64th Annual

Drosophila Research Conference

March 1–5, 2023

PROGRAM BOOK

GENETICS GSA G3 Genes | Genomes | Genetics

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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 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.

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GENETICS

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General Information

Registration Desk and Badges

If you are attending in person, you should have received your registration badge in advance via email and printed it out. Badges will not be printed onsite. You can pick up your badge holder and lanyard at the conference registration desk located on the fourth floor of the Sheraton Grand Chicago Riverwalk. For admission to the sessions, posters, exhibits, and reception, you must have your official conference badge. The information contained in the QR Code on your badge is your name, email, and institution. Exhibitors may ask your permission to scan your badge.

You can download the Program Book and Abstract Book on the conference website or access all the information in the Conference App. Certificates of Attendance and Participation are available at the registration desk and online.

Registration Desk Schedule

Wednesday, March 1	1:00 p.m. – 9:00 p.m.
Thursday, March 2	7:30 a.m. – 5:00 p.m.
Friday, March 3	8:15 a.m. – 4:00 p.m.
Saturday, March 4	7:45 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 GSA Conferences (NoReply@events.cdsreg.com)

Wi-fi Access

Complimentary wi-fi is available in the meeting rooms:

Network: MarriottBonvoy_Conference
Password: Dros23Fly

Presenting Author Index

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

Access the app at: genetics-gsa.org/Drosophila-2023/conference-app

Oral Presenters

All speakers must come to the Speaker Ready Room in Sheraton Ballroom 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

All poster authors have been invited to upload a pdf and audio overview of their poster. These electronic files will be available through the conference app from February 24 to April 6. Be sure to visit the app and leave your questions for the authors. Posters ending in V are only available online.

Poster numbers ending with T will be presented in person on Thursday, March 2 (2:00–3:00 p.m. Even, 3:00–4:00 p.m. Odd). Posters ending with F will be presented in person on Friday, March 3 (2:00–3:00 p.m. Even, 3:00–4:00 p.m. Odd). Posters ending with S will be presented in person on Saturday, March 4 (1:30–2:30 p.m. Even, 2:30–3:30 p.m. Odd)

To view a poster online, look for the “Virtual Poster” link near the bottom of each poster entry in the App. 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 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 Riverview on the first floor of the conference hotel. 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 on the following page. Masks are required in all meeting spaces.

In-person Poster Presentations

Wednesday, March 1	View all the virtual posters while traveling to the meeting and leave comments for the authors in the app. Posters will be available until April 6.	
Thursday, March 2	All T poster authors will present. Posters can be displayed beginning at 8:00 a.m.	
	2:00 p.m.–3:00 p.m. 3:00 p.m.–4:00 p.m. 10:00 p.m.	Even-numbered T posters Odd-numbered T posters T Posters must be removed
Friday, March 3	All F poster authors will present. Posters can be displayed beginning at 8:00 a.m.	
	2:00 p.m.–3:00 p.m. 3:00 p.m.–4:00 p.m. 10:00 p.m.	Even-numbered F posters Odd-numbered F posters F Posters must be removed
Saturday, March 4	All S poster authors will present. Posters can be displayed beginning at 8:00 a.m.	
	1:30 p.m.–2:30 p.m. 2:30 p.m.–3:30 p.m. 6:30 p.m.	Even-numbered S posters Odd-numbered S posters S Posters must be removed

Viewing Sessions Online

Remote attendees can view sessions via the Online Planner:

Plenary and Platform Sessions—Registrants access live sessions through the App. Ten 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 five 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 April 6.

Poster Sessions—PDFs and audio overviews of all of the posters will be available via the App February 24–April 6.

Exhibitor 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
919-450-6744
sales@archonscientific.com
www.ArchonScientific.com
Booth #202

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™.

Bloomington Drosophila Stock Center
flystock@indiana.edu
https://bdsc.indiana.edu
Booth #304

The Bloomington Drosophila Stock Center maintains and distributes *Drosophila melanogaster* strains to labs all over the world. We carry over 80,000 stocks, which can be searched and ordered on our website (https://bdsc.indiana.edu). Please come by! BDSC staff will be on hand to answer any questions and take suggestions.

Drobot Biotechnology Limited Company
8869 2106 7865
service@drobot.com.tw
drobot.com.tw
Booth #301

DroBot provides personal stocks center, automatic devices, and scientific services. 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 for survival. DroBot keeps upgrading the AI fly-conserving system to give intact services for biotechnology research.

Drosophila Genomics Research Center
https://dgrc.bio.indiana.edu
Booth #104

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

FlyBase
617-678-4567
russo@morgan.harvard.edu
flybase.org
Booth #102

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.

Genetics Society of America
240-880-2000
ruth.isaacson@thegsajournals.org
genetics-gsa.org
Booth #502

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.

FlyTabs
805-948-5665
flytabs@yahoo.com
flytabsci.com
Booth #204

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 1 finger, 1 button design is remarkably easy to use. Stop by for a demonstration!

LabExpress
734-761-8148
sheila@lab-express.com
www.lab-express.com
Booth #402

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.

Genesee Scientific
888-357-3597
support@geneseesci.com
www.geneseesci.com
Booth #201 and 203

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!

Leica Microsystems
felicia.roland@leica.microsystems.com
www.leica-microsystems.com
Booth #601

Leica Microsystems develops and manufactures microscopes and scientific instruments for the analysis of microstructures and nanostructures. The company is one of the market leaders in compound and stereo microscopy, digital microscopy, confocal laser scanning microscopy, electron microscopy sample preparation, optical coherence tomography, and surgical microscopes.

microPublication Biology
contact@micropublication.org
www.microPublication.org
Booth #303

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
781-791-9508
nightsea@nightsea.com
www.NIGHTSEA.com
Booth #501

Adapt your existing stereo microscopes for fluorescence with NIGHTSEA's popular, economical system. Fully modular, with 6 excitation-emission combinations available. Widely used in the *Drosophila* community for screening and sorting transgenic flies, undergraduate laboratory courses, and K-12 outreach.

Percival Scientific
515-465-9363
jjackson@percival-scientific.com
www.percival-scientific.com
Booth #403

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.

Rainbow Transgenic Flies, Inc
info@rainbowgene.com
www.rainbowgene.com
Booth #503

Located in beautiful California, RTF has been serving *Drosophila* fly research community since 2004. Our newly developed CRISPR cloning services give you opportunities to use our expertise to do different types of genome editing. Our high quality of services, competitive price and fast turn-around time make RTF an affordable and reliable resource for your research.

Roboz Surgical Instruments
dmitrii@roboz.com
Booth #302

For more than 60 years, Roboz has been known to consistently deliver superior quality surgical instruments for the biomedical and life science research industry. Our surgical instrument catalog features over 1000 products, including the finest-tipped Vannas spring scissors, 1 micron-tipped dissection needles, and Super Fine #5 Dumont tweezers.

Union Biometrica
Sales@unionbio.com
www.unionbio.com
Booth #603

Union Biometrica's new COPAS Infinity™ offers expanded capabilities for analysis & gentle sorting of 2-1500 micron model organisms such as *Drosophila* & other cell clusters which are too big/fragile for traditional cytometers. Infinity combines high sensitivity optics packaged in a smaller footprint sized for optional installation in a biosafety cabinet.

Vienna Drosophila Resource Center
Office@vdrc.at
www.vdrc.at
Booth #504

The Vienna Drosophila Resource Center (www.vdrc.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 private stock keeping, fly extract and fly food. Drop by to ask any questions and give feedback.

WellGenetics
8861 2651 1809
info@wellgenetics.com
www.wellgenetics.com
Booth #401

WellGenetics is dedicated to providing professional services in microinjection and gene knockout/knockin in various *Drosophila* species. We are a team of experts in molecular biology and microinjection for generating genetic tools, such as transgenic line; gene deletion; point mutation; gene reporter; tag knockin; RMCE swap and RMCE knockin. The cloning projects and experiment-outsourcing are also welcome.

Zantiks Ltd
info@zantiks.com
www.zantiks.com
Booth #404

Zantiks units enable animal behavior to be measured simply. Fully automated units deliver controlled environments to reliably measure *Drosophila* adult and larval behavior in response to visual, odor, temperature and shock stimuli. Results are available at the end of the experiment. Studies include circadian rhythms, locomotor, startle, courtship, etc.

Safety Protocols

In-person attendees are required to wear a protective masks, ideally N95s or KN95s, while attending the conference. If you do not have access to a high-quality mask, a limited supply of complementary masks are available at the Conference Registration Desk

Hand sanitizers will be available in the meeting rooms.

Please keep your mask on while in line for food or beverages and only remove it to eat or drink.

Daily self monitoring: If you experience any of the listed symptoms, do not enter the meeting space and contact gsaconferences@genetics-gsa.org to have a rapid test brought to you.

COVID-19 Testing

A limited supply of rapid antigen tests are available at the conference registration desk for those experiencing symptoms. The Guest Services Desk in the hotel lobby will also have a current list of nearby pharmacies offering testing.

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 on social media with #jobs and #Dros23.

Security/Lost and Found

For all emergencies and lost and found items, contact Sheraton Grand Chicago Riverwalk security by dialing 0 from any house phone. The conference registration desk will be able to assist you as well.

Nursing Mothers Room

The conference hotel has two nursing mother’s rooms located on the lobby level (third floor) that are open 24/7.

Meals

Meals are not included in the conference registration fee but there are plenty of dining options at the hotel and within walking distance. The Guest Services Desk in the hotel lobby can give you a list of nearby options. There will also be cash concessions at breakfast and lunchtime on the fourth floor near the Sheraton Chicago Ballroom.

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 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. For more on GSA's Vision for Inclusive Conferences, please visit https://genetics-gsa.org/vision-for-inclusive-conferences/

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.

Posters

When you view poster materials during the conference, whether in person or via the Conference App, remember that posters are typically works in progress. Do not cite or reproduce any part of posters without the presenter's permission.

Schedule of Events

Manage your schedule
Download the free app

Scan the QR code or enter the URL in your device browser to download

Mobile app access code: **DROS23**

Download on the App Store
https://ativ.me/4dd

GET IT ON Google Play
https://ativ.me/68t

For all other devices
Web Version
https://ativ.me/uh1

All times are listed in Central Standard Time (CST)

Friday, February 24, 2023		
10:00 a.m.–12:00 p.m.	**(Virtual) CRISPR/Cas and related technologies in Drosophila cells and in vivo workshop**	Online
12:00 p.m.–1:00 p.m.	**(Virtual) Virtual Networking Meetup**	Online
Monday, February 27, 2023		
7:30 a.m.–8:00 a.m.	**Getting Involved in GSA's Early Career Professional Development**	Online
8:30 a.m. –9:30 a.m.	**Conference Success Tips and Welcome from Early Career Leadership Program**	Online
10:00 a.m. –11:00 a.m.	**Career Exploration Panel**	Online
1:00 p.m. –2:30 p.m.	**Careers in Academia**	Online
3:30 p.m. –4:30 p.m.	**Multilingual Networking**	Online
Wednesday, March 1, 2023		
1:00 p.m.–5:00 p.m.	**Speaker Ready Room Open** *(plenary and platform speakers must check in 24 hours in advance of their session)*	Sheraton 1, Level 4
1:00 p.m.–4:00 p.m.	**Drosophila Board of Directors Meeting**	Michigan, Level 2
1:00 p.m.–4:00 p.m.	**Ecdysone Workshop**	Superior, Level 2
2:00 p.m.–9:00 p.m.	**Registration/Information Desk**	Ballroom Promenade, Level 4
2:00 p.m.–4:00 p.m.	**GSA LOCI Hygiene Packing Kit Event**	Mayfair, Level 2
2:30 p.m.–3:00 p.m.	**Getting Involved in GSA's Early Career Professional Development**	Chicago 8, Level 4
3:30 p.m.–4:30 p.m.	**Conference Success Tips and Welcome from Early Career Leadership Program**	Chicago 8, Level 4
4:45 p.m.–5:45 p.m.	**Multilingual Networking**	Chicago 8, Level 4
7:00 p.m.–9:00 p.m.	**Opening General Session, Keynote, and Sandler Award Talk** Session Chair: Savraj Grewal	Sheraton/Chicago 4-7
9:00 p.m.–10:30 p.m.	**Opening Mixer with Exhibitors**	Riverwalk, Level 1

All times are listed in Central Standard Time (CST)

THURSDAY, March 2, 2023

7:00 a.m.–5:00 p.m.	**Registration/Information Desk**	Ballroom Promenade, Level 4
7:15 a.m.–8:15 a.m.	**Continental Breakfast**	Ballroom Promenade, Level 4
7:15 a.m.–8:15 a.m.	**Undergraduate Mixer**	Chicago 8, Level 4
8:00 a.m. – 12:15 p.m.	**T Posters can be mounted**	Riverwalk, Level 1
8:00 a.m.–4:00 p.m.	**Speaker Ready Room Open** *(plenary and platform speakers must check in 24 hours in advance of their session)*	Sheraton 1, Level 4
8:15 a.m.–10:30 a.m.	**Plenary Session 1** Session Chairs: Jennifer Jemc Mierisch and Lucy O'Brien	Sheraton/Chicago 4-7
10:30 a.m.–11:00 a.m.	**Coffee Break**	Ballroom Promenade, Level 4
11:00 a.m.–12:30 p.m.	**Plenary Session 2 Discover and Develop Your Community** Session Chair: Angela DePace	Sheraton/Chicago 4-7
12:15 p.m.–4:15 p.m.	**Exhibits**	Riverwalk, Level 1
12:45 p.m.–1:45 p.m.	**GSA Journals Publishing Q & A (registration required)**	Chicago 8, Level 4
1:00 p.m.–4:00 p.m.	**Networking Hotspot**	Riverwalk, Level 1
1:30 p.m.–4:00 p.m.	**Coffee Break**	Riverwalk, Level 1
1:30 p.m.–2:00 p.m.	**Meet the Speaker**	Riverwalk, Level 1
2:00 p.m.–4:00 p.m.	**T Poster Presentations (2-3 Even, 3-4 Odd) and Exhibits**	Riverwalk, Level 1

All times are listed in Central Standard Time (CST)

THURSDAY, March 2, 2023 (continued)

4:30 p.m.–6:30 p.m.	**Concurrent Platforms I**	
	Patterning, Morphogenesis, and Organogenesis I Session Chairs: Sougata Roy, Lathiena Nervo, and Matthew Fischer	Chicago 9-10, Level 4
	Evolution I Session Chairs: Grace Yuh Chwen Lee, Yun Ding, and Gavin Rice	Sheraton 2-3, Level 4
	Physiology, Metabolism, and Aging I Session Chairs: Yves Chabu, Naoki Yamanaka, and Mar Quereda Pastor	Sheraton/Chicago 4-7
7:45 p.m.–9:45 p.m.	**Concurrent Workshops**	
	Spotlight on Undergraduate Research	Erie, Level 2
	The Neighborhoods Project: Leveraging cultural community connections to develop novel, collaborative genetics research projects	Huron, Level 2
	Developmental Mechanics	Michigan, Level 2
	Non-traditional fly models: Contributions and research opportunities	Ontario, Level 2
	Everything You Wanted to know About Sex	Superior, Level 2
8:00 p.m.–10:00 p.m.	**Networking Hotspot**	Riverwalk, Level 0
10:00 p.m.	**(T) Posters must come down**	Riverwalk, Level 1

FRIDAY, March 3, 2023

8:00 a.m.–12:15 p.m.	**F Posters can be mounted**	Riverwalk, Level 1
8:00 a.m.–5:00 p.m.	**Registration/Information Desk**	Ballroom Promenade, Level 4
8:00 a.m.–4:00 p.m.	**Speaker Ready Room Open** *(plenary and platform speakers must check in 24 hours in advance of their session)*	Sheraton 1, Level 4

All times are listed in Central Standard Time (CST)

FRIDAY, March 3, 2023 (continued)

8:30 a.m.–10:00 a.m.	**Concurrent Platforms II**	
	Patterning, Morphogenesis, and Organogenesis II Session Chairs: Sougata Roy, Lathiena Nervo, and Matthew Fischer	Chicago 9-10, Level 4
	Evolution II Session Chairs: Grace Yuh Chwen Lee, Yung Ding, and Gavin Rice	Sheraton 2-3, Level 4
	Physiology, Metabolism, and Aging II Session Chairs: Yves Chabu, Naoki Yamanaka, and Mar Quereda Pastor	Sheraton/Chicago 4-7
10:00 a.m.–10:30 a.m.	**Coffee Break**	Ballroom Promenade, Level 4
10:30 a.m.–12:30 p.m.	**Concurrent Platforms III**	
	Cell Stress and Cell Death Session Chairs: Fabio Demontis, Bree Grillo Hill, and Han Tran	Chicago 9-10, Level 4
	Reproduction and Gametogenesis Session Chairs: Lindsay Lewellyn, Michelle Starz-Gaiano, and Audrey Williams	Sheraton 2-3, Level 4
	Neural Development and Physiology Session Chairs: Robert Carrillo, Katherine Thompson-Peer, and Kristen Lee	Sheraton/Chicago 4-7
12:15 p.m.–4:15 p.m.	**Exhibits**	Riverwalk, Level 1
12:30 p.m.–1:30 p.m.	**Come Fly with Me: Career Advice and Connections** *(pre-registration required)*	Chicago 8, Level 4
12:45 p.m.–1:45 p.m.	**GSA Journals Editorial Board Meeting**	Mayfair, Level 2
1:00 p.m.–4:00 p.m.	**Networking Hotspot**	Riverwalk, Level 1

All times are listed in Central Standard Time (CST)

2:00 p.m.–4:00 p.m.	**F Poster Presentations (2-3 Even, 3-4 Odd)**	Riverwalk, Level 1
FRIDAY, March 3, 2023 (continued)		
4:30 p.m.–6:30 p.m.	**Concurrent Platforms IV**	
	Immunity and the Microbiome Session Chairs: Jason Karpac, Francesca Di Cara, and Scott Keith	Chicago 9-10, Level 4
	Cell Division and Cell Growth Session Chairs: Jessica Fellmeth, Bob Duronio, and Mark Geisler	Sheraton 2-3, Level 4
	Neural Circuits and Behavior Session Chairs: Annika Barber, Troy Shirangi, and Amy Poe	Sheraton/Chicago 4-7
7:45 p.m.–9:45 p.m.	**Concurrent Workshops**	
	Evolutionary and Population-omics at the Scale of Model Clade Drosophilidae	Michigan, Level 2
	Immunometabolism: Flying 10 Years later	Superior, Level 2
8:00 p.m.–10:00 p.m.	**Networking Hotspot**	Riverwalk, Level 1
10:00 p.m.	**(F) Posters must come down**	Riverwalk, Level 1
SATURDAY, March 4, 2023		
8:00 a.m.–2:00 p.m.	**Registration/Information Desk**	Ballroom Promenade, Level 4
8:00 a.m – 12:00 p.m.	**S Posters can be mounted**	Riverwalk, Level 1
8:00 a.m.–4:00 p.m.	**Speaker Ready Room Open** *(plenary and platform speakers must check in 24 hours in advance of their session)*	Sheraton 1, Level 4
8:00 a.m.–10:00 a.m.	**Concurrent Platforms V**	
	Initiatives in Education and DEI Session Chairs: Jacob Kagey, Alana O'Reilly, and Andrea Darby	Chicago 9-10, Level 4
	Stem Cells, Regeneration, and Tissue Injury Session Chairs: Young Kwon, Minoree Kohwi, and Jiae Lee	Sheraton 2-3, Level 4
	Chromatin, Epigenetics, and Genomics Session Chairs: Maya Capelson, Nicole Riddle, and Annesha King	Sheraton/Chicago 4-7

All times are listed in Central Standard Time (CST)

SATURDAY, March 4, 2023 (continued)

10:00 a.m.–10:30 a.m.	**Coffee Break**	Ballroom Promenade, Level 4
10:30 a.m.–12:00 p.m.	**Concurrent Platforms VI**	
	Regulation of Gene Expression I Session Chairs: Vikki Weake, Leila Rieder, and Varsha Rajshekar	Chicago 9-10, Level 4
	Cell Biology: Cytoskeleton, Organelles, and Trafficking I Session Chairs: Thomas Hurd, Clemens Cabernard, and Katheryn Rothenberg	Sheraton 2-3, Level 4
	Models of Human Disease I Session Chairs: Hakeem Lawal, Rachael French, and Dionne Williams	Sheraton/ Chicago 4-7
12:00 p.m.–3:30 p.m.	**Exhibits**	Riverwalk, Level 1
12:30 p.m.–3:30 p.m.	**Networking Hotspot**	Riverwalk, Level 1
1:30 p.m.–3:30 p.m.	**S Poster Presentations (1:30-2:30 Even, 2:30-3:30 Odd)**	Riverwalk, Level 1
4:00 p.m.–6:00 p.m.	**Concurrent Platforms VII**	
	Cell Biology: Cytoskeleton, Organelles, and Trafficking II Session Chairs: Thomas Hurd, Clemens Cabernard, and Katheryn Rothenberg	Sheraton 2-3, Level 4
	Models of Human Disease II Session Chairs: Hakeem Lawal, Rachael French, and Dionne Williams	Sheraton/ Chicago 4-7
	Regulation of Gene Expression II Session Chairs: Vikki Weake, Leila Rieder, and Varsha Rajshekar	Chicago 9-10, Level 4
6:00 p.m.	**(S) Posters must come down**	Riverwalk, Level 1
7:30 p.m.–9:45 p.m.	**Techniques and Technology** Session Chairs: Nilay Yapici, Hongjie Li, and Oguz Kanca	Sheraton/ Chicago 4-7

