erika Bach and Ellie Heckscher | Town and Country Ballroom A                 |
| 9:00 p.m. – 10:30 p.m. | **Opening Mixer with Exhibitors** | Golden State Ballroom                       |
| 9:01 p.m. – 10:30 p.m. | **Open Poster Viewing**  
A Posters | Golden State Ballroom                       |

All times are listed in Pacific Daylight Time (PDT)
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>7:00 a.m. – 5:00 p.m.</td>
<td>Registration/Information Desk Open</td>
<td>Town and Country Ballroom Foyer</td>
</tr>
<tr>
<td>7:15 a.m. – 8:30 a.m.</td>
<td>Continental Breakfast</td>
<td>Flamingo Lawn</td>
</tr>
<tr>
<td>7:30 a.m. – 8:30 a.m.</td>
<td>Undergraduate Mixer</td>
<td>Pacific Ballroom A</td>
</tr>
<tr>
<td>8:00 a.m. – 4:00 p.m.</td>
<td>Speaker Ready Room Open</td>
<td>Sunset 1-2</td>
</tr>
<tr>
<td>8:30 a.m. – 10:30 a.m.</td>
<td>Plenary Session I</td>
<td>Town and Country Ballroom A</td>
</tr>
<tr>
<td>10:30 a.m. – 11:00 a.m.</td>
<td>Coffee Break</td>
<td>Flamingo Lawn</td>
</tr>
<tr>
<td>11:00 a.m. – 12:30 p.m.</td>
<td>Plenary Session II (Equity and Inclusion)</td>
<td>Town and Country Ballroom A</td>
</tr>
<tr>
<td>12:00 p.m. – 3:00 p.m.</td>
<td>COVID-19 Testing</td>
<td>Palm Room 8</td>
</tr>
<tr>
<td>12:15 p.m. – 4:15 p.m.</td>
<td>Exhibit Hall Open</td>
<td>Golden State Ballroom</td>
</tr>
<tr>
<td>1:00 p.m. – 4:00 p.m.</td>
<td>Networking Hotspot</td>
<td>Golden State Ballroom</td>
</tr>
<tr>
<td>2:00 p.m. – 4:00 p.m.</td>
<td>Exhibits and Poster Presentations</td>
<td>Golden State Ballroom</td>
</tr>
<tr>
<td>4:00 p.m. – 10:00 p.m.</td>
<td>Open Poster Viewing</td>
<td>Golden State Ballroom</td>
</tr>
</tbody>
</table>

All times are listed in Pacific Daylight Time (PDT)
## Schedule of Events

All times are listed in Pacific Daylight Time (PDT)

### THURSDAY, April 07

<table>
<thead>
<tr>
<th>Time</th>
<th>Concurrent Platforms I</th>
</tr>
</thead>
<tbody>
<tr>
<td>4:30 p.m. – 6:30 p.m.</td>
<td>Evolution I</td>
</tr>
<tr>
<td></td>
<td>Session Chairs: Ana Llopant, Geoffrey Findlay, Cécile Courret, and Llewellyn Green</td>
</tr>
<tr>
<td></td>
<td>Town and Country Ballroom B</td>
</tr>
<tr>
<td>6:30 p.m. – 7:30 p.m.</td>
<td>Neurodevelopment I</td>
</tr>
<tr>
<td></td>
<td>Session Chairs: Vanessa Auld, Xin Li, and Yu-Chieh David Chen</td>
</tr>
<tr>
<td></td>
<td>Town and Country Ballroom A</td>
</tr>
<tr>
<td>6:30 p.m. – 7:30 p.m.</td>
<td>Physiology, Aging, and Metabolism I</td>
</tr>
<tr>
<td></td>
<td>Session Chairs: Ethan Greenblatt, Laura Musselman, and Juliet Girard</td>
</tr>
<tr>
<td></td>
<td>Town and Country Ballroom C</td>
</tr>
<tr>
<td>7:45 p.m. – 9:45 p.m.</td>
<td>Virtual Networking Meet-Up</td>
</tr>
<tr>
<td></td>
<td>Online</td>
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### FRIDAY, April 08

<table>
<thead>
<tr>
<th>Time</th>
<th>Concurrent Workshops</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 a.m. – 10:00 p.m.</td>
<td>Networking Hotspot</td>
</tr>
<tr>
<td></td>
<td>Golden State Ballroom</td>
</tr>
</tbody>
</table>

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**THURSDAY, April 07**

- **4:30 p.m. – 6:30 p.m.** Concurrent Platforms I: Evolution ISession Chairs: Ana Llopant, Geoffrey Findlay, Cécile Courret, and Llewellyn GreenTown and Country Ballroom B
- **6:30 p.m. – 7:30 p.m.** Virtual Networking Meet-UpOnline
- **7:45 p.m. – 9:45 p.m.** Concurrent Workshops
  - Everything you ever wanted to know about sexPacific Ballroom C
  - Flies on drugs – drug discovery approaches, challenges and opportunitiesPacific Ballroom E
  - Inter-organs communications in the era of MetabolomicsPacific Ballroom D
  - Networking HotspotGolden State Ballroom

**FRIDAY, April 08**

- **8:00 a.m. – 4:30 p.m.** Registration/Information Desk OpenShow your green check mark to pick up your conference materials.Town and Country Ballroom Foyer
- **8:00 a.m. – 4:00 p.m.** Speaker Ready Room OpenAll plenary and platform presenters must check in at the speaker ready room and upload their talk 24 hours in advance of their session.Sunset 1-2
<table>
<thead>
<tr>
<th>Time</th>
<th>Concurrent Platforms I</th>
<th>Concurrent Platforms III</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 a.m. – 10:00 a.m.</td>
<td><strong>Cell Biology I</strong>&lt;br&gt;Session Chairs: Claire Thomas, Blake Riggs, and Marco Monroy</td>
<td><strong>Cell Biology II</strong>&lt;br&gt;Session Chairs: Claire Thomas; Blake Riggs; and Marco Monroy</td>
</tr>
<tr>
<td></td>
<td><strong>Cell Division and Cell Growth</strong>&lt;br&gt;Session Chairs: Sarah Siegrist, Wu-Min Deng; and Gary Teeters</td>
<td><strong>Gene Regulation</strong>&lt;br&gt;Session Chairs: Steven DeLuca; Trisha Wittkopp; and Colleen Hannon</td>
</tr>
<tr>
<td></td>
<td><strong>Immunity and Microbiome</strong>&lt;br&gt;Session Chairs: Nichole Broderick, Will Ludington, and Jessamyn Perlmutter (Jessie)</td>
<td><strong>Neurobehavior I</strong>&lt;br&gt;Session Chairs: Karla Kaun; Marie Suvar; and John Hernandez</td>
</tr>
<tr>
<td></td>
<td><strong>Physiology, Aging, and Metabolism II</strong>&lt;br&gt;Session Chairs: Ethan Greenblatt, Laura Musselman, and Juliet Girard</td>
<td><strong>Stem Cells, Regeneration, and Tissue Repair</strong>&lt;br&gt;Session Chairs: Lesley Weaver; Adrian Halme; and Mahi Rahman</td>
</tr>
<tr>
<td>10:00 a.m. – 10:30 a.m.</td>
<td><strong>Coffee Break</strong>&lt;br&gt;Please continue to wear your mask while picking up your coffee.</td>
<td></td>
</tr>
<tr>
<td>10:30 a.m. – 12:30 p.m.</td>
<td><strong>Concurrent Platforms III</strong></td>
<td><strong>COVID-19 Testing</strong>&lt;br&gt;By appointment</td>
</tr>
<tr>
<td></td>
<td><strong>Cell Biology II</strong>&lt;br&gt;Session Chairs: Claire Thomas; Blake Riggs; and Marco Monroy</td>
<td><strong>Palm Room 8</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Gene Regulation</strong>&lt;br&gt;Session Chairs: Steven DeLuca; Trisha Wittkopp; and Colleen Hannon</td>
<td><strong>Golden State Ballroom</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Neurobehavior I</strong>&lt;br&gt;Session Chairs: Karla Kaun; Marie Suvar; and John Hernandez</td>
<td><strong>Online</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Stem Cells, Regeneration, and Tissue Repair</strong>&lt;br&gt;Session Chairs: Lesley Weaver; Adrian Halme; and Mahi Rahman</td>
<td><strong>Golden State Ballroom</strong></td>
</tr>
<tr>
<td>12:00 p.m. – 3:00 p.m.</td>
<td><strong>COVID-19 Testing</strong>&lt;br&gt;By appointment</td>
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</tr>
<tr>
<td>12:15 p.m. – 4:15 p.m.</td>
<td><strong>Exhibit Hall Open</strong></td>
<td></td>
</tr>
<tr>
<td>12:30 p.m. – 1:30 p.m.</td>
<td><strong>Virtual Networking Meet-Up</strong></td>
<td></td>
</tr>
<tr>
<td>1:00 p.m. – 4:00 p.m.</td>
<td><strong>Networking Hotspot</strong></td>
<td></td>
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</tbody>
</table>
## FRIDAY, April 08

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:00 p.m. – 4:00 p.m.</td>
<td><strong>Exhibits &amp; Poster Presentations</strong>&lt;br&gt;B Posters&lt;br&gt;B posters should be removed at 4 p.m. so that C posters can be mounted</td>
<td>Golden State Ballroom</td>
</tr>
<tr>
<td>4:00 p.m. – 10:00 p.m.</td>
<td><strong>Open Poster Viewing</strong>&lt;br&gt;C Posters</td>
<td>Golden State Ballroom</td>
</tr>
<tr>
<td>4:30 p.m. – 6:30 p.m.</td>
<td><strong>Concurrent Platforms IV</strong>&lt;br&gt;<strong>Evolution II</strong>&lt;br&gt;Session Chairs: Geoffrey Findlay; Ana Llopart; Cécile Courret; and Llewellyn Green&lt;br&gt;<strong>Neurodevelopment II/Neurobehavior II</strong>&lt;br&gt;Session Chairs: Marie Suvar; Karla Kuan; Yu-Chieh David Chen; Vanessa Auld; Xin Li; and John Hernandez&lt;br&gt;<strong>Reproduction and Gametogenesis</strong>&lt;br&gt;Session Chairs: Kari Lenhart; Jennifer Mierisch; and Rafael Demarco</td>
<td>Town and Country Ballroom B, Town and Country Ballroom A, Town and Country Ballroom C</td>
</tr>
<tr>
<td>8:00 p.m. – 10:00 p.m.</td>
<td><strong>Networking Hotspot</strong></td>
<td>Golden State Ballroom</td>
</tr>
</tbody>
</table>

## SATURDAY, April 09

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 a.m. – 2:00 p.m.</td>
<td><strong>Registration/Information Desk Open</strong>&lt;br&gt;Show your green check mark to pick up your conference materials.</td>
<td>Town and Country Ballroom Foyer</td>
</tr>
<tr>
<td>8:00 a.m. – 4:00 p.m.</td>
<td><strong>Speaker Ready Room Open</strong>&lt;br&gt;All plenary and platform presenters must check in at the speaker ready room and upload their talk 24 hours in advance of their session.</td>
<td>Sunset 1-2</td>
</tr>
</tbody>
</table>

All times are listed in Pacific Daylight Time (PDT)
### SATURDAY, April 09

<table>
<thead>
<tr>
<th>Time</th>
<th>Concurrent Platforms V</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 a.m. – 10:00 a.m.</td>
<td><strong>Concurrent Platforms V</strong>&lt;br&gt;<strong>Chromatin</strong>&lt;br&gt;Session Chairs: Julie Secombe; Amanda Amodeo; and Dahong Chen&lt;br&gt;Town and Country Ballroom B</td>
</tr>
<tr>
<td>10:00 a.m. – 10:30 a.m.</td>
<td><strong>Models of Human Disease I – Diseases with a Neurological Focus</strong>&lt;br&gt;Session Chairs: Tirtha Kamal Das; Daniela Zarnescu; and Rebekah Keating Godfrey&lt;br&gt;Town and Country Ballroom A</td>
</tr>
<tr>
<td>10:30 a.m. – 12:00 p.m.</td>
<td><strong>Patterning and Morphogenesis I</strong>&lt;br&gt;Session Chairs: Seyeon Chung; Todd Blankenship; and Raj Loganathan&lt;br&gt;Town and Country Ballroom C</td>
</tr>
<tr>
<td>10:00 a.m. – 10:30 a.m.</td>
<td><strong>Coffee Break</strong>&lt;br&gt;Please continue to wear your mask while picking up your coffee.&lt;br&gt;Flamingo Lawn</td>
</tr>
<tr>
<td>10:30 a.m. – 12:00 p.m.</td>
<td><strong>Concurrent Platforms VI</strong></td>
</tr>
<tr>
<td>12:00 p.m. – 3:00 p.m.</td>
<td><strong>Cell Stress and Cell Death</strong>&lt;br&gt;Session Chairs: Deepika Vasudevan, Andreas Jenny, and Lydia Grmai&lt;br&gt;Town and Country Ballroom B</td>
</tr>
<tr>
<td>12:00 p.m. – 3:00 p.m.</td>
<td><strong>Models of Human Disease II</strong>&lt;br&gt;Session Chairs: Tirtha Kamal Das, Daniela Zarnescu; and Rebekah Keating Godfrey&lt;br&gt;Town and Country Ballroom A</td>
</tr>
<tr>
<td>12:00 p.m. – 3:00 p.m.</td>
<td><strong>Patterning and Morphogenesis II</strong>&lt;br&gt;Session Chairs: Seyeon Chung; Todd Blankenship, and Raj Loganathan&lt;br&gt;Town and Country Ballroom C</td>
</tr>
<tr>
<td>12:00 p.m. – 3:00 p.m.</td>
<td><strong>COVID-19 Testing</strong>&lt;br&gt;by appointment&lt;br&gt;Palm Room 8</td>
</tr>
<tr>
<td>12:15 p.m. – 3:45 p.m.</td>
<td><strong>Exhibit Hall Open</strong>&lt;br&gt;Golden State Ballroom</td>
</tr>
<tr>
<td>12:15 p.m. – 1:15 p.m.</td>
<td><strong>GSA Journals Editorial Board meeting</strong>&lt;br&gt;Palm Room 4</td>
</tr>
<tr>
<td>12:30 p.m. – 3:30 p.m.</td>
<td><strong>Networking Hotspot</strong>&lt;br&gt;Golden State Ballroom</td>
</tr>
<tr>
<td>1:30 p.m. – 3:30 p.m.</td>
<td><strong>Exhibits and Poster Presentations</strong>&lt;br&gt;C Posters&lt;br&gt;C posters should be removed at 3:30 p.m.&lt;br&gt;Golden State Ballroom</td>
</tr>
<tr>
<td>Time</td>
<td>Event</td>
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<tr>
<td>4:00 p.m. – 6:00 p.m.</td>
<td>Techniques and Technology Session</td>
</tr>
<tr>
<td>7:45 p.m. – 10:00 p.m.</td>
<td>Plenary Session III</td>
</tr>
<tr>
<td>8:30 a.m. – 10:30 a.m.</td>
<td>Closing Plenary</td>
</tr>
</tbody>
</table>
Oral Presentation and Workshop Session Listings
Oral Presentation and Workshop Session Listings

Wednesday, April 06

1:30 p.m. – 4:30 p.m.
Pacific Ballroom C

**Ecdysone Workshop**

*Organizers*
N. Yamanaka, R. Spokony, J. Park

1:30 p.m. **Kim Rewitz**, University of Copenhagen, Dietary cholesterol and sugar influence growth and maturation through insulin signaling.

2:05 p.m. **Lianna Wat**, University of British Columbia, Sex-specific regulation of the adipokinetic hormone pathway contributes to the male-female difference in fat storage.

2:30 p.m. **Saumya Jain**, UCLA, Orchestration of neuronal circuit formation by hormones.

2:55 p.m. Open Discussion

3:15 p.m. **Mubarak Hussain Syed**, University of New Mexico, Temporal hormonal cues regulate neural diversity and function of *Drosophila* Central Complex lineages.

3:40 p.m. **Matthew Meiselman**, Cornell University, Allatostatin-C mediates recovery from reproductive dormancy in *Drosophila melanogaster*.

4:05 p.m. **Lacy Barton**, New York University, Highs and lows: responsive regulation of Juvenile Hormones.

2:30 p.m. – 3:00 p.m.
Pacific Ballroom A

**Getting Involved in GSA’s Early Career Professional Development**

GSA Early Career Leadership Program (ECLP) members will join us in sharing how to get involved in GSA’s professional development programming for early career scientists. GSA will walk through upcoming events and programs including how and when to apply to join the ECLP.
3:30 p.m. – 4:30 p.m.
Pacific Ballroom A

**Conference Success Tips and Welcome from the Early Career Leadership Program**

The purpose of this event is to help first-time conference attendees and early career scientists make the most of the conference. Topics covered may include introductions to organizers of the meeting, advice on having meaningful interactions in a virtual space, a chance to meet other attendees in an informal setting, and an introduction to scientific events and other conference programming.

