

63rd Annual
Drosophila
Research Conference
April 6-10, 2022



PROGRAM BOOK

GENETICS

 **GSA**

G3 
Genes | Genomes | Genetics

Table of Contents

Genetics Society of America	3
<i>Drosophila</i> Board of Directors, Organizers, and Session Chairs	5
Sponsors	9
Exhibitor and Sponsor Information	11
General Information	14
Registration Desk and Badges	15
Registration Desk Schedule	15
Conference App	15
Oral Presenters	16
Poster Presentations	16
In-person Poster Presentations	17
Viewing Sessions Online	17
Exhibitor and Sponsor Directory	18
Safety Protocols	19
COVID-19 Testing	19
Meals	20
Wi-Fi Access	20
Job and Meeting Postings	20
Presenting Author Index	20
Slack Chat Channels	20
Security/Lost and Found	20
Space	21
Parking	21
Conference Policies	22
Code of Conduct	23
Accessibility	24
Diversity and Inclusion	24
Social Media/Photo/Video Policy	24
Schedule of Events	25
Oral Presentation and Workshop Session Listings	33
Poster Session Listings	53
Poster and Exhibit Map	89
Property Map	91



Genetics Society of America



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

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 Ideraabdullah

Amanda Larracuenta

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

Name	Office	Year
Tin Tin Su	President (2022)	2024
Mariana Wolfner	Past-President (2021)	2023
Mark Peifer	Past-Past-President (2020)	2022
Bruce Edgar	Past-Past-Past-President (2019)	2021
Jessica Treisman	Treasurer	2020

Regional Representatives

Name	Region	Year
Liz Rideout	Canada	2024
Brian Lazzaro	Great Lakes	2024
Nadia Singh	Mountain	2023
Wu Min Deng	Southeast	2024
Leanne Jones	California	2022
Tânia Reis	Heartland	2024
Alexey Veraksa	New England	2023
Erika Bach	Mid-Atlantic	2022
Rachel Smith-Bolton	Midwest	2024

Primarily Undergraduate Institution Representative

Name	Year
Justin DiAngelo	2023

International Representatives

Name	Office	Year
Kieran Harvey	Australia/Oceania	2023
Tatsushi Igaki	Asia	2022
Nic Tapon	Europe	2022
Helena Araujo	Latin America	2022

Postdoc and Student Representatives

Name	Role	Year	Institution
Lydia Grmai	Postdoc Representative	2023	Johns Hopkins University
Ana-Maria Raicu	Student Representative	2023	Michigan State University

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 Llopart	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



GENETICS



Supporters



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™.



**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.



**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.



**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!



***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.



**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

**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

**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@vdr.c.at

The Vienna *Drosophila* Resource Center (www.vdr.c.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 namebadge 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

Wednesday, April 6	12:00 p.m. – 9:00 p.m.
Thursday, April 7	7:00 a.m. – 5:00 p.m.
Friday, April 8	8:00 a.m. – 4:30 p.m.
Saturday, April 9	8:00 a.m. – 2:00 p.m.

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

A Posters	
Wednesday, April 6	
5:00 p.m.	“A” posters can be mounted on poster board
5:00 p.m. – 10:30 p.m.	“A” posters open poster viewing (authors do not have to be present)
Thursday, April 7	
2:00 p.m. – 4:00 p.m.	“A” poster presentations
4:00 p.m.	“A” posters must be removed
B Posters	
Thursday, April 7	
4:15 p.m.	“B” posters can be mounted on poster board
4:15 p.m. – 10:00 p.m.	“B” posters open poster viewing (authors do not have to be present)
Friday, April 8	
2:00 p.m. – 4:00 p.m.	“B” poster presentations
4:00 p.m.	“B” posters must be removed
C Posters	
Friday, April 8	
4:15 p.m.	“C” posters can be mounted on poster board
4:15 p.m. – 10:00 p.m.	“C” posters open poster viewing (authors do not have to be present)
Saturday, April 9	
1:30 p.m. – 3:30 p.m.	“C” poster presentations
3:30 p.m.	“C” posters must be removed

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.

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

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.

Wednesday, April 6	3:00 p.m. – 5:00 p.m.
Thursday, April 7	12:00 a.m. – 3:00 p.m.
Friday, April 8	12:00 a.m. – 3:00 p.m.
Saturday, April 9	12:00 a.m. – 3:00 p.m.

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

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

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

Schedule of Events

All times are listed in Pacific Daylight Time (PDT)

WEDNESDAY, April 06		
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.	<i>Drosophila</i> 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

Schedule of Events

All times are listed in Pacific Daylight Time (PDT)

THURSDAY, April 07		
7:00 a.m. – 5:00 p.m.	Registration/Information Desk Open Show your green check mark to pick up your conference materials.	Town and Country Ballroom Foyer
7:15 a.m. – 8:30 a.m.	Continental Breakfast	Flamingo Lawn
7:30 a.m. – 8:30 a.m.	Undergraduate Mixer Undergraduate students and their PIs are invited to attend this informal networking event.	Pacific Ballroom A
8:00 a.m. – 4:00 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
8:30 a.m. – 10:30 a.m.	Plenary Session I Need a little more space? This session will also be broadcast in Town & Country B Session Chairs: Sally Horne-Badovinac, Artyom Kopp, and Justin DiAngelo	Town and Country Ballroom A
10:30 a.m. – 11:00 a.m.	Coffee Break Please continue to wear your mask while picking up your coffee.	Flamingo Lawn
11:00 a.m. – 12:30 p.m.	Plenary Session II (Equity and Inclusion) Need a little more space? This session will also be broadcast in Town & Country B Session Chairs: Andrew M Arsham and Rachel Smith-Bolton	Town and Country Ballroom A
12:00 p.m. – 3:00 p.m.	COVID-19 Testing By appointment	Palm Room 8
12:15 p.m. – 4:15 p.m.	Exhibit Hall Open	Golden State Ballroom
1:00 p.m. – 4:00 p.m.	Networking Hotspot	Golden State Ballroom
2:00 p.m. – 4:00 p.m.	Exhibits and Poster Presentations A Poster Presentations A Posters should be removed at 4 p.m. so B posters can be mounted	Golden State Ballroom
4:00 p.m. – 10:00 p.m.	Open Poster Viewing B Posters	Golden State Ballroom

Schedule of Events

All times are listed in Pacific Daylight Time (PDT)

THURSDAY, April 07

4:30 p.m. – 6:30 p.m.	Concurrent Platforms I	
	Evolution I Session Chairs: Ana Llopart, Geoffrey Findlay, Cécile Courret, and Llewellyn Green	Town and Country Ballroom B
	Neurodevelopment I Session Chairs: Vanessa Auld, Xin Li, and Yu-Chieh David Chen	Town and Country Ballroom A
	Physiology, Aging, and Metabolism I Session Chairs: Ethan Greenblatt, Laura Musselman, and Juliet Girard	Town and Country Ballroom C
6:30 p.m. – 7:30 p.m.	Virtual Networking Meet-Up Online	Online
7:45 p.m. – 9:45 p.m.	Concurrent Workshops	
	Everything you ever wanted to know about sex	Pacific Ballroom C
	Flies on drugs – drug discovery approaches, challenges and opportunities	Pacific Ballroom E
	Inter-organs communications in the era of Metabolomics	Pacific Ballroom D
8:00 p.m. – 10:00 p.m.	Networking Hotspot	Golden State Ballroom

FRIDAY, April 08

8:00 a.m. – 4:30 p.m.	Registration/Information Desk Open Show 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 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

Schedule of Events

All times are listed in Pacific Daylight Time (PDT)

FRIDAY, April 08		
8:30 a.m. – 10:00 a.m.	Concurrent Platforms II	
	Cell Biology I Session Chairs: Claire Thomas, Blake Riggs, and Marco Monroy	Town and Country Ballroom A
	Cell Division and Cell Growth Session Chairs: Sarah Siegrist, Wu-Min Deng; and Gary Teeters	Town and Country Ballroom D
	Immunity and Microbiome Session Chairs: Nichole Broderick, Will Ludington, and Jessamyn Perlmutter (Jessie)	Town and Country Ballroom C
	Physiology, Aging, and Metabolism II Session Chairs: Ethan Greenblatt, Laura Musselman, and Juliet Girard	Town and Country Ballroom B
10:00 a.m. – 10:30 a.m.	Coffee Break Please continue to wear your mask while picking up your coffee.	Flamingo Lawn
10:30 a.m. – 12:30 p.m.	Concurrent Platforms III	
	Cell Biology II Session Chairs: Claire Thomas; Blake Riggs; and Marco Monroy	Town and Country Ballroom A
	Gene Regulation Session Chairs: Steven DeLuca; Trisha Wittkopp; and Colleen Hannon	Town and Country Ballroom B
	Neurobehavior I Session Chairs: Karla Kaun; Marie Suvar; and John Hernandez	Town and Country Ballroom C
	Stem Cells, Regeneration, and Tissue Repair Session Chairs: Lesley Weaver; Adrian Halme; and Mahi Rahman	Town and Country Ballroom D
12:00 p.m. – 3:00 p.m.	COVID-19 Testing By appointment	Palm Room 8
12:15 p.m. – 4:15 p.m.	Exhibit Hall Open	Golden State Ballroom
12:30 p.m. – 1:30 p.m.	Virtual Networking Meet-Up	Online
1:00 p.m. – 4:00 p.m.	Networking Hotspot	Golden State Ballroom

Schedule of Events

All times are listed in Pacific Daylight Time (PDT)

FRIDAY, April 08		
2:00 p.m. – 4:00 p.m.	Exhibits & Poster Presentations B Posters B posters should be removed at 4 p.m. so that C posters can be mounted	Golden State Ballroom
4:00 p.m. – 10:00 p.m.	Open Poster Viewing C Posters	Golden State Ballroom
4:30 p.m. – 6:30 p.m.	Concurrent Platforms IV	
	Evolution II Session Chairs: Geoffrey Findlay; Ana Llopart; Cécile Courret; and Llewellyn Green	Town and Country Ballroom B
	Neurodevelopment II/Neurobehavior II Session Chairs: Marie Suvar; Karla Kuan; Yu-Chieh David Chen; Vanessa Auld; Xin Li; and John Hernandez	Town and Country Ballroom A
	Reproduction and Gametogenesis Session Chairs: Kari Lenhart; Jennifer Mierisch; and Rafael Demarco	Town and Country Ballroom C
8:00 p.m. – 10:00 p.m.	Networking Hotspot	Golden State Ballroom
SATURDAY, April 09		
8:00 a.m. – 2:00 p.m.	Registration/Information Desk Open Show 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 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

Schedule of Events

All times are listed in Pacific Daylight Time (PDT)