All times are listed in Central Standard Time (CST)

SUNDAY, March 5, 2023

8:30 a.m.–11:00 a.m.	**Closing Plenary** Session Chairs: Mia Levine, Savraj Grewal	Sheraton/Chicago 4-7

Oral Presentation and Workshop Session Listings

Friday, February 24, 2023

10:00 a.m.–12:00 p.m.
Online

(Virtual) CRISPR/Cas and related technologies in Drosophila cells and in vivo workshop

10:00–10:20 a.m. Chun Han, Cornell University, "CRISPR tools in Drosophila for tissue-specific gene manipulation"

10:20–10:40 a.m. Fillip Port, DKFZ, "Novel CRISPR strategies for more efficient bi-allelic gene inactivation"

10:40–11:00 a.m. Justin Bosch, Harvard Med School, "Next-generation Prime Editing technology"

11:00–11:20 a.m. Shu Kondo, Tokyo Univ of Science, "Lessons learned and resources available from the NIG-Japan systematic large-scale in vivo CRISPR knockout project"

11:20–11:40 a.m. Ram Viswanatha, Harvard Med School, "Next-generation genome-wide CRISPR pooled screening in Drosophila cells"

11:40–noon Jonathan Zirin and Stephanie Mohr, Harvard Med School, Moderated panel discussion

Wednesday, March 1, 2023

1:00 p.m.–4:00 p.m.
Superior, Level 2

Ecdysone Workshop

1:00 p.m. Heidi Bretscher and Jason Tennessen, Welcome Address

1:05 p.m. Yongjun Li, University of Pennsylvania, Mechanisms underlying effects of ecdysone on sleep

1:40 p.m. Jacob Jaszczak, University of California San Francisco, Ecdysone coordination of peripheral sensory neuron structure and function

2:05 p.m. Alex Shingleton, University of Illinois Chicago, Understanding Critical Size: A mathematical model of ecdysone dynamics in Drosophila

2:30 p.m. Break

2:45 p.m. Susan Gerbi, Brown University, The ecdysone receptor is a replication factor in addition to a transcription factor

3:10 p.m. Dan McKay, University of North Carolina, Spatiotemporal control of gene expression by the ecdysone nuclear receptor

3:35 p.m. Arely Diaz, University of Colorado Anschutz Medical Campus, Spenito-dependent metabolic sexual dimorphism intrinsic to fat storage cells

Wednesday, March 1, 2023

7:00 p.m.–9:00 p.m.
Sheraton/Chicago 4-7

Opening General Session, Keynote, and Sandler Award Talk

Session Chair:
Savraj Grewal, University of Calgary

7:00 p.m. Opening Remarks

7:30 p.m. Larry Sandler Award Talk - A protease-initiated model of wound detection, James O'Connor

8:00 p.m. Keynote Function of satellite DNA in Drosophila spermatogenesis **Yukiko Yamashita** Whitehead Institute for Biomedical Research, MIT, HHMI

Thursday, March 2, 2023

8:15 a.m.–10:30 a.m.
Sheraton/Chicago 4-7

Plenary Session 1

Session Chairs:
Jennifer Jemc Miersch, Loyola University Chicago
Lucy O'Brien, Stanford University

8:15 a.m. Image Awards

8:20 a.m. Outstanding Service to the Community Award

2 8:25 a.m. Adipocyte-Derived Amino Acid Storage Proteins Regulate Distinct Steps of Oogenesis **Lesley Weaver** Indiana University

3 8:50 a.m. Molecular kinetics of gene regulation and nuclear organization during development **Mustafa Mir** University of Pennsylvania and Children's Hospital of Philadelphia

4 9:15 a.m. Why flies like getting buzzed: Neuromolecular mechanisms for motivation **Karla Kaun** Brown University

5 9:40 a.m. Genetic variation in *P*-element dysgenic sterility: how flies put up with invading genomic parasites **Erin Kelleher** University of Houston

6 10:05 a.m. Immune Regulation of Intestinal Stem Cell Dynamics Is Essential for the Repair of Damaged Epithelia **Edan Foley** University of Alberta

Thursday, March 2, 2023

11:00 a.m.–12:30 p.m.
Sheraton/Chicago 4-7

Plenary Session 2 Discover and Develop Your Community

Session Chair:
Angela DePace, Harvard University

7 11:00 a.m. Discover and Develop Your Community
Raquell Holmes improvscience and Tânia Reis, University of Colorado, Anschutz Medical Campus

Thursday, March 2, 2023

12:45 p.m.–1:45 p.m.
Chicago 8, Level 4

GSA Journals Publishing Q & A (registration required)

Curious about the peer review process? Join us for an overview of peer review presented by the Executive Editor of GSA Journals GENETICS and G3: Genes|Genomes|Genetics. Editors from multiple journals, including GENETICS, G3, Elsevier, and others, will then participate in a panel discussion answering attendee questions about the entire process—from submission to review to publication. Students and postdocs are invited to attend. All questions welcome!

Thursday, March 2, 2023

1:00 p.m.–4:00 p.m.
Riverwalk, Level 1

Networking Hotspot

Thursday, March 2, 2023

1:30 p.m.–2:00 p.m.
Riverwalk, Level 1

Meet the Speaker

Come meet our plenary speakers and chat about life as a scientist. What are your influences and inspirations? What do you find rewarding and challenging? Who has helped you along the way? The speakers are excited to share their own experiences and to hear about yours.

Thursday, March 2, 2023

4:30 p.m.–6:30 p.m.
Sheraton 2-3, Level 4

Evolution I

Session Chairs:
Grace Yuh Chwen Lee, University of California Irvine
Yun Ding, University of Pennsylvania
Gavin Rice, University of Pittsburgh

8 4:30 p.m. High-resolution Hi-C shows chromatin state is responsible for pairing changes in Drosophila hybrids **James Baldwin-Brown** University of Utah

9 4:45 p.m. Rapid centromere turnover in *Drosophila* gives rise to telocentric chromosomes **Cecile Courret** University of Rochester

10 5:00 p.m. Coevolution between two essential telomere binding proteins preserves chromosome end-protection **Sung-Ya Lin** University of Pennsylvania

11 5:15 p.m. Single and repetitive oligopaints probes label specifically neo-Y chromosome of *Drosophila miranda* **Maria Vibranovski** Arizona State University

12 5:30 p.m. Rapid evolution of piRNA clusters in the *D. melanogaster* ovary **Satyam Srivastav** Cornell University

13 5:45 p.m. Cracking open an evolutionary mystery: Using the eggshell ECM to understand how cell polarity, cell adhesion, actomyosin contractility, and patterned secretion contribute to diverse ECM morphologies **Seth Donoughe** University of Chicago

14 6:00 p.m. Modelling the evolution of chemical defense in *Drosophila melanogaster* **Tyler Douglas** University of California Berkeley

15 6:15 p.m. Balanced Inversions Help Maintain Sexually Antagonistic Polymorphism **Christopher McAllester** UW Madison

Thursday, March 2, 2023

4:30 p.m.–6:30 p.m.
Chicago 9-10, Level 4

Patterning, Morphogenesis, and Organogenesis I

Session Chairs:
Sougata Roy, University of Maryland, College Park
Lathiena Nervo, Pacific Lutheran University
Matthew Fischer, University of Maryland

16 4:30 p.m. Positioning of the hematopoietic stem cell niche **Kara Nelson** University of Pennsylvania

17 4:45 p.m. Investigating the cellular origins of 3D tissue shapes **Claudia Vasquez** University of Washington

18 5:00 p.m. Imaginal disc growth factors regulate epithelial morphogenesis and CO_2 response **Sandra Zimmerman** University of Washington

19 5:15 p.m. Tiling mechanisms of the compound eye through geometrical tessellation **Makoto Sato** Kanazawa University

20 5:30 p.m. The Role of *crossveinless-c (cv-c)* in Caudal Visceral Mesoderm (CVM) Migration **Jayden Ogbodo** University of St. Thomas

21 5:45 p.m. Lessening cell-ECM adhesion: a kick off point triggering basal epithelial folding. **Maria Martin-Bermudo** CABD

22 6:00 p.m. Effects of maternal BMP signaling in *Drosophila melanogaster* early embryonic development **Daniel Bressan de Andrade** Federal University of Rio de Janeiro

23 6:15 p.m. The *Drosophila* tracheal system controls sex differences in gut shape **Laura Blackie** MRC London Institute of Medical Sciences

Thursday, March 2, 2023

4:30 p.m.–6:30 p.m.
Sheraton/Chicago 4-7

Physiology, Metabolism, and Aging I

Session Chairs:
Yves Chabu, University of Missouri
Naoki Yamanaka, University of California, Riverside
Mar Quereda Pastor, University of Missouri-Columbia

24 4:30 p.m. Maternal metabolic stress regulates intestinal stem cell differentiation by metabolite inheritance **Helin Hocaoglu** UT Southwestern Medical Center

25 4:45 p.m. Integrated Stress Response signaling in adipose tissue acts as a systemic regulator of reproduction **Lydia Grmai** University of Pittsburgh

26 5:00 p.m. Lactate and glycerol-3-phosphate metabolism cooperatively regulate larval growth in a tissue nonautonomous manner **Madhulika Rai** Indiana University Bloomington

27 5:15 p.m. Sphingolipid control of neural circuits by glial catabolism **John Vaughen** Stanford University

28 5:30 p.m. Myoinhibiting peptide precursor affects the diet-gut-brain axis and leads to neurodegeneration **Francesca Di Cara** Dalhousie University

29 5:45 p.m. *Myc* mediates the scaling of RNA and proteins with ploidy in the *Drosophila* midgut **Christopher Amourda** Imperial College London

30 6:00 p.m. Aging Fly Cell Atlas **Tzu-Chiao Lu** Baylor College of Medicine

31 6:15 p.m. Vitamin A deficiency triggers a novel transmembrane protein that stabilizes degenerating photoreceptors. **Deepshe Dewett** UMASS Boston

Thursday, March 2, 2023

7:45 p.m.–9:45 p.m.
Michigan, Level 2

Developmental Mechanics Workshop

7:46 p.m. Tony Harris, University of Toronto, Re-shaping the cell cortex into dome-like compartments of the syncytial embryo.

8:03 p.m. Mo Weng, University of Nevada – Las Vegas, Differential Bazooka levels regulated by a novel Drosophila, Moat, modulate morphogenetic boundaries.

8:20 p.m. Rick Fehon, University of Chicago, Tension and actomyosin dynamics in Hippo pathway regulation.

8:37 p.m. Tina Tootle, University of Iowa, Prostaglandins act in both the microenvironment and within migrating cells to promote collective migration.

8:54 p.m. Rich Carthew, Northwestern University, A Mechanochemical Perspective on Patterning a Neurocrystalline Lattice.

9:11 p.m. Ruth Lehmann, Massachusetts Institute of Technology, Cortical flow–driven amoeboid migration in vivo

9:28 p.m. David Bilder, University of California – Berkeley, Specialized cells that sense tissue mechanics to regulate morphogenesis

Thursday, March 2, 2023

7:45 p.m.–9:45 p.m.
Superior, Level 2

Everything You Wanted to know About Sex Workshop

7:45 p.m. Opening Comments

7:50 p.m. Yun Ding, University of Pennsylvania, Structural and functional changes of motor patterning neurons in the evolution of Drosophila male courtship song

8:10 p.m. Yasir Ahmed-Braimah , Syracuse University, The female transcriptional response to mating 8:30 p.m. Brian Hollis, University of South Carolina, Life without sexual selection: fly population genomics and transcriptomics during 200 generations of experimental monogamy

8:50 p.m. Ching-Ho Chang, Fred Hutchinson Cancer Center, Genetic conflicts shape the evolution of sperm nuclear proteins (protamines)

9:10 p.m. Mursalin Khan, Auburn University, Sex differences in the innate immune response

9:22 p.m. Nicole Riddle, University of Alabama, Integration Institute: Sex, Aging, Genomics, and Evolution (IISAGE)

9:42 p.m. Closing Comments/Discussion

Thursday, March 2, 2023

7:45 p.m.–9:45 p.m.
Ontario, Level 2

Non-traditional fly models: Contributions and research opportunities Workshop

7:45–8:00 p.m. Introduction (Urs Schmidt-Ott / Ellie Heckscher)

8:00–8:15 p.m. Brian Wiegman: Updating the phylogeny of flies: New phylogenomic frameworks to understand evolutionary specialization

8:15–8:30 p.m. Jeff Tomberlin: The black soldier fly Hermetia illucens: model for circular economics and basic science

8:30–8:45 p.m. Ellie Heckscher: Motor circuit diversity in Dipteran larvae

8:45–9:00 p.m. Susan Gerbi: Chromosome antics in the fungus fly Bradysia (Sciara) — a new/old emerging model organism

9:00–9:15 p.m. Steffen Lemke: Innovations in early fly development

9:15–9:30 p.m. Doris Bachtrog: Dynamic gene content evolution on Drosophila Y chromosomes

9:30–9:45 p.m. Moderated panel discussion with speakers and organizers

Thursday, March 2, 2023

7:45 p.m.–9:45 p.m.
Huron, Level 2

The Neighborhoods Project: Leveraging cultural community connections to develop novel, collaborative genetics research projects Workshop

7:45 p.m. Alana O'Reilly and Sarah Bay, GSA Equity and Inclusion Committee, Introduction to the Neighborhoods Program

8:00 p.m. Neighborhoods form and work to develop Specific Aims to tackle their community problem.

9:15 p.m. Neighborhoods presentations by participants (5 min per neighborhood).

9:40 p.m. Wrap-up and summary

Thursday, March 2, 2023

7:45 p.m.–9:45 p.m.
Erie, Level 2

Spotlight on Undergraduate Research Workshop

7:48 pm, Rincon Jagarlamudi, Vanderbilt University, Neural Development and Physiology

8:01 pm, Brayden Graves, Lewis-Clark State College, Cell Division and Cell Growth

8:14 pm, Ella Buhlke, University of Nebraska at Kearney, Immunity and the Microbiome

8:27 pm, Leila Lin, University of California, Irvine, Evolution

8:50 pm, Charlie Watts, University of Evansville, Reproduction and Gametogenesis

9:03 pm, Isaiah Thomas, Northeastern Illinois University, Physiology, Metabolism, and Aging

9:16 pm, Fareeha Syeda, University of Massachusetts Boston, Neural Development and Physiology

9:29 pm, Jackson Ridges, University of Utah, Evolution

Thursday, March 2, 2023

8:00 p.m.–10:00 p.m.
Riverwalk, Level 1

Networking Hotspot

Friday, March 3, 2023

8:30 a.m.–10:00 a.m.
Sheraton 2-3, Level 4

Evolution II

Session Chairs:
Grace Yuh Chwen Lee, University of California, Irvine
Yun Ding, University of Pennsylvania
Gavin Rice, University of Pittsburgh

32 8:30 a.m. Origin and structural evolution of de novo genes in *Drosophila* **Junhui Peng** Rockefeller University

33 8:45 a.m. Origination and evolution of transfer RNA genes in Drosophila **Dylan Sosa** University of Chicago

34 9:00 a.m. The genetic basis of neural circuit evolution for *Drosophila* mate preferences **Emily Behrman** HHMI Janelia Research Campus

35 9:15 a.m. Development of fast motion detectors in insect eyes: the example of the male housefly small target motion detector **Antoine Donati** University of California, San Diego

36 9:30 a.m. *Sox21b* contributes to the rapid diversification of a novel male genital structure between *Drosophila simulans* and *Drosophila mauritiana* **Amber Ridgway** Oxford Brookes University

37 9:45 a.m. Rapid functional divergence of *Drosophila* protamines hints at their roles in suppressing genetic conflicts between sex chromosomes **Ching-Ho Chang** Fred Hutchinson Cancer Center

Friday, March 3, 2023

8:30 a.m.–10:00 a.m.
Chicago 9-10, Level 4

Patterning, Morphogenesis, and Organogenesis II

Session Chairs:
Sougata Roy, University of Maryland, College Park
Lathiena Nervo, Pacific Lutheran University
Matthew Fischer, University of Maryland

38 8:30 a.m. Function and regulation of amyloids in developing *Drosophila* embryo **Kuan-Chih Peng** Stowers Institute for Medical Research

39 8:45 a.m. Endocytic regulation of the spatial organization of Dachsous-Fat signaling **Jyoti Misra** University of Texas at Dallas

40 9:00 a.m. Bruno1 is required throughout *Drosophila* indirect flight muscle development to regulate cytoskeletal assembly and sarcomere growth **Maria Spletter** University of Missouri Kansas City

41 9:15 a.m. A contractility dependent rigidity transition shapes the curvature of the pupal retina **Jacob Decker** University of Chicago

42 9:30 a.m. Novel mechanosensitive junction interactor Gish is required for apical constriction and epithelial folding **Reina Koran** University of Nevada Las Vegas

43 9:45 a.m. Ligand-dependent feedback and ligand-independent activation regulate Notch signaling during wing vein patterning in *Drosophila* **Julio Miranda-Alban** University of Chicago

Friday, March 3, 2023

8:30 a.m.–10:00 a.m.
Sheraton/Chicago 4-7

Physiology, Metabolism, and Aging II

Session Chairs:
Yves Chabu, University of Missouri
Naoki Yamanaka, University of California, Riverside
Mar Quereda Pastor, University of Missouri-Columbia

44 8:30 a.m. The physiological consequences of polyploid cells in the *Drosophila* Brain. **Deena Damschroder** University of Michigan

45 8:45 a.m. Fruit flies and yeast meet at the table: symbiotic mechanisms of interkingdom lipid transfer underlying *Drosophila'*s thermoregulation **Claudia Espinoza** University of California San Diego

46 9:00 a.m. Enhanced longevity through muscle hypercontraction **Saki Naito** RIKEN

47 9:15 a.m. Reduced expression of the modifier *CG4168* alleviates metabolic phenotypes caused by *Sirt1* loss of function **Rebecca Palu** Purdue University-Fort Wayne

48 9:30 a.m. Drosophila embryos allocate lipid droplets to specific lineages to ensure punctual development and prevent oxidative stress **Marcus Kilwein** University of Rochester

49 9:45 a.m. The Role of the Circadian Transcriptome in Aging Photoreceptors Sarah McGovern, Purdue University

Friday, March 3, 2023

10:30 a.m.–12:30 p.m.
Chicago 9-10, Level 4

Cell Stress and Cell Death

Session Chairs:
Fabio Demontis, St. Jude Children's Research Hospital
Bree Grillo Hill, San Jose State University
Han Tran, MIT

50 10:30 a.m. Hypoxia-dependent regulation of epithelial tissue growth. **Abhishek Sharma** University of Calgary

51 10:45 a.m. Depleting CRL4 E3 ligase Mahjong/DCAF1 induces *Minute*-like cell competition through transcription factor Xrp1, independently of cell polarity genes **Amit kumar** Alber Einstein College of Medicine

52 11:00 a.m. Ionizing Radiation induces cells with past caspase activity that contribute to the adult organ in *Drosophila* and show reduced Loss of Heterozygosity (LOH) **Sarah Colon Plaza** University of Colorado Boulder

53 11:15 a.m. Sex-specific differences in the activation of the Integrated Stress Response **Melissa Mychalczuk** University of Pittsburgh

54 11:30 a.m. Xrp1/Irbp18 heterodimer governs the stress response program to spliceosome dysfunction **Mirka Uhlirova** University of Cologne

55 11:45 a.m. Increased intracellular pH promotes cell death in the developing *Drosophila* eye **Rachel Ann Soriano** San Jose State University

56 12:00 p.m. A pseudokinase-mediated feedback loop regulates neuronal stress responses and links proteostasis defects to sleep behavior **Shashank Shekhar** UT Southwestern Medical Center

57 12:15 p.m. Differential neuronal vulnerability associated with C9orf72 expansion toxicity **Teresa Niccoli** UCL

Friday, March 3, 2023

10:30 a.m.–12:30 p.m.
Sheraton/Chicago 4-7

Neural Development and Physiology

Session Chairs:
Robert Carrillo, University of Chicago
Katherine Thompson-Peer, University of California, Irvine
Kristen Lee, University of Oregon

58 10:30 a.m. Dual roles of an ABCA transporter in phagocytosis-dependent neurodegeneration in *Drosophila melanogaster* **Xinchen Chen** Cornell University

59 10:45 a.m. Loss of Syndecan disrupts peripheral glia **Vanessa Auld** University of British Columbia

60 11:00 a.m. Developmental emergence of sleep rhythms enables long-term memory capabilities in *Drosophila* **Amy Poe** University of Pennsylvania