4:45 p.m. – 5:45 p.m.
Pacific Ballroom A

**Multilingual Networking**

Join us for this exciting event to network in the language of your choice! At this multilingual networking event, #Dros22 participants who speak languages other than English have a chance to network and talk about science in their native language or language of choice with other participants.
7:00 p.m. – 9:00 p.m.
Town and Country Ballroom A

**Opening General Session**

*Session Chairs*
Erika Bach New York University School of Medicine; and Ellie Heckscher The University of Chicago

1 7:00 p.m. Welcome to #DROS22 **Erika Bach** NYU School of Medicine, New York, NY

2 7:08 p.m. *Drosophila* Community Update **Tin Tin Su** University of Colorado, Boulder

3 7:13 p.m. GSA Welcome **Denise Montell** Genetics Society of America

4 7:23 p.m. Larry Sandler Award **Alissa Armstrong** University of South Carolina, Columbia, SC

5 7:27 p.m. Larry Sandler Award Talk – Sex-specific regulation of fat metabolism in *Drosophila* **Lianna Wat** The University of British Columbia

6 7:57 p.m. Keynote Introduction **Ellie Heckscher** University of Chicago

7 8:00 p.m. Central Nervous System Development: Stem Cells to Circuits **Chris Doe** University of Oregon
Oral Presentation and Workshop Session Listings

Thursday, April 07

8:30 a.m. – 10:30 a.m.
Town and Country Ballroom A

Plenary Session I

Session Chairs
Sally Horne-Badovinac The University of Chicago; Artyom Kopp University of California, Davis; and Justin DiAngelo Penn State Berks

8 8:30 a.m. Image Award Nasser Rusan NIH/NHLBI

9 8:35 a.m. Origins of adult organ plasticity: How cell lifecycles define tissue states Lucy O’Brien Stanford University

10 9:05 a.m. Regulating host phospholipid metabolism to fight infection Michelle Bland University of Virginia, Charlottesville, VA

11 9:35 a.m. The genetics basis of inviability in hybrids between Drosophila melanogaster and D. santomea Daniel Matute University of North Carolina

12 10:05 a.m. Tissue Biology of Chromosomal Instability Marco Milan IRB Barcelona

11:00 a.m. – 12:30 p.m.
Town and Country Ballroom A

Plenary Session II (Equity and Inclusion)

Session Chairs
Andrew M Arsham Bemidji State University; and Rachel Smith-Bolton University of Illinois Urbana-Champaign

13 11:00 a.m. Collective Action for Institutional Transformation Shaila Kotadia Stanford University

14 11:30 a.m. Strategies at UCSF for addressing barriers in science that disproportionately affect people from marginalized groups. Todd Nystul UC San Francisco

15 12:00 p.m. NINDS Strategies for Enhancing the Diversity of Neuroscience Researchers Marguerite Matthews National Institute of Neurological Disorders
4:30 p.m. – 6:30 p.m.
Town and Country Ballroom B

**Evolution I**

*Session Chairs*
Ana Llopart University of Iowa; Geoffrey Findlay College of the Holy Cross; Cécile Courret University of Rochester; and Llewellyn Green University of Houston

24 4:30 p.m. Partial overlap between inversions and genomic islands of divergence during early stages of ecological speciation in *Drosophila yakuba* Erina A. Ferreira CNRS

25 4:45 p.m. Chromatin Architecture Constrains Where Inversion Breakpoints Occur Over a Short-Time Scale in *D. pseudoobscura* Dynisty Wright The Pennsylvania State University

26 5:00 p.m. Cis-regulatory Changes at the Fatty Acid Elongase *eloF* Underlie the Evolution of Sex-specific Pheromone Profiles in *Drosophila Prolongata* Yige Luo University of California, Davis

27 5:15 p.m. Dissecting the genetic changes underlying the adaptation of the carbon dioxide receptor in the *D. suzukii* species complex Alice Gadau The Rockefeller University

28 5:30 p.m. Faster-X: Evolution of *Drosophila melanogaster* and *Drosophila simulans* Sex-biased Expression and Associated Chromatin Adalena Nanni University of Florida

29 5:45 p.m. Phage-derived DNAses are novel innate immune cell effectors in animals Kirsten Verster University of California – Berkeley

30 6:00 p.m. Widespread introgression across a phylogeny of 155 *Drosophila* genomes Anton Suvorov UNC

31 6:15 p.m. An odorant binding protein is required for mating plug formation and male fertility in *Drosophila* Nora Brown Cornell University

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4:30 p.m. – 6:30 p.m.
Town and Country Ballroom A

**Neurodevelopment I**

*Session Chairs*
Vanessa Auld University of British Columbia; Xin Li University of Illinois; and Yu-Chieh David Chen New York University

16 4:30 p.m. A conserved anoctamin regulates olfactory neuron firing in *Drosophila* Pratayjit Mohapatra University of Connecticut

17 4:45 p.m. Dissection of the BMP-activated synaptic gene network identifies dichotomous BMP-responsive elements regulating synaptic functions Robin Vuilleumier University of British Columbia

18 5:00 p.m. γ-secretase promotes postsynaptic development through the cleavage of a Wnt receptor Timothy Mosca Thomas Jefferson University

19 5:15 p.m. Copia, a *Drosophila* retrotransposable element, regulates structural synaptic plasticity at the larval neuromuscular junction Peter M’Angale University of Massachusetts Chan Medical School

20 5:30 p.m. Chromatin regulatory networks underlying coordinated synaptic gene expression James Kentro Brown University

21 5:45 p.m. Fatty acid flux through triacylglycerol regulates neuroblast proliferation during oxidative stress Eva Islimye The Francis Crick Institute

22 6:00 p.m. Neuronal activity induces Glucosylceramide that is extruded via exosomes upon glial BMP signals for lysosomal degradation in glia Liping Wang Baylor College of Medicine

23 6:15 p.m. Sequential addition of neuronal temporal cohorts generates a stimulus on-set detection circuit Zarion Marshall University of Chicago
Physiology, Aging, and Metabolism I

Session Chairs: Ethan Greenblatt University of British Columbia; Laura Musselman Binghamton University; and Juliet Girard University of California, Los Angeles

32 4:30 p.m. A novel role for CRTC linking age-related cardiac dysfunction and fibrosis to metabolic syndrome Cristiana Dondi Sanford Burnham Prebys Medical Discovery Institute

33 4:45 p.m. glial GBA links neural lipid metabolism and proteostasis with sleep John Vaughen Stanford University

34 5:00 p.m. Macrophages-derived Pvf2 modulates developmental transition by ecdysone synthesis regulation Sergio Juarez-Carreño Memorial Sloan Kettering Cancer Center

35 5:15 p.m. The Drosophila enzyme L-2-hydroxyglutarate dehydrogenase is required in the renal system for recovery from hypoxic stress Nader Mahmoudzadeh Indiana University

36 5:30 p.m. Differential regulation of glycogen homeostasis by TGFβ/Activin ligands Heidi Bretscher University of Minnesota, Twin Cities

37 5:45 p.m. Spenito, mA RNA modification and the establishment of metabolic sexual dimorphism in larvae Arely V. Diaz University of Colorado, Anschutz Medical Campus

38 6:00 p.m. Acetyl-CoA mediated autoacetylation of fatty acid synthase as a metabolic switch for de novo lipogenesis in developing Drosophila Ting Miao Iowa State University

39 6:15 p.m. Mechanical activation of mitochondrial energy metabolism during cell differentiation Zong-Heng Wang National Heart, Lung, and Blood Institute, NIH
Concurrent Workshops
Pacific Ballroom C

Everything you ever wanted to know about sex
Organizers
R. Graze, M. Arbeitman, G. Rice

7:45 p.m. Opening Remarks

First Hour

Amanda Larracuente, University of Rochester, Rapid structural divergence of Drosophila Y chromosomes.

Dawn Chen, Cornell University, Octopaminergic/tyraminergic Tdc2 neurons regulate biased sperm usage in female Drosophila melanogaster.

Marianne Mercer, UT Southwestern, bourbon interacts with known germline sex determination regulator otu and promotes the expression of sxl in the Drosophila female germline.

Ben Vincent, University of Pittsburgh, Reorganizations in the apical extracellular matrix underlie morphological diversification in Drosophila genital structures.

Julia Duckhorn, Villanova University, Regulation of sexually dimorphic abdominal courtship behaviors in Drosophila by the Tlx/tailless-like nuclear receptor, Dissatisfaction.

Jason Millington, Stanford, A low sugar diet enhances Drosophila body size in males and females via sex-specific mechanisms.

Second Hour

Sreesankar Easwaran, UC Santa Barbara, Diapause – Can we “pause” and “play” reproductive development?

Iván David, University of Pittsburgh, Male-specific transcriptional silencers contribute to the regulatory evolution of a pigmentation gene in Drosophilids.

Ben Hopkins, UC Davis, The dynamic evolution of the Sex Peptide gene family.

Joseph Louis Aguilera, Brown University, X marks the spot: Specifically targeting an active chromatin domain to the X-chromosome.

Ella Preger-Ben Noon, Technion – Israel Institute of Technology, The evolution of morphology at a single-cell resolution.

9:37 p.m. Trivia and Prizes
Pacific Ballroom E

**Flies on drugs – drug discovery approaches, challenges and opportunities**

*Organizers*
D. Zarnescu, C. Chow


3. Udai Pandey, University of Pittsburgh – “Identifying therapeutic targets for a rare neurodevelopmental syndrome”

4. Tirtha Das, Mount Sinai School of Medicine – “Screens, Drugs and Flies to Explore Disease Signaling Networks”

5. Daniela C Zarnescu, University of Arizona – “Phenotypic screens in *Drosophila* models of ALS/FTD based on TDP-43 proteinopathy”

Discussion

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Pacific Ballroom D

**Inter-organs communications in the era of Metabolomics**

*Organizers*
F. DiCara, J. Karpac, A. Simonds

**Speakers’ list**

7:45 p.m. **Mrs. Emily Strachan**, Imperial College London, “Food, sex and tumours”.

8:00 p.m. **Dr. Mahi Rahman**, Huntsman Cancer Institute University of Utha, “ISC and tracheal interaction in the *Drosophila* midgut”.

8:15 p.m. **Dr. Daniel Promislow**, University of Washington, “A Metabolomic Perspective on Genetic Variation and Aging”.

8:30 p.m. **Dr. Yang Lyu**, University of Michigan, “Neurometabolomic approach to identify aging mechanisms in response to environmental challenges”.

8:45 p.m. Dr. Madhulika Rai, Indiana University Bloomington, “Lactate and glycerol-3-phosphate metabolism cooperatively regulate larval growth in a tissue nonautonomous manner”.

9:00 p.m. **Dr. Lesley Weaver**, Indiana University, “Regulation of oogenesis by inter-organ communication”.

9:15 p.m. **Dr. Kim Rewitz**, IT University of Copenhagen, “Gut-derived NPF regulates selective feeding decisions through inter-organ crosstalk to maintain nutrient homeostasis”

9:30 p.m. **Dr. Matthew Sieber**, UT Southwestern Medical Center, “More than Medelian: Metabolites function as heritable factors that drive progeny reprogramming”
Friday, April 08

8:30 a.m. – 10:00 a.m.
Town and Country Ballroom A

**Cell Biology I**

*Session Chairs*
Claire Thomas Penn State; Blake Riggs San Francisco State University; and Marco Monroy San Francisco State University

48 8:30 a.m. The septate junction protein Bark beetle (Bark) is required for *Drosophila* intestinal barrier function and homeostasis **Rachel Hodge** UCLA

49 8:45 a.m. Role of Intramembrane Spastic Paraplegia Proteins in Organization of Axonal ER and ER-mitochondria Contacts in *Drosophila* **ZEYNEP OZTURK** University of Cambridge

50 9:00 a.m. The Abelson tyrosine kinase cooperates with the Nedd4-family ubiquitin ligase Suppressor of Deltex to regulate the late endosomal passage of Notch and modulate signaling activation **Julio Miranda-Alban** University of Chicago

51 9:15 a.m. Understanding the Role of Loner in Myoblast Fusion. **Amrita Shrikant Gokhale** UT Southwestern Medical Center

52 9:30 a.m. Pericentrin-Like-Protein is a Kinesin-1 Adaptor that drives Centriole Motility. **Matthew Hannaford** National Heart Lung and Blood Institute

53 9:45 a.m. Uncovering the mechanism of BNIP3-mediated mtDNA selection in the female germline **Anastasia Minenkova** University of Toronto

8:30 a.m. – 10:00 a.m.
Town and Country Ballroom D

**Cell Division and Cell Growth**

*Session Chairs*
Sarah Siegrist University of Virginia; Wu-Min Deng Tulane University; and Gary Teeters University of Virginia

60 8:30 a.m. The role of Jagunal protein in the establishment of cortical polarity in *Drosophila melanogaster* neuroblast **Lelahiwat Legesse** San Francisco State University

61 8:45 a.m. Exploring the role of dynein in transporting *cen* mRNA to the centrosome **Hala Zein-Sabatto** Emory University

62 9:00 a.m. Elucidating the mechanism of coactivator Taiman/AIB1-driven cell competition and its relation to the Adenomatous Polyposis Coli (APC) tumor suppressor in *Drosophila* **Colby Schweibenz** Emory University

63 9:15 a.m. Cell-surface proteomic profiling identifies key regulators in epithelial cell competition **Ke Li** University of California, San Francisco

64 9:30 a.m. Hypoxia-dependent regulation of epithelial tissue growth and development **Abhishek Sharma** University of Calgary

65 9:45 a.m. Late Endosomes act as carriers for delivery of Ceramide phosphoethanolamine (CPE) with unique acyl chain anchors to cleavage furrows during male meiosis cytokinesis. **Govind Kunduri** National Cancer Institute
8:30 a.m. – 10:00 a.m.  
**Oral Presentation and Workshop Session Listings**

**Immunity and Microbiome**

*Session Chairs:* Nichole Broderick Johns Hopkins University; Will Ludington Carnegie Institution for Science; and Jessamyn Perlmutter (Jessie) University of Kansas

66 8:30 a.m. Immunostimulatory Lipids in *Drosophila* Bacterial Infection **Sophia Parks** University of California Riverside

67 8:45 a.m. Interorgan transfer of intact micron-sized lipid droplets to macrophages during the *Drosophila* immune response **Ishneet Kaur** Cal State University Fullerton

68 9:00 a.m. Paying the amino acid cost of the humoral immune response to bacterial infection **William H. Pearson** Imperial College London

69 9:15 a.m. The cytoplasmic incompatibility factor proteins CifA and CifB are both nucleases in *Drosophila melanogaster** **Rupinder Kaur** Vanderbilt University

70 9:30 a.m. A symbiotic niche in the *Drosophila* gut regulates the stable association of a multispecies community **Ren Dodge** Carnegie Institute of Washington

71 9:45 a.m. The Turandot proteins promote tolerance to stress by regulating energy consumption and tracheogenesis **Alexia L. Carboni** EPFL

8:30 a.m. – 10:00 a.m.  
**Physiology, Aging, and Metabolism II**

*Session Chairs* Ethan Greenblatt University of British Columbia; Laura Musselman Binghamton University; and Juliet Girard University of California, Los Angeles

54 8:30 a.m. Tissue-specific chromatin profiling reveals a key role for Clock-dependent transcription in regulation of *Drosophila* photoreceptor homeostasis **Juan Jauregui-Lozano** Purdue University

55 8:45 a.m. Circadian autophagy drives longevity response to Intermittent Time-Restricted-Feeding (iTRF) **Matthew Ulgherait** Columbia University Medical Center

56 9:00 a.m. The Neuronal and Molecular Mechanisms by Which Death Perception Impacts Fly Behavior and Lifespan **Tuhin Chakraborthy** University of Michigan, Ann Arbor

57 9:15 a.m. Blocking cell fusion inhibits age-induced polyploidy and maintains epithelial organization in *Drosophila** **Ari Dehn** Boston College

58 9:30 a.m. Mechanisms of Systemic and Cellular Growth Control by Cholesterol **Mette Lassen** University of Copenhagen

59 9:45 a.m. Hypoxia-dependent Control of Larval Maturation **Michael Turingan** University of Calgary
**Oral Presentation and Workshop Session Listings**

10:30 a.m. – 12:30 p.m.  
Town and Country Ballroom A

### Cell Biology II

**Session Chairs**  
Claire Thomas Penn State; Blake Riggs San Francisco State University; and Marco Monroy San Francisco State University

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<th>Session</th>
<th>Title</th>
<th>Speaker(s)</th>
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<tr>
<td>72</td>
<td>10:30 a.m. Regulation of Missshapen during Border Cell Migration</td>
<td>Gabriela Molinari Roberto</td>
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<td>Université de Montréal</td>
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<td>73</td>
<td>10:45 a.m. Investigating mechanisms regulating actin assembly in the early <em>Drosophila</em> embryo</td>
<td>Anna Yeh</td>
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<td>74</td>
<td>11:00 a.m. Discovery of a novel competitive interaction between the <em>Chlamydia trachomatis</em> early effector Tarp and the endogenous actin bundler Singed/Fascin during mechanosenory bristle development</td>
<td>George Aranjuez</td>
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<td>University of Central Florida</td>
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<td>75</td>
<td>11:15 a.m. Sufficiency of active Rac to drive whole tissue phagocytosis in vivo</td>
<td>Abhinava Mishra</td>
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<td>University of California Santa Barbara</td>
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<td>76</td>
<td>11:30 a.m. WAVE regulatory complex facilitates cell rearrangements through the generation of an F-Actin subpopulation at tri-cellular junction in the follicular epithelium</td>
<td>Lisa Calvary</td>
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<td>iGReD, FACULTE DE MEDECINE ET PHARMACIE</td>
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<td>77</td>
<td>11:45 a.m. Fat2 polarizes the WAVE complex to align protrusions for collective cell migration</td>
<td>Audrey Williams</td>
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<td>University of Chicago</td>
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<td>78</td>
<td>12:00 p.m. Defining the role of prostaglandins in collective cell migration</td>
<td>Samuel Mellentine</td>
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<td>University of Iowa</td>
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<td>79</td>
<td>12:15 p.m. Microtubule acetylation promotes epithelial cell stretching and squamous cell carcinogenesis in <em>Drosophila</em></td>
<td>Rachita Bhattacharya</td>
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<td>Indian Institute of Technology Kanpur, India</td>
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10:30 a.m. – 12:30 p.m.  
Town and Country Ballroom B

### Gene Regulation

**Session Chairs**  
Steven DeLuca Brandeis University; Trisha Wittkopp University of Michigan; and Colleen Hannon University of California, Berkeley

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<th>Session</th>
<th>Title</th>
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<tr>
<td>80</td>
<td>10:30 a.m. Maternal pioneer factor CLAMP regulates sex-specific transcript diversity in early <em>Drosophila</em> embryos.</td>
<td>Mukulika Ray</td>
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<td>Brown University</td>
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<td>81</td>
<td>10:45 a.m. Hippo pathway transcriptional regulators alter chromatin binding dynamics of the transcription factor Scalloped</td>
<td>Samuel Manning</td>
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<td>Monash University</td>
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<td>82</td>
<td>11:00 a.m. Hox linker domain phosphorylation alters Exd-Hox DNA-binding preferences and regulates gene expression</td>
<td>William Glassford</td>
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<td>Columbia University</td>
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<td>83</td>
<td>11:15 a.m. Assembly of the Brain tumor RNA decay pre-complex expedites downregulation of Notch signaling following asymmetric stem cell division</td>
<td>Hideyuki Komori</td>
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<td>University of Michigan</td>
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<td>84</td>
<td>11:30 a.m. Using CRISPRi to uncover mechanisms of transcriptional repression by Rb and CtBP co-repressors</td>
<td>Ana-Maria Raicu</td>
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<td>Michigan State University</td>
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<td>85</td>
<td>11:45 a.m. Sculpture of a sex-specific piRNA program</td>
<td>Peiwei Chen</td>
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<td>California Institute of Technology</td>
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<td>86</td>
<td>12:00 p.m. The steroid hormone Ecdysone coordinates larval growth and development through its interaction with the transcriptional repressor Smrter.</td>
<td>Joanna Wardwell-Ozgo</td>
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<td>Emory University School of Medicine</td>
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<td>87</td>
<td>12:15 p.m. Embryo development requires histone acetylation by Nejire during the maternal-to-zygotic transition</td>
<td>Audrey Marsh</td>
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<td>University of Wisconsin-Madison</td>
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#Dros22 | 44
10:30 a.m. – 12:30 p.m.
Town and Country Ballroom C

**Neurobehavior I**

*Session Chairs*
Karla Kaun Brown University; Marie Suvar Vanderbilt University; and John Hernandez Brown University

88 10:30 a.m. Color augments motion vision for detecting approaching objects in *Drosophila* Kit D Longden HHMI Janelia Research Campus

89 10:45 a.m. A hymenopteran odorant alerts flies to bury eggs Shaun Davis University of Arizona

90 11:00 a.m. STIM dependent dopamine-neuropeptide axis maintains the larval drive to feed and grow. Nandashree Kasturacharya National Centre for Biological Science

91 11:15 a.m. A taste for toxins: Evolution of feeding preferences in the herbivorous drosophilid *Scaptomyza flava* Julianne Pelaez University of California, Berkeley

92 11:30 a.m. The mRNA-binding protein Pumilio pleiotropically regulates food-related phenotypes through foraging Ina Anreiter University of Toronto