SATURDAY, April 09		
8:00 a.m. – 10:00 a.m.	Concurrent Platforms V	
	Chromatin Session Chairs: Julie Secombe; Amanda Amodeo; and Dahong Chen	Town and Country Ballroom B
	Models of Human Disease I – Diseases with a Neurological Focus Session Chairs: Tirtha Kamal Das; Daniela Zarnescu; and Rebekah Keating Godfrey	Town and Country Ballroom A
	Patterning and Morphogenesis I Session Chairs: Seyeon Chung; Todd Blankenship; and Raj Loganathan	Town and Country Ballroom C
10:00 a.m. – 10:30 a.m.	Coffee Break Please continue to wear your mask while picking up your coffee.	Flamingo Lawn
10:30 a.m. – 12:00 p.m.	Concurrent Platforms VI	
	Cell Stress and Cell Death Session Chairs: Deepika Vasudevan, Andreas Jenny, and Lydia Grmai	Town and Country Ballroom B
	Models of Human Disease II Session Chairs: Tirtha Kamal Das, Daniela Zarnescu; and Rebekah Keating Godfrey	Town and Country Ballroom A
	Patterning and Morphogenesis II Session Chairs: Seyeon Chung; Todd Blankenship, and Raj Loganathan	Town and Country Ballroom C
12:00 p.m. – 3:00 p.m.	COVID-19 Testing by appointment	Palm Room 8
12:15 p.m. – 3:45 p.m.	Exhibit Hall Open	Golden State Ballroom
12:15 p.m. – 1:15 p.m.	GSA Journals Editorial Board meeting	Palm Room 4
12:30 p.m. – 3:30 p.m.	Networking Hotspot	Golden State Ballroom
1:30 p.m. – 3:30 p.m.	Exhibits and Poster Presentations C Posters C posters should be removed at 3:30 p.m.	Golden State Ballroom

Schedule of Events

SATURDAY, April 09

4:00 p.m. – 6:00 p.m.	Techniques and Technology Session Session Chairs: Benjamin White; Jonathan Zirin; and Oguz Kanca	Town and Country Ballroom A
7:45 p.m. – 10:00 p.m.	Plenary Session III Session Chairs: Artyom Kopp; and Erika Bach	Town and Country Ballroom A

SUNDAY, April 10

8:30 a.m. – 10:30 a.m.	Closing Plenary Session Chairs: Ellie Heckscher; Justin DiAngelo; and Sally Horne-Badovinac	Town and Country Ballroom A
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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.

Oral Presentation and Workshop Session Listings

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.

Oral Presentation and Workshop Session Listings

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

Oral Presentation and Workshop Session Listings

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. sukukii* 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

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* **Pratyajit 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

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

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 TGF β /Activin ligands **Heidi Bretscher** University of Minnesota, Twin Cities

37 5:45 p.m. Spenito, m⁶A 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

Oral Presentation and Workshop Session Listings

7:45 p.m. – 9:45 p.m.

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 Larracuenta, University of Rochester, Rapid structural divergence of *Drosophila* Y chromosomes.

Dawn Chen, Cornell University, Octopaminergic/tyraminergetic *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

Oral Presentation and Workshop Session Listings

Pacific Ballroom E

Flies on drugs – drug discovery approaches, challenges and opportunities

Organizers

D. Zarnescu, C. Chow

1. Clement Chow, University of Utah – “Lessons from personalized drug screens for Congenital Disorders of Glycosylation”

2. Tin Tin Su, University of Colorado – “An inhibitor of translation elongation identified in a *Drosophila* screen shows efficacy in human cancer models”

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

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”

Oral Presentation and Workshop Session Listings

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

Oral Presentation and Workshop Session Listings

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

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.
Town and Country Ballroom B

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 Chakraborty** 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

72 10:30 a.m. Regulation of Misshapen during Border Cell Migration **Gabriela Molinari Roberto** Université de Montréal

73 10:45 a.m. Investigating mechanisms regulating actin assembly in the early *Drosophila* embryo **Anna Yeh** MIT

74 11:00 a.m. Discovery of a novel competitive interaction between the *Chlamydia trachomatis* early effector Tarp and the endogenous actin bundler Singed/Fascin during mechanosensory bristle development **George Aranjuez** University of Central Florida

75 11:15 a.m. Sufficiency of active Rac to drive whole tissue phagocytosis in vivo **Abhinava Mishra** University of California Santa Barbara

76 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 **Lisa Calvary** iGReD, FACULTE DE MEDECINE ET PHARMACIE

77 11:45 a.m. Fat2 polarizes the WAVE complex to align protrusions for collective cell migration **Audrey Williams** University of Chicago

78 12:00 p.m. Defining the role of prostaglandins in collective cell migration **Samuel Mellentine** University of Iowa

79 12:15 p.m. Microtubule acetylation promotes epithelial cell stretching and squamous cell carcinogenesis in *Drosophila* **Rachita Bhattacharya** Indian Institute of Technology Kanpur, India

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

80 10:30 a.m. Maternal pioneer factor CLAMP regulates sex-specific transcript diversity in early *Drosophila* embryos. **Mukulika Ray** Brown University

81 10:45 a.m. Hippo pathway transcriptional regulators alter chromatin binding dynamics of the transcription factor Scalloped **Samuel Manning** Monash University

82 11:00 a.m. Hox linker domain phosphorylation alters Exd-Hox DNA-binding preferences and regulates gene expression **William Glassford** Columbia University

83 11:15 a.m. Assembly of the Brain tumor RNA decay pre-complex expedites downregulation of Notch signaling following asymmetric stem cell division **Hideyuki Komori** University of Michigan

84 11:30 a.m. Using CRISPRi to uncover mechanisms of transcriptional repression by Rb and CtBP co-repressors **Ana-Maria Raicu** Michigan State University

85 11:45 a.m. Sculpture of a sex-specific piRNA program **Peiwei Chen** California Institute of Technology

86 12:00 p.m. The steroid hormone Ecdysone coordinates larval growth and development through its interaction with the transcriptional repressor Smrter. **Joanna Wardwell-Ozgo** Emory University School of Medicine

87 12:15 p.m. Embryo development requires histone acetylation by Nejire during the maternal-to-zygotic transition **Audrey Marsh** University of Wisconsin-Madison

Oral Presentation and Workshop Session Listings

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 spermatogonial 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^{35A}*-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/SeIR 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

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

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

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

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

Oral Presentation and Workshop Session Listings

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

Oral Presentation and Workshop Session Listings

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 Amankwaa** 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 Isenhardt** 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 Ataxias **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

Oral Presentation and Workshop Session Listings

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

Oral Presentation and Workshop Session Listings

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

4:00 p.m. – 6:00 p.m.
Town and Country Ballroom A

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 xijuxia*
xia Peking University

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

7:45 p.m. – 10:00 p.m.
Town and Country Ballroom A

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 OregonR 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.....	209–234
02. Immunity and the microbiome.....	235–279
03. Evolution.....	280–291,293–311,313–357
04. Stem cells, regeneration and tissue injury.....	358–396,398–407
05. Reproduction and gametogenesis	408–471
06. Regulation of gene expression	472–513,515–531
07. Chromatin, epigenetics and genomics	532–571
08. Patterning, morphogenesis and organogenesis	572–649
09. Signal transduction.....	650–653
10. Cell biology: Cytoskeleton, organelles and trafficking.....	654–693,695–699
11. Cell division and cell growth.....	700–735
12. Physiology, metabolism and aging.....	736–808
13. Neural development and physiology.....	809–875
14. Neural circuits and behavior.....	876–933
15. Models of human disease	934–1015
16. Techniques and technology.....	1016–1045
17. Educational Initiatives	1046–1054

01. Cell Stress and cell death

209A Identifying potential caspase substrates involved in spermatid terminal differentiation in *Drosophila* **Tslil 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 Mastrogianopoulos** 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-Edwardsville

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

222B Adenosine receptor and its downstream targets, Mod(mdg4) and Hsp70, work as a signaling pathway modulating cytotoxic damage in *Drosophila* **Michal Zurovec** Biology Centre, Inst Entomology, VAT: CZ60077344

223C Investigating neuronal survival from caspase activity in neurodegeneration **Morgan Mutch** University of California, Santa Barbara

224A Xrp1 and Irbp18 trigger a feed-forward loop of proteotoxic stress to induce the loser status **Michael Baumgartner** Perelman School of Medicine at the University of Pennsylvania

225B Mechanisms for culling of *Drosophila* wing disc cells with loss-of-heterozygosity after irradiation **Jeremy Brown** University of Colorado Boulder

226C An in vivo *Drosophila* screen to identify new regulators of ATF4 signaling **Kristoffer Walsh** NYU

227A Characterizing the landscape of alternative splicing events regulating the clearance of nurse cells by non-professional phagocytes in *Drosophila melanogaster* oogenesis **Shruthi Bandyadka** Boston University

228B Wdr59 regulates the interaction of GATOR1 with RagA to inhibit TORC1 activity in the *Drosophila* ovary **Yingbiao Zhang** NIH

229V Toxicological study and genetic basis of BTEX susceptibility in *Drosophila melanogaster* **Temitope Adebambo** Emory University School of Medicine

230V Symptoms following Traumatic Brain Injury in a *Drosophila melanogaster* CTE Model are Ameliorated by Ketone Body Enantiomers **Katelyn Mooney** University of Connecticut

231V Roles of Hippo and Ecdysone Receptor Signaling in the regulation of *dronc* **Karishma Gangwani** University of Dayton

232V JNK-independent Eiger/TNFR signaling during cell competition **Aditi Sharma Singh** Columbia University Medical Center

233V Utilizing Live Cell Imaging in *Drosophila melanogaster* Salivary Glands to Determine if Resveratrol Treatment Activates Heat Shock Factor DNA Binding **Martin Buckley** Slippery Rock University of Pennsylvania

234V Same tissue, different responses: How do different cells in the *Drosophila* wing imaginal disc respond to ionizing radiation and contribute to tissue homeostasis? **Joyner Cruz** University of California Berkeley

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 Dipteracin 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* **Chloe 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 microbiome colonization in *Drosophila melanogaster* **Haolong Zhu** Carnegie Institution for Science

262C Microbiota effects on climbing abilities in *w¹¹¹⁸* flies **Tanner B. Call** Northwestern 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** Northwestern 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

274V The Impact of Increasing Concentrations of Ragweed Pollen on the Innate Immune System and Allergic Response of *Drosophila melanogaster* **Shaila Sachdev** Princeton High School