61 11:15 a.m. Homeodomain proteins hierarchically specify neuronal diversity and synaptic connectivity **Chundi Xu** University of Oregon

62 11:30 a.m. *Drosophila* Dprs and DIPs are GPI-anchored and this modification contributes to their subcellular localization **Meike Lobb-Rabe*** University of Chicago

63 11:45 a.m. The viral like transfer of Copia, a Drosophila retrotransposon, across the synapse antagonize dArc1 at the larval neuromuscular junction **Peter M'Angale** UMass Chan Medical School

64 12:00 p.m. Mapping transcriptomes to connectomes uncover matching synaptic determinants **Yerbol Kurmangaliyev** Brandeis University

65 12:15 p.m. Spontaneous network activity during motor circuit development **Arnaldo Carreira-Rosario** Stanford University

Friday, March 3, 2023

10:30 a.m.–12:30 p.m.
Sheraton 2-3, Level 4

Reproduction and Gametogenesis

Session Chairs:
Lindsay Lewellyn, Butler University
Michelle Starz-Gaiano, UMBC
Audrey Williams, University of Chicago

66 10:30 a.m. Tdrd5l promotes male identity in germline stem cells **Caitlin Pozmanter** Johns Hopkins University

67 10:45 a.m. A pioneer factor regulates somatic sex reversal in the adult *Drosophila* testis **SNEH HARSH** New York University

68 11:00 a.m. Plasticity versus Paradigm: Follicle Stem Cell Identity shifts in response to environmental cues **Alana O'Reilly** Fox Chase Cancer Center

69 11:15 a.m. Chronic suboptimal temperatures impact spermatogenesis in Drosophila melanogaster **Ana Caroline Gandara** University of Wisconsin-Madison

70 11:30 a.m. The Head-Tail Connection Apparatus is a dynamic macromolecular structure that links the sperm tail to the haploid sperm nucleus **Kathleen Holmes** National Institutes of Health

71 11:45 a.m. Cohesion maintenance/rejuvenation during meiotic prophase depends on the chromatin remodeler Brahma and the mRNA-binding protein Pumilio, both of which have functional links to the cohesin loader, Nipped-B **Muhammad Abdul Haseeb** Dartmouth College

72 12:00 p.m. Fasciclin-2 promotes anchoring of the polar cell processes that form the sperm-entry channel during micropyle morphogenesis **Kristin Sherrard** University of Chicago

73 12:15 p.m. An intruder-targeting system eliminates paternal mitochondria after fertilization in *Drosophila* **Sharon Ben-Hur** Weizmann Institute of Science

Friday, March 3, 2023

12:30 p.m.–1:30 p.m.
Chicago 8, Level 4

Come Fly with Me: Career Advice and Connections (pre-registration required)

Friday, March 3, 2023

1:00 p.m.–4:00 p.m.
Riverwalk, Level 1

Networking Hotspot

Friday, March 3, 2023

4:30 p.m.–6:30 p.m.
Sheraton 2-3, Level 4

Cell Division and Cell Growth

Session Chairs:
Jessica Fellmeth, Millersville University
Bob Duronio, University of North Carolina, School of Medicine
Mark Geisler, University of North Carolina

74 4:30 p.m. A centromere-encoded retroelement generates transcripts that localize to centromeres in *cis* **Barbara Mellone** University of Connecticut

75 4:45 p.m. HP1 Interacts with the Chromosomal Passenger Complex to Promote Spindle Assembly and Chromosome Segregation **Siwen Wu** Rutgers University

76 5:00 p.m. Visualization of CRISPR/Cas9 Induced Mitotic Crossovers Suggest Multiple Types of double Holliday Junction Resolution **Evan Dewey** University of North Carolina-Chapel Hill

77 5:15 p.m. The Regulation of Prospero by miR-190 during asymmetric cell division in *Drosophila* Neuroblasts **Gerson Ascencio** San Francisco State University

78 5:30 p.m. Loss of Spargel/dPGC-1 function in larval endoreplicating tissues negatively influence metabolism and growth **Mohammed Shah Jalal** Howard University

79 5:45 p.m. Local Ecdysone Activation Enforces Robust Cell Cycle Exit in the Pupal Eye **Elizabeth Fogarty** University of Michigan

80 6:00 p.m. Elimination pathways of spontaneous neoplastic mutant clones during development **Hojun Jeon** Institut Curie, PSL Research University, CNRS UMR 3215, INSERM U934, Stem Cells and Tissue Homeostasis Group, Paris, France

81 6:15 p.m. Beyond basic: pH dependent mechanisms of brain development **Beverly Piggott** University of Montana

Friday, March 3, 2023

4:30 p.m.–6:30 p.m.
Chicago 9-10, Level 4

Immunity and the Microbiome

Session Chairs:
Jason Karpac, Texas A&M University
Francesca Di Cara, Dalhousie University
Scott Keith, Cornell University

82 4:30 p.m. The circular RNA *circ_R41* regulates anti-viral immunity and ROS production in *Drosophila* **Rui Zhou** Johns Hopkins University School of Medicine, Johns Hopkins All Children's Hospital

83 4:45 p.m. The DNA Damage Response regulates epithelial cell dynamics in the infected gut **Peter Nagy** Cornell University

84 5:00 p.m. Molecular and transcriptional characterization of a symbiotic niche mediating gut microbiome colonization in *Drosophila melanogaster* **Haolong Zhu** Johns Hopkins University

85 5:15 p.m. Gut derived cytokine signalling mediates hypoxia tolerance **Kate Ding** University of Calgary

86 5:30 p.m. *Wolbachia* confers olfactory changes through the modification of glutamic acid decarboxylase (GAD) in *Drosophila melanogaster* **Sarah Boothman** Carnegie Mellon University

87 5:45 p.m. CRISPR screens in *Drosophila* cells identify Vsg as a Tc toxin receptor **Raghuvir Viswanatha** Harvard Medical School

88 6:00 p.m. Chronic Infection, Imperfectness of Pathogen Detection, and the Evolution of Adaptive Suicide. **Peter Lidsky** University of California San Francisco

89 6:15 p.m. Identifying of Enhancers of the *Drosophila* Innate Immune System **Lianne Cohen** Boston University

Friday, March 3, 2023

4:30 p.m.–6:30 p.m.
Sheraton/Chicago 4-7

Neural Circuits and Behavior

Session Chairs:
Annika Barber, Rutgers;
Troy Shirangi, Villanova University
Amy Poe, University of Pennsylvania

90 4:30 p.m. That's how they roll, the motor pattern of rolling escape locomotion in *Drosophila* larvae **W. Daniel TRACEY** Indiana University

91 4:45 p.m. The retrovirus-like genes d*Arc1* and *dArc2* regulate associative learning **Sven Bervoets** University of Utah

92 5:00 p.m. A new dimension to the olfactory system: lncRNAs and a micropeptide upregulated by hunger **Gaelle Talross** Yale University

93 5:15 p.m. Gliotransmission of D-serine promotes thirst-directed behaviors in Drosophila **Annie Park** University of Oxford

94 5:30 p.m. Central Circadian Clock Control of *Drosophila* Feeding and Activity Rhythms **Sumit Saurabh Saurabh** Loyola University Chicago

95 5:45 p.m. Characterization of tecuzitécatl (*tecu*) mutants in behavioral paradigms **Laura Alejandra Lujano Perez** Universidad Nacional Autónoma de México

96 6:00 p.m. Neuronal E93 regulates metabolic homeostasis **Cecilia Yip** UT Southwestern Medical Center

97 6:15 p.m. Effect of social isolation on gene expression, circuit function and behaviors **Pelin Volkan** Duke University

Friday, March 3, 2023

7:45 p.m.–9:45 p.m.
Michigan, Level 2

Evolutionary and Population-omics at the Scale of Model Clade Drosophilidae

Overview – Bernard Kim & Dmitri Petrov (Stanford)

Phylogenetics of Drosophilidae – Patrick O'Grady (Cornell)

Phylogenetics methods – Anton Suvorov (Schrider Lab, UNC Chapel Hill)

Transposable element annotation – Josefa Gonzalez (Institute of Evolutionary Biology CSIC – UPF, Barcelona, Spain)

Drosophila evolutionary phenomics – Yasir Ahmed (University of Rochester) Wolbachia – Brandon Cooper (University of Montana)

Q&A + extended interactive discussion with the fly community

Friday, March 3, 2023

7:45 p.m.–9:45 p.m.
Superior, Level 2

Immunometabolism: Flying 10 Years later

7:45 p.m. Catherine Brennan, California State University, Fullerton, "Living off the gland fat: lipids' role in the fly inflammatory response".

8:00 p.m. Mingyu Shin, Shim Laboratory, Hanyang University, "A function of immune cells in internal oxygen homeostasis".

8:15 p.m. Julian Batista, Watnick Laboratory, Harvard Medical School, "The Vibrio cholerae quorum sensing regulator, HapR, promotes Drosophila survival by preventing intestinal serotonin depletion".

8:30 p.m. Michelle Bland, University of Virginia, "Immune regulation of phospholipid metabolism in Drosophila larval fat body".

8:45 p.m. Neal Silverman, University of Massachusetts Chan Medical School, "Peroxisome metabolism regulates the IMD adaptor protein' amyloid formation to modulate IMD signaling during bacterial challenge".

9:00 p.m. Jason S Karpac, Texas A&M University, "Exploring the complex integration of life history and immunometabolic responses".

9:15 p.m. Group Discussion

Friday, March 3, 2023

8:00 p.m.–10:00 p.m.
Riverwalk, Level 1

Networking Hotspot

Saturday, March 4, 2023

8:00 a.m.–10:00 a.m.
Sheraton/Chicago 4-7

Chromatin, Epigenetics, and Genomics

Session Chairs:
Maya Capelson, San Diego State University
Nicole Riddle, University of Alabama at Birmingham
Annesha King, University of Alabama-Birmingham

98 8:00 a.m. Small RNA and X-linked repeats collaborate in chromosome identification for dosage compensation **Sudeshna Biswas** Wayne State University

99 8:15 a.m. A novel histone gene array expression and engineering platform with tissue-specific and temporal control for direct interrogation of histone post-translational modification function **Markus Nevil** University of North Carolina at Chapel Hill

100 8:30 a.m. A Tale of Two Condensates: Dynamic interplay between pericentromeric heterochromatin and nucleoli **Varsha Rajshekar** University of California Berkeley

101 8:45 a.m. Identification of trans-acting factors regulating barrier activity of the Homie chromatin insulator **Savanna Lyda** National Institutes of Health

102 9:00 a.m. Heterochromatic 3D genome architecture is directed by H3K9/HP1-dependent and independent mechanisms **Alexis Stutzman** University of North Carolina at Chapel Hill

103 9:15 a.m. Stonewall links chromatin organization at the nuclear periphery to female germline stem cell fate in *Drosophila* **Ankita Chavan** ETH Zurich

104 9:30 a.m. Uncovering Novel Functions of Histone Demethylase KDM5 Through a Genome-wide Approach. **Matanel Yheskel** Albert Einstein College of Medicine

105 9:45 a.m. Diet-dependent epigenetic silencing of transposable elements **Jennifer McIntyre** University of California Irvine

Saturday, March 4, 2023

8:00 a.m.–10:00 a.m.
Chicago 9-10, Level 4

Initiatives in Education and DEI

Session Chairs:
Jacob Kagey, University of Detroit Mercy
Alana O'Reilly, Fox Chase Cancer Center
Andrea Darby, Cornell University

106 8:00 a.m. Assessing the connection between obesity and bacterial pathogenesis in a first-year CURE **Moria Chambers** Bucknell University

107 8:15 a.m. Fly-CURE, a Multi-institutional CURE, Has a Positive Impact on Students' Research Self-efficacy, Sense of Belonging in Science, and Interest to Pursue Additional Research Experiences **Julie Merkle** University of Evansville

108 8:30 a.m. An advanced Genomics Education Partnership CURE exploits long-read genome assemblies to study F Element expansion in four *Drosophila* species **Timothy Stanek** Rutgers University

109 8:45 a.m. A framework for educating and empowering students by teaching about history and consequences of bias in STEM **Andrea Darby** Cornell University

110 9:00 a.m. *Drosophila melanogaster* isofemale line models in undergraduate Genetics laboratories: Genetic architecture of natural populations **Guy Barbato** Stockton University

111 9:15 a.m. Decoding Transcription Factors: A semester long bioinformatics CURE identifying DNA-binding factors at a specific genetic locus **Lauren Hodkinson** Emory University

112 9:30 a.m. Freshman Research Initiative Behavioral Neuroscience course for undergraduate research training in neuroscience **Thilini Wijesekera** University of Texas at Austin

9:45 a.m. Integrating culture and community in diabetes research, an intro bio collaboration **Elyse Bolterstein**, Northeastern Illinois University

Saturday, March 4, 2023

8:00 a.m.–10:00 a.m.
Sheraton 2-3, Level 4

Stem Cells, Regeneration, and Tissue Injury

Session Chairs:
Young Kwon, University of Washington
Minoree Kohwi, Columbia University
Jiae Lee, University of Washington

113 8:00 a.m. Paths and pathways that generate cell-type heterogeneity and developmental progression in hematopoiesis **Juliet Girard** University of Massachusetts Boston

114 8:15 a.m. Cytonemes coordinate asymmetric signaling and organization in the *Drosophila* adult muscle progenitor niche **Akshay Patel** University of Maryland

115 8:30 a.m. Nuclear Actin is a Critical Regulator of Drosophila Germline Stem Cell Maintenance **Nicole Green** University of Iowa

116 8:45 a.m. The conserved RNA binding protein Orb2 regulates cell-type-specific responses to rare codon enriched transcripts during neural stem cell differentiation **Rebeccah Stewart** Duke University

117 9:00 a.m. Blastema transcriptional state is sustained by transcription factor Ets21C during imaginal disc regeneration and tumorigenesis **Melanie Worley** University of Virginia

118 9:15 a.m. Epithelial Ca^{2+} waves triggered by enteric neurons heal the gut **Afroditi Petsakou** Harvard Medical School

119 9:30 a.m. *Brainwashing* regulates sphingolipid and fatty acid saturation to promote intestinal stem cell proliferation in *Drosophila* midgut **Mahi Rahman** Huntsman Cancer Institute

120 9:45 a.m. Identifying factors that maintain a stem cell niche **Gabriela Vida** University of Pennsylvania

Saturday, March 4, 2023

10:30 a.m.–12:00 p.m.
Sheraton 2-3, Level 4

Cell Biology: Cytoskeleton, Organelles, and Trafficking I

Session Chairs:
Thomas Hurd, University of Toronto
Clemens Cabernard, University of Washington
Katheryn Rothenberg, University of Toronto

121 10:30 a.m. Evolutionary diversification of Arp2 separated somatic versus germline roles **Courtney Schroeder** UT Southwestern Medical Center

122 10:45 a.m. The role of microtubule motor adaptor proteins in controlling mitochondrial movement during oogenesis **Matthew Gillen** Uniformed Services University

123 11:00 a.m. Sac1, a PI4P phosphatase, maintains epithelial integrity during Drosophila dorsal closure **Kimberley Gauthier** The Hospital For Sick Hospital

124 11:15 a.m. Phase separation properties determine the *in vivo* function of adaptor proteins in myoblast fusion **Zhi-Rong Ruan** UTSouthwestern Medical Center

125 11:30 a.m. Repressing a Repressor: How Germ Cells Form Despite Somatic Interference **Mariyah Saiduddin** Whitehead Institute

126 11:45 a.m. Evolutionarily Conserved Regulators of Muscle Type-Specific Mitochondrial Network Organization **Prasanna Katti** National Institutes of Health/ NHLBI

Saturday, March 4, 2023

10:30 a.m.–12:00 p.m.
Sheraton/Chicago 4-7

Models of Human Disease I

Session Chairs:
Hakeem Lawal, Delaware State University
Rachael French, San Jose State University
Dionne Williams, Delaware State University

127 10:30 a.m. *SPTSSA* associated hereditary spastic paraplegia: modeling the disease and screening for drugs in flies **Xueyang Pan** Baylor College of Medicine

128 10:45 a.m. Suppression of phototactic tendencies in flies as a learning assay for models of cognitive decline **Giovanna Marie Crystal Novi** Colby College

129 11:00 a.m. The Y225A substitution induces long-range conformational changes in human PrP that are protective in *Drosophila* **Pedro Fernandez-Funez** University of Minnesota Medical School

130 11:15 a.m. A novel model for the *in vivo* screening of small ingestible compounds with anti-amyloid-β properties **Rosalind Heron** University of Edinburgh

131 11:30 a.m. Septins regulate heart contractility through changes in activity of cardiomyocyte store-operated Ca^{2+} entry. **Ben Tripoli** Uniformed Services University of the Health Sciences

132 11:45 a.m. Neuronal and molecular mechanisms of Nf1-dependent metabolic regulation **Valentina Botero** Scripps Research Institute

Saturday, March 4, 2023

10:30 a.m.–12:00 p.m.
Chicago 9-10, Level 4

Regulation of Gene Expression I

Session Chairs:
Vikki Weake, Purdue University
Leila Rieder, Emory University
Varsha Rajshekar, UC Berkeley

133 10:30 a.m. Moira, a component of Drosophila SWI/SNF complex, compacts circadian chromatin to enable ~24-hour circadian rhythms **Swathi Yadlapalli** University of Michigan

134 10:45 a.m. Maintenance of Terminal Differentiation by Retinoblastoma and Hippo Tumor Suppressors **Alexandra Rader** University of Illinois at Chicago

135 11:00 a.m. Coordinating stereotyped and stochastic patterns in the *Drosophila* eye **Alison Ordway** Johns Hopkins University

136 11:15 a.m. Blimp-1 and Hr3/RORβ specify the blue-sensitive photoreceptor subtype in *Drosophila* by repressing the Hippo pathway **Mhamed Bashir** University of Massachusetts Boston

137 11:30 a.m. Uncovering the role of protein quality control systems in shaping tissue-specific proteomes **Kai Zhang** Stowers Institute for Medical Research

138 11:45 a.m. Pervasive SUMOylation of piRNA pathway factors revealed by diGly proteomics **Maria Ninova** UC Riverside

Saturday, March 4, 2023

12:30 p.m.–3:30 p.m.
Riverwalk, Level 1

Networking Hotspot

Saturday, March 4, 2023

4:00 p.m.–6:00 p.m.
Sheraton 2-3, Level 4

Cell Biology: Cytoskeleton, Organelles, and Trafficking II

Session Chairs:
Thomas Hurd, University of Toronto
Clemens Cabernard, University of Washington
Katheryn Rothenberg, University of Toronto

139 4:00 p.m. Actomyosin contraction in follicular epithelium is the major mechanical force for follicle rupture during *Drosophila* ovulation **Stella Cho** University of Connecticut

140 4:15 p.m. Localization of mRNA encoding the actin-binding protein Sry-α promotes nuclear repositioning **Tejas Mahadevan** University of Illinois Urbana Champaign

141 4:30 p.m. Determining the roles of Prostaglandins and Fascin in regulating nuclear architecture during collective cell migration **Ashley Goll** University of Iowa

142 4:45 p.m. Recruitment of transcription machinery to HLBs during Drosophila embryogenesis occurs independently of histone gene transcription **James Kemp Jr** University of North Carolina Chapel Hill

143 5:00 p.m. Dysregulation of the ER blocks recruitment of centrosome associated proteins, resulting in mitotic failure **Katherine Rollins** University of Denver

144 5:15 p.m. Regulation of Hippo signaling by the "tug of war" between apical polarity and actomyosin dynamics **Sherzod Tokamov** University of Chicago

145 5:30 p.m. The Centralspindlin proteins Pavarotti and Tumbleweed work with Wash to regulate Nuclear Envelope budding **Mitsutoshi Nakamura** Fred Hutchinson Cancer Center

146 5:45 p.m. *Drosophila* non-muscle myosin II Zipper positively regulates Notch signaling **Dipti Verma** Banaras Hindu University

Saturday, March 4, 2023

4:00 p.m.–6:00 p.m.
Sheraton/Chicago 4-7

Models of Human Disease II

Session Chairs:
Hakeem Lawal, Delaware State University
Rachael French, San Jose State University
Dionne Williams, Delaware State University

147 4:00 p.m. Natural variants in *SEL1L* modify lethality, ERAD, and proteasome function in a model of NGLY1 deficiency **Travis Tu'ifua** University of Utah

148 4:15 p.m. Modeling Glioblastoma angiogenesis in *Drosophila* **Chrysoula Pitsouli** University of Cyprus

149 4:30 p.m. Elucidating the role of Tripod-Easel kinase complex in Wnt/Wg signaling **Muhammad Taha** Dartmouth

150 4:45 p.m. Efficacy of single domain antibodies targeting pathological tau protein in *Drosophila* **Sudershana Nair** New York University School of Medicine

151 5:00 p.m. Glycosphingolipid accumulation causes synaptic dysfunction in the *Drosophila* lipid storage disease model of Niemann Pick Type C **Anna Eberwein** Vanderbilt University