93 11:45 a.m. Genetic Variation in Cocaine Preference in the *Drosophila melanogaster* Genetic Reference Panel Jeffrey Hatfield Clemson University

94 12:00 p.m. Descending neurons coordinate anterior grooming behavior in *Drosophila* Li GUO University of California, Santa Barbara

95 12:15 p.m. *Drosophila* females receive male substrate-borne signals through specific leg neurons during courtship Caroline Fabre University of Cambridge

10:30 a.m. – 12:30 p.m.
Town and Country Ballroom D

**Stem Cells, Regeneration, and Tissue Repair**

*Session Chairs*
Lesley Weaver Indiana University; Adrian Halme University of Virginia School of Medicine; and Mahi Rahman University of Utah – Huntsman Cancer Institute

96 10:30 a.m. *chinmo*-mutant spermatogonal stem cells cause mitotic drive by evicting non-mutant neighbors from the niche CHEN YUAN TSENG NYU Grossman School of Medicine

97 10:45 a.m. Role for local ecdysone signaling in *Drosophila* imaginal wing disc regeneration Douglas Terry Emory University

98 11:00 a.m. Blocking the native differentiation program recapitulated in *yki*/+A*-induced midgut tumor alters the tumor cells’ capacity to disseminate and induce cachexia-like wasting Inez Pranoto University of Washington

99 11:15 a.m. Enterocyte dynamics in the *Drosophila* adult midgut epithelium upon infection Shyama Nandakumar Cornell University

100 11:30 a.m. PAAC to the new normal: Intravital imaging of dynamic brush border repair in the adult *Drosophila* intestine Anthony Galenza Stanford University

101 11:45 a.m. Asymmetric nucleosome density and differential condensation of sister chromatids coordinates with Cdc6 to ensure distinct cell fates Rajesh Ranjan Johns Hopkins University

102 12:00 p.m. Rab35 mediates two distinct pathways that regulate actin modification through Mical/SelR and actin remodeling through Septins during cell wound repair Mitsutoshi Nakamura Fred Hutchinson Cancer Research Center

103 12:15 p.m. Re-entry into mitosis and regeneration of intestinal stem cells through enteroblast dedifferentiation in *Drosophila* midguts Aiguo Tian Tulane University
Oral Presentation and Workshop Session Listings

Evolution II
Session Chairs
Geoffrey Findlay College of the Holy Cross; Ana Llopart University of Iowa; Cécile Courret University of Rochester; and Llewellyn Green University of Houston

112 4:30 p.m. Functional divergence of the bag of marbles gene in the Drosophila melanogaster species group Jaclyn Bubnell Cornell University

113 4:45 p.m. Cross-species incompatibility between a DNA satellite and the Drosophila homolog of Spartan poisons germline genome integrity Cara Brand University of Pennsylvania

114 5:00 p.m. A putative de novo evolved gene is essential for male fertility via a paternal effect Sara Guay College of the Holy Cross

115 5:15 p.m. The Y-linked gene, WDY, is necessary for sperm storage in Drosophila melanogaster. Yassi Hafezi Cornell University

116 5:30 p.m. Investigating the evolution of new body parts in the rapidly evolution genitalia of Drosophila Gavin Rice University of Pittsburgh

117 5:45 p.m. Do supergenes mediate seasonal adaptation in overwintering Drosophila? Joaquin Nunez University of Virginia

118 6:00 p.m. The evolution and genetic mechanism of sex-ratio meiotic drive in Drosophila affinis Wen-Juan Ma University of Kansas

119 6:15 p.m. The genetic basis of cardiac glycoside resistance in wild-caught Drosophila melanogaster Arya Rao Columbia University

Neurodevelopment II/Neurobehavior II
Session Chairs
Marie Suvar Vanderbilt University; Karla Kuan Brown University; Yu-Chieh David Chen New York University; Vanessa Auld University of British Columbia; Xin Li University of Illinois; and John Hernandez Brown University

104 4:30 p.m. Cellular and molecular basis of detection of acidic pH in fly gustatory system Anindya Ganguly University of California, Santa Barbara

105 4:45 p.m. Developmental mechanisms regulating the formation and function of drosophila sleep-wake circuit Mubarak H Syed University of New Mexico

106 5:00 p.m. Associative learning drives longitudinally-graded presynaptic plasticity of neurotransmitter release along axonal compartments Aaron Stahl The Scripps Research Institute

107 5:15 p.m. A conserved RNA binding protein regulates RNAs critical for neurodevelopment Carly Lancaster Emory University

108 5:30 p.m. Recovery from cold-induced reproductive dormancy is regulated by temperature-dependent AstC signaling Matthew R. Meiselman Cornell University

109 5:45 p.m. Orion bridges phosphatidylserine and Draper in the phagocytosis of somatosensory neurons in Drosophila Hui Ji Cornell University

110 6:00 p.m. The Circular RNA Edis-Relish-Castor Axis Regulates Neurodevelopment Wei Liu Johns Hopkins University School of Medicine

111 6:15 p.m. Netrins and receptors control Drosophila optic lobe organization and transmedullary neuron axon targeting Yu Zhang University of Illinois Urbana-Champaign
4:30 p.m. – 6:30 p.m.
Town and Country Ballroom C

**Reproduction and Gametogenesis**

*Session Chairs*
Kari Lenhart Drexel University; Jennifer Mierisch Loyola University of Chicago; and Rafael Demarco University of California, San Francisco

120 4:30 p.m. Old Hormones, new tricks: Juvenile Hormones ensure primordial germ cells reach the embryonic somatic gonad **Lacy Barton** NYU, Skirball Institute

121 4:45 p.m. The role of *Drosophila* germ granules in regulating mRNA stability during germ cell development **Anna Hakes** Princeton University

122 5:00 p.m. A feedback loop between heterochromatin and the nucleopore complex controls germ-cell to oocyte transition during *Drosophila* oogenesis **Kahini Sarkar** University at Albany, SUNY

123 5:15 p.m. Single-cell testes expression of ampliconic meiotic drivers on the sex chromosomes of *Drosophila miranda** **Kevin Wei** University of California Berkeley

124 5:30 p.m. Ecdysone signaling times border cell migration by regulating protrusive activity and cell-cell adhesion **Mallika Bhattacharya** University of Maryland, Baltimore County

125 5:45 p.m. Cell intruder targeting system mediates paternal mitochondrial destruction after fertilization in *Drosophila** **Sharon Ben-Hur** Weizmann institute of science

126 6:00 p.m. Transcriptome analysis implicates circadian clock genes in Sex Peptide-dependent post-mating responses in *Drosophila melanogaster** females **Sofie Delbare** Cornell University

127 6:15 p.m. Genetic coordination of sperm morphology and seminal fluid proteins promotes male reproductive success in *Drosophila melanogaster** **Jake Galvin** George Washington University

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Saturday, April 09
8:00 a.m. – 10:00 a.m. Town and Country Ballroom B

**Chromatin**

*Session Chairs*
Julie Secombe Albert Einstein College of Medicine; Amanda Amodeo Dartmouth College; and Dahong Chen NIH

144 8:00 a.m. Uncovering how the pioneer transcription factor Grainy head binds and opens chromatin **Meghan Freund** University of Wisconsin-Madison

145 8:15 a.m. Image-based investigation of enhancer-promoter bridging in the *Drosophila* genome **Aleena Patel** Stanford University

146 8:30 a.m. *Drosophila* genome architectural proteins form in vivo liquid-liquid phase separating **Bright Amankwa** University of Tennessee, Knoxville

147 8:45 a.m. Chromatin state transitions in the *Drosophila* intestinal lineage gives new insights into cell type specification **Manon Josserand** Institut Curie

148 9:00 a.m. Condensin II loss ameliorates long-range chromosomal interactions in both active and inactive physical compartments within a chromosome territory **Randi Isenhart** University of Pennsylvania

149 9:15 a.m. Histone gene replacement reveals functional independence, redundancy and synergism between lysine 36 of H3.2 and H3.3 **Harmony Salzler** UNC Chapel Hill

150 9:30 a.m. Single-cell chromatin accessibility in *Drosophila melanogaster* human tauopathy model **Eve Lowenstein** Oregon Health & Science University

151 9:45 a.m. Simultaneous cellular and molecular phenotyping of embryonic mutants using single cell regulatory trajectories **Stefano Secchia** European Molecular Biology Laboratory (EMBL)

8:00 a.m. – 10:00 a.m. Town and Country Ballroom A

**Models of Human Disease I – Diseases with a Neurological Focus**

*Session Chairs*
Tirtha Kamal Das ICAHN School of Medicine at Mount Sinai; Daniela Zarnescu University of Arizona; and Rebekah Keating Godfrey University of Arizona

152 8:00 a.m. A KDM5-Prospero transcriptional axis functions during early neurodevelopment to regulate mushroom body formation **Hayden Hatch** Albert Einstein College of Medicine

153 8:15 a.m. Neuronal mechanisms of neurofibromin dependent metabolic regulation **Valentina Botero** Scripps Research Institute

154 8:30 a.m. Traip controls brain size via suppression of mitotic DNA bridges **Ryan O’Neill** National Heart, Lung, and Blood Institute, NIH

155 8:45 a.m. Dietary restriction ameliorates TBI-induced phenotypes in *Drosophila melanogaster*. **Rebecca Delventhal** Lake Forest College

156 9:00 a.m. Cyclin-dependent kinase 8 regulates mitochondrial morphology and modulates a Parkinson’s disease model in *Drosophila* **Zhe Liao** Simon Fraser University

157 9:15 a.m. Endurance exercise ameliorates phenotypes in *Drosophila* models of Spinocerebellar Ataxies **Alyson Sujkowski** Wayne State University

158 9:30 a.m. Loss of function variants in *TIAM1* are associated with developmental delay, intellectual disability and seizures **Shenzhao Lu** Baylor College of Medicine

159 9:45 a.m. Extremely rare variants in *EIF4A2* are associated with a neurodevelopmental disorder characterized by hypotonia, intellectual disability and epilepsy **Maimuna Paul** Jan and Dan Duncan Neurological Research Institute, Baylor College of Medicine
8:00 a.m. – 10:00 a.m.  
Town and Country Ballroom C

**Patterning and Morphogenesis I**

*Session Chairs:* Seyeon Chung Louisiana State University; Todd Blankenship University of Denver; and Raj Loganathan Johns Hopkins University School of Medicine

**136** 8:00 a.m. Visceral organ morphogenesis via calcium-patterned muscle constrictions *Noah Mitchell* University of California-Santa Barbara

**137** 8:15 a.m. Maintaining symmetry in morphogenetic movements *Celia Smits* Princeton University

**138** 8:30 a.m. Malvolio, a Fork head target metal ion transporter, is required for salivary gland morphogenesis *Srihitha Akula* Johns Hopkins University

**139** 8:45 a.m. Defining the structure and function of the multivalent protein network at cell-cell adherens junctions during morphogenesis *Anja Schmidt* University of North Carolina at Chapel Hill

**140** 9:00 a.m. A feedback mechanism mediated by actomyosin activity-dependent apical targeting of Rab11 vesicles reinforces apical constriction *Wei Chen* Dartmouth College

**141** 9:15 a.m. Mechanical cues planar polarize Pins and orient divisions during *Drosophila* gastrulation *Jaclyn Camuglia* MIT

**142** 9:30 a.m. Tissue geometry reorients in-plane homeotic tension to promote folding. *Floris Bosveld* INSTITUT CURIE

**143** 9:45 a.m. The flipside of tissue growth: how the two layers of the wing imaginal disc keep pace with each other *Sophia Friesen* University of California, Berkeley

10:30 a.m. – 12:00 p.m.  
Town and Country Ballroom B

**Cell Stress and Cell Death**

*Session Chairs:* Deepika Vasudevan University of Pittsburgh; Andreas Jenny Albert Einstein College of Medicine; and Lydia Grmai University of Pittsburgh

**180** 10:30 a.m. Ionizing Radiation induces cells with past caspase activity that contribute to the adult organ in *Drosophila* and show reduced Loss of Heterozygosity *Sarah Colon Plaza* University of Colorado Boulder

**181** 10:45 a.m. Irradiation-Induced Cell Migration: An Epithelial-Mesenchymal Transition Process Regulated By Low-Level Caspase Activity *Lena Sapozhnikov* The Weizmann Institute of Science

**182** 11:00 a.m. A genome-wide CRISPR screen identifies DPM1 as a modifier of DPAGT1 deficiency and ER stress *Hans Dalton* University of Utah

**183** 11:15 a.m. The Protein Phosphatase-1 regulatory subunit dPPP1R15 controls collective cell migration via the eIF2-alpha-ATF4-dependent ER stress pathway *Yujun Chen* Kansas State University

**184** 11:30 a.m. Increased intracellular pH promotes cell death in the developing *Drosophila* eye *Joanne Mendez* San Jose State University

**185** 11:45 a.m. Lamp1 mediates lipid transport, but is dispensable for autophagy in *Drosophila* *Norin Chaudhry* Iowa State University
10:30 a.m. – 12:00 p.m.
Town and Country Ballroom A

Models of Human Disease II

Session Chairs: Tirtha Kamal Das ICAHN School of Medicine at Mount Sinai; Daniela Zarnescu University of Arizona; and Rebekah Keating Godfrey University of Arizona

174 10:30 a.m. Genetic modifiers of NGLY1 deficiency identified through a Drosophila genetic screen point to the role of NGLY1 in ERAD Travis Tu’ifua University of Utah

175 10:45 a.m. Identifying the genetic links between insomnia and cardiovascular disease using Drosophila models of sleep and cardiac physiology Farah Abou Daya University of Alabama at Birmingham

176 11:00 a.m. A multi-model system approach identifies genetic interactions underlying atrial fibrillation susceptibility James Kezos Sanford Burnham Prebys Medical Discovery Institute

177 11:15 a.m. Exploring the effects of diet-induced obesity on the invasiveness of Drosophila tumours Cecilia Cabrera MRC London Institute of Medical Sciences

178 11:30 a.m. The Clot Thickens: Tumor-induced coagulopathy is a conserved driver of host mortality Katy Ong UC Berkeley

179 11:45 a.m. Modeling Paraneoplastic Diabetes in Drosophila Jyoti Tripathi Indian Institute of Technology Kanpur

10:30 a.m. – 12:00 p.m.
Town and Country Ballroom C

Patterning and Morphogenesis II

Session Chairs
Seyeon Chung Louisiana State University; Todd Blankenship University of Denver; and Raj Loganathan Johns Hopkins University School of Medicine

168 10:30 a.m. Cactin, a component of spliceosome C complex, is required for collective border cell polarization and migration in the Drosophila ovary Guangxia Miao University of California-Santa Barbara

169 10:45 a.m. The cytoskeletal mechanics that shape a stem cell niche Bailey Warder University of Pennsylvania

170 11:00 a.m. Endocytic regulation of Fat protocadherins in tissue growth and morphogenesis Jyoti Misra University of Texas at Dallas

171 11:15 a.m. Inter-organ signaling regulates the onset of myoblast fusion Zhi-Rong Ruan UT Southwestern Medical Center

172 11:30 a.m. Distinct contributions of ECM proteins to basement membrane mechanical properties in Drosophila Uwe Töpfer Technische Universität Dresden

173 11:45 a.m. Affinity-driven germline-soma interactions mediate Drosophila oogenesis Vanessa Weichselberger University of Freiburg
Oral Presentation and Workshop Session Listings

Techniques and Technology Session

Session Chairs
Benjamin White NIH; Jonathan Zirin Harvard Medical School; and Oguz Kanca Baylor College of Medicine

192 4:00 p.m. Enabling recombination on the 4th chromosome: FRT101F and Bloom syndrome helicase
Stuart Newfeld Arizona State Univ

193 4:15 p.m. Temperature-Inducible precision guided Sterile Insect Technique, Ti-pgSIT
Nikolay Kandul UC San Diego

194 4:30 p.m. Seamless genetic engineering via CRISPR-triggered SSA allows spatio-temporal control of gene labelling
Gustavo Aguilar University of Basel

195 4:45 p.m. SpyChIP identifies genome-wide and cell type-specific transcription factor occupancy
Siqian Feng Columbia University

196 5:00 p.m. The continuum of Drosophila embryonic development at single cell resolution
Xingfan Huang University of Washington

197 5:15 p.m. Optogenetic manipulation of endogenous proteins in Drosophila by light-inducible trapping
Yineng Xu Cornell University

198 5:30 p.m. Spying on the dynamics of neuropeptides by the GRAB sensors in Drosophila
xiju Peking University

199 5:45 p.m. Cryopreservation method for Drosophila melanogaster embryos
Li Zhan University of Minnesota

Plenary Session III

Session Chairs
Artyom Kopp University of California, Davis; and Erika Bach New York University School of Medicine

200 7:45 p.m. GSA Awards
Denise Montell Genetics Society of America

201 8:00 p.m. Minute mutations, cell competition, and cellular surveillance
Nick Baker Albert Einstein College of Medicine

202 8:30 p.m. Innate immune signaling sculpts neuron-glia interactions across lifespan
Heather Broihier Case Western Reserve University

203 9:00 p.m. Coping with mechanical stress: tissue dynamics in homeostasis and repair
Yanlan Mao University College London

204 9:30 p.m. The evolution of morphological novelties at the cellular and gene regulatory levels
Mark Rebeiz University of Pittsburgh
Sunday, April 10

8:30 a.m. – 10:30 a.m.
Town and Country Ballroom A

Closing Plenary

Session Chairs
Ellie Heckscher The University of Chicago; Justin DiAngelo Penn State Berks; and Sally Horne-Badovinac The University of Chicago

205 8:30 a.m. What long-term quantitative Imaging of stem-cells in their natural environment can tell us about the way they are born, differentiate, and talk to each other Guy Tanentzapf University of British Columbia, Canada

206 9:00 a.m. Becoming an oocyte: demise of the germ cell program and new beginnings Prashanth Rangan Icahn School of Medicine at Mount Sinai

207 9:30 a.m. Pioneers, settlers, and life on the Oregon trail: Transcriptional regulation during development Melissa Harrison University of Wisconsin-Madison

208 10:00 a.m. Temporally dynamic antagonism between transcription and chromatin compaction controls stochastic photoreceptor specification Robert Johnston Johns Hopkins University
Poster Session Listings
01. Cell Stress and cell death

209A Identifying potential caspase substrates involved in spermatid terminal differentiation in *Drosophila* Tsil Braun Weizmann Institute of Science

210B Non-apoptotic activation of *Drosophila* Caspase-2/9 limits the growth of open-wound-like tumours by modulating JNK signalling and the tumour microenvironment Luis Alberto Lopez University of Oxford

211C Differential sensitivity to cell death cues in long-lived, non-regenerative cells in the *Drosophila* hindgut Jessica Sawyer Duke University

212A Knockdown of CG6191 (Mary Shelley) results in compensatory apoptosis in the imaginal wing disc mediated through JNK signaling Razan El Yaman University of Detroit Mercy

213V Ribosome protein mutant cells rely on the GR64 cluster of gustatory receptors for survival and proteostasis in *Drosophila* Alex Mastrogiannopoulos University of Bristol

214C BMP-gated cell cycle progression drives anoikis during mesenchymal collective migration Frank Macabenta California Institute of Technology