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
- 285B** The Conservation of The GlyP Gene Across highly divergent species of *Drosophila* **Bethany Lieser** Anoka-Ramsey Community College
- 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 Couret** University of Rochester
- 291B** Natural Selection Shapes Variation in Genome-wide Recombination Rate in *Drosophila pseudoobscura* **Kieran Samuk** University of California, Riverside
- 293A** *Acetobacter* to *Lactobacillus* Ratios within *Drosophila Melanogaster* Microbiota, Diet and Environment Across a Latitudinal Gradient **Aubrey Johansen** Brigham Young University
- 294B** Chromosomal Rearrangements in two populations of *Drosophila yakuba* **Timothy Ranallo-Benavidez** UNC Charlotte
- 295C** Karyotype evolution - Insights from a *D. melanogaster* strain with unusual sex chromosome karyotypes **Duoja Li** Whitehead Institute for Biomedical Research
- 296A** Tandem duplications as targets of selection in local adaptation **Taylor Conway** University of North Carolina at Charlotte
- 297B** Chromosomal rearrangements as a source of local adaptation in island *Drosophila* **Brandon Turner** UNC Charlotte
- 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 Preger-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
- 313C** Correlating Regulatory Region and Genetic Evolution **Chinmay 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 ruma** 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 Syteny 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

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

349V Evidence of horizontal transmission of *Wolbachia* in *Drosophila sturtevantii* 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

04. Stem cells, regeneration and tissue injury

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. pipientis* 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 Washington

389A Transition from acute nerve injury to central sensitization requires metabotropic driven astrocyte store-operated Ca^{2+} 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 *Diaphanous* 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 Suisse** 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 Enteroendocrine 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

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 **Joanatta 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 Kempf** 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 endosymbiont 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/tyraminerbic *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^{Q19}*) **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 Hodgkinson** 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
Annesha 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 larvae 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 epithelium. **Kelvin Ip** McGill University

529V Myc-regulated miRNAs modulate p53 expression in *Drosophila*. **Gervé María Paula** IAL (instituto de agrobiotecnología 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

532C 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, rapid-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 Silencing and position-effect variegation in a dual-reporter transposition mutagenesis screen **Nathan Dupre** Bemidji State University

546B The Phosphorylated Histone Variant H2Av Associates With Gypsy Insulator Proteins Through Liquid-Liquid Phase Separation **Mariano Labrador** the University of Tennessee at Knoxville

547C Cardiac aging prevention through H3K27me3 modulation **Clara Guida** Sanford Burnham Prebys Medical Discovery Institute

548A Investigating the role of Polycomb repression in *Drosophila* eye specification **Haley Brown** Indiana University

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 **shue chen** National Institutes of Health

566V Essential role of Cp190 in physical and regulatory boundary formation **Maria Crisitna 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 Sneiderman** 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 **Sequoia 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 *Decapentaplgic* 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 *flf1* and *flf2* 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 Doubrovinski** 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 **Analyne 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 (Elle) 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 Zúniga-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 Eivers** 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 (I κ B) complex reveals fit induced and competition based mechanisms that alters NF κ B 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'Neill** 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** β_{II} -spectrin Recruits PP2A^{Waldorf} 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 Jagunal 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 Kalladanthiyil** Kennesaw State University
- 678B** Characterization of the physical and functional connection between CNK and Misshapen **Eloïse 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 **Sierra Schwabach** 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

688V Rap1 acts via Cane and Rho1 to control the adhesion and cytoskeletal rearrangements that drive rapid wound repair **Katheryn Rothenberg** University of Toronto

689V Cell wound repair requires the coordinated action of linear and branched actin nucleation factors **Justin Hui** Fred Hutchinson Cancer Research Center

690V Molecular regulation of centrosome stability **Ana Pimenta-Marques** Instituto Gulbenkian de Ciência

691V Evolutionary Diversification of *Drosophila* Arp2 for Specialized Actin Branching **Courtney Schroeder** UT Southwestern Medical Center

692V Centrosome-induced membrane infolding linked to Rac pathway and Arp2/3 network recruitment during actin cap formation in the *Drosophila* embryo **Rebecca Tam** University of Toronto

693V Early endosomal Rab21 in enterocytes contributes to gut tissue maintenance **Sonya Nassari** Université de Sherbrooke

695V Implications of Class II PI3K Variants and Mtm phosphatase during Autophagic Lysosome Reformation **Ilva Cabrera** UCSD

696V A new shape, a new fate: uncovering how mitochondria regulate germline stem cell differentiation **Vernon Monteiro** University of Toronto

697V Cell-extracellular matrix adhesion is necessary for rapid embryonic wound closure **Michelle Ly** University of Toronto

698V Cell extrusion during starvation-induced intestinal shrinkage **Aparna Sherlekar Banerjee** Stanford University School of Medicine

699V Basal intercellular junctions integrate local cytoskeletal forces to regulate Hippo signalling in growing epithelia **Benjamin Kroeger** Monash University

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 *l.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

721C Candidate ion channel screen identifies modifiers of brain tumor size **Isabella Maag** University of Montana

722A Yorkie dependent transcriptional network promotes tumor growth **arushi rai** University of Dayton

723B Fmi-mediated cell polarity and adhesion are critical during cell competition and tumorigenesis in *Drosophila* **Pablo Sanchez Bosch** Stanford University

724C Modulation of Hippo signaling by Mnat9 N-acetyltransferase for normal growth and tumorigenesis in *Drosophila* **Jung-Wan Mok** Baylor College of Medicine

725V Transcriptomic and functional analysis of a larval brain tumor in *Drosophila* **Victoria Mendiz** Institute for Research in Biomedicine Barcelona (IRB Barcelona)

726V Regulation of early wing disc growth by Dilp8 **Jeffrey Bellah** Columbia University Medical Center

727V Influence of B chromosomes on gene expression in the *D. melanogaster* germline **Paulo Belato** University of Connecticut

728V Variation in genomic instability due to heat stress in early and late meiosis: Regulation of transcription and chromatin availability **Ulku Altindag** Auburn University

729V Active site phosphorylation of CDK11 is antagonised by PNUITS-PP1 and localised in the centrosomes **Abdulrahman Aljabri** University of Liverpool

730V A non-cell-autonomous buffering mechanism protects cells from replication stress-driven DNA damage **Tania Maalouf** Institut Curie

731V REV7 Acts Independently of Polymerase ζ to Maintain Genome Stability During Development **Lara Maggs** Tufts University

732V Maintenance of genomic integrity in the male germline of *Drosophila melanogaster* **Kate Lemons** University of Utah

733V Shared functions of p53 and Xrp1 in DDR and cell competition **Chaitali Khan** National Institutes of Health

734V Loss of *rer1*-mediated ER-stress drives cell competition in the developing *Drosophila* wing epithelium **Pranab Kumar Paul** Indian Institute of Science Education and Research (IISER) Bhopal, India

735V Regional differences in timing of apical cell area change associated with sex comb rotation during development **Anari-Mai Byfield** Canadian Mennonite 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 *w¹¹¹⁸* 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 Ahrentlöv** University of Copenhagen

746A The loss of function mutation in the *Drosophila* *Nepriylisin 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 **Dalton 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

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-1 α 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 Aut3noma de M3xico

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* **Sudipta Bar** Buck Institute for research on aging

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 dFND5 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 Ríos Méndez** Brown University
- 818A** 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 motorneuron 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 $\alpha_2\delta$ -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 confers 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

865C 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 BARTOLETTI** 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 **WENYUE GUAN** Institut de génomique fonctionnelle de Lyon, ENS de Lyon

871V Candidate Autism Genes Nr1 and Nlg3 Lead To Ectopic Synapses in Nociceptive Neurons in *Drosophila* Larvae **Claudia Gualtieri** 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 FasII and APPL in *kismet* Mutants **Ireland Smith** Southern Illinois University Edwardsville

884A The *Drosophilla* 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 on 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 Universitaet 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 *Neurologin3* 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 Alejandra 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_{OA} 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. in *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 Johny** 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 circuitry of social spacing behaviour through the lens of *Drosophila* Neurologin 3 **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 Candib** 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 ($A\beta_{17-42}$) and $A\beta_{1-42}$ 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 $A\beta_{42}$'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^{S358L} **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
- 967C** A novel assay to study salivary gland dysfunction in a model of *NGLY1* deficiency **Clement Chow** University of Utah

- 968A** *De novo* variant in *MRTF-B* is associated with intellectual disability, minor dysmorphic features, expressive language delay, impulse control issues, and fine motor delay. **Jonathan Andrews** Baylor College of Medicine
- 969B** Identification of gene expression changes in response to vitamin A deprivation **Deepshe Dewett** UMASS Boston
- 970C** Transcriptomic analysis in NF1: exploring drivers of diverse phenotypes **Connor N. Broyles** The Scripps Research Institute - Florida
- 971A** CryAB is a target protein of NUAK kinase activity to prevent protein aggregation in muscle tissue **Ziwei Zhao** Kansas State University
- 972B** Survival and motility of adult *Drosophila melanogaster* flies fed high-calorie diets during early development **Noma Velazquez-Ulloa** Lewis and Clark College
- 973C** Genotype-by-Sex-by-Exercise Studies Using *Drosophila melanogaster*: Comparing the Power Tower and the TreadWheel as Two Exercise Apparatuses **Tolulope Kolapo** The University of Alabama
- 974A** Pupation as a critical hypoxia-sensitive stage in *Drosophila melanogaster* **Tsering Stobdan** University of California, San Diego
- 975B** Gapvd1 regulates slit diaphragm formation in *Drosophila* but is otherwise dispensable for fly development. **Helena Heinkle** Faculty of Medicine and Medical Center, University of Freiburg, Freiburg, Germany
- 976C** An *in vivo* screen identifies small molecule modulators of the endoplasmic reticulum stress response **Kevin Hope** University of Utah
- 977A** Humanized *Drosophila* model of the Meier-Gorlin syndrome. **Maxim Balasov** UAB
- 978B** Mimicking human disease-causing mutations in *Drosophila* PLC- γ **Justin Thackeray** Clark University
- 979C** Understanding the Progressive Loss of Larval Muscle Fibers in Cachexia Tumor Model System with Focus on Myosin **Ellen Thompson** Sam Houston State University
- 980A** miR-277 targets *hid* to ameliorate A β 42-mediated neurodegeneration in *Drosophila* eye model of Alzheimer's Disease **Prajakta Deshpande** University of Dayton
- 981B** A Screen to Identify Genetic Modifiers of Seizure Susceptibility in a *Drosophila* model of *PIGA* Deficiency **Shayna Scott** University of Utah
- 982C** Exploring the role of *shaggy* and *dmyc* in development of combination therapy against human neuronal tauopathies in *Drosophila* . **Pragati** University of Delhi
- 983A** Coevolution is pervasive between unrelated glycosylation pathways and points to potential disease modifiers **Holly Thorpe** University of Utah
- 984B** *Drosophila* eye model to study the role of NAT9 in Alzheimer's Disease related Dementia (ADRD) **Prajakta Deshpande** University of Dayton
- 985V** Age-dependent Lamin Remodeling Induces Cardiac Dysfunction via Dysregulation of Cardiac Transcriptional Programs **Natalie Kirkland** University of California, San Diego
- 986V** Loss of MEER, an enzyme for mitochondrial fatty acid synthesis, causes iron accumulation, upregulation of ceramides and neurodegeneration **Debdeep Dutta** Baylor College of Medicine
- 987V** Transcription related proteins modify TDP-43 mediated toxicity in a fly model of ALS **Deepak Chhangani** University of Florida
- 988V** *Vexed* mediates non-cell autonomous loss of dopaminergic neurons **Jacinta Davis** Lehigh University
- 989V** Identification of human genes that modify concurrent A β 42 and tau pathology in a fly model of Alzheimer's disease **Vanlalrinchani Varte** University of Florida
- 990V** Intra- and extra-cellular functions of ALS-related ER protein VAP in *Drosophila* **Kosuke Kamemura** Hiroshima University
- 991V** Characterizing synaptic deficits at adult neuromuscular Junctions in a model of Amyotrophic Lateral Sclerosis **Jessica Sidisky** Lehigh
- 992V** Targeted downregulation of *Hipp1* ameliorates tau-engendered deficits in *Drosophila melanogaster* **SUNG YEON PARK** Seoul National University, College of Medicine
- 993V** De novo missense mutations in E3 ubiquitin ligase RNFT2 lead to intellectual disability as evidenced by loss of function studies in *Drosophila* **Ayşe Kahraman** Bogazici University
- 994V** Homologues of the human disease-associated amyloidogenic proteins APP and TGFBI are required for physiological protein aggregation in *Drosophila* secondary cells **Clive Wilson** University of Oxford
- 995V** Novel dominant and recessive variants in human *ROBO1* cause distinct neurodevelopmental defects through different mechanisms **Yan Huang** Baylor college of medicine
- 996V** Localization of transgenes for *Drosophila* models of myotonic dystrophy type 1 **Andrea Waltrip** University of Mary Washington
- 997V** Increased oxidative stress precedes activation of the seizure-exacerbating glial immune response in *prickle* mutants **Krishna Madhav Nukala** University of Iowa