152 5:15 p.m. Modulation of purine biosynthesis via *Paics* suppresses disease phenotypes across multiple *Drosophila* models of Amyotrophic Lateral Sclerosis **Helen Zhou** Brown University

153 5:30 p.m. N-acetylcysteine alleviates retinal defects in Drosophila models of *SNRNP200*-associated Retinitis Pigmentosa **Sara Mayer** University of Iowa

154 5:45 p.m. Time-restricted feeding retains muscle function through activation of purine cycles and AMPK signaling in Drosophila obesity models **Christopher Livelo** University of Alabama at Birmingham

Saturday, March 4, 2023

4:00 p.m.–6:00 p.m.
Chicago 9-10, Level 4

Regulation of Gene Expression II

Session Chairs:
Vikki Weake, Purdue University
Leila Rieder, Emory University
Varsha Rajshekar, UC Berkeley

155 4:00 p.m. A single-cell transcriptomic study of Drosophila gastrulation highlights sequential transcription programs during mesodermal epithelial-to-mesenchymal transition **Jingjing Sun** California Institute of Technology

156 4:15 p.m. Divergent transcriptional changes of *even-skipped* due to decreased *Krüppel* dosage **Shufan Lin** University of Pennsylvania

157 4:30 p.m. Odd-paired and Ocelliless dynamics in *Drosophila* head development **Theodora Koromila** University of Texas at Arlington

158 4:45 p.m. Coordination of gene expression programs critical to development: chromatin modifier KDM5 in the prothoracic gland and beyond **Michael Rogers** Albert Einstein College of Medicine

159 5:00 p.m. Regulation of the *Drosophila* germ granules by granule mRNAs and proteins **Tatjana Trcek** Johns Hopkins University

160 5:15 p.m. Defining the transcriptional enhancers and regulators of *flamenco*, a prominent *Drosophila* piRNA cluster essential for female fertility. **Austin Rivera** Boston University Chobanian & Avedisian School of Medicine

161 5:30 p.m. An undergraduate-driven bioinformatics screen reveals novel factors that target the *Drosophila melanogaster* histone gene locus **Casey Schmidt** Emory University

162 5:45 p.m. Generating enhancer variability and testing activity in a high-throughput manner **Julia Falo Sanjuan** University of California Berkeley

Saturday, March 4, 2023

7:30 p.m.-9:45 p.m.
Sheraton/Chicago 4-7

Techniques and Technology

Session Chairs:
Oguz Kanca, Baylor College of Medicine
Hongjie Li, Baylor College of Medicine
Nilay Yapici, Cornell University

163 7:45 PM TFTag – A novel library of endogenously tagged *Drosophila* transcription factors **Sebastian Kittelmann** Oxford Brookes University

164 8:00 PM Using single-cell RNA sequencing to generate cell-type-specific split-GAL4 reagents throughout development **Yu-Chieh David Chen** New York University

165 8:15 PM Cas9-derived Nickase promotes efficient allelic conversion through Homologous chromosome-Templated Repair (HTR) in somatic tissues **Annabel Guichard** UCSD

166 8:30 PM Physical aspects of Drosophila gastrulation **Konstantin Doubrovinski** UT Southwestern Medical Center

167 8:45 PM A second-generation auxin-inducible gene expression system for conditional manipulation of *Drosophila* circadian behavior **Annika Barber** Rutgers, the State University of New Jersey

168 9:00 PM A new arena to measure humidity preference in wild type and mutant *Drosophila* species **Daniel Bennett** Northwestern University

169 9:15 PM Automated cobot-assisted high-throughput phenotyping of cognition in behaving *Drosophila melanogaster* **Riddha Manna** École Polytechnique Fédérale de Lausanne

170 9:30 PM New technology and resource development at the Drosophila Research and Screening Center-Biomedical Technology Research Resource (DRSC-BTRR) and DRSC/TRiP **Stephanie Mohr** Harvard Medical School

Sunday, March 5, 2023

8:30 a.m.–11:00 a.m.
Sheraton/Chicago 4-7

Closing Plenary

Session Chairs:
Mia Levine, University of Pennsylvania
Savraj Grewal, University of Calgary

8:30 a.m. Poster Awards

8:40 a.m. Pay it Forward

171 8:55 a.m. On being the right size: the nuclear-to-cytoplasmic ratio control of early embryogenesis **Amanda Amodeo** Dartmouth College

172 9:20 a.m. Unraveling the Neural Circuitry of Female Aggression in Health and Disease **Caroline Palavicino-Maggio** Harvard Medical School

173 9:45 a.m. Genome instability in stem and progenitor cells **Allison Bardin** Institut Curie

174 10:10 a.m. Going in circles gets you somewhere – signaling mechanisms that coordinate cell movements for rotational epithelial migration **Sally Horne-Badovinac** Univ Chicago

175 10:35 a.m. Encoding Memory in Amyloids **Kausik Si** Stowers Institute for Medical Research

Poster Session Listings

T=Thursday, **F**=Friday, **S**=Saturday, **V**=Online

Cell Stress and cell death

176T PINK1 in *Drosophila* Bcl-2 family protein dependent apoptosis **Mélanie Fages** Univesity Paris Saclay, UVSQ, LGBC

177T Endogenous Retroviruses and TDP-43 Proteinopathy Form a Sustaining Feedback to Drive the Intercellular Spread of Neurodegeneration **josh dubnau** Stony Brook School of Medicine

178T Irradiation-induced cell migration is regulated by caspases executed through EMT and triggered by the cytosolic DNA sensing pathway **Eli Arama** Weizmann Institute of Science

179T The role of metabolites in Minute cell physiology and cell competition. Alex Mastrogiannopoulos University of Bristol

180T Wdr59 promotes or inhibits TORC1 activity depending on cellular context **Yingbiao Zhang** NIH

181T Exploring the effects of heat shock stress on nucleolar structure and function **Anna Ramsey** University of Iowa

182T Investigation of mechanisms underlying cell corpse clearance in the brain of glia-specific phagocytosis-deficient flies **Guangmei Liu** Boston University

183T Characterizing the Role of p38Kb and GARS in CMT **Piotr Klos** Illinois State University

184T Developmental parthanatos of the primordial germ cells is regulated by lipid metabolism **Guy Hadary** Weizmann Institute of Science

185T The role of *Baldspot/Elovl6* in metabolic homeostasis upon dietary stress **Nicholas Molisani** Purdue University Fort Wayne

Immunity and the microbiome

186F Investigating the role of the TNF pathway in Drosophila tricellular junction protein regulation **Zazil Adriana Solis Saldivar** University of British Columbia

187F Higher hypoxia-sensitivity of pupae than embryos in *Drosophila melanogaster* **Tsering Stobdan** UCSD

188F Molecular investigation of UQCRC1 in a disease model of neurodegeneration **Yu-Chien Hung** National Taiwan University

189F Assessment of *ACBP* and its impact in retinal degeneration **Landin Stokes** Purdue University Fort Wayne

190F Identifying Proteins that Mediate Cellular Behaviors in Response to Higher Intracellular pH **Laura Martins** San Jose State University

191F Evidence for existence of an apoptosis-inducing BH3-only protein, *sayonara*, in *Drosophila* **YUko Ikegawa** RIKEN

192F HATSDAL suppresses the endoplasmic reticulum stress response in high ambient temperature **Kim Il-Ju** Gwangju Institute of Science and Technology

193F The G protein-coupled receptor kinase Gprk2 acts in follicle cells to regulate nurse cell death and corpse clearance via two pathways **Jeanne Peterson** Boston Univ

194F Feedback circuit that simultaneously drives cell death and proliferation **Shivakshi Sulekh** RIKEN

195F A cell death sensitivity switch in long-lived cells **Jessica Sawyer** Duke University

196S Mechanism of induction of a stabilizing protein in degenerating photoreceptors **Heena Khurana** University of Massachusetts Boston

197S An inducible Actin Stress Response disrupts the balance between pools of nuclear and cytoplasmic actin in embryos **Natalie Biel** University of Illinois Urbana Champaign

198S The Role of Ca^{2+} Signaling in Apoptosis-induced Proliferation **KOMAL Suthar** UMASS Medical School

199S Role of M1BP, a transcriptional pausing factor in JNK-mediated cell death during eye development **Anuradha Chimata** University of Dayton

200S JNK and Chk2 Inhibit but E2F1 Promotes Loss of Heterozygosity After Exposure to Ionizing Radiation in Drosophila **Tin Tin Su** University of Colorado

201S Extra macrochaetae regulates the Hippo pathway and non-apoptotic caspase control of Notch signaling **Nick Baker** Albert Einstein College of Medicine

202S *Drosophila* eye model to Study the role of Mnat9 in Alzheimer's Disease related Dementia **Prajakta Deshpande** University of Dayton

203S Effects of proteotoxic stress in D. melanogaster oocytes and embryos on viability, fertility and transcription. **Natalia Tamarina** University of Chicago

204V Die or eat your neighbors: Induction of apoptosis or phagocytic activity in epithelial cells is a consequence of who dies first **Keren Yacobi-Sharon** Weizmann Institute

205V 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

206V Mitochondrial membrane associated Spoonbill protein modulates JNK mediated apoptosis in *Drosophila* **Rituparna Das** Banaras Hindu University

Immunity and the microbiome

207T Investigating the molecular basis for host-microbe specificity in the *Drosophila melanogaster* gut **Kevin Aumiller** Johns Hopkins University

208T Investigating the role of microRNAs (miRNAs) in *Drosophila* aging antiviral immunity **Max Lu** The University of Alabama

209T Brain innate immune activation following bacterial infection in *Drosophila melanogaster* **Sameekshya Mainali** University of Alabama

210T Expression of retrotransposons contributes to aging in *Drosophila* **Blair Schneider** Albert Einstein College of Medicine

211T Uncertainty favors an induced immune response to infection **Danial Asgari** University of Houston

212T Characterization of cross-species transmission of *Drosophila melanogaster* Nora virus **Ella Buhlke** University of Nebraska at Kearney

213T Potential for viral neuro-invasion in Nora virus Infected *Drosophila melanogaster* **Blase Rokusek** University of Nebraska at Kearney

214T Selfish signaling: metabolic reprogramming during immune response **Ellen McMullen** University of South Bohemia

215T Senescent cells promote tumorigenesis through non-autonomous interactions with hemocytes in a larval model of colorectal cancer. **Ishwaree Datta** Florida State University

216T Mechanisms of immune regulation by Ecdysone and Juvenile Hormone **Scott Keith** Cornell University

217T Plasma membrane rupture protein Ninjurin A controls susceptibility of *Drosophila melanogaster* to Invertebrate Iridescent Virus 6 (IIV6) infection in a *Turandot*-independent manner. **Molly Murphy** University of Massachusetts Chan Medical School**Immunity and the microbiome**

218F Regulation of the Imd Pathway by Steroid Hormones and Immune Crosstalk **Bao Ho** University of Massachusetts Chan Medical School

219F The role of environmental fermentation and host metabolic genotype on the Drosophila gut microbiome **Nitin Bansal** University of Nebraska-Lincoln

220F Single Cell transcriptomic analysis of hemocytes in *Drosophila* overgrowth/tumor models **Prathibha Yarikipati** University of Massachusetts Medical School

221F Sex-differential immune gene expression and immune response in *Drosophila melanogaster and Drosophila simulans*. **MD Mursalin Khan** Auburn University

222F Gustatory receptors regulate metabolism and immunity **Jin Seo** Rogers State University

223F Regulation and function of SLC46 Family Member CG15553 in Immunity **Benedetta D'Elia** UMass Chan Medical School

224F *drop-dead* mutants show altered cortex glial (CG) morphology and age-dependent hyperactivation of innate immunity (HII) **Unmila Jhuti** Marquette University

225F Not quite FedEx: How are venom proteins packaged for delivery by the parasitoid wasp *Ganaspis hookeri*? **Nicholas Bretz** Oregon State University

226F High dietary sugar post-development increases susceptibility to bacterial infection in *Drosophila melanogaster* **Andrea Darby** Cornell University

227F Dietary macronutrients and live yeasts influence the microbiota composition of drosophila melanogaster **Ryan Barney** Brigham Young University-Provo

228S Host feeding preferences shape microbiota composition in the fruit fly *Drosophila melanogaster* **Caroline Massey** Brigham Young University

229S Genotypic effect on microbiome composition and colonization in *Drosophila melanogaster* models of Parkinson's disease **Shelby Olson** Midwestern University

230S Effect of exogenous fecal exposure on protein aggregation and microbiome in a *Drosophila melanogaster* model of Parkinson's disease **Sharon Shaju** Juniata College

231S Seasonal and diet effects on the lactic acid bacteria composition of *Drosophila melanogaster* **Joseph Gale** Brigham Young University

232S Characterizing Translational Shifts and Restricting Dietary Yeast During Bacterial Infection **Kate Browning** Cornell University

233S The Effects of Thiamine on Drosophila Dietary Yeast Preference **Dean Peterson** Brigham Young University

234S Vertically Transmitted Avirulent Nora Virus is Associated With Canonical Toll and Imd Pathway Gene Expression in Cells of the Fat Body **Nilanjan Roy** University of Kansas

235S Renal NF-κB activation impairs uric acid homeostasis to shorten lifespan in the context of malignant tumors **Wei Song** Wuhan University

236S The conserved acetyltransferase Tip60 modulates insulin signaling and lipid homeostasis in *Drosophila melanogaster* **Juliana Batista** Boston Children's Hospital/Harvard Medical School

237S Evolution of mutualism from parasitism in a *Wolbachia*-*Drosophila* symbiosis **Jessamyn Perlmutter** University of Kansas

238V A novel interaction between an intracellular pathogen effector protein and the host Hippo signaling pathway **George Aranjuez** University of Central Florida

239V No blood, no guts, no glory: the gut-immune axis during injury **Sveta Chakrabarti** Indian Institute of Science

240V Defining the Role of Cyclic Dinucleotide (CDN) Induced Genes in Innate Antiviral Immunity in Drosophila **Steven Miller** University of Pennsylvania

241V Does varying investment in egg production modify immune defense in mated female *Drosophila melanogaster*? **Kathleen Gordon** Cornell University

242V PTTH regulates lifespan through innate immunity pathway in *Drosophila melanogaster.* **Ping Kang** Iowa State University

243V The influence of environmental variation on the dynamics of host-symbiont interactions between *Drosophila melanogaster* and *Wolbachia* **Martin Kapun** Medical University Vienn

244V Binding and Beyond: Exploring *Wolbachia's* Ankyrin Effector Proteins and their Impact on the Host Organism **Will Hamilton** Indiana University

245V Effect of caffeine intake on *Drosophila*'s gut microbial community, innate immunity and susceptibility to pathogens **Layla Kamareddine** Qatar University

246V Time of day variation in gut microbes of *Drosophila melanogaster* **Alder Yu** University of Wisconsin - La Crosse

Evolution

247T Rapid evolutionary diversification of the *flamenco* locus across simulans clade *Drosophila* species **Sarah Signor** North Dakota State University

248T Fast evolution of proteins involved in heterochromatin functions **Leila Lin** UC Irvine

249T Twenty-seven ZAD-ZNF genes of *Drosophila melanogaster* are orthologous to the embryo polarity determining mosquito gene *cucoid* **Muzi Li** The University of Chicago

250T Extreme QTL Mapping Reveals Zinc Resistance Loci **Katherine Hanson** University of Kansas

251T Molecular evolution in Oskar protein function in *Drosophila* **Emily Rivard** Harvard University

252T Single-cell analysis of *doublesex*-expressing neurons across species **Justin Walsh** University of Pennsylvania

253T Genomic diversity reveals invasion history and environmental adaptation of *Drosophila suzukii* **Siyuan Feng** University of Wisconsin-Madison

254T Centromere polymorphisms in *Drosophila melanogaster* **Miraz Sadi** University of Rochester

255T Functional evolution of horizontally transferred bacterial cytotoxins in a novel *Drosophila* innate immune module **Rebecca Tarnopol** UC Berkeley

256T Identification of *trn* enhancers and their contribution to the evolution of *Drosophila* male genital morphology **Javier Figueras Jimenez** Durham University

257T The role of segregation distortion driven evolutionary conflict in hybrid sterility in Drosophila **Jackson Ridges** University of Utah

258T Evolutionary history of *CK2bTes*–a sex-linked ampliconic gene family in the simulans clade **Emiliano Martí** University of Rochester

259T Temporal analysis of Drosophila genomic variation across decades and centuries illuminates known and novel targets of adaptive evolution **John Pool** University of Wisconsin - Madison

260T Enrichment of hard sweeps on the X chromosome relative to autosomes in six *Drosophila* species **Mariana Harris** UCLA

261T Investigating enhancer and protein divergence at *follistatin* paralogs underlying genetic assimilation of wing plasticity **Kevin Deem** University of Rochester

262T The Evolution of DNA Repeat Sequences at Inversion Breakpoints and TAD Boundaries **Dynisty Wright** The Pennsylvania State University

263T Characterizing Genetic Variation in Morphological Scaling **austin wilcox** University of Illinois at Chicago

264T Altered sexual size dimorphism in *Drosophila melanogaster* via artificial selection **Elizabeth Agolli** University of Illinois at Chicago

265T Using hybrid swarms to test for co-adaptation of mitochondrial and nuclear genes in *Drosophila* **Leah Darwin** Brown University

266T Effects of D. subobscura Atpα intra-protein background on CG-tolerance adaptation **Flora Borne** Columbia University

267T Deleterious consequences of evolutionarily mismatched centromeric histone (Cid) genes in D. melanogaster **Andrea Carroll** Fred Hutchinson Cancer Research Center

268T Precise inference of natural selection with a genomic dataset spanning Family Drosophilidae **Bernard Kim** Stanford University

269F Evolutionarily novel expression of Marf1 in the D. melanogaster accessory gland is functionally significant **Tiezheng Fan** University of California, Davis

270F A combination of developmental mechanisms drives the evolution of *Drosophila* germ granules **Matthew Niepielko** Kean University

271F Transcriptome analysis in *Drosophila guttifera* reveals candidate genes involved in the specification of a novel color pattern by the Wingless morphogen. **Yuichi Fukutomi** UC Davis

272F A new *Drosophila* genome database for evolutionary research **Chau-Ti Ting** National Taiwan Univ

273F Coevolution between two essential telomere-binding proteins preserves female fertility **Hannah Futeran** University of Pennsylvania

274F Metabolism as an engine of functional environmental and evolutionary responses across levels of biological organization **Kristi Montooth** University of Nebraska-Lincoln

275F New gene evolution with subcellular expression patterns detected in PacBio-sequenced genomes of Drosophila genus **Shengqian Xia** The University of Chicago

276F Characterizing putatively adaptive *P*-element insertions in recently invaded laboratory *D. melanogaster* populations **Savana Hadjipanteli** University of Houston

277F Repression precedes independent evolutionary gains of a highly specific gene expression pattern **Henry Chung** Michigan State University

278F *Chromosomal Inversion enables* Drosophila's *seasonal adaptation by modulating behavior* **Benedict Lenhart** University of Virginia

279F One-third of *Drosophila* orphan genes are putative *de novo* genes **Shengqian Xia** The University of Chicago

280F Modeling satellite DNA organization **Sherif Negm** The University of Chicago

281F Motor circuit evolution: Muscle pattern diversity in Cyclorrhaphan larvae **Annika Sharma** The University of Chicago

282F Analysis of high-resolution recombination rate variation between *Drosophila santomea* and *D. yakuba* based on whole-genome sequencing of individual meiotic events **Nikale Pettie** University of Iowa

283F Let's talk about bruno: Using QTL mapping and CRISPR HDR to uncover causative variants of dysgenic sterility in *Drosophila melanogaster*. **Lorissa Saiz** University of Houston

284F Testing the functional relevance of a key herbivore detoxification gene: an "in-fly" approach **Paula Fernandez Begne** University of Chicago

285F TRPN channel diversification: a mechanosensory driver of insect hyperdiversity? **Maurice Kernan** Stony Brook University

286F Investigating the maintenance of the *Responder* satellite in *Drosophila melanogaster* **Matthew Lindsay** University of Rochester

287F Variable phenotypes and complex genetic architecture underlie hybrid male sterility between recently-diverged populations of Drosophila melanogaster **Myron Child** University of Wisconsin, Madison

288F Germline RNAi of *D. melanogaster double fission* (CG34200) Causes Nurse Cell Doubling **William Gilliland** DePaul University

289F Following Muller's Footsteps: Mapping Natural Variation in Mutagen Sensitivity. **Llewellyn Green** The University of Houston

290F Mapping Genetic Variation in Mating Plug Ejection Timing in *Drosophila* Females **Jolie Carlisle** Cornell University

291F Characterization of Female Meiotic Prometaphase I in *Drosophila ananassae* **Langston Pendleton** DePaul

292S Intralocus sexual conflict drives new gene evolution in *Drosophila* **Deanna Arsala** University of Chicago

293S The evolution of ovary-biased gene expression in Hawaiian *Drosophila* **Samuel Church** Yale University

294S Disentangling the linkage between an ecological trait and the corresponding mate preference **Wei Lu** University of Chicago

295S Investigating the relationship between compensatory gene regulatory evolution and gene misexpression in Drosophila hybrids **Sophie Ross** Wesleyan University