215V Role of M1BP, a transcriptional pausing factor in JNK-mediated cell death during eye development Hannah Darnell University of Dayton

216B PDZD8 promotes autophagy at ER-Lysosome contact sites to regulate synaptic growth Rajan Thakur Brown University

217C Investigating the contributions of Rab11 and the UPR in amyloid-β load at the *Drosophila* neuromuscular junction Fatemeh Barmaleki Lighavn Southern Illinois University-Ericville

218A The stress response transcription factor ATF4 regulates oocyte maturation Lydia Grmai University of Pittsburgh

219B A *Drosophila* screen identified a role of histone methylation in ER stress preconditioning Katie Owings University of Utah

220C Deciphering an unrecognized role of bZIP transcription factor IRBP18 during unfolded protein response (UPR) in *Drosophila* Sahana Mitra New York University

221A ER stress-induced JNK promotes stress granule formation via epigenetic modifications in *C9orf72* mediated ALS/FTD Sahana TG Mayo Clinic
02. Immunity and the microbiome

235C Characterization and functional analysis of diverse reactive Oxygen species produced during the immune response to bacterial infection. Alva Duenas Cal State University Fullerton

236A Identification and characterisation of functionally distinct macrophage subpopulations in Drosophila Martin Zeidler The University of Sheffield

237B Diptericin A protects flies from opportunistic gut infections in a sex dependent manner Sarah Mullinax University of Kansas

238C Zika Virus infection in Drosophila brain activates host immune responses in a sex-dependent manner Ghada Tafesh The George Washington University

239A Short-term feeding on high sugar increases susceptibility to infection Andrea Darby Cornell University

240B Phagocytosis-dependent activation of Nrf2 strengthens the macrophage inflammatory response whilst limiting immune senescence and systemic tissue damage. Giuliana Clemente University Of Bristol

241C Identifying Candidate Genes and Genetic Networks that Influence the Age-specific Ability to Clear an Infection Using Genome Wide Association Tests (GWAs) Shonda Campbell University of Maryland Baltimore County

242A Modified binding site of IDGF proteins is important for their function Lucie Kucerova Biology Centre of the Czech Academy of Sciences, Institute of Entomology

243B Phagocytic defects lead to or exacerbate neurodegeneration through increased immune signaling Guangmei Liu Boston University

244C Peroxisomes regulate the Imd amyloid fibril formation and subsequent Relish signaling pathway Yizhu Mu Dalhousie university

245A Identification of Enhancers of the Drosophila Innate Immune System Lianne Cohen Boston University

246B Title: Exploring transcriptional signatures of Anti-Microbial Peptides early in infection to predict infection outcomes Radhika R Cornell University

247C Metchnikowin alleles are associated with both immune and life history phenotypes Jessamyn Perlmutter University of Kansas

248A JAK/STAT mediated metabolic reprogramming during immune response Ellen McMullen University of South Bohemia in České Budějovice

249B The Role of Professional Phagocytes during Cell Death in the Ovary of Drosophila melanogaster Alexandra Chasse Boston University
250C The role and regulation of metabolic enzymes astray and Nmdmc during infection Krista Grimes Imperial College London

251A Endocrine regulation of metabolism and immunity in response to commensal and pathogenic bacteria Scott Keith Cornell University

252B Domestication of a phage-encoded DNAse I by Drosophila Rebecca Tarnopol UC Berkeley

253C ShKT-domain-containing protein from parasitic nematode is toxic to Drosophila melanogaster Aklima Khanam Lima University of California Riverside

254A Nematode secreted PLA₂ displays toxicity and immunosuppression in Drosophila melanogaster Ogadinma Okakpu University of California, Riverside

255B Drosophila melanogaster containing a galbut virus endogenous viral element are resistant to infection Ali Brehm Colorado State University

256C Age-dependent antiviral immunity in Wolbachia-infected Drosophila melanogaster Brian Kmiecik The University of Alabama

257A The Evolutionary Genetic Basis of Bacterial-Mediated Embryonic Lethality Mahip Kalra Vanderbilt University

258B Microbial Influence on Drosophila sechellia Fitness on Octanoic Acid Jake Erley Wesleyan University

259C Kismet affects gut biomechanics, the gut microbiome, and gut-brain axis in Drosophila melanogaster Chloé Welch California State University, Sacramento

260A The relationship between natural diet, microbiome, and life history in Drosophila melanogaster Brittany Burnside Brigham Young University

261B Molecular and transcriptional characterization of a physical niche mediating symbiotic gut microbe colonization in Drosophila melanogaster Haolong Zhu Carnegie Institution for Science

262C Microbiota effects on climbing abilities in w^{111B} flies Tanner B. Call Midwestern University

263A Effects of host genetic feeding preferences in shaping microbiota composition in D. melanogaster Caroline Massey Brigham Young University

264B The Influence of Lab Manipulated Fermented Fruit and Maternally Inherited Microbiota on Metabolic Phenotype Oluwatobi Fijabi University of Alabama

265C The influence of environmental factors on the composition of fruit fly microbiota. Reese Hunsaker Brigham Young University

266V Evaluating Approaches for Bacterial Mono-association in Parkinson’s disease Model Drosophila melanogaster Paige E Bonnette Midwestern University

267B Transcriptional Profiling of Immune Priming in Drosophila melanogaster Kevin Cabrera University of California, Irvine

268V Establishing the feasibility of Drosophila melanogaster as a model system for Acinetobacter baumannii infection Melanie Garcia California State University, Fullerton

269V The role of host microbiota in aging of Drosophila melanogaster Courtney Mueller California State University, Fullerton

270V Metabolic regulation of blood progenitor homeostasis and heterogeneity by TCA cycle in development and immune response in Drosophila larvae ajay kumar Institute For Stem Cell Science and Regenerative Medicine

271V Amyloid Beta Peptide Plays an Immune Role in Alzheimer’s Disease Pathogenesis Nguyen Le Illinois State University

272V Immune role of Drosophila melanogaster Kazal-type serine protease inhibitor CG14933 Alexandra Hrdina Max Planck Institute for Infection Biology

273V Gut barrier defect and hyperactivation of innate immune response in a Drosophila model of NGLY1 deficiency Ashutosh Pandey Baylor College of Medicine, Houston, TX-77030, USA


275V In vivo demonstration of polymorphisms in antimicrobial peptides shaping host-pathogen interactions Mark Hanson EPFL

276V Does varying investment in egg production modify immune defense in mated female Drosophila melanogaster? Kathleen Gordon Cornell University

277V Not quite FedEx: How are venom proteins packaged for delivery by the parasitoid wasp Ganaspis hookeri? Nicholas Bretz Illinois State University

278V Microbiome remodeling influences Drosophila immune response across generations Krystal Maya-Maldonado Johns Hopkins University

279V Role of Juvenile hormone in mediating trade-offs between immunity and reproduction Vanika Gupta Cornell University

03. Evolution

280C Comparative sex chromosome evolution in Drosophila robusta species group Kamalakar chatla University of California, Berkeley
281A Effects of epigenetic silencing of transposable elements on local recombination rate Yuheng Huang UC-Irvine

282B Evolution of Drosophila glue adhesiveness Manon Monier Institut Jacques Monod

283C Reconstructing the evolutionary history and neofunctionalization of the ZAD-Znf chromatin regulator dwg Jack Jurmu Bemidji State University

284A Horizontal transfer of an apoptosis-inducing toxin gene in an agriculturally destructive fruit fly genus Saron Akalu UC Berkeley


286C A genome wide model for estimating DNA transposable element excision rates in Drosophila virilis Stefan Cerbin University of Kansas

287A Testing the Effects of Fast-Evolving Heterochromatic Genes on Euchromatic Transposable Elements in Drosophila Leila Lin UC Irvine

288B Predicting Gene Essentiality in Non-Model Drosophila Species to Understand Phenotypic Evolution of New Genes Dylan Sosa University of Chicago

289C Extensive genome-wide homozygosity tracts reveal micro-environment population structure in Drosophila populations. Peter Andolfatto Columbia University

290A SR drive and the evolutionary history of the Y chromosome in Drosophila simulans Cecile Courret University of Rochester

291B Natural Selection Shapes Variation in Genome-wide Recombination Rate in Drosophila pseudoobscura Kieran Samuk University of California, Riverside

292A Acetobacter to Lactobacillus Ratios within Drosophila melanogaster Microbiota, Diet and Environment Across a Latitudinal Gradient Aubrey Johansen Brigham Young University

293B Chromosomal Rearrangements in two populations of Drosophila yakuba Timothy Ranallo-Benavidez UNC Charlotte

294C Karyotype evolution - Insights from a D. melanogaster strain with unusual sex chromosome karyotypes Duojia Li Whitehead Institute for Biomedical Research

295C Tandem duplications as targets of selection in local adaptation Taylor Conway University of North Carolina at Charlotte

296A Tandem duplications as a source of local adaptation in island Drosophila Brandon Turner UNC Charlotte

297B Chromosomal rearrangement rates in Drosophila vs. temperate D. melanogaster embryos Emily Mikucki University of Vermont

298C Genetic variation in recalcitrant repetitive genomic regions in Drosophila melanogaster Harsh G. Shukla University of California, Irvine

299A A tandem duplication in Drosophila melanogaster shows enhanced expression beyond the gene copy number David Loehlin Williams College

300B Seasonal plasticity and adaptive fluctuations of gene expressions of D. melanogaster Yang Yu University of Virginia

301C Shavenbaby as a model to link phenotypic and gene regulatory changes across Drosophila evolution Tatiana Gaitan Stowers Institute for Medical Research

302A Identification of Three Novel Paralogs of CG3795 Jaquelyn Hester Rutgers University - New Brunswick

303B The evolution of morphology at a single-cell resolution Ella Pregler-Ben Noon Technion - Israel Institute of Technology

304C New Transcript Formation in Hybrid Drosophila Rebekah Rogers UNC Charlotte

305A More than molting: Ecdysone signaling in adult Drosophila Zachary Drum Wesleyan University

306B Comparative Analysis of Node Degree on Gene Evolution in the Insulin Signaling Pathway Abigail Myers The University of Alabama

307C De novo suppression of a male-harming mitochondrial mutation in Drosophila melanogaster via laboratory passaging Sarah A. Tomlin Fred Hutchinson Cancer Research Center

308A Maternal mRNAs underlie higher heat tolerance in tropical vs. temperate Drosophila melanogaster embryos Emily Mikucki University of Vermont

309B Evolutionarily young, gene-silencing piRNA: innovation in gene regulation or control of selfish genetic elements? Peiwei Chen California Institute of Technology

310C Multi-trait genetic characterization of resistance to heavy metal stress Elizabeth Everman University of Kansas

311A Discovering Zinc Resistance Loci via Extreme QTL Mapping Katherine Hanson University of Kansas

312C Correlating Regulatory Region and Genetic Evolution Chimmay P. Rele The University of Alabama

313A Correlating Regulatory Region and Genetic Evolution Chimmay P. Rele The University of Alabama

314A What shall we do with the melanogaster species group? Artyom Kopp University California, Davis

315B Modelling Satellite DNA organization Sherif Negm University of rochester

316C Testing long-term evolutionary change and stasis in the pioneer factor Grainyhead Henry Ertl University of Michigan
317A Rapid diversification shapes the evolution and function of sperm nuclear basic protein genes in *Drosophila* species Ching-Ho Chang Fred Hutchinson cancer research center

318B Molecular mechanisms underlying alternating cell polarity establishment in *Scaptodrosophila* follicle cells Miriam Osterfield UT Southwestern

319C Genomic analyses of new genes and their phenotypic effects reveal rapid evolution of essential functions in *Drosophila* development shengqian xia University of Chicago

320A Resolving the evolution and diversification of a *Hox*-regulated pigmentation trait Ivan D. Mendez Gonzalez University of Pittsburgh

321B Germ granule analysis reveals conserved and diverse features among *Drosophila* species Matthew Niepielko Kean University

322C Reorganizations in the apical extracellular matrix underlie morphological diversification in *Drosophila* genital structures Ben Vincent University of Pittsburgh

323A Tracking Natural Variation in Tolerance to Transposable Elements Across Time Llewellyn Green The University of Houston

324B Intralocus sexual conflict drives new gene evolution in *Drosophila* Deanna Arsala University of Chicago

325C Identifying the epigenetic determinants of gene-by-environment interactions using *Drosophila melanogaster* diapause as a model Abigail DiVito Evans University of Pennsylvania

326A Redox balance and the oxidative stress response following acute heat stress of the early embryo in temperate and tropical lines of *Drosophila melanogaster* Thomas O’Leary University of Vermont

327B Widespread effects of early embryonic thermal stress on morphology, physiology and performance across the lifespan in *D. melanogaster* Sara Helms Cahan University of Vermont

328C Ultra Violet radiation tolerance between *Drosophila* species from São Tomé and Africa: Adaptation across *Drosophila yakuba* and *Drosophila santomea* James Titus-McQuillan UNC Charlotte

329A Genomic Benchmarks: A Collection of Datasets For DNA Sequence Classification Petr Simecek Central European Institute of Technology, Masaryk University

330B Insights into *D. melanogaster* and *D. simulans* transcriptome evolution and complexity using transcript distance (TranD) Lauren McIntyre University of Florida

331C Bacterial infection promotes transposable element activation in *Drosophila* species Sabrina Mostoufi University of Oregon

332A Prevalence of galbut virus in wild *Drosophila melanogaster* populations and to lab colonization Tillie Dunham Colorado State University

333V The role of chromatin and DNA sequence changes in *de novo* gene origin Logan Blair UC Davis

334V Experimental Evolution for Longevity Differentiation in *Drosophila melanogaster* Karen Walsh Cal State University, Fullerton

335V Evolution of longevity and immunity differentiation in *Drosophila melanogaster* Joshua Glowalla California State University, Fullerton

336V Trade-offs between cost of ingestion and rate of intake drive defensive toxin use Tyler Douglas University of California Berkeley

337V Dietary utilization drives the differentiation of gut bacterial communities Chau-Ti Ting National Taiwan Univ

338B Identification of a pseudogene derived from *Arr1* in *D. ananassae* Ishtar Olaveja New Jersey City University

339V Frequent co-domestication of *PIF*-like transposable element proteins in insects Fatema runa University of Texas at Arlington

340V Evolutionary diversification and repeated gene capture by telomeric retrotransposons across the Drosophila genus Jae Hak Son Rutgers University

341V Analysis of eIF4E1 Conservation and Synteny across *Drosophila* Species to Understand the Evolution of the Insulin Pathway Jessica Strand Anoka Ramsey Community College

342V Genome-wide relaxation and phylogenetic inertia of codon usage bias in the Neotropical *Drosophila saltans* species group Carolina Prediger Sao Paulo State University

343V Resemblances Among Different Romanian Ecotypes of *Drosophila melanogaster* L. Gallia Butnaru Banat University of Agricultural Sciences

344V Screening for cryptic genetic variation in natural populations of *Drosophila melanogaster* Gabriella Moreno California Lutheran University

345V Genotype-dependent effects of human disturbance on organismal fitness Heidi Johnson University of Alabama at Birmingham

346V Evolutionary conservation and divergence of 3D genome organization in *Drosophila* Nicole Torosin Rutgers University

347V The interaction between male courtship plasticity and female mate choice in *Drosophila melanogaster* Samuel Marston University of Utah
04. Stem cells, regeneration and tissue injury

348V A locus affecting pigmentation evolution and male mating success between two sibling species in Drosophila Amir Yassin Laboratoire Evolûtion, Génomes, Comportement et Écologie, CNRS, IRD, Université Paris-Saclay

349V Evidence of horizontal transmission of Wolbachia in Drosophila sturtevanti and Drosophila lehrmanae (saltans group) Bruna Roman Sao Paulo State University

350V Sexual Selection is not a Driver of Female Sperm Storage Organ Length in Drosophila Cameron Himes The George Washington University

351V Intermolecular interactions drive protein adaptive and co-adaptive evolution at both species and population levels Junhui Peng Rockefeller University

352V Synthetic evolution of a Drosophila developmental network predicts trends in wild populations Xueying Li EMBL

353V fushi tarazu and fushi tarazu factor 1, novel re-wiring in the Tribolium castaneum pair-rule gene network Ximena Gutierrez Ramos University of Maryland

354V Probing evolution by Hox locus replacement ANKUSH AURADKAR University of California, San Diego

355V Genetic architecture of male-female coevolution in Drosophila melanogaster Mollie Manier George Washington University

356V Genetic basis of variation in high sugar-induced diabetes-associated traits and development delay in Drosophila Xuan Zhuang University of Arkansas

357V Effective label of XL/XR and Neo-X chromosomes of Drosophila miranda using oligopaints probes Henry Bonilla University of São Paulo

358C Signals governing pupal development of ovarian Follicle Stem Cells and Niche Cells Rachel Misner Columbia University

359A Diapause extends female germline stem cell longevity in Drosophila Sreesankar Easwaran University of California, Santa Barbara

360B The impact of cell cycle and DNA damage response on germline stem cell survival in the Drosophila testis Jasmine Grey Johns Hopkins University School of Medicine

361C Tnpo-SR maintains ovarian cyst connectivity and is required for GSC fusome dynamics morphogenesis in Drosophila ovarian germline stem cells Anna Williams East Carolina University

362V Effects of nuclear lamina aging on oogenesis William Zaremba University of Iowa

363B Function of Bazooka in dedifferentiation of the male germline stem cells Muhammed Burak Bener University of Connecticut Health

364C Investigating the Regulation of Germline Stem Cell Cytokinesis by Somatic Stem Cells Carlos Billini Drexel University

365A Investigating re-initiation of stem cell cytokinesis during tumor proliferation Beth Kern Drexel University

366B Programmed changes of interaction of Stat92E homologous loci regulate transcription during the stem cell differentiation Matthew Antel UConn Health center

367C Examining the Role of Adipokines in Regulating Oogenesis Chad Simmons University of South Carolina

368A Assessing the interactions between W. pipiensis genotype and titer on the bag of marbles partial loss of function mutant (hypomorph) in Drosophila melanogaster Catherine Kagemann Cornell University

369B Lineage decisions and competency in early Drosophila melanogaster neurogenesis Fiona Kerlin Max Delbrück Center for Molecular Medicine in the Helmholtz Association Berlin-Mitte (BIMSB)

370C Neural Circuits Involved in Nutrient-Dependent Neuroblast Reactivation Susan Doyle University of Virginia

371A A Screen for Amino Acid Transporters Involved in Nutrient-Dependent Reactivation of Quiescent Neuroblasts Erik Miao University of Virginia

372B Activin signaling controls ISC proliferation and cell fate to maintain adult gut homeostasis Christian Christensen University of Copenhagen

373C Functional analysis of Escargot and STAT targets in intestinal stem cells of the Drosophila melanogaster posterior midgut Mariano Loza-Coll California State University, Northridge

374A Sphingolipid metabolism regulates intestinal stem cell homeostasis M. Mahidur Rahman Huntsman Cancer Institute

375B Identifying factors that maintain the adult testis niche Gabriela Vida University of Pennsylvania

376C The role of ESCRTs in signaling within the testis stem cell niche Mara Grace Johns Hopkins University

377A Drosophila Holes in muscles is required for ongoing adult muscle function and muscle stem cell maintenance. Robert Hoff San Diego State University