998V Adding low levels of omega-3 and omega-6 fatty acids to the diet eliminates seizure-like activity and paralysis and alters gene expression in the bang-sensitive mutant *technical-knockout* **Daniel Kuebler** Franciscan University of Steubenville

999V Kerk1 inhibition of EGFR signaling: a Domain V mediated event **Joseph Duffy** Worcester Polytechnic Institute

1000V RASopathy Drug Discovery Aimed at Treating Hypertrophic Cardiomyopathy **Kimberly Stephens** Mount Sinai School of Medicine

1001V How polyploid cells become tumor and how fly deals with it? **Xian-Feng Wang** Tulane University School of Medicine

1002V Towards understanding the mechanism of tumorigenesis caused by centrosome dysfunction **Chaitali Khan** National Institutes of Health

1003V Using *Drosophila* Models to Dissect Biology and Signaling Mechanisms in Rare Drug Resistant Variants of Lung Cancer **Sereene Kurzum** Mount Sinai School of Medicine

1004V Rbf/E2F1-mediated transition from steroid-dependent to steroid-independent ecdysone receptor signalling in *Drosophila* prostate-like secondary cells **Aashika Sekar** Barts Cancer Institute, Queen Mary University London

1005V Tissue specific knockdown of Scribble induces tumor progression and metastasis in *Drosophila* **Jyotsna Singh** Banaras Hindu University Varanasi UP 221005 India

1006V Septins regulate heart contractility through modulation of cardiomyocyte store-operated Ca²⁺ entry **Benjamin Tripoli** USUHS - Bethesda, MD

1007V Focus on the foci: Investigating the role of HDAC4 aggregation in neuronal development in *Drosophila melanogaster* **Hannah Hawley** Massey University

1008V De novo variants in SUPT16H are associated with developmental delay, intellectual disability, epilepsy and facial dysmorphism **Mengqi Ma** Baylor College of Medicine

1009V *Drosophila* models reveal nuclear shape and lamin localization patterns that differentiate clinically distinct laminopathies **Lori Wallrath** University of Iowa

1010V Generating *Drosophila melanogaster* isofemale lines tolerating extreme oxygen conditions **Dan Zhou** UCSD

1011V Effect of Circadian Rhythm Disruption on DNA Double Strand Break Repair Pathway Choice **Alder Yu** University of Wisconsin - La Crosse

1012V Elucidation of the role of *IFT52* associated with a novel skeletal ciliopathy using *in vitro* and *Drosophila* systems **Vishal Singh Guleria** Kasturba Medical College, Manipal, India

1013V Genetic investigation of the Endolysosomal Network in a *Drosophila* model of Alzheimer's disease **Sher Li Tan** University of Adelaide

1014V *Drosophila* models of *SNRNP200*-retinitis pigmentosa exhibit retinal apoptosis and loss of photoreceptor function **Sara Mayer** University of Iowa

1015V Mutagenic-Antimutagenic Effect from the extract of a Medical Plant: the Wormwood in the *Drosophila* SMART assay **Ana Cecilia Luis Castañeda** Universidad Nacional Autónoma de México

16. Techniques and technology

1016A Using expansion microscopy to examine parasegmental boundaries at nanoscale resolution **Samia Parveen** University of Arkansas

1017B Adaptation of the CRISPR-Sirius tool for imaging the genome in *Drosophila* ovaries **Erica Berent** Case Western Reserve University

1018C An improved organ explant culture method reveals stem cell lineage dynamics in the adult *Drosophila* intestine **Marco Marchetti** Huntsman Cancer Institute

1019A Graphene Enabled Optical Cardiac Control of *Drosophila* **Abby Matt** Washington University in St. Louis

1020B An expanded toolkit for gene tagging using synthesized homology donor constructs for CRISPR mediated homologous recombination **Oguz Kanca** Baylor College of Medicine

1021C Nebulous without *white*: annotated long-read genome assembly and CRISPR/Cas9 genome engineering in *D. nebulosa* **Christopher Sottolano** Rutgers University

1022A A nickase Cas9 gene-drive system promotes super-Mendelian inheritance in *Drosophila melanogaster*. **Sara Sanz Juste** University of California, San Diego

1023B High-Resolution Imaging Method with Standardized Conditions Facilitates Reproducible, Spatial, Quantitative Data **Heidi Pipkin** Bemidji State University

1024C Developing a High Throughput Drug Induced Phenomics and Transcriptomic Assessment **Robert Courville** University of California, Irvine

1025A A novel transposable element based authentication protocol for *Drosophila* cell lines **Daniel Mariyappa** Indiana University

1026B Genetic barcoding for single cell transcriptomics and population behavioral assays **Daryl Gohl** University of Minnesota

1027C RNA viral metagenomics of 100-year-old *Drosophila melanogaster* museum specimens **Alexandra Keene** Colorado State University

1028A PECAN, a pipeline for image processing and statistical analysis of complex mosaic 3D tissues **Remi Logeay** University of Bristol

1029B MARRVEL and ModelMatcher: Online resources to facilitate cross-disciplinary collaborations between scientists, clinicians and beyond **Shinya Yamamoto** Baylor College of Medicine

1030C A toolkit to generate interconvertible overexpression *Drosophila* transgenes **Luis Alberto Baena Lopez** University of Oxford

1031A Comprehensive Resource for the *Drosophila* 4th Chromosome **Michael Stinchfield** Arizona State University

1032B Multiscale, multi-perspective imaging assisted robotic microinjection of *Drosophila melanogaster* embryos **Andrew D. Alegria** University of Minnesota, Twin Cities

1033C Making Hox Gene-specific Drivers Using a Modified Trojan-exon Strategy **Fengqiu Diao** NIMH, NIH

1034V Towards a novel method for cryopreservation via embryonic nuclear transplantation in *Drosophila* **Troy Louwagie** University of Minnesota, Twin Cities

1035V Development of a fly model to probe the functions of inorganic polyphosphates **Sunayana Sarkar** TATA Institute of Fundamental Research

1036V A split-Gal4 system that is repressible by Gal80 **Ben Ewen-Campen** Harvard Medical School

1037V Efficient allelic conversion by homologous chromosome-templated repair in *Drosophila* somatic tissues **Annabel Guichard** University California, San Diego

1038V A method to estimate the frequency of chromosomal rearrangements induced by CRISPR/Cas9 multiplexing in *Drosophila* **Bruce Reed** University of Waterloo

1039V Identification of *Drosophila* new genes using machine learning **Gabriel Goldstein** USP / CAS

1040V REDfly: The Regulatory Element Database for *Drosophila* and other insects **Soile V. E. Keränen** None

1041V Proteomic mapping of organ secretomes using in vivo proximity labeling **Justin A. Bosch** Harvard Medical School

1042V Importance of cell-cycle and cell-sex correction in single-cell analysis: unmasking novel target genes of the Hedgehog pathway **Nicholas Everetts** University of California, Berkeley

1043V Characterization of shock wave effects in syncytial embryos of *Drosophila melanogaster* using fluorescent nanoparticles **Daniel Tapia Merino** Universidad Nacional Autónoma de México

1044V OligoY: a pipeline for the design of repetitive oligopaint probes for the Y Chromosome **Isabela Almeida** USP

1045V A Bibliometric Analysis of Somatic Mutation and Recombination Tests of *Drosophila melanogaster* **Ghada Tagorti** Akdeniz University

17. Educational Initiatives

1046A The Genomics Education Partnership: Teaching and Research Opportunities **Raffaella Diotti** Bronx Community College

1047B DrosoPHILA: a partnership between teachers and scientists that begins in the lab and continues in city schools **Kaitlin Laws** University of Pennsylvania Perelman School of Medicine

1048C Investigating the impacts of engaging undergraduates as developers of inclusive curriculum through a service-learning course **Blake Riggs** San Francisco State University

1049A Extending the Fly-CURE into an Upper-Level Undergraduate Bioinformatics Course **Kayla Bieser** Nevada State College

1050B Comparative Effectiveness of Antioxidant and Lowered Carbohydrate Diets on Dysplastic Guts **Sandra Illescas** California State University Northridge

1051C Students who participate in Fly-CURE demonstrate gains in self-efficacy and belonging across a Research Coordination Network both before and during the COVID-19 pandemic **Jacob Kagey** University of Detroit Mercy