296S Functional consequences of the rapid evolution of a putative *de novo* evolved gene required for sperm function in *D. melanogaster* **Salim Metri** College of the Holy Cross

297S Molecular basis of gene co-option in mimicry phenotype evolution **Sofia Sheikh** University of Chicago

298S Contribution of chitin-related genes to octanoic acid resistance in *Drosophila sechellia* **Katherine Fhu** Wesleyan University

299S Causes and consequences of *doublesex* co-option in the evolution female-limited color pattern polymorphism **Nicholas VanKuren** University of Chicago

300S Evolution of a fatty acyl-CoA elongase underlies desert adaptation in *Drosophila* **Zinan Wang** Michigan State University

301S How do the bodies of larval insects evolve? **Ellie Heckscher** University of Chicago

302S Nucleotide-level precision in transcript distance (*TranD*) metrics: comparison of *D. melanogaster* and *D. simulans* transcriptomes **Adalena Nanni** University of Florida

303S A mitonuclear reality check on the evolutionary significance of Mother's Curse in Drosophila **David Rand** Brown University

304S A genetic and comparative approach to uncovering the evolution of inter-cellular lipid transport in animals. **Bryan Rogers** Southern University and A & M, Baton Rouge

305S Annotation of Insulin-like protein 8 in *D. persimilis* and *D. miranda* **Adriana Andrus** Ohio Northern University

306S Dynamic evolutionary history of DNA-protein crosslink repair proteins in *Drosophila* **Cara Brand** University of Pennsylvania

307S Gene expression evolution in the Drosophila female somatic reproductive tract **Rachel Thayer** University of California, Davis

308S Abdominal pigmentation in the *Drosophila montium* species subgroup as a model for investigating the molecular basis of sex-limited polymorphisms and the evolution of dominance. **Yuichi Fukutomi** UC Davis

309S Genetic mechanisms underlying temperature preference adaptation in *Drosophila melanogaster* from Africa and Europe

Stephanie Kim Northwestern University

310S Cryptic suppression reveals intragenomic conflict in the *Sex Ratio* system of *Drosophila pseudoobscura* **Jackson Bladen** University of Utah

311S Identification of degenerate 9+0 and 9+2 axoneme motifs in the *Drosophila* major B1 and testis-specific B2 tubulins **Mark Nielsen** University of Dayton

312S Limits of adaptation in a sperm-generating protein: evolution along a narrow path in Drosophilid B2 tubulin **Mark Nielsen** University of Dayton

313S The viability and segmentation defects of heterozygotes for two *even-skipped* (**eve)** lethal mutations are vastly different. **Michael Ludwig** University of Chicago

314S Gene Annotation of Akt in *Drosophila persimilis* **Julia Kaniuk** Loyola University Chicago

315V Evolutionary diversification and repeated gene capture by telomeric retrotransposons across the *Drosophila* genus **Jae Hak Son** Rutgers University

316V Pre-existing Mad binding site is required for novel expression pattern of *wingless* in *Drosophila guttifera* pupal wing **Takumi Karasawa** Graduate School of Environmental Science, Hokkaido University

317V Saltational episodes of reticulate evolution in the *Drosophila saltans* species group **Carolina Prediger** laboratoire Evolution, Génomes, Comportement, Ecologie (EGCE), CNRS,IRD,Université Paris-Saclay

318V Variation in the susceptibility of Drosophila spp. to disease; octanoic Acid in Drosophila sechellia host fruit protects the fly from fungal infection **Matthew Nikzad** University of Maryland, College Park

319V Identifying the determinants of transposition during hybrid dysgenesis using pooled nanopore sequencing **Stefan Cerbin** University of Kansas

320V The *Hairy E(spl)* gene complex of Holometabola and its dramatic remodeling in the evolutionary origination of brachyceran flies **Albert Erives** University of Iowa

321V Restoring the hidden micro-paralogical dimension to its rightful column in the study of gene regulatory evolution in *Drosophila* **John Reinitz** University of Chicago

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323V Functional and Evolutionary Analyses of Germline Stem Cell Regulating Genes across Select Drosophila and Outgroup Species **Luke Arnce** Cornell University

Stem cells, regeneration, and tissue injury

324T Low-level repressive histone marks fine-tune stemness gene transcription in neural stem cells **Cheng-Yu Lee** University of Michigan

325T Pvr regulates cyst stem cell division in the Drosophila testis niche and has functions distinct from Egfr **Judy Leatherman** University of Northern Colorado

326T Loss of Piezo compromises embryonic post-wounding epidermal barrier function and survival **Alessandro Scopelliti** University of Edinburgh (UK)

327T Transferrin 2 in homeostasis and ageing of the *Drosophila melanogaster* midgut **Anona Galbraith** Durham University

328T The roles of SPARC and PLOD in *Drosophila* intestinal stem cell homeostasis **Paula Ferraces Riegas** Durham University

329T Stress-induced reversible cell cycle arrest requires PRC2/PRC1-mediated control of mitophagy in Drosophila germline stem cells and human iPSC **Tung Chin Chan** University of Washington

330T Dad Regulates Germline Stem Cell Differentiation **Razeen Shaikh** Texas A&M University

331T Enteroendocrine cells affect intestinal regeneration through a gut-associated tissue signalling **Andre Medina** Cancer Research UK Beatson Institute

332T Ovarian stem cell niche ageing involves changes in alternative splicing and reveals a role for the splicing factor *Smu1* in niche activity **Acaimo González-Reyes** Spanish National Research Council (CSIC)

333T Role of Non-Inflammatory Chemokines in Shaping Drosophila Midgut Epithelial Polarity During Regeneration **Mohamed Mlih** Texas A&M

334T Chondroitin sulfate is required for organ morphogenesis, maintenance, and regeneration in *Drosophila* **Collin Knudsen** University of Minnesota

335T Calcium influx rapidly establishes the distinct spatial Annexin recruitment patterns at cell wounds **Mitsutoshi Nakamura** Fred Hutchinson Cancer Center

336T Transcriptional regulation of germline stem cell identity **Amelie Raz** Whitehead Institute for Biomedical Research

337T Investigating the Hippo Pathway's Role in Neuroblast Asymmetric Cell Division **Niranjan Joshi** University of Chicago

338F Understanding the role of Vestigial in *Drosophila* wing imaginal disc regeneration **Surabhi Sonam** University of Illinois Urbana Champaign

339F Increases in calcium after dendrite injury drive dendrite regeneration **Katherine Thompson-Peer** University of California, Irvine

340F Piezo regulates wound closure to ensure effective inflammation and maintenance of epithelial integrity **Luigi Zechini** University of Edinburgh

341F Mitochondrial lipid metabolism regulates JAK-STAT signaling and stem cell maintenance in the *Drosophila* testis **Rafael Demarco** University of Louisville

342F Cross-regulatory interactions among downstream targets of the master regulator genes Escargot and Stat92E in *Drosophila melanogaster* intestinal stem cells **Cynthia Petrossian** California State University Northridge

343F Using the *Drosophila melanogaster* ejaculatory duct as a model to study postmitotic tissue regeneration **Navyashree Amruthahalli Ramesh** University of Michigan

344F Elucidating the Role of *Btk29A* during early regeneration in *Drosophila* **Snigdha Mathure** University of Illinois at Urbana-Champaign

345F The cytoskeletal mechanics that shape a stem cell niche **Bailey Warder** University of Pennsylvania

346F Regeneration following necrosis requires both apoptotic and non-apoptotic caspase activity **Jacob Klemm** Arizona State University

347F Anillin-dependent Septin function is required to stabilize the actomyosin ring during cell wound repair **Viktor Stjepic** Fred Hutchinson Cancer Center

348F Nuclear lamina proteins underlie the non-canonical mode of asymmetric mitosis employed by Drosophila female germline stem cells **Julianna Hernandez** University of Iowa

349F Escargot controls somatic cell fate by attenuating EGFR signaling **Jordan Kryza** University of California Los Angeles

350F A novel, context-dependent role for the enteroendocrine cell lineage in intestinal tumorigenesis. **Maria Quintero** Florida State University

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353S Homothorax is enriched in the adult Drosophila testis hub and is essential for its maintenance **Margaret de Cuevas** Johns Hopkins School of Medicine

354S Rap1 coordinates cell-cell adhesion and cytoskeletal reorganization to drive collective cell migration during embryonic wound healing **Katheryn Rothenberg** University of Toronto

355S Function of Traffic jam in regulating Drosophila ovarian stem cell niche cell fates **Nia Kang** University of Toronto

356S Assessment of cellular and functional heterogeneity within the *Drosophila* testis stem cell niche **Jennifer Viveiros** Johns Hopkins School of Medicine

357S The impact of DNA damage response and cell cycle on germline stem cell survival in the *Drosophila* testis **Jasmine Grey** Johns Hopkins University School of Medicine

358S DNA replication establishes asymmetric sister centromeres epigenetic **Rajesh Ranjan** Howard Hughes Medical Institute

359S Investigation of Follicle Stem Cell division rate regulation with FUCCI cell cycle reporters **Daniel Kalderon** Columbia University

360S Harnessing Drosophila for In Vivo Evaluation of Radioprotection Conferred through Consumption of Radiation-Resistant Yeasts **Robert Volpe** Uniformed Services University of the Health Sciences

361S Melanization regulates wound healing by limiting polyploid cell growth in the *Drosophila* epithelium **Loiselle Gonzalez** Boston College

362S Multinucleated, polyploid cells arise and protect against UV-A irradiation in the adult *Drosophila* epithelium **Minqi Shen** Boston College

363S Real-time Notch signaling mechanisms driving intestinal repair **Hsuan-Te (Miriam) Sun** Stanford University

364S Rab11 mediates E-cadherin recycling during embryonic wound healing **Sofia Karter Lopez** University of Toronto

365V Kinetics of blood cell differentiation during hematopoiesis revealed by quantitative long-term live imaging **Kevin Ho** University of British Columbia

366V Wdr4 Limits Intestinal Stem Cell Division and has conserved function for Gut Homeostasis **Kreeti Kajal** Institute of Cellular and Organismic Biology, National Chung Hsing University and Academia Sinica, Taipei 11529

367V Role of Acetyl-CoA Carboxylase in regulating Drosophila Ovarian Germline **Oyundari Amartuvshin** Academia Sinica

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Reproduction and gametogenesis

369T The synaptonemal complex plays multiple roles in establishing the recombination landscape across chromosomes **Katie Billmyre** Stowers Inst Med Res

370T Role of PIP2 in sperm head formation **Marynelle Icmat** University of Toronto

371T Eukaryotic initiation factor 4E-5 is essential for spermatogenesis in *Drosophila melanogaster* **Brook Falk** The Hospital for Sick Children

372T Prostaglandins limit nuclear actin to control nucleolar function during oogenesis **Danielle Talbot** University of Iowa

373T Loss of Nemp triggers a fertility-linked DNA damage checkpoint through chk2 and ATM **Yonit Bernstein** The Hospital for Sick Children

374T The bHLH-PAS transcriptional complex Sim::Tgo plays active roles in late oogenesis to promote follicle maturation and ovulation **Rebecca Oramas** University of Connecticut

375T Using RNAi to Identify *Enhancer of SD* **Aimee Smith** Bethel University

376T How does Oskar assemble the *Drosophila melanogaster* germ plasm? **Anastasia Repouliou** Harvard University

377T A cell-autonomous role for triglyceride lipase *brummer* in regulating lipid droplets and differentiation during *Drosophila* spermatogenesis **Elizabeth Rideout** University of British Columbia

378T Nucleoporin107 is a critical determinant of soma-germline communication, essential for ovarian development and function **Offer Gerlitz** The Hebrew University

379T Sex chromosomes expression evolution in Drosophila spp. spermatogenesis **Camila Avelino** University of São Paulo

380T Identifying Recombination Nodule Proteome via TurboID-based Proximity Labeling **Oscar Bautista** Case Western Reserve University

381T Cytological characterization of *mei-P26*[1] and its effect on meiotic recombination **Erica Berent** Case Western Reserve University

382T Maternal organelle contribution to offspring germline health **Jay Goodman** Whitehead Institute for Biomedical Research

383T Recent functional divergence of testis-specific HMG-box-containing genes (tHMGs) in Drosophila **Isabel Mejia Natividad** Fred Hutch

384T OVO binds and regulates transcription start sites of genes encoding major egg and maternal functions including axis specification, vitelline membrane formation, and egg activation **Leif Benner** National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health

385T Bourbon interacts with Otu and promotes the expression of Sxl in the *D. melanogaster* female germline **Marianne Mercer** UT Southwestern

386T Sar1, a GTPase involved in COPII vesicle trafficking, is critical for *Drosophila* oogenesis **Makayla Gomperts** University of Evansville

387T The *Drosophila* Estrogen-Related Receptor acts as a central regulator of oogenesis **Sophie Fleck** Indiana University Bloomington

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390T TRPM's role in protein phospho-regulation during Drosophila egg activation **Jonathon Thomalla** Cornell University

391F Effects of Yolk Proteins During Egg Activation in Drosophila **Clarisa Cristobal** Cornell Univeristy

392F Identification and Analysis of Key Transcription Factor Genes in Differential Spermatogenesis in *Drosophila pseudoobscura*, a Sperm Heteromorphic Species **Fiona Messer** Cardiff University

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394F Meiotic Crossover Patterning: Understanding the *D. melanogaster* Centromere Effect **Nila Pazhayam** University of North Carolina at Chapel Hill

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398F A Mutational Approach to Analyze RNA Helicase Me31B's *in vivo* Working Mechanism in *Drosophila* Fertility and Germline Development **Ming Gao** Indiana University Northwest

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400F Female germline OVO expression is eternal **Savannah Muron** National Institutes of Health

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402F Characterizing the composition and morphology of the germ plasm in the wasp *Nasonia vitripennis* **Allie Kemph** University of Illinois at Chicago

403F SIRT1 is required for cohesion maintenance during meiotic prophase in Drosophila oocytes **Zihan Meng** Dartmouth College

404F Autophagy during meiotic prophase is required for accurate chromosome segregation in Drosophila oocytes **Diana Hilpert** Dartmouth College

405F Defining the mechanistic basis of germline transcriptional activation **Anais Tsai** Massachusetts Institute of Technology

406F Test Requirement of Polo Kinase to CO Formation in Drosophila. **Bowen Man** Case Western Reserve University

407F Regulation of stem cell niche assembly during gonadogenesis **Lauren Anllo** East Carolina University

408F Regulation of Spermatogenesis by Notch and Ribbon **Allyson Terrell** Loyola University Chicago

409F Elucidating METTL3 Germline Function During *Drosophila* Spermatogenesis. **Rosemarie Mirabella** Susquehanna University

410F *Drosophila* PhLP3 is Required for Spermiogenesis **Christopher Petit** Loyola University Chicago

411F Characterization of the role of *Notch* in *Drosophila* testes **Christine Severude** Loyola University Chicago

412F The Interchromosomal Effect Promotes Crossovers on the Recombinantly Dormant 4th Chromosome in *Drosophila melanogaster* **Joseph Terry** Case Western Reserve University

413S Transcriptional and mutational signatures of the Drosophila aging germline **Li Zhao** The Rockefeller University

414S Determining how Doublesex and sex-specific steroid hormone signaling control gonad development **Samantha Goetting** Johns Hopkins University

415S *bruno'*s role in dysgenic sterility : cellular responder or regulator of transposition? **Modupeola Bolaji** University of Houston

416S Characterizing the Role of Doublesex in Creating Sexual Dimorphism in the Somatic Gonad **Natalie Murphy** Johns Hopkins University

417S E93 an Adult Transformer **Warda Merchant** University of Texas Southwestern Medical Center

418S The Creation of a Null Allele of *Clipper* and Investigation of Its Role in *Drosophila melanogaster* Oogenesis **Charlie Watts** University of Evansville

419S A meiosis specific APC/C functions in sex determination **Andrew Swan** University of Windsor

420S Mutations in RNA Helicase Me31B's key motifs influence germ cell quantity in *Drosophila* **Megan Proffer** Indiana University Northwest

421S Spargel/dPGC-1 RNA Recognition Motif (RRM) is essential for Oogenesis **Swagota Roy** The Howard University

422S Establishing *Drosophila* egg chambers as a cell size control model **Shruthi Balachandra** Dartmouth College

423S Identifying the Protein Factors That Influence the Aggregation of Me31B into *Drosophila melanogaster* Germ Granules **Ammaar Mohammed** Indiana University Northwest

424S Understanding rare disease variants of the conserved nuclear lamina protein Barrier-to-Autointegration Factor **Samuel Jones** University of Iowa

425S Slogging through Mud: meiotic isoforms and their function **Daniel Bergstralh** University of Rochester

426S Does 4-nonylphenol affect the fertility of Drosophila? **Jennifer Bandura** Lock Haven University

427S Essential and recurrent roles for endogenous RNAi to silence *de novo* sex chromosome conflict
Eric Lai Sloan Kettering Institute

428S ESCRTs mediate Notch signaling in the testis stem cell niche **Mara Grace** Johns Hopkins University

429S Uncovering the Mechanisms that Activate the Germ Cell Transcriptional Program **Sherilyn Grill** Whitehead Institute for Biomedical Research

430S Using FIB-SEM and AT-SEM to monitor ultrastructural changes in the germline ring canals **Lindsay Lewellyn** Butler University

431S Characterization of testis specific sugar transport and glycolysis genes in *Drosophila melanogaster* **Mark Hiller** Goucher College

432S A single-nucleus gene expression atlas of the somatic female reproductive tract **Rachel Thayer** University of California, Davis

433S Investigating the role of the microbiome in gonadogenesis **Taylar Mouton** Johns Hopkins University

434V Functional assembly of the large and unique germ granule during germline development in the wasp *Nasonia vitripennis* **Kabita Kharel** Murray State University

435V A transcriptomics based RNAi screen for components of the synaptonemal complex in *Drosophila* **Cynthia Staber** Stowers Institute for Medical Research

436V A multi-protein complex regulates *cycB* translation in the *Drosophila* male germline **Catherine Baker** Stanford University School of Medicine

437V Investigating the development of key somatic cells in the Drosophila ovary **Joanna Portillo** Johns Hopkins University

438V Inducible *Gal4* expression reduces egg production and disrupts normal morphology in the *Drosophila* ovary **Tiansheng Zhang** University of Wisconsin-Superior

439V Insights into the mechanistic basis of the manipulation by the endosymbiotic bacteria *Wolbachia pipientis* of female reproduction in *D. melanogaster* **Catherine Kagemann** Cornell University

440V The *Wolbachia* interaction with the *D. melanogaster bag of marbles* (*bam*) gene is specific to *bam* function **Miwa Wenzel** Cornell University

441V Is Roundup-Induced Reproductive Toxicity Reversible in Drosophila Melanogaster? **Kalinah Winston** California State University San Bernardino

442V Ectopic expression of ovary expressed *polo* transcripts and duplicates in *Drosophila melanogaster* testis creates female-biased sex ratios **Paola Najera** University of Houston

Regulation of gene expression

443T Revealing hidden micropeptide functions using high-throughput screening **Emma Walmsley** Imperial College London

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445T Targeting Dosage Compensation to the Drosophila Male X-chromosome **Angelica Aragon Vasquez** Brown University

446T Mechanism of the anterior determinant gene *panish* in the midge *Chironomus riparius* **Muzi Li** The University of Chicago

447T Investigating intersecting RNA regulatory roles for Glorund in the ovary and the adult brain **Brooke Hull** Princeton University

448T The histone acetyltransferase Nejire is recruited to the genome by the pioneer factor Zelda, and is required to activate gene expression during the maternal-to-zygotic transition **Audrey Marsh** University of Wisconsin-Madison

449T The role of Piwi in selecting transcription start sites **Jiaying Chen** Yale University

450T Quantitative analysis of the roles of IRM cell adhesion molecules in column formation in the fly brain **Yunfei Li** Kanazawa University

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453T Dynamics of recruitment of transcription elongation factor SPT6 to the histone locus body during the activation of replication dependent histone genes in early Drosophila embryogenesis **Mia Hoover** University of North Carolina

454T Multiple domains in transcription factor CLAMP regulates sex-specific splicing during Drosophila development. **Pranav Mahableshwarkar** Brown University

455T Characterizing the transcriptional landscape of *Drosophila melanogaster* centromeres **Asna Amjad** University of Connecticut

456T Defining the Dynamics of Transcriptional Bursting in Developing *Drosophila* legs **Rina Helt** Johns Hopkins University

457T PARP-1 acts as a transcriptional rheostat during development **Gbolahan Bamgbose** University of North Dakota

458T Exploring the Role of CLAMP's Prion-like Domain in Co-Transcriptional Splicing in Drosophila **Jasmine Shum** Brown University

459T The *Mute* button: Turning down the volume of histone expression **Mark Geisler** University of North Carolina - Chapel Hill

460T Variable nuclear translocation kinetics differentially modulate gene expression during dorsal-ventral axis patterning **Samantha Fallacaro** University of Pennsylvania

461T Mechanisms of efficient transcription factor target search in *Drosophila* embryos **Alan Boka** University of Pennsylvania Perelman School of Medicine