378B Assessment of cellular and functional heterogeneity within the Drosophila testis stem cell niche Jennifer Viveiros Johns Hopkins School of Medicine
379C Investigating somatic stem cell cytokinesis and coordination of daughter cell release from the testis niche
Tiffany Roach Drexel University

380A Characterizing the Novel Protein Asperous Involved in Tissue Regeneration Si Cave Arizona State University

381B Genetic determinants of cell fate plasticity during regeneration after radiation damage in *Drosophila* Caitlin Clark University of Colorado, Boulder

382C Necrosis-induced apoptosis promotes regeneration in *Drosophila* wing imaginal discs Jacob Klemm Arizona State University

383A Elucidating The Roles of Zelda and Taranis During Late Regeneration in *Drosophila* Wing Imaginal Discs Anish Bose University of Illinois at Urbana Champaign

384B The epithelial apical-basal polarity regulator Lgl constrains imaginal disc regeneration Faith Karanja University of Virginia

385C Inducing limb regeneration in *Drosophila melanogaster*
Yutian Li California Institute of Technology

386A Adapting the Nitroreductase Cell Ablation System to *Drosophila* Gary Teeters University of Virginia

387B The role of dMyc in *Drosophila* wing imaginal disc regeneration Felicity (Ting-Yu) Hsu University of Illinois at Urbana-Champaign

388C Wear and Tear of the Intestinal Visceral Musculature by Intrinsic and Extrinsic Factors Ho Kim University of Virginia

389A Transition from acute nerve injury to central sensitization requires metabotropic driven astrocyte store-operated Ca²⁺ entry Mariya Prokhorenko Uniformed Services University of the Health Sciences

390B Wound-induced changes in epithelial tension Ivy Han Vanderbilt University

391C The Role of Polyploidy During *Drosophila* Epithelial Wound Repair James White Vanderbilt University

392A Insulin receptor/Akt/TOR signaling regulates muscle stem cell pool in *Drosophila* Kumar Vishal San Diego State University

393B Cell cycle exit and stem cell differentiation are coupled through regulation of mitochondrial activity in the *Drosophila* testis Diego Sainz de la Maza University College London

394V Molecular mechanisms behind adult muscle stem cells specification and activation. Hadi Boukhatmi CNRS

395V Regulation of Damage-Responsive Maturity-Silenced enhancers in *Drosophila* John Quinn Arizona State University

396V Switching On/Off the Hh signalling Pathway Determines Niche Cell Fates of Ovarian Germline Stem Cells Yu-Ting Wang Academia Sinica

398V The role of *Diaphanus* in the reactivation of quiescent neural stem cells Kun-Yang Lin Duke-NUS medical school

399V Regulation of nutrient-independent proliferation of the mushroom body neuroblasts (MB NBs) in *Drosophila melanogaster* Md Ausrafuggaman Nahid University of Virginia

400V Consequences of monosomy: How stem cells can lose their female identity and start tumors. Annabelle Suisset Institut Curie

401V Role of the PIWI protein Aubergine in the regulation of intestinal regeneration Karen Bellec University of Glasgow

402V WD40 Wuho regulates intestinal stem cell homeostasis for Gut integrity and Longevity Kreeti Kajal Institute of Cellular and Organismic Biology (ICOB), Academia Sinica

403V Kinetics of blood cell differentiation during hematopoiesis revealed by quantitative long-term live imaging Kevin Ho University of British Columbia

404V Enteroeoendocrine control of intestinal health and disease in *Drosophila* Andre Medina Cancer Research UK Beatson Institute

405V JNK and JAK/STAT stratify cell behaviors during tissue regeneration Janhvi Jaiswal Hilde Mangold Haus, Albert Ludwigs University of Freiburg

406V Imaginal disc regeneration: from stress to nutrients José Esteban Collado University of Barcelona

407V Ets21C organizes a pro-regenerative microenvironment that is essential for imaginal disc regeneration Melanie Worley University of California, Berkeley

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**05. Reproduction and gametogenesis**

408V Functional dissection of recently diverged HMG-box proteins in *Drosophila* spermatogenesis Isabel Mejia Natividad Fred Hutch

409C Identification of CG4511 as a Novel Regulator of Spermatogenesis Christopher Petit Loyola University Chicago

410A Mutation in *Drosophila Concentrative nucleoside transporter 1 (cnt1)* alters spermatid maturation Houda Ouns Maaroufi Biology Centre CAS, Institute of Entomology, Czech Republic

411B Investigation of Y expression in germ cells, if it is modulated by the non-autonomous cues from soma Sharvani Mahadevaraju National Institute of Health

412C Exploring The Sperm Head-Tail Connection Apparatus Kathleen Mulhern NIH
413V The N-end rule Pericentrin degradation is required for centrosome assembly and function in Drosophila spermatogenesis Ramya Varadarajan National Heart Lung and Blood Institutes (NHLBI), NIH

414B A mutation in the gene for kinetochore protein Spc25 disrupts both homolog and sister chromatid connections in male meiosis and causes very high levels of meiosis I nondisjunction Elsie Adams University of Tennessee

415C Robustness of the canonical mitochondrial fusion machinery promotes Nebenkern formation in Drosophila spermatids Eli Arama Weizmann Institute of Science

416A Regulation of cycB translation by a four-protein complex in Drosophila spermatocytes Catherine Baker Stanford Univ Sch Medicine

417B Cellular and molecular basis of transcriptional regulation during spermatogenesis in Drosophila Saurabh Chaudhary Cardiff University

418C Characterization of test specific sugar transport and glycolysis genes in Drosophila melanogaster Mark Hiller Goucher College

419A Rethinking cyst formation during Drosophila spermatogenesis Rocky Diegmiller Princeton University

420B Using FIB-SEM to create a 3D model of early oogenesis Stephanie Pellegrino Butler University

421C The neurodegeneration gene iPLA2-VIA is required for mitochondrial maintenance in the Drosophila melanogaster female germline, with autonomous and non-autonomous components Tamar Soussana Yeshiva University

422A Spargel/dPGC-1 is a closer ancestor to mammalian PRC-1 with an RRM domain that is functionally essential for oogenesis Swagota Roy The Howard University

423B Exploring the role of Oatp74D, an Ecdysone Importer, in the Drosophila ovary. Amanda Powell East Carolina University

424C Regulation of Delta-Notch pathway by mitochondrial signaling during Drosophila oogenesis Yipeng Du UT Southwestern Medical Center

425A A Cytological F1 RNAi Screen for Defects in Drosophila melanogaster Female Meiosis William Gilliland DePaul University

426B Structural changes in centrosomes correlate with activation of a checkpoint that triggers germline stem cell loss Isabella Perales University of Iowa

427C Stonewall promotes germ cell to oocyte transition by promoting heterochromatin maintenance during Drosophila oogenesis Noor Kotb University of Albany

428A fs(1)K741 is a female sterile allele of the gene Sxl and disrupts Sxl splicing Jillian Gomez National Institutes of Health

429B The expression of OVO isoforms throughout Drosophila development Savannah Muron National Institutes of Health

430C Analysis of RNA Helicase Me31B’s Molecular Mechanism in Germline Development by Motif Mutations Ming Gao Indiana University Northwest

431A Size Regulation within the Germline of the Developing Egg Chamber. Zoe Herdman Butler University

432B Nuclear and ring canal growth in the germline of the developing egg chamber Kathleen Sherlock Butler University

433C Mob family proteins and Tricornered kinase are required to form dorsal appendages of the Drosophila eggshell Keala Watson University of Nevada Las Vegas

434V Physiological and functional implications of differentially enriched transcripts on eRpl22-family polysomes Caroline Pritchard Lehigh University

435B Identification of E2 ubiquitin-conjugating enzymes required in Drosophila male meiosis Andrea Binder University of North Carolina at Greensboro

436C A Borealin-HP1 Interaction Regulates Chromosome Passenger Complex Binding to Chromosomes and Movement to Microtubules Manisha Persaud Rutgers University -- New Brunswick

437A Regulation of Meiotic Kinetochore-Microtubule Attachments by the RZZ Complex Joannatta Shapiro Waksman Institute of Microbiology, Rutgers University

438B Genome-wide RNAi screen for new meiotic genes in Drosophila melanogaster Joel Sop Rutgers University

439C Characterization of the Immune Deficiency Pathway during female meiosis in Drosophila melanogaster Sarah Mashburn DePaul University

440A Investigating chromosome-specific differences during meiosis Katherine Billmyre Stowers Inst Med Res

441B The Effect of Heterozygous Inversion on Crossover Frequency near Inversion Breakpoints by High-Res Whole Genome Sequencing Haosheng Li Case Western Reserve University

442C Meiotic Crossovers on Chromosome 4 induced by the Interchromosomal Effect in Drosophila Melanogaster Joseph Terry Case Western Reserve University

443A Identification of Meiotic Recombination Nodule Proteins Utilizing Proximity Labeling Oscar Bautista Case Western Reserve University
444B Mechanism of bruno-mediated tolerance to P-element activity in Drosophila melanogaster germline Modupeola Bolaji
University of Houston

445C Characterizing the composition and morphology of the germ plasm in the wasp Nasonia vitripennis Allie Kemph
University of Illinois at Chicago

446A bourbon interacts with known germline sex determination regulator otu and promotes the expression of sxl in the Drosophila female germline Marianne Mercer UT Southwestern

447B Targeted mutagenesis of orco disrupts fertility in the second gonotrophic cycle in the Aedes aegypti mosquito Olayinka David Florida International University

448C Searching for the female receptor for the D. melanogaster seminal fluid protein ovulin Mengye Yang Cornell University

449A RNA–protein interaction mapping via MS2-based APEX2 targeting in the Drosophila ovary Kwan Yin Lee Princeton University

450B Genetic interactions between new bag-of-marbles mutants and the endosymbiotic bacteria Wolbachia in D. melanogaster Miwa Wenzel Cornell University

451C Nuclear actin is a critical regulator of Drosophila germline stem cell maintenance Nicole Green University of Iowa

452A Evaluating the Effect of Architectural Features on Border Cell Migration in Drosophila Alexander George University of Delaware

453B A Genetic Screen Identifying E2s and E3s Involved with Maternal Protein Clearing During the Maternal to Zygotic Transition Calvin Bleskan Metropolitan State University

454C A Genetic Screen for Identifying E2s and E3s Involved in Protein Clearance During the Maternal-to-Zygotic Transition Hector Cobian University of Colorado School of Medicine, Metropolitan State University of Denver

455A Octopaminergic/tyraminergic Tdc2 neurons regulate sperm preference in female Drosophila melanogaster Dawn Chen Cornell University

456V Transcriptional and mutational signatures of the aging germline Li Zhao Rockefeller University

457V Modeling effects of human disease variant of Barrier-to-Autointegration on oogenesis Felipe Rodriguez University of Iowa

458V Polycomb group (PcG) proteins prevent the assembly of higher order repetitive structures during meiosis Rui Gonçalo Martinho University of Aveiro

459V Identification of factors regulating individualization. Sepideh Dadkhah University of Kentucky

460V Distinct downstream effectors downstream of InR activity control multiple aspects of oogenesis. Tancia Bradshaw University of South Carolina

461V Warm and cold temperatures have distinct germline stem cell lineage effects during Drosophila oogenesis Ana Caroline Gandara Johns Hopkins University

462V Obesity and oogenesis in Drosophila: Increased fat storage is not sufficient to impair fertility Rodrigo Dutra Nunes Johns Hopkins Bloomberg School of Public Health

463V Validation of candidate genes influencing egg size in cold-adapted Drosophila melanogaster Cecelia Miles Augustana University

464V Genetic Requirement of IC effect Bowen Man Case Western Reserve University

465V Broad is sex and cell type specifically required in the Drosophila gonads for gametogenesis and fertility. PRADEEP BHASKAR NIDDK, NIH

466V Nucleoporin107 mediates female sexual differentiation via Dsx Offer Gerlitz IMRIC, The Hebrew University-Faculty of Medicine

467V Tudor5-like promotes post-transcriptional regulation of maternal RNAs Caitlin Pozmanter Johns Hopkins University

468V The bHLH-PAS transcriptional complex Sim::Tgo plays active roles in late oogenesis to promote follicle maturation and ovulation Rebecca Oramas University of Connecticut

469V Explore the roles of steroid hormone signaling mediated Drosophila oogenesis Chueh Wen Wang National Cheng Kung University

470V Functions and interactions of sperm-bound seminal proteins in Drosophila melanogaster Sarah Allen Cornell University

471V Female factors are important for the seminal Sex Peptide’s association with sperm, in mated D. melanogaster Snigdha Misra Cornell University

### 06. Regulation of gene expression

472C Examining essential functions of KDM5 via a novel truncation allele (kdm5<sup>Q29</sup>) Melissa Castiglione Albert Einstein College of Medicine

473A Use of transformants bearing deletions in the 5’ upstream region of the Hdc gene to identify regions required for CNS expression of Hdc Collin Louis Grand Valley State University

474B Investigating the role of intrinsic protein disorder in transcription factor dynamics and function Colleen Hannon University of California, Berkeley
475C Nuclear Function of the protocadherin fat in Drosophila
Jannette Rusch Washington University St Louis School of Medicine

476A Establishing the Role of the Conserved TN Domain in
Tinman Cayleen Bileckyj San Diego State University

477B Initiating and Maintaining the Histone Locus Body: Two Sides of the Same Coin? Greg Kimmerer Emory University

478C Developmental regulation of histone genes by pioneer factor Zelda Thomas O'Haren Emory University

479A Fruitless modulates the threshold of Notch target gene transcription during asymmetric neuroblast division Arjun Rajan University of Michigan-Ann Arbor

480B Out of the shadows: Co-acting cis-regulatory elements control T-box transcription factors midline and H15 during development. Cody Stevens Rutgers University–Camden

481C Necessity versus sufficiency: furthering understanding of ftz cis-regulatory elements in Drosophila melanogaster Matthew Fischer University of Maryland, College Park

482A Defining the mechanisms underlying how enhancer binding sites regulate Notch signal strength Collin Christensen University of Cincinnati

483B brinker gene promoter-proximal element drives ovary expression and supports sequential action of distal enhancers Susan Newcomb California Institute of Technology (Caltech)

484C Investigating the genome-wide cooperativity between the pioneer factor Zelda and patterning transcription factors in the early embryo Kaelan Brennan Stowers Institute for Medical Research

485A Enhancer hijacking leads to flies with no thorax Taylor Crawford NICHD/NIH

486B Investigating the role of Notch signalling in the development of the ventral mesoderm in Drosophila melanogaster Marvel Megaly Brock University

487C The synergistic roles of Glass and EGFR signaling in the differentiation of multiple retinal cell types Hongsu Wang New York University

488A Tissue-specific diversity of the Muscleblind expression in adult flies Davron Hanley Kennesaw State University

489B Lingerer interact with FMRP to promote FMRP target translation KAICHENG MA The University of British Columbia

490C Development of a novel molecular assay to sensitively detect Fmr1's translational function in Drosophila ovarian follicles. Kayla Judson University of British Columbia

491A Precocious expression of Zelda does not initiate early zygotic genome activation Elizabeth Larson University of Wisconsin at Madison

492B Tet (Ten-Eleven Translocation) Regulates Axonal Development in the Drosophila Pupal Brain via Transcriptional Repression Hiep Tran Rutgers University

493C (E)close but no cigar: Essential developmental programs transcriptionally regulated by the chromatin modifier KDM5 Michael Rogers Albert Einstein College of Medicine

494A Extracellular neuronal stimulation promotes Tip60 histone acetyltransferase mediated epigenetic neuroplasticity gene control in the Drosophila brain. Christina Thomas Drexel University

495B Extracellular stimulation triggers Tip60 HAT nucleocytoplasmic transport in the Drosophila brain with concomitant induction of Tip60 target neuroplasticity genes Ellen Armour Drexel University

496C Regulation of Polycomb silencing initiation during nurse cell development Steven DeLuca Brandeis University

497A Developmental ethanol exposure causes changes in the expression of histone modifying enzymes and results in long-term changes in gene expression Joshua Marsh San Jose State University

498B Epigenetic regulation of energy homeostasis by the RNA adenosine methylation Tahrim Choudhury University of Michigan

499C Pleiotropic fitness effects at the Uhg4-Boot locus in Drosophila melanogaster Rebecca A MacPherson Clemson University

500A Using Natural Variation and Machine Learning to map Gene Regulatory Networks Prasad bandodkar Texas A&M University

501B Sources of variation in gene expression Siddhant Kalra Wesleyan University

502C Using ISRES+, an evolutionary optimization algorithm to fit experimental data in systems biology models Razeen Shaikh Texas A&M University

503A Genome-wide Effects of the GeneSwitch GAL4 System on Drosophila melanogaster Gene Expression Caroline Pitton Wesleyan University

504B A homeostatic transcriptional response counteracts I-SMAD activity in Drosophila motor neurons Jacqueline Kanzler Southern Connecticut State University

505C Characterization of a Drosophila Activin signaling network Yisi Louise Lu University of Minnesota
506A Determining how antagonistic transcription factors control transcription dynamics for robust cell fate specification by single nuclei imaging of transcription factor and target mRNA dynamics
Suzy SJ Hur University of Chicago

507B In vitro identification of critical cis elements in the embryonic Drosophila histone locus Pamela Diaz-Saldana Emory University

508C Investigating the Effects of Genetic Distance and Regulatory Elements on Tandem Gene Duplicate Expression in Drosophila melanogaster Georgia McClain Williams College

509A P-bodies Protect mRNAs from the RNAi Machinery
Samantha Milano Hunter College, CUNY

510B The mRNA regulatory function of Brat is essential for development and neurogenesis Robert Connacher University of Minnesota

511C Protein-RNA interaction drives co-transcriptional regulation and RNA processing Annie Huang Brown University

512A Nonsense-mediated mRNA decay plays an essential role during female germline development in Drosophila melanogaster Omar Omar Hunter College

513B Bruno 1 and Cup interdependent regulation of oskar mRNA life cycle Livia Bayer Hunter College

515A Exploring the novel role of a putative tRNA methyltransferase in synaptic growth and neuronal development Jennifer Dumouchel Brown University

516V A toolkit to wire synthetic transcriptional circuits in Drosophila melanogaster Aya Gomaa Le Centre de recherches interdisciplinaires, University of Paris

517V Determinants of transcription factor function Lauren Hodkinson Emory University

518V De novo discovery of motifs enriched in promoters of D. ananassae F Element genes Annabelle Laughlin Washington University in St. Louis

519V Regulation of gene expression by the HP1 variants Annessha King University of Alabama-Birmingham

520V Regulation of PDF neuropeptide production in the central nervous system Jae Park University of Tennessee

521V It’s about time: an investigation into the role of abnormal oocyte (abo) in embryonic histone gene regulation Eric Albanese Emory University

522V Differential regulation of alternative promoters emerges from unified kinetics of enhancer-promoter interaction Heng Xu Shanghai Jiao Tong University

523V Reporter gene assays and chromatin-level assays define substantially non-overlapping sets of sequences as enhancers
Daniel Lindhorst University at Buffalo-State University of New York