1052A A Research-based laboratory course in Molecular Biology, Genetics, and Evolution **Eric Spana** Duke University

1053V Reproducibility for Everyone **Nele Haelterman** Reproducibility for Everyone

1054V A semester-long genetics lab exploring gene families through comparative genomics and CRISPR-based gene editing **Jennifer Kennell** Vassar College

A

Abou Daya, Farah	175
Adams, Elsie	414B
Adebambo, Temitope	229V
Aden, Safiyo	541C
Afkhami, Mehrnaz	889C
Agi, Egemen	812A
Aguilar, Gustavo	194
Aguilera, Joseph	550C
Ahmad, Kami	549B
Ahrentløv, Nadja	745C
Akalu, Saron	284A
Akhmetova, Katarina	739C
Akos, Zsuzsa	594B
Akula, Srihitha	138
Al-nouman, Abdulqater	580C
Albanese, Eric	521V
Alber, Daniel S.	588B
Alegria, Andrew D.	1032B
Aljabri, Abdulrahman	729V
Allen, Brooke	781V
Allen, Sarah	470V
Almeida, Isabela	1044V
Alqarni, Adel	778C
Altindag, Ulku	728V
Alvarez, Jessica	798V
Amankwaa, Bright	146
Amin, Ruksana	773A
Amodeo, Amanda	714B
Andersen, Ditte	771B
Anderson, Elizabeth	827A
Anderson, Judith	864B
Andolfatto, Peter	289C
Andrews, Jonathan	968A
Anreiter, Ina	92
Ansaf, Huda	887A
Antel, Matthew	366B
Arain, Urfa	826C
Arama, Eli	415C
Aranjuez, George	74
Armour, Ellen	495B
Armstrong, Alissa	4
Arsala, Deanna	324B
Ascencio, Gerson	673C
Ash, Meagan	902A
Atkinson, Nigel	880C
AURADKAR, ANKUSH	354V

B

Bach, Erika	1
Baena Lopez, Luis Alberto	1030C
Bailey, Hannah	657B
Baker, Catherine	416A
Baker, Nick	201
Balasov, Maxim	977A
Baldwin-Brown, James	551A

Bandodkar, Prasad	500A
Bandyadka, Shruthi	227A
Bar, Sudipta	802V
Barmaleki Lighavn, Fatemeh	217C
BARTOLETTI, Mathieu	866V
Barton, Lacy	120
Bauer, Milena	582B
Baumgartner, Michael	224A
Bautista, Oscar	443A
Bayer, Livia	513B
Bechard, Abigail	930V
Belato, Paulo	727V
Bellah, Jeffrey	726V
Bellec, Karen	401V
Ben el kadhi, Khaled	850C
Ben-Hur, Sharon	125
Bener, Muhammed Burak	363B
Bereda, Colleen	710A
Berent, Erica	1017B
BHASKAR, PRADEEP	465V
Bhatnagar, Akanksha	532C
Bhattacharya, Mallika	124
Bhattacharya, Rachita	79
Bielawski, Ashley	832C
Bieser, Kayla	1049A
Bileckyj, Cayleen	476A
Billini, Carlos	364C
Billmyre, Katherine	440A
Binder, Andrea	435B
Biswas, Sudeshna	568V
Bjork, Reed	951B
Blair, Logan	333V
Bland, Michelle	10
Bleskan, Calvin	453B
Bolaji, Modupeola	444B
Bondarenko, Simon	559V
Bonilla, Henry	357V
Bonnette, Paige E.	266A
Bosch, Justin A.	1041V
Bose, Anish	383A
Bostelman, Marina	829C
Bosveld, Floris	142
Botero, Valentina	153
Boukhatmi, Hadi	394V
Boutet, Alison	601C
Bradshaw, Tancia	460V
Brand, Cara	113
Braun, Tslil	209A
Brehm, Ali	255B
Brennan, Kaelan	484C
Bretscher, Heidi	36
Bretz, Nicholas	277V
Broihier, Heather	202, 845A
Brown, Haley	548A
Brown, Jeremy	225B
Brown, Nora	31

Broyles, Connor N.	970C
Bubnell, Jaclyn	112
Buckley, Martin	233V
Bunnell, Dean	748C
Burghardt, Emily	603B
Burkhart, Jessica	799V
Burnside, Brittany	260A
Butler, Megan B.	537B
Butnaru, Gallia	343V
Butova, Nadejda	542A
Byfield, Anari-Mai	735V

C

Cabrera, Cecilia	177
Cabrera, Ilva	695V
Cabrera, Kevin	267V
Call, Tanner B.	262C
Calvary, Lisa	76
Calvino, Martin	530V
Campanale, Joseph	604C
Campbell, Shonda	241C
Camuglia, Jaclyn	141
Candib, Alec	943C
Cansell, Celine	747B
Carboni, Alexia L.	71
Casarez, Veronica	717B
Castiglione, Melissa	472C
Cave, Si	380A
Cerbin, Stefan	286C
Ceretti, Attilio	920V
Chahwala, Kishen	670C
Chakraborty, Shalini	843B
Chakraborty, Tuhin	56
Chang, Ching-Ho	317A
Chasse, Alexandra	249B
Chatla, Kamalakar	280C
Chaudhary, Saurabh	417B
Chaudhry, Norin	185
Chavan, Ankita	570V
Chen, Dahong	533A
Chen, Dawn	455A
Chen, Hsueh-Ling	929V
Chen, Hung-Yuan (Zeke)	653V
Chen, Jiayang	642V
Chen, Peiwei	85, 309B
Chen, Shue	565V
Chen, Wei	140
Chen, Yu-Chieh David	816B
Chen, Yujun	183
Chen, Zhe	666B
Cheng, Duo	836A
Chhangani, Deepak	987V
Chimata, Anuradha	574C
Cho, Eddie	942B
Choudhury, Tahrim	498B
Chow, Clement	967C

Presenting Author Index

Christensen, Christian 372B
Christensen, Collin 482A
Clark, Caitlin 381B
Claussen, Nikolas 618B
Clayworth, Katherine 841C
Clemente, Giuliana 240B
Clements, Rhiannon 648V
Cobb, Tyler 808V
Cobian, Hector 454C
Cohen, Lianne 245A
Collu, Giovanna 619C
Colon Plaza, Sarah 180
Connacher, Robert 510B
Conway, Taylor 296A
Cortés, Alyssa 890A
Courret, Cecile 290A
Courville, Robert 1024C
Crain, Aaron T. 539A
Crawford, Taylor 485A
Cruz, Joyner 234V

D

Dadkhah, Sepideh 459V
Dahmani, Celya D. 940C
Dalton, Hans 182
Darby, Andrea 239A
Darnell, Hannah 215A
Daumann, Ilsa-Maria 664C
David, Olayinka 447B
Davis, Jacinta 988V
Davis, Shaun 89
De Grace, Olivia 592C
De, Oindrila 610C
Decker, Jacob 616C
Dehn, Ari 57
Delbare, Sofie 126
Delgado, Ambar 831B
DeLuca, Steven 496C
Delventhal, Rebecca 155
Deshpande, Prajakta 980A
Deshpande, Prajakta 984B
Dewett, Deepshe 969B
Dewey, Evan 712C
Dey, Manali 899A
Di Cara, Francesca 675B
Diamandi, Julia 888B
Diao, Fengqiu 1033C
Diaz-Saldana, Pamela 507B
Diaz, Arely V. 37
Diegmiller, Rocky 419A
Diltz, Jackson 936B
Ding, Kate 786V
Diotti, Raffaella 1046A
DiVito Evans, Abigail 325C
Dixon, Cameron 759B
Dobi, Krista 634V
Dodge, Ren 70

Doe, Chris 7
Domingos, Pedro 671A
Dondi, Cristiana 32
Dorador, Ana 552B
Doubrovinski, Konstantin 609B
Douglas, Tyler 336V
Doyle, Susan 370C
Draper, Isabella 555B
Drum, Zachary 305A
Du, Chengcheng 531V
Du, Yipeng 424C
Duan, Qichen 868V
Duckhorn, Julia 893A
Duenas, Alva 235C
Duffy, Joseph 999V
Dumouchel, Jennifer 515A
Dunham, Tillie 332A
Dupre, Nathan 545A
Duramé, Eloïse 678B
Dutra Nunes, Rodrigo 462V
Dutta, Debdeep 986V

E

Easwaran, Sreesankar 359A
Eivers, Edward 631V
El Gammal, Menna 611A
El Yaman, Razan 212A
Eldanaf, Rana 824A
Ell, Clara-Maria 639V
Emerson, J.J. 544C
Ercliik, Teddy 819B
Erdemci-Tandogan, Gonca 627V
Erley, Jake 258B
Ertl, Henry 316C
Espinoza, Claudia 784V
Esteban Collado, José 406V
Everetts, Nicholas 1042V
Everman, Elizabeth 310C
Ewen-Campen, Ben 1036V

F

Fabre, Caroline 95
Farmer, Adam 625V
Fasteen, Tess 754C
Feng, Siqian 195
Ferreira, Erina A. 24
Fijabi, Oluwatobi 264B
Fischer, Matthew 481C
Freund, Meghan 144
Friesen, Sophia 143
Fujimoto, Marisa 947A

G

Gabbert, Allison 679C
Gadau, Alice 27
Gagnon, Sarah 810B
Gaitan, Tatiana 301C

Galagovsky, Dlego 797V
Galenza, Anthony 100
Galvin, Jake 127
Gambetta, Maria Crisitna 566V
Gandara, Ana Caroline 461V
Ganguly, Anindya 104
Gangwani, Karishma 231V
Gao, Ming 430C
Garcia, Melanie 268V
Gautam, Sumit 892C
Gauthier, Kimberley 606B
Geier, Benjamin 955C
George, Alexander 452A
Gerlitz, Offer 466V
Ghosh, Neha 685C
Gilbert, Mary 842A
Gilliland, William 425A
Giniger, Edward 654B
Girada, shravan 663B
Glassford, William 82
Glowalla, Joshua 335V
Gohl, Daryl 1026B
Gokhale, Amrita Shrikant 51
Goldberg, Zachary 577C
Goldsmith, Samuel 774B
Goldstein, Gabriel 1039V
Gomaa, Aya 516V
Gomez, Jillian 428A
Gordon, Kathleen 276V
Goyal, Manisha 790V
Grace, Mara 376C
Gracheva, Elena 960B
Green, Llewellyn 323A
Green, Nicole 451C
Grey, Jasmine 360B
Grimes, Krista 250C
Grmai, Lydia 218A
Gruys, Madeline 543B
Gu, Lingkun 669B
Gualtieri, Claudia 871V
GUAN, WENYUE 870V
Guay, Sara 114
Guevara, Ruby 948B
Guichard, Annabel 1037V
Guida, Clara 547C
Guleria, Vishal Singh 1012V
Guo, Hanqing 643V
GUO, LI 94
Guo, Yiming 764A
Guo, Yungui 665A
Gupta, Vanika 279V
Gutierrez Ramos, Ximena 353V