462T Mechanisms of Fork head regulation of the salivary gland secretome **Dorian Jackson** Johns Hopkins University

463T Retinoblastoma paralogs employ both similar and distinct mechanisms of repression **Ana-Maria Raicu** Michigan State University

464T Isoform expression and the post-transcriptional regulation of centrosome *Plp* mRNA **Junnan Fang** Emory University School of Medicine

465T Bicoid concentration differentially regulates the transcriptional onset of targets genes **Eleanor Degen** Northwestern University

466F Sequence reliance of a context-dependent transcription factor **Lauren Hodkinson** Emory University

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468F Investigating the *cis*-regulatory elements controlling a stochastic cell fate choice in the *Drosophila* eye **Yaniris Molina** Johns Hopkins University

469F Investigating Vasa's role in Translational Regulation of Oskar Protein **Austin Chiappetta** Johns Hopkins University

470F FSH Plays a Critical Role in Zelda Mediated Zygotic Genome Transactivation During Early Embryogenesis in *Drosophila* **Xiao-yong Li** Howard Hughes Medical Institute, University of California, Berkeley, CA

471F A hierarchy influencing gene expression **Siddhant Kalra** Wesleyan University

472F The complexity of genomic DNA methylation influences sex-specific functions in environmental changes in cactophilic *Drosophila* **Adriano Santos** Ribeirão Preto Medical School, University of São Paulo, FMRP-USP

473F Characterizing the Role of METTL3 During *Drosophila* Embryogenesis. **Savannah Barton** Susquehanna University

474F The conserved homeodomain transcription factor Hmx rewires the Hippo pathway to specify and maintain blue-sensitive photoreceptor fate **Joseph Bunker** UMass Boston

475F ETS-domain transcriptional regulators Pnt and Yan regulate spatiotemporal expression of matrix metalloproteinase 2 in *Drosophila* ovary **Baosheng Zeng** University of Connecticut

476F Dorsal/NF-κB exhibits a dorsal-to-ventral mobility gradient in the *Drosophila* embryo **Gregory Reeves** Texas A&M University

477F K-Gut Project Creates a Database of High-resolution Gut-expression Images of GAL4 Transgenes Derived from *Drosophila* Gut-expressed Genes **Seung Yeon Lim** Sungkyunkwan University

478F Identifying the impact of H3K4 methylation on the circadian clock in the *D. melanogaster* eye **Gaoya Meng** Purdue University

479F Comprehending testes-specific gene regulation in *Drosophila melanogaster* **Saurabh Chaudhary** Cardiff University

480F Regulation of transcriptional dynamics in *Drosophila* embryonic heart development **Amanda Hill** The University of Chicago

481F Investigating how germline sexual identity controls sex-specific gene expression **Harrison Curnutte** Johns Hopkins University

482F Shining a Light on the Design Principles of Developmental Shadow Enhancers **Jillian Ness** Boston University

483F Gene expression regulation by the Bin3 noncoding RNA methyltransferase through 7SK snRNP-dependent and -independent mechanisms plays a conserved role in development **Ryan Palumbo** SUNY Upstate Medical University

484F Stumple activates Wnt signaling through BRG1 regulation **Kai Yuan** Dartmouth College

485F Dynamic regulation of the mutualistic retrotransposon R2 maintains ribosomal DNA copy number stability **Jonathan Nelson** Whitehead Institute for Biomedical Research

486F Mimicking Permanent Phosphorylation of HP1a Causes Sterility **James Walts** University of Alabama at Birmingham

487F Analysis of transcription factor binding sites upstream of the p38Kb gene in oxidative stress resistance **Brooke Allen** Illinois State University

488F A screen for novel roles of G protein-coupled receptors in eye development **Romaisa Shahid** University of Massachusetts Boston

489S Evaluating SCRMshaw enhancer prediction for non-traditional model organisms through a cross-species reporter assay **Ellen Tieke** Miami University

490S Wing enhancers of *vestigial* evolved through modifications of the body wall enhancers **Jabale Rahmat** Miami University

491S Brat binds to mRNAs and accelerates their decay via a 3' decay pathway to control development **Robert Connacher** University of Minnesota

492S Spatiotemporal regulation of *orthodenticle* during *Drosophila* embryogenesis and retinal development **Rhea Datta** Hamilton College

493S Investigating the Role of RNA Editing in Toxin Exposure in D. *sechellia* **Neil Bohan** Wesleyan University

494S Yorkie dependent transcriptional network promotes tumor growth. **arushi rai** University of Dayton

495S Interactions among *cis*-regulatory regions of cell fate determinants during follicle cell patterning **Kelvin Ip** McGill University

496S A role for Set1 at Zygotic Genome Activation **Natalie Gilbert Gonzaga-Saavedra** Northwestern University

497S Fat cadherin cleavage releases a transcriptionally active nuclear fragment to regulate Yki targets **Jannette Rusch** Washington University St Louis School of Medicine

498S *miR-277* ameliorates Aβ42-mediated neurodegeneration in *Drosophila* eye model of Alzheimer's Disease **Prajakta Deshpande** University of Dayton

499S Structure-function analysis of Defective proventriculus (Dve) in *Drosophila melanogaster* eye growth and development **Anuradha Chimata** University of Dayton

500S Gene Regulatory Networks in Development: Genetic Variation and Robustness of Anteroposterior (AP) Axis Formation in *Drosophila* **Lossie (Elle) Rooney** NC State University

501S Epigenetic effects of transgenerationally inherited piRNAs **Peiwei Chen** California Institute of Technology

502S Activin signaling network in Drosophila tissue growth and development **Yisi Louise Lu** University of Minnesota

503S Using CRISPR/Cas9 genome editing to dissect the 5' regulatory region of the gene *hindsight* **Richard Do** University of Waterloo

504S Combined inputs of two antagonistic transcription factors regulates progenitor vs. photoreceptor cell fate decision in the developing Drosophila eye **Suzy Hur** The University of Chicago

505S Transcriptome analysis of the effects of loss of *ft* and of deletion of conserved domains. **Nattapon Thanintorn** Washington University School of Medicine

506S Synthetic reconstruction of the *hunchback* promoter specifies the roles of Bicoid, Zelda and Hunchback in the dynamics of its transcription **Gonçalo Fernandes** Institut Curie

507S Exploring how cells randomly choose between fates in the fly eye **Christina Im** Johns Hopkins University

508S Regulation of the Mef2 transcription factor during myogenesis by the Class IIa Histone Deacetylase, HDAC4 **Sean Hubbert** Cardiff University

509S Mechanisms controlling cell type-specific transcription factor activity **Ross Munce** Columbia University

510S Poly(ADP-ribose) enzymes temporally regulate the expression of developmental genes. **Guillaume Bordet** University of North Dakota

511V Coexpression analysis reveals candidate regulators of transposable element (TE) expression **Matthew Lawlor** Rutgers University

512V Genetic Compensation between Ribosomal Protein paralogs mediated by a cognate circular sisRNA in *Drosophila* **Amanda Ng** Temasek Life Sciences Laboratory

513V Analysis of functionally enriched transcripts differentially associated with eRpL22-family polysomes **Caroline Pritchard** Lehigh University

514V CRISPR Knock-in Split Fluorescent Protein as an Endogenous Tag in Drosophila melanogaster **Yingshan Bi** UCSF

515V *In vivo* contribution of the DPE core promoter motif to transcriptional regulation in developing *Drosophila melanogaster* embryos **Anna Sloutskin** Bar Ilan University

516V Identifying key drivers of gene regulatory networks in male *Drosophila* **Melissa Aldana** Brown University

517V β-catenin/Armadillo mediated activation of Wg/Wnt target genes utilizes a biomolecular condensate dependent mechanism **Richard Stewart** University of Michigan

518V Role of *drumstick* to specify the anterior-most domain of *Drosophila* hindgut. **Sarder Uddin** City Colleges of Chicago

Chromatin, epigenetics and genomics

519T Probing the chromatin landscape of a repetitive locus using DiMeLo-seq **Thomas OHaren** Emory University

520T A ZAD zinc finger protein guides installation of a mini H3K9me3 silencing domain to secure female germ cell identity **Helen Salz** Case Western Reserve Univ

521T Determining essential, pioneering features of the conserved transcription factor Grainy head **Meghan Freund** University of Wisconsin-Madison

522T A Dual-activity Topoisomerase Interacts with piRNA Machinery to Promote Transposon Silencing and is needed for Germ Cell Functions in *Drosophila* ovary **weiping shen** National Institute on Aging

523T *D. melanogaster HP1b/HP1c* double-mutants are viable and fertile with only minor changes in HP1a localization **Sarah Sims** University of Alabama at Birmingham

524T The function and evolution of *abnormal oocyte,* a *Drosophila* histone regulator **Risa Takenaka** University of Washington

525T Transcript-specific effects of developmental ethanol exposure on the expression of chromatin-modifying genes in Drosophila **Joshua Marsh** San Jose State University

526T Determining how “reader” proteins interact with the genome: Does L(3)mbt require methylation of histone H4 lysine 20 to bind chromatin? **Megan Butler** University of North Carolina at Chapel Hill

527T Consequences of activating a centromere-enriched retroelement **Tyler McDermott** University of Connecticut

528T Evolutionary conservation of chromatin-modifying and insulator sequences in Drosophila **Alia Khogali** Widener University

529T Is X recognition dependent on nuclear architecture? **Maggie Sneideman** Wayne State University

530T Identifying limitations to pioneer factor-mediated reprogramming **Eliana Torres-Zelada** University of Wisconsin School of Medicine and Public Health

531T Targeting an Active Chromatin Domain to the X-chromosome **Claire Gray** Brown University

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533F Deciphering developmentally regulated DSB repair outcomes at single allele resolution **Zhiqian Li** University of California

534F The motif-1 interacting protein (M1IP) colocalizes with CP190 and M1BP near TAD borders **Dagyeong Yang** NIH

535F How chromatin state affects mitotic recombination rates **Priscila Santa Rosa** University of North Carolina at Chapel Hill

536F Impacts of the epigenetic silencing of transposable elements on local recombination rate **Yuheng Huang** UC-Irvine

537F BRWD3 targets KDM5/Lid for degradation to maintain H3K4 methylation levels **Dongsheng Han** Department of Biological Sciences

538F Sequence Divergence and Binding Factors of Repetitive Histone Loci **Connor Smith** Emory

539F Analysis of repetitive DNA elucidates details about the composition of the *D. melanogaster* B chromosomes **Ana Beatriz Stein Machado Ferretti** Universidade Estadual Paulista (UNESP)

540F Regulation of gene expression by HP1 proteins **Annesha King** University of Alabama at Birmingham

541F Investigating the role of Polycomb repression in *Drosophila* eye specification **Haley Brown** Indiana University

542F 3D dynamics of enhancer-promoter interactions during transvection in living *Drosophila* embryos **Hao Deng** University of Pennsylvania

543F Triggering targeted recombination with hybrid transposable elements **Victoria Lopez** Indiana University

544F A *Drosophila* Model for Trinucleotide Repeat-Induced Silencing in Friedrech's Ataxia melanogaster **Nhi Vuong** Bemidji State University

545F Evolutionary origins and diversification of variant histone H2Av in *Drosophila* **Ashlyn Anderson** Fred Hutch Cancer Center

546F Describing genetic interactions between blm and rDNA in Drosophila **Ergul Susamci** The University of Arizona

547S Observing the Interchromosomal Effect in *D. simulans* **Nigel Muhammad-Lahbabi** Case Western Reserve University

548S Heterochromatinization of Repetitive DNA is Location Dependent **"Alix" Brittny Hathaway** Bemidji State University

549S GAGA-Associated Factor Fosters Loop Formation in the *Drosophila* Genome **Xiao Li** Princeton University

550S Using wavelets to generate new insights into the impact of biological processes on the 3D nuclear architecture of *Drosophila* **Ryan Pellow** University of Iowa

551S Its ***abo***ut Time: Abnormal oocyte's (abo) role in embryonic histone gene regulation **Eric Albanese** Emory University

552S The role and control of gene expression variation underlying tissue-specific responses to copper stress in *Drosophila melanogaster* **Elizabeth Everman** University of Kansas

553S *Drosophila* Set8 has functions in cell proliferation and neurogenesis that are independent of its chromatin modifying activity **Aaron Crain** UNC Chapel Hill

554S Investigating the *in vivo* functions of histone monoaminylation using *Drosophila* **Harim Delgado-Seo** Baylor College of Medicine

555S Super-resolution imaging of homologous chromosomes reveals different scales of genome organization in *Drosophila* **Jumana AlHaj Abed** Harvard Medical School

556S Evidence for a trans-nuclear envelope bridge required for centromere tethering in *Drosophila melanogaster* neuroblasts **Jennifer Taylor** University of Washington

557S Epigenetic silencing of transposons by nuclear and cytoplasmic factors of Piwi-piRNA pathway promotes Piwi's function in developmental robustness **Rasesh Parikh** Medical University of South Carolina

558S Dissecting the temporal dynamics of histone inheritance through *Drosophila* neural development **Jason Palladino** Johns Hopkins University

559V Insights into Magnification by a Functional Characterization of ribosomal DNA-null alleles in D. melanogaster **Selina Kindelay** University of Arizona

560V Establishing the molecular mechanisms mediating chromatin architecture **Wenfan Ke** Princeton University

561V Histone methylation regulates reproductive diapause in *Drosophila melanogaster* **Abigail DiVito Evans** University of Pennsylvania

562V Assessing an unprecedented role for Heterochromatin Protein 1a (HP1a) at mitochondria **Liliana Tullo** University of Rome Sapienza

563V Transcriptomic studies of histone H3 lysine 36 residue and writer enzyme mutants reveal unique and redundant functions **Harmony Salzler** UNC Chapel Hill

564V Creation of an optogenetically tagged Polycomb protein capable of inducible nuclear export in *Drosophila melanogaster*. **Sarah Aleman** McDaniel College

Patterning, morphogenesis and organogenesis

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566T Cellular consequences of acute manipulation of Rap1 activity in early embryonic morphogenesis **Amruta Nayak** The University of Chicago

567T Real time dynamics of cell fate specification in the *Drosophila* tracheal system **Alison Simpkins** Princeton University

568T Developmental Variation in the Rate of Collagen Deposition in the Cardiac Basement Membrane **Danielle MacDuff** McMaster University

569T Quantifying the relative contribution and furthering qualitative understanding of *ftz cis*-regulatory elements in *Drosophila melanogaster* **Matthew Fischer** University of Maryland, College Park

570T The Role of Akirin/NuRD Interactions During Heart Development **Mia Jones** Kennesaw State University

571T Pointing us in the right direction: the *Drosophila melanogaster* wing as a model of planar cell polarity **Jessica Baker** Taylor University

572T Beyond wings: Roles for *apterous* gene in gut development, feeding initation and adult survival **Cindy Reinger** Biozentrum, University of Basel

573T An EP mutant for *snuts* slows larval growth and development in high ambient temperatures **Kwon Yong-Jin** Gwangju Institute of Science and Technology

574T Histamine immunoreactivity in secondary cells of the male accessory gland in *Drosophila melanogaster* appears during late pupal development **Jurrien Wilson** Grand Valley State University

575T The PI 4-kinase Four wheel drive promotes cell surface expansion during apical constriction-mediated tissue folding **Bing He** Dartmouth College

576T Planar polarized localization of the atypical cadherin Fat is dynamic and regulated by Frizzled in the eye disc **Jiahui Liu** Northwestern University

577T Regulation of localization and abundance of the Dachs-Approximated-Dlish complex by the protocadherins Fat and Dachsous **Hitoshi Matakatsu** University of Chicago

578T Role of Broad in regulation of proper border cell migration during *Drosophila* oogenesis **Dongyu Jia** Georgia Southern University

579T Nutrient-driven dedifferentiation of enteroendocrine cells promotes adaptive intestinal growth **Hiroki Nagai** The University of Tokyo

580T Transcriptional co-repressor Atrophin regulates Hippo pathway target genes **Deimante Mikalauskaite** Waksman Institute, Rutgers University

581T Macroglobulin complement-related protein is required late in Drosophila oogenesis to maintain egg elongation through cell shape changes and secretion of eggshell components **Lydia Bruno** Case Western Reserve University

582T Transcriptome analysis reveals temporally regulated genetic networks during border cell collective migration **Emily Burghardt** Kansas State University

583T Shining Light on Calcium-Mediated Morphogenesis: Forward Engineering Organ Development with Optogenetics and Piezo **Mayesha Sahir Mim** University of Notre Dame

584T Analysis of pMad and Medea Expression in BMP Pathway in S2 Cells with Multiple Fluorescent Proteins **Hung-Yuan (Zeke) Chen** Texas A&M University

585T Slowing Follicle Cell Migration Can Tune the Mechanical Properties of the Basement Membrane During Egg Chamber Elongation **Mitch Anderson** University of Chicago

586T Characterization of *kayak* (*kay*) mutant phenotypes in *Drosophila melanogaster* eye development **Manuel Zuniga-Garcia** Instituto de Neurobologia, UNAM

587T Identification of CryAB as a NUAK kinase substrate that influences protein aggregation in muscle tissue **Ziwei Zhao** Kansas State University

588F Fat expression dynamics and growth control in the developing *Drosophila* wing pouch **Andrew Liu** Northwestern University

589F *Drosophila eEF1a2* has a cell autonomous role in the actin-fiber maintenance of adult muscle **Hidetaka Katow** New York University

590F Integration of the *Sex combs reduced* Hox gene into the Drosophila leg gene regulatory network **Xinyuan Liu** University of Illinois at Chicago

591F Morphogenetic forces regulate Hippo signalling in epithelial tissues via basolateral spot junctions **Kieran Harvey** Peter MacCallum Cancer Centre

592F The DUB complex increases Wingless/Wnt signaling strength by stabilizing Arrow/LRP6 **Ghalia Saad Siddiqui** Dartmouth

593F The different facets and functions of Wingless (Wg) signalling in *Drosophila* ovarian follicle cell migration **Poulami Chatterjee** Presidency University

594F Transient epithelial folding and out-of-plane division are genetically patterned mechanical sinks that release compressive stress resulting from tissue tectonic collision **Yu-Chiun Wang** RIKEN BDR

595F Twin roles of the zinc-finger transcription factor Castor: specification of cardiac cell subtypes and regulation of cardiac progenitor cell division **Abbigayle Gamble** Department of Biology, Indiana State University, Terre Haute, IN

596F The counter-intuitive role of junctional tension during morphogenesis in the drosophila embryo **Thom de Hoog** University of Zürich

597F Optogenetic perturbation of a pre-gastrulation niche to modulate neural lineage fates **Kelli Fenelon** University of Texas Arlington

598F Discovery of novel short linear motifs in insect segmentation proteins **Minh Lê** University of Maryland

599F Fox transcription factors mediate proper positioning of cardiac cells by restricting the expression of ECM genes **Rajnandani Katariya** Indiana State University

600F Investigating a role for septate junction proteins in cell flattening during dorsal closure **Robert Ward** Case Western Reserve University

601F Investigating the role of ecdysone signaling in dorsal closure using Halloween genes. **Jae Ho Lee** Case Western Reserve University

602F Malvolio, the *Drosophila* ortholog of human NRAMP2 metal ion transporter, is required for salivary gland morphogenesis **Rajprasad Loganathan** Wichita State University

603F Shaping 3D geometry during tubulogenesis: the PDZ domain-containing protein Arc regulates Crumbs and myosin II during embryonic salivary gland morphogenesis **Ji Hoon Kim** Johns Hopkins University School of Medicine

604F The role of the Sp/KLF transcription factor Huckebein during tubular organ formation in *Drosophila*. **Jeffrey Matthew** Louisiana State University, LSU

605F Expanding the ocellar gene regulatory network in *Drosophila melanogaster* **Karly Miller** Indiana University at Bloomington

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607F Optogenetic Techniques for Control of the Bone Morphogenetic Protein (BMP) Pathway in S2 cells **Shelby Morton** Texas A&M University

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609F Molecular analysis of Toll receptor function during the polarization of contractile and adhesive proteins during *Drosophila* embryogenesis **Chloe Kuebler** University of Arkansas

610F Exploring how basement membrane mechanics evolve over time to control tissue lengthening in the *Drosophila* egg chamber **Victoria Hoznek** University of Chicago

611F Using multiphoton fluorescence lifetime imaging (FLIM) to visualize NADH/FAD endogenous autofluorescence in Drosophila early embryogenesis **Maria Espana** University of Arkansas

612S The Puratrophin-1-like RhoGEF regulates epithelial tube formation during *Drosophila* embryonic development **Thao Le** Louisiana State University

613S Investigating the role of Dachsous intracellular domain and binding partners in wing size and planar cell polarity using CRISPR. **Alex Earl** Washington University in St. Louis

614S Involvement of Btz in Grk / EGFR Signaling during Drosophila Oogenesis **Alexander Mathewson** State University of NY at Fredonia

615S Downstream transcriptional targets of *Drosophila* Egf receptor signaling play roles in eggshell morphogenesis **Lisa Kadlec** Wilkes University