524V Temporal-specific requirement of Bruno1 in Drosophila flight muscle to support myofibril assembly, growth and maturation Temporal-specific requirement of Bruno1 in Drosophila flight muscle to support myofibril assembly, growth and maturation Maria Spletter Ludwig-Maximilians-University Munich

525V RNA-binding protein Nocte regulates glass mRNA translation during Drosophila eye development Tianyi Zhang National Institute of Aging

526V Dynamic time warping on sn- and sc-RNA-seq trajectories of Drosophila adult and larve testis enables contrasting the different germline developmental stages Soumitra Pal National Center for Biotechnology Information, National Library of Medicine, National Institutes of Health

527V Identification of candidate regulators of transposable element (TE) expression from host gene/TE coexpression
Matthew Lawlor Rutgers University

528B Integration of BMP, JAK/STAT and EGFR signaling during anterior-posterior patterning of the follicular epithium. Kelvin Ip McGill University

529V Myc-regulated miRNAs modulate p53 expression in Drosophila. Gervé María Paula IAL (instituto de agrobiotecnologia del Litoral)

530V The NXF gene family in Drosophila: Evolutionary History and Cell-Type Specific Gene Expression Martin Calvino The Human Genetics Institute of New Jersey, Rutgers University

531V Social experience and pheromone receptor activity reprogram behavioral switch gene splicing and neuromodulatory gene expression in sensory neurons Chengcheng Du Duke University

07. Chromatin, epigenetics and genomics

532A A tale of two functions: Epigenetic programming and RNA splicing by Tip60 histone acetyltransferase Akanksha Bhatnagar Drexel University

533A Temporal regulation of neuronal maturation by a chromatin anti-looping factor Dahong Chen NIH

534B Sex-specific variation in R-loop formation in Drosophila melanogaster Timothy Stanek Rutgers University
535C HDAC-inhibitory Microbial Volatiles Effect on Slowing Huntington’s Disease in a Drosophila model Rogelio Nunez Flores University of California, Riverside

536A Unique chromatin characteristics allow a genome-eliminating B chromosome to avoid self-elimination Salina Teklay Claremont Colleges

537B Determining how H4K20 methylation contributes to L(3) mbt recruitment to chromatin Megan B. Butler University of North Carolina at Chapel Hill

538C Interrogating the roles of canonical versus variant histone H3 in genome function and aging Jeanne-Marie McPherson University of North Carolina at Chapel Hill

539A A novel mosaic system for performing forward genetics in a sensitized histone mutant background Aaron T. Crain UNC Chapel Hill

540B Identification of factors involved in rDNA magnification in the male germline Alyssa Slicko Whitehead Institute

541C Genomic insertion of repetitive DNA can trigger conversion of euchromatin to heterochromatin Safiyo Aden Bemidji State University

542A Role of Ulp1, a SUMO E3 Protease, in enabling ‘safe’ Homologous Recombination progression at the nuclear periphery. Nadejda Butova University of Southern California

543B Investigating the origin and evolution of CG17359, rapidly evolving, essential ZAD-ZNF gene in multiple Drosophila species Madeline Gruys Bemidji State University

544C Towards telomere-to-telomere genome assemblies of Drosophila melanogaster J.J. Emerson Univ California Irvine

545A Determining how H4K20 methylation contributes to L(3) mbt recruitment to chromatin Megan B. Butler University of North Carolina at Chapel Hill

546A Investigating dBRWD3’s regulation on ORC by ubiquitination Dongsheng Han Biological Science

547A The histone chaperone NASP has multiple functions during development. Reyhaneh Tirgar Vanderbilt University

548B Environmental Effects on the Epigenetic Silencing of Transposable Elements Jennifer McIntyre University of California Irvine

549B The H3.3K27M oncohistone antagonizes reprogramming in Drosophila Kami Ahmad Fred Hutchinson Cancer Research Center

550C X marks the spot: Specifically targeting active chromatin to the X chromosome Joseph Aguilera Brown University

551A Intercalary heterochromatin prevents local somatic pairing loss in interspecies Drosophila hybrids James Baldwin-Brown University of Utah

552B A telomere associated system of paramutation in Drosophila virilis mediated by maternally provisioned piRNAs Ana Dorador University of Kansas

553C Activating and repressing stochastic gene expression between chromosomes Elizabeth Urban Johns Hopkins University

554A Investigating dBRWD3’s regulation on ORC by ubiquitination Dongsheng Han Biological Science

555B Y2H screening reveals potential interactors of a B chromosome-expressed toxin in the jewel wasp Isabella Draper Claremont Colleges

556C DNA methylation machinery is required for transcriptome regulation and early development in the wasp Nasonia Jeremy Lynch University of Illinois at Chicago

557A The histone chaperone NASP has multiple functions during development. Reyhaneh Tirgar Vanderbilt University

558B Environmental Effects on the Epigenetic Silencing of Transposable Elements Jennifer McIntyre University of California Irvine

559V The detachment of lamin Dm0 from the nuclear envelope increases variability in 3D positioning of LADs within Drosophila melanogaster nuclei Simon Bondarenko Virginia Tech

560V ORC associates with the Nup107-160 subcomplex, coupling nucleoporins to replication initiation Logan Richards Vanderbilt University

561V Hinfp is a guardian of the somatic genome by repressing transposable elements Niraj Nirala University of Massachusetts Chan Medical School

562V Dual loss of HP1B and HP1C impacts chromatin structure Sarah Sims University of Alabama at Birmingham

563V Repair of double-strand breaks in Drosophila polycomb bodies Aniek Janssen University Medical Center Utrecht

564V Ectopic heterochromatin triggered by insertion of repetitive DNA is temperature-sensitive Melissa Sawyer Bemidji State University

565V Nurf301 and Su(Hw) coregulate gene expression and nuclear organization through the recruitment of CP190 chen National Institutes of Health

566V Essential role of Cp190 in physical and regulatory boundary formation Maria Crisitina Gambetta University of Lausanne
567V Analysis of nuclear organization and dosage compensation in *Bombyx mori* by Oligopaint FISH reveals divergent 3D architecture between moths and flies Elissa Lei NIH

568V Details of transgene construction determine effective siRNA production Sudeshna Biswas Wayne State University

569V Aid from repeat-binding and architectural maintenance proteins important in *D. melanogaster* dosage compensation Maggie Sneideman Wayne State University

570V Investigating the function of Stonewall in the maintenance of *Drosophila* female germline stem cells Ankita Chavan ETH Zurich

571V Investigating the consequences of histone overexpression in *Drosophila* Risa Takenaka Fred Hutchinson Cancer Research Center

08. Patterning, morphogenesis and organogenesis

572A Spargel/dPGC-1 is required in eggshell patterning and proper cytoskeleton organization during oogenesis and embryogenesis Mohammed Shah Jalal Howard University

573B Identification and characterization of novel genes in *Drosophila*’s retinal development utilizing a transcriptomics approach Sequioa Smith Sam Houston State University

574C Structure-function analysis of Defective proventriculus (Dve) in *Drosophila melanogaster* eye development Anuradha Chimata University of Dayton

575A Hh signaling coordinates stereotyped and stochastic patterns in the *Drosophila* eye Alison Ordway Johns Hopkins University

576B Decapentaplegic Regulates the Boundary Expression of Midline and Groucho in the Developing Eye Imaginal Disc of *Drosophila* Alani Perkin Harris-Stowe State University

577C Insights into the evolution and development of stochastic *Drosophila* retinal patterning through cross-species comparison with yellow-fever mosquito, *Aedes aegypti* Zachary Goldberg University of California, San Diego

578A The Goldilocks effect: proper dosage of PAX6 levels is required for proper retinal differentiation and patterning in *Drosophila*. Claude Jean-Guillaume Indiana University

579B The timing of cell fate decisions is critical for initiating pattern formation in the *Drosophila* eye Justin Kumar Indiana University

580C Elucidating the role of the *Drosophila melanogaster* TENT5 homolog in eye development Abdulqater Al-nouman New Mexico State University

581A Extradenticle expression in the *Drosophila* *Melanogaster* eye regulates ectopic patterning on the ventral margin of the eye-antennal imaginal disc Jasmine Warren Indiana University Bloomington

582B Heterodimerization-dependent secretion of BMP5/7 is required for wing patterning in *Drosophila* Milena Bauer University of Basel

583C Evolutionarily young genes *ff1* and *ff2* are required for Wingless signaling in the wing development of *Drosophila* Yusuke Kurihara Chiba University

584A Defining the Role of CG11617 in the Transcriptional Control of Muscle Development in *Drosophila melanogaster* Elizabeth Trujillo San Diego State University and UC San Diego

585B Single-cell sequencing of *Drosophila* embryonic heart and muscle cells during differentiation and maturation Georg Vogler Sanford Burnham Prebys Medical Discovery Institute

586C Discs Large is a novel regulator of the Enteroblast Mesenchymal-to-Epithelial Transition in the adult *Drosophila* midgut Fionna Zhu University of Melbourne

587A A role for the *apterous* gene in adult survival of *Drosophila melanogaster* Cindy Reinger University of Basel

588B Patterning and Morphogenesis of the Posterior Midgut Daniel S. Alber Princeton University

589C Identifying split-GAL4 drivers for targeting and manipulating enteroendocrine cells in the *Drosophila* midgut Jessica Holsopple Indiana University

590A Characterization of novel *Drosophila* EGF receptor signaling targets with roles in eggshell structure and morphology Molly Yuschock Wilkes University

591B Characterizing the Role of Doublesex in Creating Sexual Dimorphism in the Somatic Gonad Natalie Murphy Johns Hopkins University

592C The role of the extracellular protease AdamTS-B and BMP signaling in wing vein formation Olivia De Grace University of St. Thomas

593A A single cell atlas of *Drosophila* embryonic epidermal and salivary gland cells highlights spatiotemporal gene expression during tube morphogenesis Annabel May MRC LMB

594B Using NaNuTrap method to provide insight into synchronized remodeling of adjacent tissues ectoderm and mesoderm at gastrulation Zsuzsa Akos California Institute of Technology

595C The small GTPase Rap1 promotes polar cell survival and morphogenesis to form the migratory border cell cluster Luke Messer Kansas State University
596A Phosphoinositide PI(3,4,5)P3 turnover modulates cytoskeletal forces controlling Drosophila eye morphogenesis
Jacob Malin Tufts University

597B Customization of tissue growth coordinates organ form and function in the embryo Rajprasad Loganathan Jhu

598C Investigating the role of Uif and Gprk2 in tissue-specific growth of the larval trachea Zihao Yu Case Western Reserve University

599A Regulated actomyosin turnover is essential for eye epithelial morphogenesis Christian Rosa Tufts University

600B Anisotropic Myosin Recruitment Responds To A Static Source During Drosophila Body Axis Elongation Matthew Lefebvre University Of California, Santa Barbara

601C ArfGAP1 regulates collective cell migration in vivo. Alison Boutet IRIC

602A Uncovering the mechanism of hematopoietic niche formation Kara Nelson University of Pennsylvania

603B Transcriptome analysis reveals temporally regulated genetic networks during border cell collective migration. Emily Burghardt Kansas State University

604C Coordination of border cell cohesion through localization of the RacGEF Cdep by the scribble complex. Joseph Campanale University of California, Santa Barbara

605A Investigating the role of Ecdysone signaling during mid embryogenesis using Halloween genes Jae Ho Lee Case Western Reserve University

606B Regulation of epithelial tissue sealing during Drosophila dorsal closure by the PI4P phosphatase Sac1 Kimberley Gauthier The Hospital For Sick Hospital

607C Smog GPCR regulates distinct myosin pools and cortical actin organization during Drosophila SG invagination Vishakha Vishwakarma Louisiana State University

608A Snail drives epithelium-to-mesenchymal transition by cytoplasmic sequestering of polarity protein Bazooka/Par-3 mo weng University of Nevada, Las Vegas

609B Physical aspects of Drosophila gastrulation Konstantin Droubovinski UT Southwestern

610C Investigating a morphogenetic role for septate junction proteins in cell shape changes and polarity during dorsal closure Oindrila De Case Western Reserve University

611A Molecular players of mis-specified cell elimination during development Menna El Gammal Cardiff University

612B Exploring the function of Canoe’s intrinsically disordered region in linking cell junctions to the cytoskeleton during morphogenesis Rachel Szymanski UNC Chapel Hill

613C Defining the roles of the small GTPase Rap1 and its regulator Dizzy in embryonic morphogenesis Kristi Yow University of North Carolina at Chapel Hill

614A Protein biogenesis factors Nascent Polypeptide Associated Complex—alpha and Signal Recognition Particle are required in heart development Analyse Schroeder Sanford Burnham Prebys Medical Discovery Institute

615B The role of Akirin/NuRD interactions during heart development Mia Jones Kennesaw State University

616C Tissue scale viscoelastic properties influence 3-D organ morphology in the developing fly retina Jacob Decker University of Chicago

617A Characterization of mechanosensitive regulation of cell adhesion by membrane kinase Gish Reina Koran University of Nevada Las Vegas

618B Quantitative Models of Mechanical Feedback in Morphogenesis Nikolas Claussen University of California, Santa Barbara

619C Lztr1 is a conserved regulator of Ras/MAPK activity Giovanna Collu Icahn School of Medicine at Mount Sinai

620A Robustness of Early Pattern Formation in the Drosophila Visual Map Charlotte Wit Freie Universität Berlin

621V Piezo ensures robust tissue size regulation by balancing proliferation, cell size, anisotropy and cell death Nilay Kumar University of Notre Dame

622V Investigating the Role of Septate Junction Proteins during Border Cell Migration Giovanni Sabatino Case Western Reserve University

623V Negative feedback regulation in Drosophila dorsal-ventral patterning Allison Schloop NC State University

624V Gene Regulatory Networks in Development: Genetic Variation and Robustness of Anterior-Posterior (AP) Axis Formation in Drosophila Lossie (Ella) Rooney North Carolina State University

625V trithorax regulates the expression of multiple Hox genes within the embryonic dorsal vessel and is required for heart proper and aorta specification Adam Farmer Indiana State University

626V In vivo analysis of a Hox gene enhancer required for segment-specific sense organ patterning Xinyuan Liu University of Illinois at Chicago

627V Physical mechanisms of tissue compartmentalization in the Drosophila embryo Gonca Erdemci-Tandogan University of Toronto

628V Identifying Proteins that Mediate Increased Proliferation at Higher Intracellular pH Laura Martins San Jose State University
629V Characterization of kayak (kay) mutant phenotypes in Drosophila melanogaster eye development Manuel Alejandro Zúñiga-García Universidad Nacional Autónoma de México

630V Quantitative input-output mapping of cytoskeleton regulator localization demonstrates linearity in developing epithelia systems Akanksha Sachan University of Notre Dame

631V Investigating if the linker phosphorylation sites in Drosophila Smad2 control its stability and transcriptional activity Edward Evers California State University Los Angeles

632V Frizzled receptor-mediated mechanisms of Wingless signaling in developing Drosophila wing epithelium Swapnil Hingole Indian Institute of Science Education and Research (IISER) Bhopal, India

633V Modulation of integrin levels triggers actomyosin reorganization essential for proper tissue folding Andrea Valencia Expósito CABD-UPO-CSIC

634V Apterous Regulates the Formation of Stable Myotendinous Junctions in the Drosophila Embryo Krista Dobi Baruch College

635V The Thanos Requirement for Transdetermination Leads to an End Game on Wing Cell Fate as Ectopic Eyes Develop Alison Smith Indiana University Bloomington

636V The JNK and Hippo pathways regulate an overlapping transcriptome to control neoplastic tissue growth Katrina Mitchell Peter MacCallum Cancer Centre

637V The Osiris family genes regulate endocytic trafficking during Drosophila tracheal maturation Lan Jiang Oakland University

638V The adult Drosophila salivary gland exhibits an unusual mode of cell division Gary Hime University of Melbourne

639V Cling film – a novel regulator of epithelial morphogenesis Clara-Maria Ell Albert-Ludwigs University of Freiburg

640V dysfusion negatively regulates JAK/STAT signaling to constraint the invasive cell population Jhen-Wei WU National Cheng Kung University

641V Characterization of adhesion and secretin GPCRs in the salivary glands and germ cells during Drosophila embryogenesis Sean Riccard Quinnipiac University

642V Dunk Regulates Cortical Localization of Myosin II during Drosophila Cellularization through Interaction with the Scaffolding Protein Anillin Jiayang Chen Dartmouth College

643V Mechanical bistability of the mesoderm facilitates mesoderm invagination during Drosophila gastrulation Hanqing Guo Dartmouth College

644V Shaping 3D geometry in tubulogenesis: a PDZ domain-containing protein Arc regulates Crumbs to determine salivary gland morphology in Drosophila embryogenesis Ji Hoon Kim Johns Hopkins University

645V Cell polarity determinant Dlg1 regulates the spatial organization and contractile behavior of non-muscle myosin II during tissue morphogenesis Bing He Dartmouth College

646V The role of Scabrous in long distance Notch signaling during bristle patterning Adam Presser Clarkson University

647V How to form and maintain a monolayered epithelium: the role of integrins Lourdes Rincón-Ortega Centro Andaluz de Biología del Desarrollo, CSIC-Univ. Pablo de Olavide

648V Myosin XV regulates basal filopodia formation during bristle patterning Rhiannon Clements Clarkson University

649V Scraps, an anilin, and Nebbish, a kinesin, are integral components of a Fox transcription factor-regulated subnetwork that mediates specific cardiac progenitor cell divisions Md Rezaul Hasan Indiana State University

09. Signal transduction

650V Exploring the mechanistic roles of APC in the Armadillo/β-catenin destruction complex David Roberts Franklin & Marshall College

651V C. elegans Notch proteins are tuned to lower force thresholds than Drosophila Notch, bypassing the requirement for Epsin-mediated ligand endocytosis. Paul Langridge Augusta University

652V Structural basis of the Calpain A:Cactus (IκB) complex reveals fit induced and competition based mechanisms that alters NFκB activity in embryonic patterning and the immune response Alison Julio Universidade Federal do Rio de Janeiro

653V Analysis of pMad and Medea Expression in BMP Pathway in Drosophila with Multiple Fluorescent Proteins Hung-Yuan (Zeke) Chen Texas A&M University

10. Cell biology: Cytoskeleton, organelles and trafficking

654B Abl tyrosine kinase controls the distribution and propagation of cellular forces by regulating the coherence of an actin network Edward Giniger NIH

655C Pelado, a conserved protein that regulates actin dynamics Claudia Molina Icahn School of Medicine at Mount Sinai
656A Spd-2 gene duplication suggests cell type-specific mechanisms of pericentriolar material assembly Ryan O'Neil National Heart, Lung, and Blood Institute, NIH

657B Developing tools to study the actin mesh during Drosophila oogenesis Hannah Bailey University of California, Los Angeles

658C Dynein acts to cluster glutamate receptors and traffic the PIP5 kinase, Skittles, to regulate postsynaptic membrane organization at the neuromuscular junction Amanda L. Neisch University of Minnesota

659A β1-spectrin Recruits PP2A Waldo to Crumbs where it Regulates Growth and Apical Domain Stability In Drosophila Claire Thomas Penn State University

660B Cullin 3 promotes polarization of aPKC phosphorylated differentiation determinants during asymmetric neuroblast division Cheng-yu Lee University Michigan