H

Haelterman, Nele 1053V
Hafezi, Yassi 115
Hakes, Anna 121

Presenting Author Index

- Hamlin, Victoria 885B
Han, Dongsheng 554A
Han, Ivy 390B
Hanley, Davron 488A
Hannaford, Matthew 52
Hannon, Colleen 474B
Hanson, Katherine 311A
Hanson, Mark 275V
Harrison, Melissa 207
Hasan, Md Rezaul 649V
Haseeb, Muhammad Abdul 707A
Hatch, Hayden 152
Hatfield, Jeffrey 93
Hawley, Hannah 1007V
He, Bing 645V
Heckscher, Ellie 6
Heinkele, Helena 975B
Helms Cahan, Sara 327B
Helt, Rina 716A
Hemba-Waduge, Rajitha Udakara Sam-
path 788V
Henderson, Jake 814C
Hendricks, Emily 884A
Herdman, Zoe 431A
Hernandez, John 907C
Herriage, Hunter 715C
Hester, Jaquelyn 302A
Hiller, Mark 418C
Hilovsky, Dalton 775C
Hilsabeck, Tyler 783V
Hime, Gary 638V
Himes, Cameron 350V
Hingole, Swapnil 632V
Ho, Kevin 403V
Hocaoglu, Helin 749A
Hodge, Rachel 48
Hodkinson, Lauren 517V
Hoff, Robert 377A
Holsopple, Jessica 589C
Hope, Kevin 976C
Hopkins, Ben 847C
Hossain, Al Rohet 858B
Hrdina, Alexandra 272V
Hsu, Felicity (Ting-Yu) 387B
Huang, Annie 511C
Huang, Xingfan 196
Huang, Yan 995V
Huang, Yuheng 281A
Hui, Justin 689V
Hunsaker, Reese 265C
Hur, Suzy SJ 506A
- I**
- Icoy, Jude 862C
Illescas, Sandra 1050B
Ip, Kelvin 528V
Isenhardt, Randi 148
- Islam, Ishrat Maliha 852B
Islimy, Eva 21
- J**
- Jain, Alexandra (Olenka) 718C
Jaiswal, Janhvi 405V
Jaksic, Ana Marija 876B
Jalal, Mohammed Shah 572A
Janssen, Aniek 563V
Janz, Maren 674A
Jaszczak, Jacob 859C
Jauregui-Lozano, Juan 54
Jean-Guillaume, Claude 578A
Jeyapalan, Nishani 672B
Jhuti, Unmila 939B
Ji, Hui 109
Jiang, Lan 637V
JIN, LINNI 903B
Jindal, Dan 835C
Johansen, Aubrey 293A
Johnson, Heidi 345V
Johnston, Robert 208
Johny, Jibin 928V
Jones, Mia 615B
Jones, Nicolas 746A
Josserand, Manon 147
Juarez-Carreño, Sergio 34
Judson, Kayla 490C
Julio, Alison 652V
Jurmu, Jack 283C
- K**
- Kagemann, Catherine 368A
Kagey, Jacob 1051C
Kahraman, Ayşe 993V
Kajal, Kreeti 402V
Kalladanthiyil, Shania 677A
Kalra, Mahip 257A
Kalra, Siddhant 501B
Kamemura, Kosuke 990V
Kanca, Oguz 1020B
Kandul, Nikolay 193
Kanzler, Jacqueline 504B
Kapali, George 740A
Karanja, Faith 384B
Kasturacharya, Nandashree 90
Kaur, Ishneet 67
Kaur, Rupinder 69
Keene, Alexandra 1027C
Keith, Scott 251A
Kemph, Allie 445C
Kennell, Jennifer 1054V
Kentro, James 20
Keränen, Soile V. E. 1040V
Kerlin, Fiona 369B
Kern, Beth 365A
Kezos, James 176
- Khan, Chaitali 733V,
1002V
Kilbourn, Eric 794V
Kilwein, Marcus 758A
Kim, Boram 923V
Kim, Ho 388C
Kim, Ji Hoon 644V
Kimmerer, Greg 477B
King, Annesha 519V
Kirkland, Natalie 985V
Klemm, Jacob 382C
Klinke, Nora 963B
Kmieciak, Brian 256C
Knapp, Elizabeth 896A
Koger, Aundrea 908A
Kolapo, Tolulope 973C
Komori, Hideyuki 83
Kondai, Abhilash 922V
Kopp, Artyom 314A
Koran, Reina 617A
Kotadia, Shaila 13
Kotb, Noor 427C
Kovacs, Levente 668A
Krabbenhof, Sam 957B
Krieger, Avery 878A
Kroeger, Benjamin 699V
Krueger, Walt 952C
Kucerova, Lucie 242A
Kuebler, Daniel 998V
Kumar, Ajay 270V
Kumar, Ankur 801V
Kumar, Justin 579B
Kumar, Nilay 621V
Kunduri, Govind 65
Kurihara, Yusuke 583C
Kurzum, Sereene 1003V
- L**
- Labrador, Mariano 546B
Lago-Baldaia, Inês 839A
Lampe, Lena 804V
Lancaster, Carly 107
Langridge, Paul 651V
Larson, Elizabeth 491A
Lassen, Mette 58
Laughlin, Annabelle 518V
Lawlor, Matthew 527V
Laws, Kaitlin 1047B
Le, Nguyen 271V
Lebestky, Tim 895C
Lee, Cheng-yu 660B
Lee, Jae Ho 605A
Lee, Ji-Hyeon 770A
Lee, Kwan Yin 449A
Lefebvre, Matthew 600B
Legesse, Lelahiawit 60
Lehmann, Michael 755A

Presenting Author Index

Lei, Elissa	567V	Maalouf, Tania	730V	Miao, Ting	38
Lemons, Kate	732V	Maaroufi, Houda Ouns	410A	Midillioglu, Ipek	833A
Lenhart, Benedict	763C	Macabenta, Frank	214C	Migunova, Ekaterina	962A
Leone, Sofia	821A	MacCharles, Katja	965A	Mikucki, Emily	308A
Li, Duoqia	295C	Machado, Luana	737A	Milan, Marco	12
Li, Haosheng	441B	MacPherson, Rebecca A	499C	Milano, Samantha	509A
Li, Ke	63	Madhwani, Kimberly Rose	818A	Miles, Cecelia	463V
Li, Menglin	897B	Maggs, Lara	731V	Minenkova, Anastasia	53
Li, Wanhe	894B	Mahadevaraju, Sharvani	411B	Minniefield, Bre	807V
Li, Xiaotong	744B	Mahmoudzadeh, Nader	35	Miranda-Alban, Julio	50
Li, Xuelin	916V	Maillee, Colleen	686A	Mishra, Abhinava	75
Li, Xueying	352V	Malin, Jacob	596A	Misner, Rachel	358C
Li, Yutian	385C	Man, Bowen	464V	Misra, Jyoti	170
Liao, Zhe	156	Manier, Mollie	355V	Misra, Snigdha	471V
Liebl, Faith	882B	Manning, Samuel	81	Mitchell, Katrina	636V
Lieser, Bethany	285B	Mannino, Constanza	844C	Mitchell, Noah	136
Lima, Aklima khanam	253C	Mao, Yanlan	203	Mitra, Sahana	220C
Lin, Kun-Yang	398V	Marchetti, Marco	1018C	Miyamoto, Tetsuya	877C
Lin, Leila	287A	María Paula, Gervé	529V	Mohapatra, Pratyajit	16
Lindhorst, Daniel	523V	Mariyappa, Daniel	1025A	Mok, Jung-Wan	724C
Liu, Guangmei	243B	Marsh, Audrey	87	Molina, Claudia	655C
Liu, Han-Hsuan	950A	Marsh, Joshua	497A	Molinari Roberto, Gabriela	72
Liu, Mengmeng	789V	Marshall, Zarion	23	Monier, Manon	282B
Liu, Peiduo	787V	Marshman, Evan	949C	Monteiro, Vernon	696V
Liu, Wei	110	Marston, Samuel	347V	Montell, Denise	3, 200
Liu, Xinyuan	626V	Martinho, Rui Gonçalo	458V	Montemurro, Marianne	719A
Liu, Yizhou	838C	Martins, Laura	628V	Mooney, Katelyn	230V
Livelo, Christopher	765B	Mashburn, Sarah	439C	Morales, Gonzalo	853C
Loehlin, David	299A	Massey, Caroline	263A	Moreira, Danielle	926V
Loganathan, Rajprasad	597B	Mastrogiannopoulos, Alex	213B	Moreno, Gabriella	344V
Logeay, Remi	1028A	Matt, Abby	1019A	Mornement, Abigail	757C
Long, Delaney	809A	Matthews, Marguerite	15	Mortimore, Nicholas	937C
Longden, Kit D	88	Matute, Daniel	11	Mosca, Timothy	18
Longworth, Michelle	851A	Maxson, Roilea	946C	Mostoufi, Sabrina	331C
Lopez, Luis Alberto	210B	May, Annabel	593A	Mu, Yizhu	244C
Louis, Collin	473A	Maya-Maldonado, Krystal	278V	Mueller, Courtney	269V
Louwagie, Troy	1034V	Mayer, Sara	1014V	Mulhern, Kathleen	412C
Lowenstein, Eve	150	McAvoy, Rebecca	879B	Mullinax, Sarah	237B
Lowery, Cameron	901C	McClain, Georgia	508C	Munteanu, Daniel	762B
Loza-Coll, Mariano	373C, 911A	McIntyre, Jennifer	558B	Murillo-Maldonado, Juan Manuel	792V
Lu, Shenzhao	158	McIntyre, Lauren	330B	Muron, Savannah	429B
Lu, Yisi Louise	505C	McMullen, Ellen	248A	Murphy, Natalie	591B
Luf, Max	938A	McPherson, Jeanne-Marie	538C	Mutch, Morgan	223C
Luis Castaeda, Ana Cecilia	1015V	Medina, Andre	404V	Myers, Abigail	306B
Lujano Perez, Laura Alejandra	915V	Megaly, Marvel	486B		
Luo, Yige	26	Meiselman, Matthew R.	108	N	
Lv, Mingyue	917V	Mejia Natividad, Isabel	408B	Nagy, Agota	706C
Ly, Michelle	697V	Mellentine, Samuel	78	Nahid, Md Ausruggaman	399V
Lynch, Jeremy	556C	Mendez Gonzalez, Ivan D.	320A	Nakamura, Mitsutoshi	102
		Mendez, Joanne	184	Nandakumar, Shyama	99
M		Mendiz, Victoria	725V	Nanni, Adalena	28
M'Angale, Peter	19	Mercer, Marianne	446A	Nassari, Sonya	693V
MA, KAICHENG	489B	Messer, Luke	595C	Nedbalová, Pavla	741B
Ma, Mengqi	1008V	Mewborne, Quinlan	944A	Negm, Sherif	315B
Ma, Wen-Juan	118	Mi, Ting-Wei	924V	Neisch, Amanda L.	658C
Maag, Isabella	721C	Miao, Erik	371A	Nelson, Kara	602A
		Miao, Guangxia	168	Nettemeyer, Nicolas	933V