616S Spatiotemporal dynamics of the protein Cactus in *Drosophila melanogaster* development **Allison Schloop** North Carolina State University

617S A Single Transcription Factor Determines Distinct Visual System Fates **Claude Jean-Guillaume** Indiana University

618S The Serine-like Protease *masquerade* (*mas*) Plays an Important Role in Tracheal Tube Formation **Victoria Kurdyumov** University of St. Thomas

619S Evaluating the effect of molecular interaction between *Tsh* & *CtBP* on *Drosophila* eye development **Harley Hines** Arkansas Tech University

620S 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

621S *trithorax* is essential for cardiac *Hox* gene expression and anterior-posterior patterning of the *Drosophila melanogaster* embryonic dorsal vessel **Adam Farmer** Indiana State University

622S The adult *Drosophila* salivary gland exhibits an unusual mode of cell division **Gary Hime** University of Melbourne

623S Analyzing the role of Approximated-mediated palmitoylation in the Fat/Dachsous signaling pathway **Seth Blair** Univ Wisconsin

624S Quantitative 3D mechanical model of embryonic epithelium based on *in vivo* mechanical measurements **Mohamad Ibrahim Cheikh** UT Southwestern Medical Center

625S Chitinase-Like Proteins work through a novel signaling pathway to regulate tube formation **Luana Paleologu** University of Washington

626S Lipid modified FGF programs cytoneme-mediated polarized FGF signaling and tissue organization **Sougata Roy** University of Maryland, College Park

627S Differential bazooka levels regulated by a novel Drosophila protein, Moat, define morphogenetic boundaries **Lingkun Gu** UNLV

628S The multimodal action of *Gαq* in coordinating growth and homeostasis in the *Drosophila melanogaster* wing imaginal disc **Maria Unger** University of Notre Dame

629S A cell adhesion gradient contributes to gastrulation morphogenesis in *Drosophila* **Nat Clarke** Massachusetts Institute of Technology

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632S Expression patterns of lexA and split-GAL4 drivers in enteroendocrine cells of Drosophila melanogaster **Ellen Popodi** Indiana University

633S Interaction between the dorsal selector gene *defective proventriculus* (*dve*) and Decapentaplegic (Dpp) signaling pathway during *Drosophila* development eye. **Anjali Sangeeth** University of Dayton

634S Studying the role of Hedgehog signaling pathway in Dorso-Ventral patterning **Soumya Bajpai** University of Dayton

635V Midline and Morphogens: Coordination of Furrow Dynamics in the Eye Disc with Cell Fate Specification and Tissue Patterning **Sandra Leal** Harris Stowe State College

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637V 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

638V Morphodynamics of Early Drosophila Embryogenesis **Vishank Jain-Sharma** University of California, Santa Barbara

639V Integrins and the Notch pathway control epithelial cell proliferation and fate specification in the *Drosophila* ovary **Lourdes Rincón-Ortega** Spanish National Research Council (CSIC)

640V The Hippo-like Ccm3 signaling pathway regulates tube morphogenesis via Rab11. **Amin Ghabrial** Columbia University

641V TOR signalling regulates epithelial cell shape transition in *Drosophila* oogenesis **Mohit Prasad** Indian Institute of Science Education and Research Kolkata

642V Specialized cells that sense tissue mechanics to regulate morphogenesis **Hui-Yu Ku** UC-Berkeley

643V Glypican-based mechanisms of extracellular Wnt distribution **Indrayani Waghmare** Vanderbilt University

644V Mechanical inputs and Rho1 GTPase signaling regulate medioapical actomyosin network turnover during eye epithelial morphogenesis **Christian Rosa** Tufts University

Cell biology: Cytoskeleton, organelles and trafficking

645T Microtubule polymerase XMAP215/Mini spindles and cytoplasmic dynein are required for the oocyte determination in *Drosophila* **Wen Lu** Northwestern University

646T Bridging the gap between mitochondrial fission and cytokinesis during Drosophila sperm development **Catherine Zhang** University of Toronto

647T The LIM protein Smallish regulates actomyosin contractility during epithelial morphogenesis in *Drosophila* **Patrizia Kroll** University Hospital Cologne

648T An Intestinal G Protein-Coupled Receptor modulates enteroendocrine peptide secretion and lipid homeostasis in *Drosophila melanogaster.* **Daniela Barraza** Harvard Medical School

649T Multiple roles for the actin mesh in oocytes? **Hannah Bailey** University of California Los Angeles

650T An InR-Vps34/PI3P-Kinesin-2 axis accelerates the anterograde axonal transport of a subset of Rab4-associated vesicles in *Drosophila* **Kamaldeep Singh** Tata Institute of Fundamental Research

651T Defining the Role of Adipose Triglyceride Lipase in *Drosophila* Border Cell Migration **Israel Wipf** University of Iowa

652T Control of Crag's localization and activity in the polarized deposition of basement membrane proteins in epithelial cells. **Hemin Shah** Northern Illinois University

653T Bicaudal-D cargo binding differentially regulates Dynein activity **Frederick Baker** Augusta University

654T SCAR and the Arp2/3 complex regulate polar myosin and plasma membrane organization in dividing neuroblasts. **Giulia Cazzagon** MRC Laboratory of Molecular Biology

655T Long non-coding RNA *Hsr-omega* provides scaffolding for the nuclear domain B-body **SooBin An** Kennesaw State University

656T *Drosophila* Tak1, Tab2, and MyoVI function in protein autophagy **Erica Biven** Kansas State University

657T A Multiplayer game: how heteroplasmy transmission is regulated. **beitong gao** Gurdon Institute, University of Cambridge

658T Regulation of pericentriolar material via Spd-2 C-terminal tail domain **Ryan O'Neill** National Heart, Lung, and Blood Institute, NIH

659T Defining the role of prostaglandins within the substrate versus the migratory cells during collective cell migration **Samuel Mellentine** University of Iowa

660T The nephrocyte actin and tubulin cytoskeleton networks model slit diaphragm structural defects pertaining to podocyte pathogenesis **Megan Delaney** University of Maryland-Baltimore

661T Pericentrin-Like-Protein is a Kinesin-1 Interactor That Drives Centriole Motility **Matthew Hannaford** NIH

662T Different Actin Populations Determine How Cell Wounds Undergo Repair **Mitsutoshi Nakamura** Fred Hutchinson Cancer Center

663F A Dominant Modifier Screen for Genetic Interactors of Jagunal in the *Drosophila* Compound Eye **Laura Galvan** San Francisco State University

664F Cytoophidia maintain the integrity of *Drosophila* follicle epithelium **Qiao-qi Wang** ShanghaiTech University

665F "Mitotic" Kinesin-5 regulates axonal growth in the nervous system of *Drosophila* **Wen Lu** Northwestern University Feinberg School of Medicine

666F Monitoring fatty acid trafficking in follicles reveals a critical role for DGAT1/Midway in protecting mitochondrial integrity **Roger White** University of Rochester

667F Mechanisms of RNA localization to centrosomes **Dorothy Lerit** Emory University School of Medicine

668F The G-Signaling Protein Rcp Controls the Polarized Basement Membrane Deposition in Epithelial Cells **Lindsey Price** Northern Illinois University

669F Design and characterization of optogenetic tools to manipulate Rap1 GTPase activity during collective cell migration **Yujun Chen** Kansas State University

670F Glial-specific knockdown of a subunit of the ER membrane complex (EMC) dramatically reduces survival of *D. melanogaster* **Maria Jose Orozco Fuentes** Lake Forest College

671F Using *Drosophila* denticles as a model system to investigate the role of cytoskeletal proteins in the formation of actin-based protrusions **Jennifer Sallee** North Central College

672F The STRIPAK complex and autophagy in *Drosophila* muscle tissue **Yungui Guo** Kansas State University

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674F Fat2 organizes an interface signaling system that directs collective epithelial cell migration **Audrey Williams** University of Chicago

675F *Hobbit* is a novel and conserved regulator of tissue growth and apoptosis **Sarah Neuman** University of Wisconsin-Madison

676F The *Drosophila* EGFR ligand mSpitz is delivered to cytoplasmic capes at sites of non-canonical RNA export on the nuclear envelope *via* the endosomal system **Kinsuk Shill** The Pennsylvania State University

677F Nucleolar Stress in *Drosophila* Neuroblasts: Modeling Human Ribosomopathies **Patrick DiMario** Louisiana State University

678F A Kinesin-like Protein Encoded by *CG14535* Controls Border Cell Migration During *Drosophila* Oogenesis **Leif Verace** Northern Illinois University

679F Deciphering the link between CNK and Misshapen during thorax closure in *Drosophila* **Eloïse Duramé** Université de Montréal

680S Differential roles for GSK3β and ERK kinases in a *Drosophila* model of Huntington's disease **Shermali Gunawardena** SUNY at Buffalo

681S Quantitative proteomic analysis uncovers the specific vs general mitochondrial effects caused by mutants affecting three different critical pathways for mitochondrial function in Drosophila **Aditya Sen** Uniformed Services University

682S Investigating the function of Kibra and Merlin during border cell migration **KathyAnn Lee** University of Chicago

683S An Immunoglobulin cell adhesion junction module maintains epithelial integrity. **Tara Finegan** University of Rochester

684S A screen of Serendipity-a interactors during cellularization identifies Dah and Slik **Matthew Kim** University of Illinois at Urbana-Champaign

685S Local cell-cell interactions mediate global symmetry breaking in collectively migrating follicle cells **Sierra Schwabach** University of Chicago

686S Rho GTPases Play an Essential Role In Proper Germ Cell Migration **Seohee Ma** University of St. Thomas

687S The complexities of Fat signaling in the PCP and Hippo pathways **Evan Clark** Washington University in St. Louis School of Medicine

688S Determining the localization of cell-fate determinants in Jagunal-deficient mutant Drosophila embryos **Ethan Lew** San Francisco State University

689S Cell polarity opposes Jak-STAT mediated Esg activation that drives intratumor heterogeneity in a *Drosophila* tumor model **Wu-Min Deng** Tulane School of Medicine

690S CRISPR-mediated investigation of the NaK-ATPase alpha-subunit function in septate junction formation and polarity **Greg Beitel** Northwestern University

691S A novel mechanism for transfer of dietary fat to circulating lipoproteins in the larval midgut **Ron Dubreuil** University of Illinois Chicago

692S Developing Mass Spectrometry Techniques to Identify Actin Mesh Regulatory Proteins **Merin Rixen** UCLA

693S Mapping of a suspected self-interaction domain in β_H-spectrin that may support non-canonical spectrin network formation **Chelsea Sarring** Penn State Univ

694S REC drives recombination to repair double-strand breaks in animal mtDNA **Matthew McCormack** University of Cambridge Gurdon Institute

695S Rattling the chains of a ghost protein: spectrin **Zane Deliu** University of Illinois at Chicago

696V Role of conserved molecular scaffold Tudor complex in the assembly of membraneless organelles in Drosophila germ cells **Alexey Arkov** Murray State University

697V E2 ubiquitin conjugase Bendless is essential for PINK1 stability and PINK1-Park mediated degradation of Marf **Rajit Narayanan Cheramangalam** Tata Institute of Fundamental Research, Hyderabad

698V Single-cell transcriptomics identifies Keap1-Nrf2 regulated collective invasion in a Drosophila tumor model **Caique Costa** Tulane University

699V Phosphatidylserine maintains mitochondrial homeostasis through coupling Ca^{2+} relay with lipid metabolism **Yifan Zhou** Institute of Genetics and Developmental Biology, Chinese Academy of Sciences

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701V Genetic Interaction between Ribonucleoprotein Clueless and Mitochondrial Permeability Transition Pore Components and Regulators **Hye Jin Hwang** Uniformed Services University of the Health Sciences

702V Dual model organism analysis identifies shared and unique features of tissue hingepoint formation **Juana De La O** Massachusetts Institute of Technology

703V Cryo-EM structure of mitochondrial complex I from *Drosophila melanogaster* **Edward Owusu-Ansah** Columbia University Irving Medical Center

Cell division and cell growth

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705T An Extended D-loop or a Migrating Bubble? A DNA Gap Repair Assay Based on APOBEC-Induced Mutational Signature to Assess D-loop Dynamics **Mohamed Nasr** The University of North Carolina at Chapel Hill

706T Molecular determinants of Crumbs overexpression induced neoplastic tissue growth **Maksym Shcherbina** University of Toronto

707T Neuroendocrine regulation of cell competition **Jeffrey Bellah** Columbia University Medical Center

708T A genetic screen and characterization of triggers of cell competition. **Hiroshi Kanda** Kyoto University

709T The impact of cell cycle and sex on DNA double-strand break repair **Elizabeth Graham** Georgetown University

710T A spatiotemporal cell cycle model of the mid-blastula transition **Yuki Shindo** Dartmouth College

711T Novel Upstream Regulation of Actomyosin-mediated Growth Control **Jianzhong Yu** University of Connecticut

712T Deficiency of Blm DNA helicase during early embryonic cell cycles establishes detrimental outcomes in surviving progeny **Brayden Graves** Lewis-Clark State College

713T Genetic interactions between Headcase and insulin signaling in growth control **Sam Simonovitch** University of Connecticut

714T Investigating the role of Uif in tissue-specific growth of the larval trachea **Zihao Yu** Case Western Reserve University

715T Spc105R is required for kinetochore assembly, cohesion protection, and regulating modes of microtubule interactions in Drosophila oocytes. **Lia Mahal** Rutgers University

716T The role of the RNA polymerase I and III subunit Polr1D in ecdysone-mediated developmental transitions in *Drosophila melanogaster* **Bridget Walker** SUNY Upstate Medical University

717F The spindle assembly checkpoint limits brain size reduction in a fly model of human microcephaly **Constanza Mannino** University of Wyoming

718F Assessing cell type specific roles of *Abnormal spindle* in brain growth and development **Shalini Chakraborty** University of Wyoming

719F Whole genome approaches to understanding meiotic recombination **Carolyn Turcotte** University of North Carolina - Chapel Hill

720F Synergistic tumorigenesis by Src and Yki via inhibition of *Socs36E* and *hid* **Keigo Ogawa** Kyoto University

721F Two different two-hit EMS screens on chromosome 2R and 2L generate growth and developmental mutations that are characterized and mapped by undergraduate researchers in the Fly-CURE **Joyce Stamm** University of Evansville

722F Exploring protein interactions in the ERK/MAPK signaling pathway with *in vivo* bimolecular fluorescence complementation (BiFC) **Maddison Lessard** University of Massachusetts Boston

723F The effects of induced endocycling cells on tissue growth and function **Hunter Herriage** Indiana University

724F The effect of induced endocycling cells on tissue growth and homeostasis **Yi-Ting Huang** Indiana University Bloomington

725F Mechanism of natural variation in double strand break repair **Shahrzad Hajiarbabi** University of Houston

726F The coactivator Taiman modulates cell competition via glypican-dependent diffusion and availability of the Wg morphogen **Colby Schweibenz** Emory University School of Medicine

727F Coordination of DNA synthesis during homologous recombination repair of large gaps **Daniel Kane** Le Moyne College

728F The binding sites of E2F transcription factor in *Drosophila* metabolic genes are functionally distinct **Maria Paula Zappia** University of Illinois at Chicago

729F Nuclear reassembly defects after mitosis trigger an apoptotic safeguard mechanism in *Drosophila* **Jingjing Li** Institute for research in immunology and cancer

730S Quantifying Histone H3's role as a Competitive Inhibitor of Chk1 in the Early Embryo **Kiera Schwarz** Dartmouth

731S Cooperative Regulation of Growth by Defective Proventriculus and Yorkie in the *Drosophila* eye **Rohith BN** University of Dayton

732S *The role of Jagunal in regulating stemness of neuroblast during embryonic-to-larval transition of Drosophila* **Judy Abuel** San Francisco State University

733S Understanding the role of *matrimony* in suppressing the drive of the B chromosomes **Kaylah Samuelson** University of Connecticut

734S B chromosome dynamics during female meiosis in *D. melanogaster* **Mengjia Lin** University of Connecticut

735S Exploring the relationship between the B chromosomes and Chromosome 4 segregation **Shell Chen** University of Connecticut

736S Determining how the *TM3, Sb Ser* balancer chromosome contributes to the meiotic drive of the B chromosomes in *D. melanogaster* **Ryan Gado** University of Connecticut

737S Investigating Drosophila melanogaster Glial Cell Deveopment and Oncogenesis using UAS/GAL4 **Irene Hsu** Emory University

738S Mapping of the B.3.4, M.3.2, and G.3.2 mutations in *Drosophila melanogaster* **Lauren Heininger** Ohio Northern University

739S The histone chaperone NASP maintains H3-H4 reservoirs in the early Drosophila embryo **Reyhaneh Tirgar** Vanderbilt University

740S Defining the functions of p53 isoforms and p53 nuclear bodies **Padma Rangarajan** Indiana University

741V Remote production of TNF-α/Eiger contributes to Myc super-competition in developing wing discs **Aditi Sharma Singh** Columbia University Medical Center

742V Investigating the influence of the transcription factor *hindsight* on a Notch-induced tumor model **Emily Baker** University of Waterloo

743V CRISPR/Cas9 Modification of Bloom Syndrome Helicase (Blm) to Assess Regulation of Blm Function **Lahari Pokala** North Carolina School of Science and Mathematics

Physiology, metabolism and aging

744T dSmad2 differentially regulates dILP2 and dILP5 in insulin producing and circadian pacemaker cells in adult females **Stuart Newfeld** Arizona State Univ

745T Insulin/insulin-like growth factor signaling pathway promotes increased body fat in *Drosophila* female **Puja Biswas** University of British Columbia

746T Neurodevelopmental Effects of Parental High Sugar Diet on D. melanogaster Progeny **Nina Brown** University of Michigan

747T The Interplay of peroxisome and mitochondrial dynamics during aging in *Drosophila melanogaster* **Ankur Kumar** Iowa State University

748T Mef2 and Gga regulate lifespan by interacting with sex-specific heat shock proteins in post-mitotic neurons **Jacquelyn Yarman** Case Western Reserve University

749T *PWP1 mediates intestinal stem cell homeostasis in a nutrient dependent manner and affects aging* **Gaia Fabris** University of Helsinki

750T Topoisomerase 3b enhances stability of maternal mRNAs that are essential for neurodevelopment of progeny **Seung Kyu Lee** National Institute on Aging/NIH

751T Characterization of DNA Repair Function in Dna2 Mutants **Sabah Shammari** Northeastern Illinois University

752T Experimental Evolution to identify genes that contribute to fitness in high-sugar-fed Drosophila melanogaster **Thomas Rundell** Binghamton University

753T Obesity Is Not A Direct Cause Of Infertility **Rodrigo Dutra Nunes** University of Wisconsin-Madison

754T Effects of neural factors on aging-related muscle degeneration in the fly model **Selma Atic** Kennesaw State University

755T Investigating the role for diacylglycerol in heat tolerance in *Drosophila melanogaster* **Sunayn Cheku** University of Nebraska at Kearney

756T Proteome-wide Quantitative Analysis of Redox Cysteine Availability in the Drosophila Eye Reveals Oxidation of Phototransduction Machinery During Blue Light Exposure and Age. **Sarah Stanhope** Purdue University

757T Investigating the role of Glycerol-3-phosphate dehydrogenase 1 (GPDH1) in *Drosophila* growth and development. **Shefali Shefali** Indiana University Bloomington

758T Investigating the function of sleep in *Drosophila melanogaster* **Samantha Tener** Columbia University

759T Ameliorating the effects of an environmental toxin in a *Drosophila* model of Parkinson's Disease **Dionne Williams** Delaware State University

760T The role of Spenito and sex determination in establishing sexually dimorphic metabolism **Arely V. Diaz** University of Colorado School of Medicine

761T Metabolic regulation of protein degradation by N-terminal acetylation controls germline stem cell differentiation **Bruno Hudry** Université Côte d'Azur, CNRS, Inserm

762T Expression of the alternative oxidase reconfigures the mitochondrial electron transfer system, promoting thermogenesis and increased biomass in *Drosophila* larvae **Geovana Garcia** Sao Paulo State University (Jaboticabal campus)

763T Genetic Variation in Dietary Sugar Consumption in *Drosophila* **Mubaraq Opoola** University of Louisville

764T The Integration Institute: Sex, Aging, Genomics, and Evolution (IISAGE) **Nicole Riddle** University of Alabama at Birmingham

765T Mutations in lamin and how it causes multiple tissue-specific disorders **Bismark Acquah** Illinois State University

766T The impact of modifier genes on obesity and *Drosophila* AKH/glucagon signaling **Audrey Nicol** Purdue University Fort Wayne

767T Investigating the role of PDZD8 in behavior and aging **Leona Hariharan** Brown University

768F Impact of Genetic Variation on Obesity in *Drosophila melanogaster* through the AKHR pathway **Allison Velie** Purdue University Fort Wayne

769F Impact of Social Interactions on Aging in *Drosophila melanogaster* **Yousef Emara** University of Michigan

770F Phenotypic characterization of adaptation to overnutrition in lab-evolved flies **Utsav Nyachhyon** Binghamton University