661C Unraveling Positive and Negative Feedback in Planar Cell Polarity Alexis Weiner Stanford University

662A The Establishment and Maintenance of Centrosome Asymmetry in Neural Stem Cells Roberto Segura University of Washington

663B Regulated demolition in muscle remodeling: a T-tubule membrane disassembly pathway maintains muscle function shravan girada University of California, San Diego

664C Systematic functional analysis of Rab GTPases in neuronal development and maintenance Ilsa-Maria Daumann Freie Universitaet Berlin

665A The STRIPAK complex and microtubule protein transport in Drosophila muscle tissue Yungui Guo Kansas State University

666B MDIS, a mitochondrial DNA exonuclease enforces uniparental inheritance of mitochondrial genome Zhe Chen National Institutes of Health

667C Roles for CG5755, a SLC25A46 ortholog, in mitochondrial morphogenesis during Drosophila spermatogenesis Claire Olson Davidson College

668A Moonlighting of the Golgi protein, Gorab, at the centriole is regulated by its high affinity for centriolar protein Sas6 Levente Kovacs California Institute of Technology

669B Essential functions of gish in nuclear positioning during early embryogenesis Lingkun Gu UNLV

670C Why are axonal endoplasmic reticulum tubules so narrow? Kishen Chahwala University of Cambridge

671A EMC is required for biogenesis and membrane insertion of Xport-A, an essential chaperone of Rhodopsin-1 and the TRP channel Pedro Domingos ITQB-UNL, NIF 503 093 190

672B Developing a Drosophila genetic screen for mutations that disrupt axonal ER organization Nishani Jeyapalan University of Cambridge

673C A Dominant modifier Screen for Genetic Interactor of Jagunl in the Drosophila compound eye Gerson Ascencio San Francisco State University

674A Endosomal maturation in Drosophila nephrocytes depends on a trimeric Rab7 GEF complex Maren Janz University of Osnabrück

675B Peroxisome metabolism in enterocytes regulates the diet-gut-brain axis and lead to neurodegeneration Francesca Di Cara Dalhousie University

676C A neuroprotective role of select peroxisome proteins at the fat body of Drosophila melanogaster Kazuki Ueda University of Alberta

677A Identifying the minimal sequence that enables protein trafficking to the B-body, a novel nuclear domain Shania Kalladanthyil Kennesaw State University

678B Characterization of the physical and functional connection between CNK and Misshapen Eloise Duramé Université de Montréal

679C Septins are necessary for detachment and protrusion formation in border cell migration Allison Gabbert UC Santa Barbara

680A Nuclear lamins promote collective cell migration and coordinate protrusion dynamics Lauren Penfield University of California, Santa Barbara

681B Investigating the initiation of collective cell migration in the Drosophila follicular epithelium Sierrah Swabach University of Chicago

682C Control of Crag's localization and activity in the polarized deposition of basement membrane proteins in epithelial cells. Hemin Shah Northern Illinois University

683A Basement membrane repair dynamics in the Drosophila midgut Aubrie Stricker Vanderbilt University

684B The mystery of the Peroxidasin mutant: why does this catalytically dead Drosophila mutant survive? Katherine Peebles Vanderbilt University

685C The role of ZP domain proteins in controlling corneal lens architecture Neha Ghosh Skirball Institute of Biomolecular Medicine, NYU School of Medicine

686A Neural IgCAMs at work in epithelia: phylogeny and function Colleen Maillee University of Rochester

687B Fatty acid trafficking during Drosophila oogenesis Roger White University of Rochester
11. Cell division and cell growth

700C Rab1 suggests a role for ER regulation in chromosomal separation during mitosis Katie Rollins University of Denver

701A Understanding the role of Matrimony in suppressing the drive of the B chromosomes Kaylah Samuelson University of Connecticut

702B Crossover interference through ATR phosphorylation of Mei218 leading to phase separation of RING finger proteins Jeff Sekelsky University of North Carolina

703C Meiotic Crossover Patterning: The Centromere Effect Nila Pazhayam University of North Carolina at Chapel Hill

704A Mechanisms and regulation of meiotic recombination: a whole-genome approach Carolyn Turcotte University of North Carolina at Chapel Hill

705B Tissue specific requirements of the Rcd4:Ana3 sub-complex in Drosophila centriole assembly Pallavi Panda California Institute of Technology

706C Functional domains of the Ana1 centriole protein and their regulation by mitotic protein kinases and phosphatases Agota Nagy California Institute of Technology

707A Cohesin dynamics during meiotic prophase in Drosophila oocytes Muhammad Abdul Haseeb Dartmouth College

708B Discs large licenses Pins to orient mitotic spindles Kathryn Neville University of Rochester

709C Evolutionarily conserved midbody reorganization precedes ring canal formation during gametogenesis Kari Price Yale School of Medicine

710A Functional Analysis of Bloom Syndrome Helicase in Development and DNA Repair Colleen Bereda University of North Carolina at Chapel Hill

711B Alternative End Joining Preferences in RPA-Deficient Drosophila Jacob Zuckerman Tufts University

712C Defining Mitotic Crossover Mechanisms Using CRISPR/Cas9 and Bloom Syndrome Helicase Evan Dewey University of North Carolina–Chapel Hill

713A The Krüppel-like factor Cabut has cell cycle regulatory properties similar to E2F1 Peng Zhang Huntsman Cancer Institute

714B Excess histone H3 is a Chk1 inhibitor that controls embryonic cell cycle progression Amanda Amodeo Dartmouth College

715C Regulation of induced endocycling cells and their effects on tissue growth Hunter Herriage Indiana University

716A Defining the Dynamics of Transcriptional Bursting in Developing Drosophila legs Rina Helt Johns Hopkins University

717B Molecular genetic analysis of the mutation I.3.2 by undergraduates participating in a Drosophila CURE Veronica Casarez Loyola Marymount University

718C Probing the Temporal Regulation of Hatching in D. melanogaster Alexandra (Olenka) Jain Princeton University

719A Identification of Apoptosis and Junctional Tension as Pro-tumoral Factors in Drosophila Marianne Montemurro Centre de Biologie Integrative CBI

720B Examining the synthetic lethality between BRCA2 and methyl and ethyl Paraben Zainab Rizik San Francisco State University
12. Physiology, metabolism and aging

736C The effects of developmental ethanol exposure on markers of aging in Drosophila melanogaster Navneet Sanghera San Jose State University

737A Live longer, climb further: Parabacteroides distasonis promotes healthy aging and gut barrier integrity in Drosophila melanogaster. Luana Machado Tufts University

738B Developing a quantitative analysis of cysteine availability via iodoTMT-multiplex method using Drosophila S2 cells and w^{1118} eyes. Sarah Stanhope Purdue University

739C Drosophila STING protein has a role in lipid metabolism Katarina Akhmetova University of Alabama at Birmingham

740A The steroid hormone ecdysone regulates growth rate in response to oxygen availability George Kapali University of Illinois at Chicago

741B Beauty of adenosine and immune system metabolism Pavla Nedbalová University of South Bohemia in České Budějovice

742C The Drosophila gene sima is an essential regulator of the larval glycolytic program Jason Tennessen Indiana University

743A Investigating the mechanism of the pro-aging effects of blue light in Drosophila Jun Yang Oregon State University

744B Nutrient-dependent acyl-CoA metabolism regulates tissue remodeling by adjusting stem cell quiescence and activation in Drosophila Xiaotong Li Texas A&M University

745C Endocrine signals from the gut that regulate metabolism Nadja Ahrentlov University of Copenhagen

746A The loss of function mutation in the Drosophila Neprilysin Like 15 changes expression of key enzymes involved in glycogen homeostasis, and effects longevity in sex specific manner, but exerts similar effects on motor activity in both sexes Nicolas Jones Arkansas Tech University

747B Two phases of ageing in mice, a mammal model for Smurfness. Celine Cansell Center for Research and Interdisciplinarity (CRI), INSERM, University of Paris

748C Investigating Flock House virus-mediated changes in bioenergetics in aged Drosophila melanogaster Dean Bunnell University of Alabama

749A Coordinated shifts in redox metabolites during quiescence are heritable factors that reprogram progeny metabolism Helin Hocaoglu UT Southwestern Medical Center

750V Experimental Evolution to identify genes that contribute to fitness in high-sugar-fed Drosophila melanogaster Thomas Rundell Binghamton University
751C Lactate and glycerol-3-phosphate metabolism cooperatively regulate larval growth in a tissue nonautonomous manner Madhulika Rai Indiana University Bloomington

752A Investigating the role of Glycerol-3-phosphate dehydrogenase 1 (GPDH1) in Drosophila growth and development Shefali Shefali Indiana University Bloomington

753B Ribosomal profiling Reveals Changes in the Translatome of kdm5-Knockdown Neurons Matanel Yheskel Albert Einstein College of Medicine

754C Investigating the mechanisms that control glycolytic gene expression at the cessation of larval growth Tess Fasteen Indiana University

755A Mutational characterization of phosphorylation sites suggests sex-specific regulation of the metabolic regulator Lipin Michael Lehmann University of Arkansas

756B Developmental Effects of Cactus on Drosophila mettleri Lidane Noronha Cornell University

757C Drosophila Undigested Metabolite Profiling - Uncovering age-related changes in amino acid absorption Abigail Mornement Durham University

758A Embryonic lipid transport works with TORC1 to ensure rapid and efficient development Marcus Kilwein University of Rochester

759B Consequences to Organismal Physiology upon Dysregulation of Hormonal Homeostasis using Drosophila melanogaster Cameron Dixon Boston University

760C Hormonal Effects of Glyphosate Based Herbicides on Drosophila melanogaster Maggie Santos California State University San Bernardino

761A Distinct dietary nutrients regulate circulating levels of Dilp2 and Dilp6 in Drosophila larvae Miyuki Suzawa University of Virginia

762B Dynamic expression of Lgr1 in the hindgut suggests a role in cold tolerance and acclimation Daniel Munteanu University of Vermont

763C Mechanisms of Action and Natural Variation within Fasting-induced Starvation Resistance in Drosophila Benedict Lenhart University of Virginia

764A Time-restricted feeding improves striated muscle in genetic-induced obese Drosophila Yiming Guo University of Alabama at Birmingham

765B Time-restricted feeding promotes skeletal muscle function in diet-induced obesity through purine related pathway in Drosophila Christopher Livelo University of Alabama at Birmingham

766C General anesthetics are toxic to flies mutant for a mitochondrially-encoded subunit of the electron transport chain. Amanda Scharenbrock University of Wisconsin-Madison

767A What Ingredients are Contributing to the Toxicity of Glyphosate-Based Herbicides, in Drosophila melanogaster? Noelle Roddam California State University, San Bernardino

768B Positive selection of senescence through increased evolvability: ageing is not a by-product of evolution. Michael Rera CNRS

769C Smurfness helps deconvolving ageing transcriptional signature Flaminia Zane Center for Research and Interdisciplinarity (CRI)

770A The role of commensal microbes in the longevity effects of Aronia berry (Aronia melanocarpa) in Drosophila melanogaster Ji-Hyeon Lee Inha University

771B The fly Tumor Necrosis Factor Receptor (TNFR), Wengen, restricts cytoplasmic TRAF3 levels to control gut metabolism, immunity, and tissue homeostasis Ditte Andersen University of Copenhagen

772C Screening for the genetic polymorphism underlying aging-related muscle degeneration Christina Talley Kennesaw State University

773A Identifying the regulatory basis of sex differences in reproductive senescence in Drosophila melanogaster. Ruksana Amin Auburn University

774B dSmad2 MARCM clones reveal a requirement for dILP2 secretion in the adult brain Samuel Goldsmith Arizona State University

775C Identification of transcription factors acting in larval fat body to regulate whole-animal growth David Hilovsky University of Virginia

776V Lgr1 Localization Reveals a Larval-to-Adult Developmental Switch in Hindgut Compartmentalization Luis Sullivan National Institute of Mental Health

777B fruitless Controls the Timing of Steroid Hormone Pulses in Drosophila Somatic Cell Jie Sun Tulane University School of Medicine

778C Studying the effect of Methotrexate on DNA damage and repair during ageing: drug treatments and models of JAK/STAT pathway-related blood cancers Adel Alqarni University of Sheffield

779A Determining Critical Period of Herbicide Sensitivity in the Fruit Fly, Drosophila melanogaster Becky Talyn California State University

780B Retrotransposons: a major driving force of aging Blair Schneider Albert Einstein College of Medicine
**Poster Session Listings**

**781V** Parkinson’s disease genes interact with ATP7 to regulate copper distribution and availability in *Drosophila melanogaster*  
Brooke Allen Illinois State University

**782V** Age-related neuroprotection by dietary restriction requires OXR1-mediated retromer function  
Kenneth Wilson Buck Institute for Research on Aging

**783V** A GWAS for late-life mortality in *Drosophila* identifies Diabetes and obesity regulated to regulate mortality and resilience.  
Tyler Hilsabeck Buck Institute

**784V** Inter-kingdom lipid transfer mediates *D. melanogaster* temperature-adaption  
Claudia Espinoza University of California, San Diego

**785V** The impacts of sex and genetic background on the response of *Drosophila melanogaster* to essential and non-essential metal toxicity  
Mitchell Slobodian Laurentian University

**786V** HIF-1α promotes hypoxia tolerance by restraining excess cytokine signaling  
Kate Ding University of Calgary

**787V** mTORC2 protects heart from HFD induced-damage through promoting mitochondrial fission  
Peiduo Liu Iowa State University

**788V** Role of Wnt signaling in regulating lipid homeostasis in *Drosophila*  
Rajitha Udakara Sampath Hemba-Waduge Tulane University School of Medicine

**789V** Identification of direct targets of Bortezomib in *Drosophila* using a chemical proteomics approach  
Mengmeng Liu Tulane University

**790V** Odor mediated control of blood-progenitor redox homeostasis in *Drosophila*  
Manisha Goyal Institute For Stem Cell Science and Regenerative Medicine (inStem)

**791V** Effects of Ambient Temperature on Body Fat  
Jin Seo Rogers State University

**792V** Lifestyles and metabolism of *Drosophila lutzii*, a floridosa group of species, and sympatric *D. simulans*, a generalist specie  
Juan Manuel Murillo-Maldonado Universidad Nacional Autónoma de México

**793V** Genetic analysis of Juvenile hormone epoxide hydrolases in *Drosophila*  
Felipe Rogalski Tokyo Metropolitan University

**794V** Developmental Exposure to the PFAS molecule, PFOA, alters Lipid Homeostasis in *Drosophila melanogaster*  
Eric Kilbourn Indiana University Bloomington

**795V** Exploring pathophysiology in long-lived fly populations reared on two diets  
Utsav Nyachhyon Binghamton University

**796V** Optimisation of macro- to micronutrient balance for larval growth on a holidic diet  
Sebastian Sorge The Francis Crick Institute, London

**797V** The conquest of a new habitat: A study of the nutritional and sensory adaptations of the *D. suzukii* larvae.  
Diego Galagovsky MPI Chemical Ecology

**798V** Oxidative stress resistance in insulin-signaling impaired male and female *Drosophila melanogaster*  
Jessica Alvarez UNAM

**799V** The Role of Copper in Parkinson’s Disease  
Jessica Burkhart Illinois State University

**800V** Determining the mechanism of anesthetic-induced neurotoxicity in a *Drosophila* model of mitochondrial disease  
Zachariah Olufs University of Wisconsin-Madison

**801V** Role of peroxisome in mitochondrial dynamics during aging in *Drosophila melanogaster*  
Ankur Kumar Iowa State University

**802V** Transcriptional regulator of DR responsive genes extends lifespan and regulate Tau pathology in *Drosophila*  
Rebecca Spokony Baruch College

**803V** The bestrophin-1 chloride channel is required in the Malpighian tubules and hindgut for osmoregulation in response to high salt diet  
Aylin Rodan University of Utah

**804V** The epicuticular lipid barrier is highly dynamic across the life course in *Drosophila*  
Lena Lampe Francis Crick Institute

**805V** Endogenous degradation of hormones by two distinct classes of enzymes uniquely impact coordinated animal growth and development  
Rebecca Spokony Baruch College

**806V** Impacts of Intestinal Occluding Junction Modulation on Non-Cell Autonomous Hallmarks of Aging  
Anna Salazar Christopher Newport University

**807V** Single-nucleus RNA-seq of *Drosophila* Thorax Post Exercise Treatment: Pilot Study  
Bre Minniefield University of Alabama at Birmingham

**808V** dFNDC5 Regulates Exercise Performance and Adaptations in *Drosophila*  
Tyler Cobb Wayne State University

### 13. Neural development and physiology

**809A** Serotonin autoreceptors regulate *Drosophila* serotonergic axon morphology *in vitro*  
Delaney Long Ball State University

**810B** Investigating mechanisms of Frazzled/Dcc signaling in axon guidance  
Sarah Gagnon University of Pennsylvania

**811C** Developmental axon guidance cues are critical for adult neuronal survival and function  
Aarya Vaikakkara Chithran University of British Columbia

**812A** Target-independent visual map formation  
Egemen Agi Freie Universitaet Berlin
813B Temporal regulation of nicotinic acetylcholine receptor subunits supports central cholinergic synapse development in *Drosophila* Justin Rosenthal National Institutes of Health

814C Differential expression of the roundabout 3 (Robo3) guidance receptor regulates interneuron dendrite morphogenesis in *Drosophila melanogaster* somatosensory circuit development Jake Henderson University of Chicago

815A Promiscuous wiring via variable spatial sampling of an orderly array Emma Thornton-Kolbe University of Michigan-Ann Arbor

816B Codes of cell surface proteins coordinate stochastic and deterministic cell fates during *Drosophila* color vision circuit assembly Yu-Chieh David Chen New York University

817C Investigation of the tRNA modifying enzyme, TRMT1, in neurodevelopment Sara Rios Méndez Brown University

818B Neurodevelopmental role of a tRNA methyltransferase implicated in intellectual disability Kimberly Rose Madhwani Brown University

819B Long-range temporal patterning of neuroblasts in the developing *Drosophila* medulla couples neurogenesis to circuit assembly Teddy Erclik University of Toronto, Mississauga

820C Coordinated control of neuronal differentiation and wiring specificity by a sustained code of transcription factors Mehmet Neset Ozel New York University

821A Persistence of courtship behavior neurons from larval to adult life in *Drosophila* Sofia Leone Villanova University

822B Differentiation signals from glia are fine-tuned to set neuronal numbers during development Anadika Prasad University College London

823C Dorsal-Ventral Patterning of the Developing *Drosophila* Medulla Priscilla Valentino University of Toronto

824A Developmental patterns of the *Drosophila* visual projection neurons Rana Eldanaf New York University Abu Dhabi

825B Loss of the GARP but not EARP complex drives Golgi sterol overload during dendrite remodeling Caitlin O’Brien UCSF/HHMI

826C Genetic mechanisms underlying the development and distribution of Dm4 neurons in the *Drosophila* medulla Urfa Arain University of Toronto

827A Investigating the role of VAPB in axonal ER and motoneuron development and degeneration Elizabeth Anderson Case Western Reserve University

828B The Role of Thrombospondin in Neuromuscular Junction Development and Function Grace Woods Lewis & Clark College

829C Investigating roles of conserved domains in the calcium channel subunit αδ-3 during synapse development Marina Bostelman Case Western Reserve University