Neville, Kathryn 708B
 Newcomb, Susan 483B
 Newfeld, Stuart 192
 Nielsen, Tanja 964C
 Niepielko, Matthew 321B
 Nil, Zelha 953A
 Nirala, Niraj 561V
 Noronha, Lidane 756B
 Nukala, Krishna Madhav 997V
 Nunez Flores, Rogelio 535C
 Nunez, Joaquin 117
 Nyachhyon, Utsav 795V
 Nystrom, Taylor L. 855B
 Nystul, Todd 14

O

O'Brien, Caitlin 825B
 O'Brien, Lucy 9
 O'Haren, Thomas 478C
 O'Leary, Thomas 326A
 O'Neill, Ryan 154, 656A
 Oh, Yangkyun 925V
 Okakpu, Ogadinma 254A
 Okenve-Ramos, Pilar 927V
 Olaveja, Ishtar 338V
 Olson, Claire 667C
 Olufs, Zachariah 800V
 Omar, Omar 512A
 Ong, Katy 178
 Oramas, Rebecca 468V
 Ordway, Alison 575A
 Osterfield, Miriam 318B
 Owings, Katie 219B
 Ozel, Mehmet Neset 820C
 OZTURK, ZEYNEP 49

P

Pal, Soumitra 526V
 Palumbo, Ryan 966B
 Paluri, Sravya 840B
 Panda, Pallavi 705B
 Pandey, Ashutosh 273V
 Pandey, Udai 935A
 Pang, Michelle 906B
 Panning Pearce, Margaret 941A
 Park, Jae 520V
 PARK, SUNG YEON 992V
 Parks, Sophia 66
 Parveen, Samia 1016A
 Patel, Aleena 145
 Paul, Maimuna 159
 Paul, Pranab Kumar 734V
 Pazhayam, Nila 703C
 Pearson, William H. 68
 Peebles, Katherine 684B
 Pelaez, Julianne 91

Pellegrino, Stephanie 420B
 Penfield, Lauren 680A
 Peng, Junhui 351V
 Perales, Isabella 426B
 Perkin, Alani 576B
 Perlmutter, Jessamyn 247C
 Persaud, Manisha 436C
 Petit, Christopher 409C
 Piggott, Beverly 834B
 Pimenta-Marques, Ana 690V
 Pipkin, Heidi 1023B
 Pitton, Caroline 503A
 Pizarro Salazar, Maria Alejandra 848A
 Powell, Amanda 423B
 Pozmanter, Caitlin 467V
 Pragati, 982C
 Pranoto, Inez 98
 Prasad, Anadika 822B
 Prediger, Carolina 342V
 Preger-Ben Noon, Ella 303B
 Presser, Adam 646V
 Price, Kari 709C
 Pritchard, Caroline 434A
 Prokhorenko, Mariya 389A
 Puñal, Vanessa 861B

Q

Quinn, John 395V

R

R, Radhika 246B
 Rahman, M. Mahidur 374A
 Rai, Arushi 722A
 Rai, Madhulika 751C
 Raicu, Ana-Maria 84
 Rajan, Arjun 479A
 Ranallo-Benavidez, Timothy 294B
 Rangan, Prashanth 206
 Ranjan, Rajesh 101
 Rao, Arya 119
 Ravenscroft, Thomas A. 869V
 Ray, Mukulika 80
 Rebeiz, Mark 204
 Reddy, Kayla 905A
 Reed, Bruce 1038V
 Reinger, Cindy 587A
 Rele, Chinmay P. 313C
 Rera, Michael 768B
 Riccard, Sean 641V
 Rice, Gavin 116
 Richards, Logan 560V
 Riggs, Blake 1048C
 Rincón-Ortega, Lourdes 647V
 Ríos Méndez, Sara 817C
 Rizik, Zainab 720B
 Roach, Tiffany 379C
 Roberts, David 650V

Robinson, John 931V
 Rodan, Aylin 803V
 Roddam, Noelle 767A
 Rodriguez, Felipe 457V
 Rogalski, Felipe 793V
 Rogers, Michael 493C
 Rogers, Rebekah 304C
 Rohrbach, Ethan 909B
 Rollins, Katie 700C
 Roman, Bruna 349V
 Rooney, Lossie (Elle) 624V
 Rosa, Christian 599A
 Rose, Saloni 912V
 Rosenthal, Justin 813B
 Rothenberg, Katheryn 688V
 Roy, Swagota 422A
 Ruan, Zhi-Rong 171
 Ruma, Fatema 339V
 Rundell, Thomas 750B
 Rusan, Nasser 8
 Rusch, Jannette 475C
 Rylee, Johnathan 860A

S

Sabatino, Giovanni 622V
 Sachan, Akanksha 630V
 Sachdev, Shaila 274V
 Sainz de la Maza, Diego 393B
 Salazar, Anna 806V
 Salzler, Harmony 149
 Samuelson, Kaylah 701A
 Samuk, Kieran 291B
 Sanchez Bosch, Pablo 723B
 Sanghera, Navneet 736C
 Santos, Maggie 760C
 Sanz Juste, Sara 1022A
 Sapozhnikov, Lena 181
 Sarkar, Kahini 122
 Sarkar, Sunayana 1035V
 Sarnacki, Cazmir 891B
 Sawyer, Jessica 211C
 Sawyer, Melissa 564V
 Sayied, Shanzeh 886C
 Scharenbrock, Amanda 766C
 Schloop, Allison 623V
 Schmidt, Anja 139
 Schneider, Blair 780B
 Schroeder, Analyne 614A
 Schroeder, Courtney 691V
 Schwabach, Sierra 681B
 Schweibenz, Colby 62
 Scott, Shayna 981B
 Secchia, Stefano 151
 Segu, Aishwarya 921V
 Segura, Roberto 662A
 Sekar, Aashika 1004V
 Sekelsky, Jeff 702B

Presenting Author Index

Seo, Jin	791V
Shah, Hemin	682C
Shaikh, Razeen	502C
Shapiro, Joanatta	437A
Sharma Singh, Aditi	232V
Sharma, Abhishek	64
Shea, Sydney	900B
Shefali, Shefali	752A
Shekhar, Shashank	881A
Sherlekar Banerjee, Aparna	698V
Sherlock, Kathleen	432B
Shukla, Harsh G.	298C
Sidisky, Jessica	991V
Simecek, Petr	329A
Simmons, Chad	367C
Simon, Anne F	932V
Sims, Sarah	562V
Singh, Jyotsna	1005V
Slicko, Alyssa	540B
Slobodian, Mitchell	785V
Smith, Alison	635V
Smith, Ireland	883C
Smith, Sequioa	573B
Smits, Celia	137
Sneideman, Maggie	569V
Sodders, Maggie	874V
Son, Jae Hak	340V
Sood, Chhavi	849B
Sop, Joel	438B
Sorge, Sebastian	796V
Sosa, Dylan	288B
Sottolano, Christopher	1021C
Soussana, Tamar	421C
Spana, Eric	1052A
Spletter, Maria	524V
Spokony, Rebecca	805V
Stahl, Aaron	106
Stanek, Timothy	534B
Stanhope, Sarah	738B
Stephens, Kimberly	1000V
Sterner, Emily	863A
Stevens, Cody	480B
Stewart, Rebecca	846B
Stinchfield, Michael	1031A
Stobdan, Tsering	974A
Strachan, Emily	956A
Strand, Jessica	341V
Stricker, Aubrie	683A
Su, Tin Tin	2
Suisse, Annabelle	400V
Sujkowski, Alyson	157
Sullivan, Luis	776A
Sun, Jie	777B
Suvorov, Anton	30
Suzawa, Miyuki	761A
Syed, Mubarak H	105
Szymanski, Rachel	612B

T

Tafesh, Ghada	238C
Tagorti, Ghada	1045V
Takenaka, Risa	571V
Talley, Christina	772C
Talyn, Becky	779A
Tam, Rebecca	692V
Tan, Sher Li	1013V
Tanentzapf, Guy	205
Tapia Merino, Daniel	1043V
Tarnopol, Rebecca	252B
Teeters, Gary	386A
Teklay, Salina	536A
Tennessee, Jason	742C
Terry, Douglas	97
Terry, Joseph	442C
TG, Sahana	221A
Thackeray, Justin	978B
Thakur, Rajan	216B
Thomas, Christina	494A
Thomas, Claire	659A
Thompson, Ellen	979C
Thornton-Kolbe, Emma	815A
Thorpe, Holly	983A
Thum, Andreas	918V
Tian, Aiguo	103
Tian, Xiaolin	865C
Ting, Chau-Ti	337V
Tirgar, Reyhaneh	557A
Titus-McQuillan, James	328C
Tomlin, Sarah A.	307C
Töpfer, Uwe	172
Torosin, Nicole	346V
Tran, Hiep	492B
Tripathi, Jyoti	179
Tripoli, Benjamin	1006V
Trujillo, Elizabeth	584A
Tsao, Chia-Kang	867V
TSENG, CHEN YUAN	96
Tu'ifua, Travis	174
Turcotte, Carolyn	704A
Turingan, Michael	59
Turner, Brandon	297B

U

Ueda, Kazuki	676C
Uhlhorn, Juliane	910C
Ulgherait, Matthew	55
Urban, Elizabeth	553C

V

Vaikakkara Chithran, Aarya	811C, 934C
Valencia Expósito, Andrea	633V
Valentino, Priscilla	823C
Vanderzalm, Pam	830A

Varadarajan, Ramya	413A
Varte, Vanlalrinchhani	989V
Vasudevan, Deeptha	856C
Vaughen, John	33
Velazquez-Ulloa, Noma	972B
Verster, Kirsten	29
Vida, Gabriela	375B
Villa, Sammy	857A
Vincent, Ben	322C
Vishal, Kumar	392A
Vishwakarma, Vishakha	607C
Viveiros, Jennifer	378B
Vogler, Georg	585B
Vuilleumier, Robin	17