830A Inhibitors of BMP signaling during synapse development in *Drosophila melanogaster* Pam Vanderzalm John Carroll University

831B TRMT9B regulates synaptic function and motor behavior Ambar Delgado Brown University

832C Na+/H+ exchanger (Nhe) regulates neuronal morphology at the neuromuscular junction Ashley Bielawski University of Montana

833A Ion channel trafficking is coordinated with dendrite morphogenesis in sensory neurons Ipek Midillioglu UC San Diego School of Medicine

834B Na+/H+ Exchangers play essential roles in neurogenesis Beverly Piggott University of Montana

835C Glia-dependent regulation of synapses in the *Drosophila* antennal lobe Dan Jindal Case Western Reserve University School of Medicine

836A Exploring the role of glial Syndecan on neuroepithelium expansion in the *Drosophila* optic lobe Duo Cheng University of British Columbia

837V Glia-derived lipid binding protein conveys resistance to oxidative stress in the *Drosophila* brain Jun Yin NIH

838C Divergent signaling requirements of dSARM in injury-induced degeneration and developmental glial phagocytosis Yizhou Liu Case Western Reserve University

839A Characterising the molecular basis of *Drosophila* glial diversity Inês Lago-Baldaia University College London

840B Regulation of Glial Septate Junction proteins by microRNA-184 Sravya Paluri Life Sciences Institute, University of British Columbia

841C Investigating the localization and function of laminin and dystroglycan in *Drosophila* wrapping glia development Katherine Clayworth University of British Columbia

842A Identifying subperineurial glia-specific dlg1 isoforms required for septate junction function Mary Gilbert University of British Columbia

843B Exploring molecular mechanisms of Abnormal spindle function in brain growth and development Shalini Chakraborty University of Wyoming

844C The neurodevelopmental transcriptional landscape of a fly model for human microcephaly Constanza Mannino University of Wyoming
845A Innate immune signaling sculpts neuron-glia interactions across lifespan Heather Broihier Case Western Reserve University

846B Response to and regulation of codon bias in Drosophila neural lineages. Rebecca Stewart Duke University

847C Charting the development of leg sensory organs at the single-cell level Ben Hopkins University of California, Davis

848A Uncovering the mechanism of slit function in PNS development Maria Alejandra Pizarro Salazar University of St. Thomas

849B Delta/Notch signaling inhibits expression of the early temporal factor Imp to promote termination of neurogenesis during development Chhavi Sood University of Virginia

850C Deciphering the molecular clock controlling the neurogenesis diversity in Drosophila’s medulla Khaled Ben el kadhi New York University Abu Dhabi

851A Exploring the Role of Retrotransposable Elements in the Development of Microcephaly Michelle Longworth Cleveland Clinic Lerner Research Institute

852B Long-range temporal patterning of progenitors in the developing Drosophila optic lobe Ishrat Maliha Islam University of Toronto (Mississauga)

853C Intrinsic and Extrinsic Cues Regulate the Early-to-Late Transition of Transcription Factors in Drosophila Type II Neuroblast Gonzalo Morales University of New Mexico

854A Unraveling the mechanisms of early neurogenesis with single cell resolution Robert Zinzen MDC

855B Building an integrative model of how nutrition and natural genetic variation interact during neurogenesis in natural populations of Drosophila melanogaster Taylor L. Nystrom University of Virginia

856C Establishing anterior-posterior diversity in how stem cells give rise to neural circuits for somatosensory processing Deeptha Vasudevan The University of Chicago

857A The OTUD6 deubiquitinase associates with the 40S ribosome to regulate translation and the response to stressors in Drosophila Sammy Villa UC Merced

858B Rasputin – A mediator of translational activation for essential proteins in neurodevelopment Al Rohet Hossain University of British Columbia

859C Steroid hormone signaling activates a sensory switch during Drosophila peripheral nervous system development Jacob Jaszczak University of California, San Francisco

860A Genetic regulation and protein interactions necessary for proper formation of Drosophila rhabdomeres and the inter-rhabdomeral space Johnathan Rylee Indiana University

861B Molecular instructions for the production of sparse inputs Vanessa Puñal University of Michigan

862C Analysis of sexually dimorphic gene expression in Drosophila legs Jude Icoy University of Connecticut

863A Elucidating the interaction between the chromatin reader Kismet and histone deacetylases in the promotion of axon pruning Emily Sterner Drexel University

864B Bisphenol A exposure impacts neurodevelopmental gene expression, cognitive function, and synaptic morphology in Drosophila melanogaster Judith Anderson California State University, Sacramento

865B Enhancing Mask activity in dopaminergic Neurons extends lifespan in flies Xiaolin Tian LSU Health Science Center

866V Glia-neuron signaling induced by distinct sources of two different BMPs regulate synaptic growth Mathieu BAROTTELI Brown University

867V Early lineage segregation of the retinal basal glia in the Drosophila eye disc Chia-Kang Tsao Academia Sinica

868V Organizing the Drosophila olfactory circuits by interacting Ig superfamily adhesion molecules Qichen Duan Duke University

869V Chordotonal neurons have dendritic spike initiation zones that are controlled by Para, the Drosophila sodium channel Thomas A. Ravenscroft HHMI Janelia Research Campus

870V The post-transcriptional regulation of TFs in immature motoneurons shapes the axon-muscle connectome WINYUE GUAN Institut de génomique fonctionnelle de Lyon, ENS de Lyon

871V Candidate Autism Genes Nrx1 and Nlg3 Lead To Ectopic Synapses in Nociceptive Neurons in Drosophila Larvae Claudia Guaitieri University of Maryland, Baltimore County

872V It’s not just about physical attraction: Investigating the interaction between HDAC4 and Ankyrin2 in Drosophila melanogaster neuronal function Sarah Wilson Massey University

873V Identifying New Players in Structural Synaptic Plasticity Cong Xiao University of Massachusetts Medical School

874V The Role of Glial Peroxisome in Neuron-Glia Communication in Drosophila Maggie Sodders Iowa State University

875V A comprehensive temporal patterning gene network controls developmental timing in Drosophila medulla neuroblasts Hailun Zhu University of Illinois Urbana-Champaign
14. Neural circuits and behavior

876B Natural genetic modifiers of sensitivity to dopamine-level perturbations in Drosophila melanogaster Ana Marija Jaksic EPFL Swiss Federal Institute of Technology Lausanne

877C Neuronal gluconeogenesis regulates systemic glucose homeostasis via FMRFa signaling Tetsuya Miyamoto Texas A&M Health Science Center

878A Exploring the effects of multiple neuropeptides on state-dependent visuomotor transformations Avery Krieger Stanford University

879B Molecular mechanism glia use to contribute to the production of motor outputs in Drosophila Rebecca McAvoy Indiana University

880C A non-nuclear NF-κB modulates behavioral alcohol sensitivity but not immunity Nigel Atkinson The University of Texas at Austin

881A The functionally conserved neuronal pseudokinase Allnighter retrogradely regulates homeostatic UPR and autophagy responses in photoreceptor neurons. Shashank Shekhar UT Southwestern Medical Center

882B The CHD protein, Kismet, regulates both clathrin-mediated and activity-dependent bulk endocytosis at the Drosophila neuromuscular junction Faith Liebl Southern Illinois University Edwardsville

883C Investigating the Effects of Rab11 on Synaptic Proteins Fasll and APPL in kismet Mutants Ireland Smith Southern Illinois University Edwardsville

884A The Drosophila CD63-related tetraspanins, Tsp42Ee and Tsp42Eg, regulate synaptic structure, function, and vesicle pool dynamics Emily Hendricks Southern Illinois University Edwardsville

885B Uncovering the Genetic Basis of Variation in Learning and Memory Phenotypes using the Drosophila Synthetic Population Resource Victoria Hamlin University of Missouri

886C Investigating the role of tRNA methyltransferase ALKBH8 in learning and memory Shanzeh Sayied Brown University

887A Utilizing Y-mazes to Investigate Olfactory Learning Phenotypic Variations in Drosophila Huda Ansaf University of Missouri, Columbia, MO

888B A survey of cis-regulatory fragments from the dissatisfaction gene identifies a subpopulation of abdominal interneurons that regulate the opening of the vaginal plates during courtship Julia Diamandi Villanova University

889C Pleiotropy and the rapid coevolution in reproductive traits in Drosophila Mehrnaz Afkhami University of Oklahoma

890A Effects of L-DOPA on D. simulans and D. sechellia Mating Behavior Alyssa Cortés Wesleyan University

891B Impact of histamine deficiency on accessory gland secondary cell differentiation, persistence, and post-mating responses in Drosophila melanogaster Cazmir Sarnacki Grand Valley State University

892C Mechanisms of D2R signaling in the blood-brain barrier that regulates courtship in Drosophila melanogaster Sumit Gautam University of Houston

893A Regulation of sexually dimorphic abdominal courtship behaviors in Drosophila by the Tlx/tailless-like nuclear receptor, Dissatisfaction Julia Duckhorn Villanova University

894B A Drosophila model for understanding the perception and central processing of chronic social isolation Wanhe Li Texas A&M University

895C Toll Family Receptor Function in Neuronal Recognition of Immune State Tim Lebestky Williams College

896A The Drosophila serotonin transporter (dSERT) is required for proper sleep amount and sleep architecture Elizabeth Knapp University of California, Los Angeles

897B rhodopsin 3 regulates circadian periodicity Menglin Li University of California, Santa Barbara

898C Neuronal E93 Regulates Metabolic Homeostasis Cecilia Yip University of Texas Southwestern Medical Center

899A Adaptive variation in taste detection of carboxylic acids Manali Dey University of California, Riverside

900B Functional Genetic Screen to Identify Interneurons Governing Behaviorally Distinct Aspects of Drosophila Flight Motor Programs Sydney Shea Bucknell University

901C The Effect of Cannabidiol on Central Nervous System Development and Function using Drosophila as a Model System Cameron Lowery Harris-Stowe State University

902A Drosophila larval burrowing: a parasitoid avoidance behavior? Meagan Ash University of Arizona

903V Characterization of Drosophila sugar receptors LINNI JIN Yonsei University College of Dentistry

904C Meeting a threat of the Anthropocene: Robust taste avoidance of metal ions Shuke Xiao Yale University

905A How acetic acid alters interactions of parasitoids with their Drosophila melanogaster hosts Kayla Reddy University of Arizona

906B Dissecting the subcellular mechanisms of signal processing in the Drosophila visual system Michelle Pang Stanford University
907C The circuit basis of operant self-administration for ethanol in *Drosophila melanogaster* **John Hernandez** Brown University

908A A toolkit to investigate subtype-specific functions of octopaminergic neurons in fly behavior **Aundrea Koger** Salk Institute for Biological Studies

909B An Octopaminergic Circuit in Egg Laying **Ethan Rohrbach** University of California, Los Angeles

910C Parallel processing of polarized skylight from the optic lobes towards the central brain **Juliane Uhlhorn** Freie Universität Berlin

911A Characterization of the mode of transmission of ethanol resistance to progeny of repeatedly intoxicated parental flies **Mariano Loza-Coll** California State University, Northridge

912V Pre-copulatory reproductive behaviours are preserved in *Drosophila melanogaster* infected with bacteria. **Saloni Rose** University of Birmingham

913V Identification of individual essential amino acid sensors in *Drosophila* **Jong-Hoon Won** KAIST

914V *Neuroligin*3 and dopamine are required for a response to social isolation, but recovery is complex and sex-specific. **Ryley T Yost** University of Western Ontario

915V Behavioral Characterization of tecu Mutants **Laura Alejandro Lujano Perez** Universidad Nacional Autónoma de México

916V Local 5-HT signals bi-directionally modulate the coincidence time window of associative learning **Xuelin Li** Peking University, School of Life Sciences

917V Spying on the dynamics of octopamine by genetically-encoded GRAB<sub>oa</sub> sensor in *Drosophila* **Mingyue Lv** Peking University

918V Two Individually Identified Paired Dopamine Neurons Signal Taste Punishment in Larval *Drosophila* **Andreas Thum** Institute of Biology

919V Single cell transcriptomic analysis of homologous courtship song neurons between species **Justin Walsh** University of Pennsylvania

920V Investigating the Role of SIFamide in the Effects of Food Deprivation on Female Reproductive Drive **Attilio Ceretti** Lehigh University

921V Chronic caffeine treatment disrupts circadian rhythm in *Drosophila Aishwarya Segu* Indian Institute of Science Education and Research, Thiruvananthapuram

922V Aggression in *Hieroglyphus banian* (Rice grasshopper) vs. *Drosophila melanogaster: A Comparison** **Abhilash Kondai** University of Hyderabad

923V Intestinal CNMa induced by protein deficit affects two distinct pathways in the brain to regulate the preference for protein-rich food **Boram Kim** Korea Advanced Institute of Science and Technology (KAIST)

924V Molecular and cellular basis of acid taste sensation in *Drosophila* **Ting-Wei Mi** Monell Chemical Senses Center

925V Gastric mechanosensation and the peptidergic sugar sensing regulate the *Drosophila* nutrient sensor **Yangkyun Oh** NYU School of Medicine, Skirball Institute

926V Screening of genes that regulate the maintenance of synapse during aging of *Drosophila melanogaster* **Danielle Moreira** Lehigh University

927V IFT88 maintains sensory cilia function in *Drosophila melanogaster* **Pilar Okenve-Ramos** Instituto Gulbenkian de Ciência

928V Exploring the functional evolution of odorant receptors in bark beetles using *Drosophila* empty-neuron system **Jibin Johnny** Czech University of Life Sciences Prague

929V Genetic dissection of physiological properties of local interneurons in the *Drosophila* larval visual circuit **Hsueh-Ling Chen** National Institute of Neurological Disorders and Stroke, National Institutes of Health

930V Manipulation of neuron transmission in the mushroom bodies and protocerebral bridge affects social behaviour **Abigail Bechard** Western University

931V Understanding the neural circuity of social spacing behaviour through the lens of *Drosophila* **John Robinson** Western University

932V Don’t want to be all by myself BUT Don’t stand so close to me **Anne F Simon** University of Western Ontario

933V Some Innexin Family Members Are Required for Cold Nociception Responses Mediated by Class III Dendritic Arborization Neurons **Nicolas Nettemeyer** James Madison University

15. Models of human disease

934C A drosophila model depicting braak-like propagation of tau pathology **Aarya Vaikakkara Chithran** University of British Columbia

935A DDX17 modulates FUS toxicity in an RGG-domain dependent manner **Udai Pandey** Children’s Hospital of Pittsburgh of UPMC

936B Metabolic Dysregulation in Frontotemporal Dementia **Jackson Diltz** Providence College
937C Uncovering the Mechanisms Behind the Neuroprotective Effect of Glycolysis in a Drosophila Model of ALS Nicholas Mortimore University of Arizona

938A A CRISPR-Cas9 Mediated Knockout of RNaseZ in Drosophila Neurons Max Luf Fordham University

939B Mechanism of adult neurodegeneration in drop-dead mutants Unmila Jhuti Marquette University

940C The ketone body beta-hydroxybutyrate ameliorates molecular and behavioral pathological markers in a Drosophila model of glial tauopathy. Celya D. Dahmani University of Connecticut

941A Phagocytic glia mediate prion-like spreading of mutant huntingtin aggregates in Drosophila brains Margaret Panning Pearce University of the Sciences

942B Dynamic transcriptional changes in the adult Drosophila central nervous system highlights potential coordination of stress and repair responses following traumatic brain injury Eddie Cho San Diego State University

943C Assessing Novel Therapeutics with a Drosophila Model of Neural Aging and Stressors Alec Candid San Diego State University

944A Identify novel approaches suppressing stress granule assembly to mitigate TDP-43-mediated neurotoxicity Quinlan Mewborne Mayo Clinic Jacksonville

945B Poly(ADP-ribose) Promotes the Condensation of C9ORF72 Arginine-rich Dipeptide Repeat Proteins Ke Zhang Mayo Clinic Florida

946C Behavioral changes and tau pathology in response to traumatic brain injury in Drosophila Roilea Maxson University of California, Davis

947A Comparing the Neurotoxic Effects of P3 (Aβ_{17-42}) and Aβ_{42} using Drosophila as an Alzheimer’s Disease Model Marisa Fujimoto University of California, Santa Cruz

948B Observing the Effects of the Human Peptide, LL-37, on Aβ_{42}’s Neurotoxicity and Effects on Gene Expression Using a Drosophila Model of Alzheimer’s Disease Ruby Guevara UCSC

949C An Analysis of the Microbiota of Various Drosophila melanogaster Parkinson’s Disease Models Evan Marshman Brigham Young University

950A A photo-switchable assay system for dendrite degeneration in Drosophila melanogaster Han-Hsuan Liu UCSF/HHMI

951B TDP-43 expression in dementia-relevant circuits causes axonal degeneration and behavioral deficits in Drosophila Reed Bjork The University of Arizona

952C A small molecule ion channel screen to suppress gliopathic epilepsies Walt Krueger University of Tennessee Health Science Center

953A Characterization of the Fly Models for Glutaminase-related Neurological Disorders Zelha Nil Baylor College of Medicine

954B Biallelic variants in OGDHL cause a neurodevelopmental spectrum disease featuring epilepsy, hearing loss, visual impairment, and ataxia Wan Hee Yoon Oklahoma Medical Research Foundation

955C Proteomic characterization of Dube3a substrates in glia versus neurons using ubiquitin activated interaction trap (UBAIT) Benjamin Geier University of Tennessee Health Science Center

956A Sex and reproductive differences in intestinal tumours Emily Strachan MRC London Institute of Medical Sciences/ Imperial College London

957B Imbalances in active and repressive chromatin states underlie phenotypes caused by the oncoproteins H3 K27M and EZHIP Sam Krabbenhoft University of Wisconsin-Madison

958C Targeting the Ras/Raf/ERK negative regulator sprouty as a novel strategy for cancer therapy Silvia Ziliotto Cardiff University

959A Salt-inducible kinases synergise with Homeodomain-interacting protein kinases to promote significant tumour growth Kewei Yu Simon Fraser University

960B Using optogenetic cardiac pacing and imaging to develop new heart function research platform Elena Gracheva Washington University in St Louis

961C Optogenetic control of Drosophila cardiac function with ChRmine and ReaChR opsins Fei Wang Washington University in St Louis

962A Mitochondria malfunction and RNaseZ-associated cardiomyopathy Ekaterina Migunova Fordham University

963B A Drosophila model for human ARVC-5 caused by TMEM43 S338N Nora Klinke University of Osnabrueck

964C New genetic avenues in Congenital Heart Disease: Ribosomal protein genes as regulators of cardiac growth (via YAP/yorkie) and proliferation (via p53) along with cardiogenic transcription factors Tanja Nielsen Sanford Burnham Prebys Medical Discovery Institute

965A Characterizing Robinow Syndrome-associated DVL1 mutations in Drosophila Katja MacCharles Simon Fraser University

966B The Drosophila ortholog of POLR1D, an RNA Polymerase I & III assembly protein, is required for development Ryan Palumbo SUNY Upstate Medical University

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1053V Reproducibility for Everyone **Nele Haelterman** Reproducibility for Everyone

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Regards,

Warren Shore
President
United States Biological

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