W

Wallrath, Lori	1009V
Walsh, Justin	919V
Walsh, Karen	334V
Walsh, Kristoffer	226C
Waltrip, Andrea	996V
Wang, Chueh Wen	469V
Wang, Fei	961C
Wang, Hongsu	487C
Wang, Liping	22
Wang, Xian-Feng	1001V
Wang, Yu-Ting	396V
Wang, Zong-Heng	39
Warder, Bailey	169
Wardwell-Ozgo, Joanna	86
Warren, Jasmine	581A
Wat, Lianna	5
Watson, Keala	433C
Wei, Kevin	123
Weichselberger, Vanessa	173
Weiner, Alexis	661C
Welch, Chloe	259C
Weng, Mo	608A
Wenzel, Miwa	450B
White, James	391C
White, Roger	687B
Williams, Anna	361C
Williams, Audrey	77
Wilson, Clive	994V
Wilson, Kenneth	782V
Wilson, Sarah	872V
Wit, Charlotte	620A
Won, Jong-Hoon	913V
Woods, Grace	828B
Worley, Melanie	407V
Wright, Dynisty	25
WU, Jhen-Wei	640V

X

Xia, Shengqian	319C
Xia, Xiju	198
Xiao, Cong	873V

Xiao, Shuke 904C
Xu, Heng 522V
Xu, Yineng 197

Y

Yamamoto, Shinya 1029B
Yang, Jun 743A
Yang, Mengye 448C
Yassin, Amir 348V
Yeh, Anna 73
Yheskel, Matanel 753B
Yin, Jun 837B
Yip, Cecilia 898C
Yoon, Wan Hee 954B
Yost, Ryley T 914V
Yow, Kristi 613C
Yu, Alder 1011V
Yu, Kewei 959A
Yu, Yang 300B
Yu, Zihao 598C
Yuschock, Molly 590A

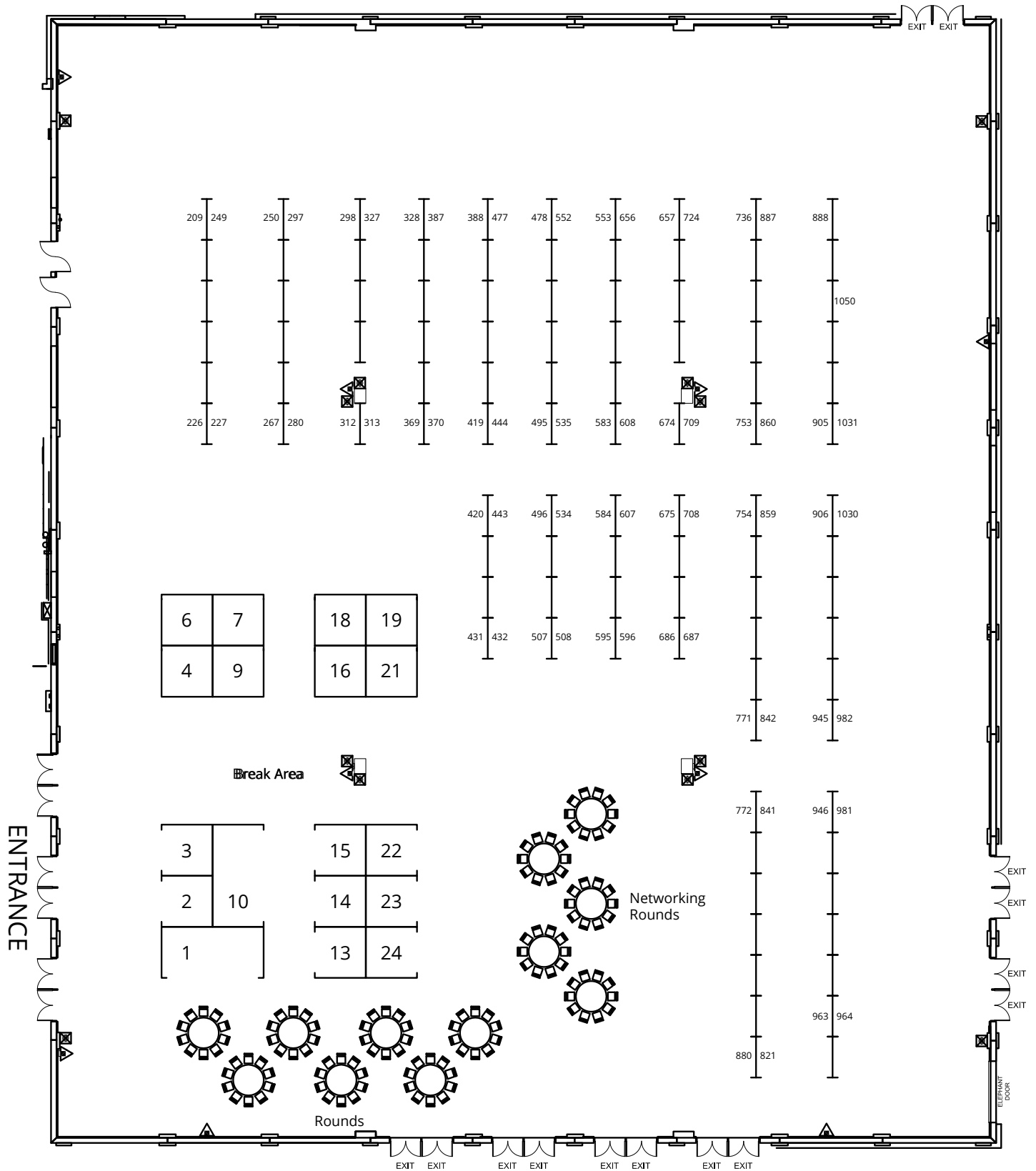
Z

Zane, Flaminia 769C
Zaremba, William 362A
Zeidler, Martin 236A
Zein-Sabatto, Hala 61
Zhan, Li 199
Zhang, Ke 945B
Zhang, Peng 713A
Zhang, Tianyi 525V
Zhang, Yingbiao 228B
Zhang, Yu 111
Zhao, Li 456V
Zhao, Ziwei 971A
Zhou, Dan 1010V
Zhu, Fionna 586C
Zhu, Hailun 875V
Zhu, Haolong 261B
Zhuang, Xuan 356V
Ziliotto, Silvia 958C
Zinzen, Robert 854A
Zuckerman, Jacob 711B
Zúniga-García, Manuel Alejandro . . 629V
Zurovec, Michal 222B



Poster and Exhibit Map

Floorplan

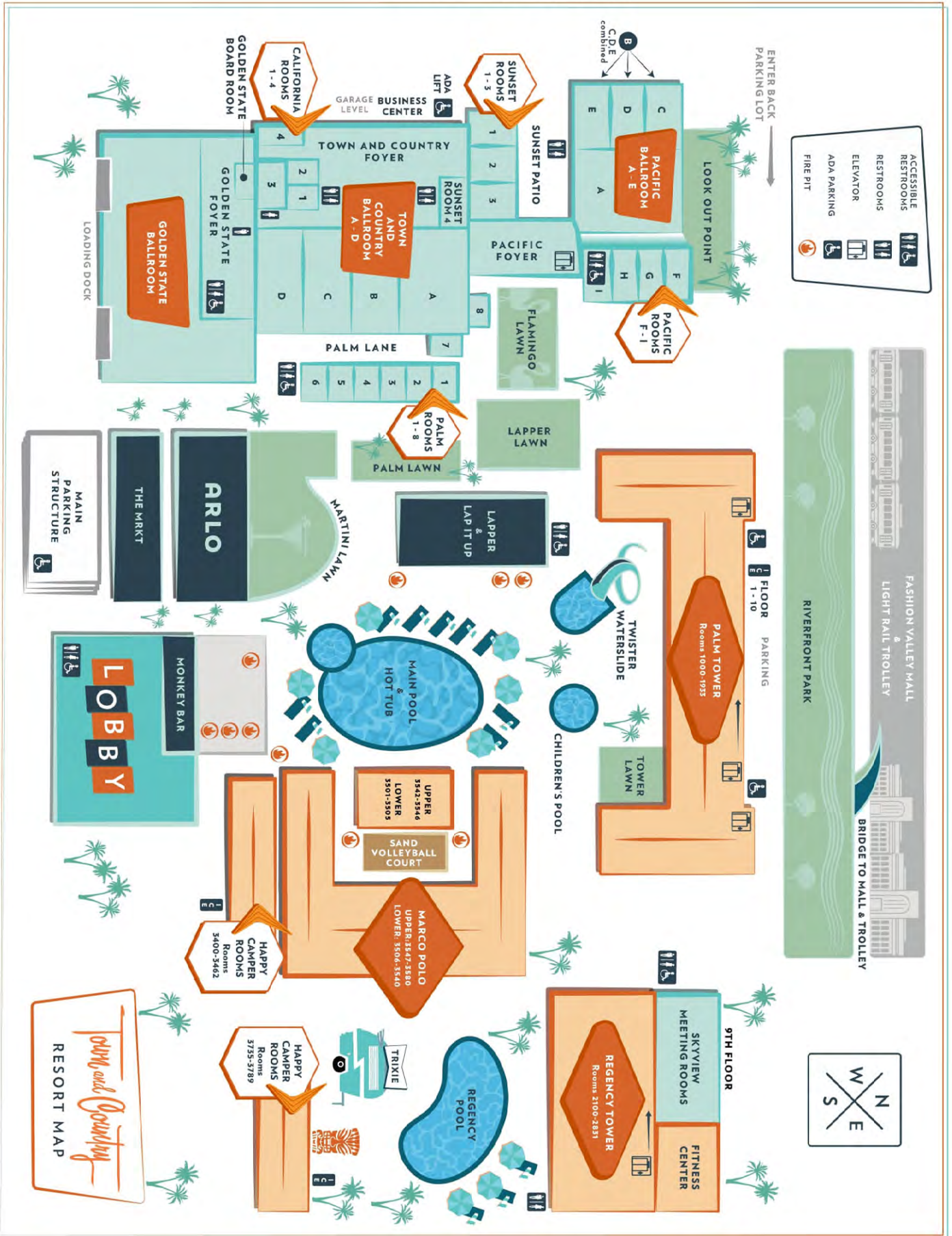




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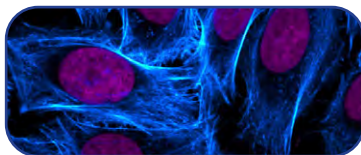
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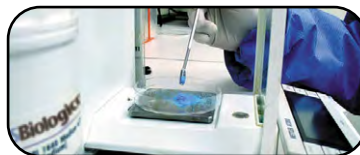
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