771F Integrating lipid metabolism, pheromone production and perception by Fruitless and Hepatocyte nuclear factor 4 **Jie Sun** Tulane University School of Medicine

772F The response to oxygen availability in the transcriptome of *Drosophila melanogaster* **George Kapali** University of Illinois at Chicago

773F New explanations for mating-induced structural and metabolic remodeling of Drosophila mid-gut **Tahmineh Kandelouei** Huntsman Cancer Institute, University of Utah

774F Unexpected nuclear roles for Iron Regulatory Protein 1A (IRP1A) **in *Drosophila melanogaster* Minyi Yan** University of Alberta

775F Physiological response to temperature stress in *Drosophila melanogaster* and *D. pseudoobscura* **Natalia Rivera Rincon** Auburn University

776F The role of insulin signaling in sex differences in gene expression **Nafiul Huda** Auburn University

777F Exploring potential genetic mechanisms underlying the transmission of ethanol resistance to progeny by adults repeatedly intoxicated with ethanol **Michelle Bonilla** California State University Northridge

778F The role of phosphoglycolate phosphatase in serving as a metabolite repair enzyme is conserved in *Drosophila* **Jennifer Kennell** Vassar College

779F Role of a phosphoglycolate phosphatase ortholog in responding to hyperosmotic stress in *D. melanogaster* **Salome Ambokadze** Vassar College

780F Ring neurons in the *Drosophila* central complex comprise a rheostat for sensory modulation of aging **Christi Gendron** University of Michigan

781F Genotype-Sex-Device Interactions Impact Differential Expression of Exercise-Related Genes and Phenotypes in Wild-Derived *Drosophila* **Tolulope Kolapo** University of Alabama

782F Metabolic requirements during *Drosophila* oogenesis **Emily Wessel** University of Wisconsin- Madison

783F Lamp1, lipid transport, and Parkinson **Andreas Jenny** Albert Einstein College of Medicine

784F Phosphatidylcholine can regulate complex I assembly independent of its role in maintaining mitochondrial membrane integrity **Sanjay Saini** Columbia University Irving Medical Center

785F The Role of the Circadian Transcriptome in Aging Photoreceptors **Sarah McGovern** Purdue University

786F Exercise Mimetics As A Rescue For Mobility Phenotypes In a *Drosophila Clock* mutant **Maryam Safdar** Wayne State University School of Medicine

787F Serotonin signaling ties brain and peripheral metabolism to influence aging in *Drosophila* **Yang Lyu** Rutgers University

788F The role of Nemp in nuclear lipid droplets in *Drosophila* **Cole Julick** Washington University in St. Louis

789F Anorexigenic protein NUCB1 regulates lipid homeostasis in *Drosophila* by modulating TAG storage **Narsimha Pujari** University of Saskatchewan

790F Metabolic Functions of Glut1 in *Drosophila* Fat and Muscle Tissue. **Louis Betz** Penn State Berks

791F The *Drosophila* Estrogen-Related Receptor supports lipid storage in the fat body during larval development **Tess Fasteen** Indiana University

792S A *Drosophila* model of Paclitaxel-induced sensory hypersensitivity **Sreepradha Sridharan** MD Anderson Cancer Center

793S Sugar-free flies: Decreasing Glut1 in all *Drosophila* neurons blunts lipid and carbohydrate storage. **Matthew Kauffman** Penn State Berks

794S Highly conserved shifts in ubiquitin-proteasome system (UPS) activity promote mitochondrial health during aging **Parul Gupta** University of Texas Southwestern

795S Genotype and sex impact the response to altered activity behaviors **Heidi Johnson** University of Alabama at Birmingham

796S Identification of CRISPR mutations in the Zwischenferment (Zw) gene in the model organism *Drosophila melanogaster* **Kathleen Miller** Widener University

797S PrecisionTox – Using *Drosophila* to Redefine Chemical Safety Testing **Shannon Smoot** Indiana University

798S Regulation of Apolipoprotein-E lipid dysmetabolism linked with Alzheimer's Disease **Ruan Carlos Macedo de Moraes** The University of Alabama at Birmingham

799S Developmental Exposure to PFOA alters Lipid and Carbon Metabolism in *Drosophila melanogaster* **Eric Kilbourn** Indiana University Bloomington

800S The impact of time-restricted feeding on cardiac function under metabolic challenges **Yiming Livelo** University of Alabama at Brimingham

801S Investigating the molecular mechanisms driving lipid metabolic changes induced by intermittent, time-restricted feeding (iTRF) **Jared Gatto** Columbia University Medical Center

802S Actβ is required to prevent purine catabolism and maintain glycogen homeostasis **Heidi Bretscher** University of Minnesota

803S The effects of circadian disruption on behavior, lifespan, and fecundity in *Drosophila melanogaster* **Isaiah Thomas** Northeastern Illinois University

804S Male and female adult body size is affected by small differences in vial density **Rebecca Spokony** Baruch College, CUNY

805S The ellipsoid body modulates aging in Drosophila **Evelynn Henry** University of Michigan

806S Role of sleep in *Drosophila* brain lipid homeostasis **Elana Pyfrom** University of Pennsylvania

807S Olfaction mediated GABA restricts pyruvate metabolism to regulate blood-progenitor redox homeostasis and development **Manisha Goyal** Institute For Stem Cell Science and Regenerative Medicine

808S *Drosophila* macrophages regulate sugar metabolism through the fructose receptor **Nuri Cha** Hanyang University

809S Assessing the role of genetic variation on chromatin regulation of lifespan and age-related traits in *Drosophila melanogaster* **Devonique Brissett** University of Maryland Baltimore County

810S Investigation of the mitochondria amino acids compartmentalization **Hiroshi Nishida** Beth Israel Deaconess Medical Center at Harvard Medical School

811S Autophagy in the larval fat body influences growth of the developing wing **Todd Fairbanks** University of Minnesota

812S The transcriptional repressor hairy acts in the larval fat body to inhibit Dilp6 expression and whole-animal growth **W. Kyle McPherson** University of Virginia

Physiology, metabolism and aging

813V The impact of dietary folic acid supplementation on hypoxia on health outcomes in wild-type *Drosophila melanogaster* **Nafisa Jadavji** Midwestern University

814V The Impacts of Intestinal Dysfunction on Aging and Disease **Anna Salazar** Christopher Newport University

815V Dietary sugar and protein differentially regulate the insulin and IGF1 homologs Dilp2 and Dilp6 in *Drosophila*. **Miyuki Suzawa** University of Virginia

816V Neuronal expression of Taxi regulates lifespan through Adar in *Drosophila melanogaster* **Upasana Gupta** Indian Institute of Science

817V Evaluation of the genotoxic potential of *Cucurbita pepo* root extracts treated with the herbicide clomazone using the SMART assay on the wing of *Drosophila melanogaster*. **Marco Antonio Carballo-Ontiveros** Universidad Nacional Autónoma de México

818V The neurodegeneration gene *iPLA2-VIA* is required for mitochondrial maintenance in the *Drosophila melanogaster* female germline, with autonomous and non-autonomous components **Josefa Steinhauer** Yeshiva University

819V A comparative study of lifestyles and metabolism of *Drosophila lutzii*, a floridosa group of species, and sympatric *D. simulans*, a generalist specie **Juan Murillo-Maldonado** Universidad Nacional Autónoma de México

820V A Novel Mistranslating tRNA Model in *Drosophila melanogaster* has Diverse, Sexually Dimorphic Effects **Joshua Isaacson** Western University

821V Adaptation to prolonged dietary iron depletion in *Drosophila melanogaster* (fruit fly): considerations for iron studies **Dawoud Usman** Usmanu Danfodiyo University

822V Wingless signaling promotes lipid mobilization through signal-induced transcriptional repression **Rajitha Udakara Sampath Hemba-Waduge** Department of Biochemistry and Molecular Biology, Tulane University School of Medicine, Louisiana Cancer Research Center

823V Females are more transgenerationally at risk of diseases related to parental zinc deficiency-induced glucose dysmetabolism in *Drosophila melanogaster* (fruit flies) **Kamaldeen Olalekan Sanusi** Usmanu Danfodiyo University

824V Activation of Nrf2 in insulin-signaling impaired male *Drosophila melanogaster* improves resistance to paraquat and hydrogen peroxide **Jessica Alvarez** UNAM

825V Fat body phospholipid state dictates hunger-driven feeding behavior **Kevin Kelly** Fred Hutchinson Cancer Research Center

826V Biotransformed citrus extract improves intestinal barrier integrity and reduces oxidative damage in female *Drosophila melanogaster* **Nadiia Sadova** University of Applied Sciences Upper Austria

827V Tissue-specific requirements of key autophagy genes in adult fruit fly lifespan regulation **Changqi Zhu** Ferris State University

828V Peppers in Diet: Genome-Wide Transcriptome and Metabolome Changes in *Drosophila melanogaster* **Carlos Lopez-Ortiz** West Virginia State University

829V Characterizing Muscle Disuse in *Drosophila* **Carthic Rajagopalan** Wayne State University

Neural development and physiology

830T Does developmental ethanol exposure trigger neurodegeneration? The interaction between ethanol and mutations causing neurodegneration in Drosophila. **Navneet Sanghera** San Jose State Univeristy

831T Synaptic heterogeneity among the compartments ofaxon terminals **Hongyang Wu** Tohoku University

832T *Investigating the role of ATM kinase in synapse development* **Matthew Taylor** University of Birmingham

833T Notch signaling positively regulates early temporal factor expression and timing of MB neurogenesis termination **Kendall Branham** University of Virginia

834T Clock mRNAs and proteins are organized into cytoplasmic membraneless ribonucleoprotein condensates **Ye Yuan** University of Michigan

835T Investigating interactions between Tsp42Eg and PI(4,5) P_2 at the synapse in *Drosophila tsp42Eg* mutants **Stephanie Mullen** Southern Illinois University Edwardsville

836T Regulation of cell number in the *Drosophila* visual system **Jennifer Malin** New York University

837T A hierarchical, combinatorial transcription factor code for leg sensory neurons revealed by single-cell RNA-sequencing **Ben Hopkins** UC Davis

838T Conserved transcription factors Eyeless and Scarecrow regulate the specification of olfactory navigation input neurons **Alexa Gonzalez** The University of New Mexico

839T Targeted DamID identifies novel transcriptional targets of Alk signalling in *Drosophila* neuroendocrine cells. **Sanjay Kumar Sukumar** Institute of Biomedicine

840T Anteroposterior segmental specialization of the nervous system: The homeotic modulation of a sexually dimorphic circuit **Nicole Leitner** Washington university in St. Louis

841T Ssdp Influences Neurodevelopment and Autism-like Behaviors in *Drosophila melanogaster* **Safa Salim** Hamad Bin Khalifa University

842T Differentiation signals from glia are fine-tuned to set neuronal numbers during development **Anadika Prasad** University College London

843T Evaluating the role of serotonin receptors in experience dependent critical period plasticity **Ahana Mallick** University of Maryland, College Park

844T Investigating the localization and function of laminin and dystroglycan in *Drosophila* wrapping glia development **Katherine Clayworth** University of British Columbia

845T Regulation of glial septate junction proteins by microRNA-184 **Sravya Paluri** Life Sciences Institute, University of British Columbia

846T The Influence of Basigin on Focal Adhesion Complexes at the Perineurial Glial Membrane **Sophie Roth** The University of British Columbia

847F Velvet ant venom activates pain-sensing neurons through Pickpocket and Balboa, homologs of DEG/ENaC and ASIC channels **Lydia Borjon** Indiana University

848F Investigating the mechanisms that generate neuronal diversity in the *Drosophila* visual system **Alicia Donoghue** University College London

849F MINIDISCS, a SL7A amino-acid transporter, involved in the amino acid-dependent activity of Kenyon cells, in *Drosophila melanogaster*.
Julie Delescluse Center for Taste and Feeding behaviour

850F Activity-dependent pH transients within the *Drosophila* synaptic cleft enhance synaptic transmission **Roberto Hernandez** Florida Atlantic University

851F The Presynaptic Role of Phosphagen Systems **Carlos Oliva** Florida Atlantic University

852F 5-HT1A regulates axon outgrowth in a subpopulation of *Drosophila melanogaster* serotonergic neurons **Douglas Roossien** Ball State University

853F Investigating Hippo signaling as a novel regulator of dopamine levels in *Drosophila melanogaster* **Shelley Gibson** Baylor College of Medicine

854F A FMRP-Dependent Pathway for the Glial Phagocytosis of Brain Neurons **Rincon Jagarlamudi** Vanderbilt University

855F Contribution of Disc Large 1 to AIS protein composition in Drosophila Melanogaster **Nat Casson** University of British Columbia

856F Characterization of phenotypes of piragua (prg) mutant alleles in the nervous system of Drosophila melanogaster **César Cano** Universidad Nacional Autónoma de México

857F Characterizing the *Drosophila* common Dpr/DIP-interacting protein (cDIP) *in vitro* and *in vivo* **Viola Nawrocka** The University of Chicago

858F Expression and functional profiling of sphingolipid enzyme network in the Drosophila nervous system **Chih-Chiang Chan** National Taiwan University

859F Two distinct mechanisms of Plexin A function in optic lobe development **Jessica Treisman** New York Univ Med Ctr

860F Organizational control of olfactory neural circuit architecture by Fat2, an atypical cadherin **Khanh Vien** Duke University

861F Deciphering the molecular clock controlling the neurogenesis diversity in drosophila's medulla **Khaled Ben El Kadhi** New York University Abu Dhabi

862F Persistence of courtship behavior neurons from larval to adult life in *Drosophila* **Troy Shirangi** Villanova University

863F A novel transmembrane protein plays a role in photoreceptor morphogenesis **Fareeha Syeda** University of Massachusetts, Boston

864F Analysis of the Guanine Nucleotide Exchange Factor, *GEFmeso*, in the Drosophila Neuromuscular Junction **David Olson** UW-Platteville Baraboo Sauk County

865S Cytodomain-independent guidance of longitudinal axons by *Drosophila* Robo3 **Timothy Evans** University of Arkansas

866S Are the functions of Netrin and Frazzled to guide axons conserved among insects? **Piyasi Ghosh** University of Arkansas

867S Structure-function studies of Drosophila Robo3 immunoglobulin domains using CRISPR gene replacement **Ayawovi Selom Ametepe** University of Arkansas

868S A critical DIP-α/dpr10 affinity window is required for proper leg motor neuron arborization **Davys Lopez** Columbia University Medical Center

869S Developmental activity is shaped by neuropeptide signaling **Sassan Suarez** UCLA

870S A non-neural miRNA cluster mediates hearing via two neural targets **Binglong Zhang** MSKCC

871S The axonal localization of Dual Leucine Zipper Kinase is essential for its protein turnover by Highwire **Jung Hwan Kim** University of Nevada, Reno

872S Mob4's phospho-binding motif is essential for viability and neuronal function **Amanda Neisch** University of Minnesota

873S Flies with altered developmental neural activity have sleep deficits as adults **Jun Reichl** UCLA

874S Clock protein-chromatin complexes are assembled within nuclear condensates to enable circadian gene repression **Dunham Clark** The University of Michigan

875S Regulation of neuronal development and function by the eukaryotic protein translation initiation complex **Erik Nolan** Washington University in St. Louis

876S Synaptotagmin β regulates neuropeptide release and circadian output in *Drosophila* **Hsueh-Ling Chen** National Institute of Neurological Disorders and Stroke

877S Identifying Critical Mechanisms of Dense Core Vesicle Sorting, Trafficking and Fusion in *Drosophila* **Kiel Ormerod** MTSU

878S Neuronal excitability modulates developmental time in *Drosophila melanogaster* **Daniel Ruiz** College of the Holy Cross

879S Astrocyte regulation of excitatory synapse formation **Hallie Youker** Washington Univeristy School of Medicine

880S Sexually dimorphic regulation of central synapse development by Neurexin and Neuroligins **Kristen Davis** Thomas Jefferson University

881S A conserved kinase cascade inhibits BMP signaling during synapse development **Pam Vanderzalm** John Carroll University

882V Early-life nutrition interacts with developmental genes to shape the brain and sleep behavior in *Drosophila melanogaster* **Patricio Olguin** Universidad de Chile

883V Cut homeodomain transcription factor is a novel regulator of cortical glia morphogenesis and niche maintenance around neural stem cells **Vaishali Yadav** Institute of science

884V Identification of cis-regulatory elements of temporal transcription factors of Drosophila medulla neuroblasts through scATAC-seq **Hailun Zhu** University of Illinois Urbana-Champaign

885V Combinatorial regulation of compartment-specific targeting of dendrites in the central brain by guidance molecules **Sijun Zhu** SUNY Upstate Medical University

886V Using *Drosophila* cuticle melanization to dissect dopamine metabolism and identify novel regulators of dopamine **Samantha Deal** Baylor College of Medicine

887V The RNA binding protein Nab2 regulates splicing of RhoGEF *trio* isoforms to govern axon development **Carly Lancaster** Emory University

888V Impact of Neural Lamella Breakdown on Glial Proliferation and Eclosion Behavior **Nelchi Prashali** Miami University

Neural circuits and behavior

889T The secreted protein NKT acts in a local mushroom body circuit to regulate sleep **Rob Jackson** Tufts University School of Medicine

890T The Role of Integrin in Dementia **Dilean Murillo** University of Texas at El Paso

891T Divergent evolution of homologous neurons mediates the natural variation of courtship song types among *Drosophila* species **Dajia Ye** University of Pennsylvania

892T Role of the C Terminus of the *Drosophila* Vesicular Acetylcholine Transporter in Regulating its Trafficking and Function in the Central Nervous System **Katarzyna Rosikon** Delaware State University

893T Functional Role of Pharyngeal Gustatory Receptor Neurons in Food Choice Behavior **Seungyun Yu** Department of Biological Sciences, Sungkyunkwan University

894T Single-cell transcriptome profiles of *Drosophila fruitless*-expressing neurons from both sexes **Michelle Arbeitman** Florida State University

895T Cell-type-specific protein visualization reveals subcellular localization and dynamics of endogenous dopamine receptors **Shun Hiramatsu** Tohoku University

896T Tango-Seq: overlaying transcriptomics on anatomy to understand neural circuits **Justin Blau** NYU

897T Olfactory avoidance of toxic volatile electrophiles is mediated by a broadly tuned olfactory receptor in Drosophila **teruyuki matsunaga** The University of Tokyo

898T Intense light unleashes male courtship behavior in wild-type *Drosophila* **Atsushi Ueda** University of Iowa

899T Sex Differences in the Reproductive Response to Energy Deficits are Reversed by Masculinizing Parts of the Female Body, But Not the Brain **Attilio Ceretti** Lehigh University

900T Copulation-dependent changes in histamine immunoreactivity in the male reproductive system of *Drosophila melanogaster* **Lydia Cruce** Grand Valley State University

901T *NF1* loss of function alters grooming via distinct temporal effects across grooming circuits **Genesis Omana Suarez** University of Iowa

902T Ecdysone In The Blood-Brain Barrier And Male Courtship Behavior **Marium Waqar** University of Houston

903T *Drosophila* Odorant Binding Proteins (OBPs) in the Sensory System: A Comprehensive Understanding **Keehyun Park** Sungkyunkwan University

904T Fatty Acid Smell, Anesthesia, and Use on Fruit Crops. **Martine Berthelot-Grosjean** National Center for Scientific Research

905F The effect of mutated HSP27 in motor neuropathy **Georgina Martinez** University of Texas at El Paso

906F Change is good: Coupling changes in homeodomain transcription factor expression with changes in Moonwalker Descending Neuron circuit connectivity and behavior in larvae and adults **Kristen Lee** University of Oregon

907F How diet-induced changes in the gut microbiome affects the mating behavior between *Drosophila sechellia* and *D. simulans* **Sofia Pogliano** Wesleyan University

908F Mechanisms of D2R signaling in the blood brain barrier that regulates courtship in *Drosophila melanogaster* **Sumit Gautam** University of Houston

909F The neural role of Toll to nonnuclear NF Kappa B signaling in the response to alcohol **Nigel Atkinson** The University of Texas at Austin

910F Sleep deprivation drives brainwide changes in cholinergic pre-synapse abundance in *Drosophila melanogaster* **Jacqueline Weiss** UCLA

911F The effect of social experience on gene regulation, neural activity and behavior in *Drosophila melanogaster* **Chengcheng Du** Duke University

912F Social spacing: elucidating the neural circuitry **J. Wesley Robinson** Western University

913F Non-Canonical Roles of Odorant Receptors in Thermosensory Nociception **Dustin Moon** Georgia State University

914F Gene Knockdown of Transporters and Receptors in Blood Brain Barrier Reduces Sleep **Ashley Avila** Emory School of Medicine

915F Analgesic signaling in *Drosophila* larvae **Michael Galko** UT MD Anderson Cancer Center

916F A gene expression program induced by neuronal inactivity **Jennifer Lennon** New York University

917F Investigating the role of a cluster of dopaminergic neurons in the regulation of reward-driven behaviors in *Drosophila* **Lisha Shao** University of Delaware

918F Identification and characterization of genetic modifiers of ethanol-induced behaviors in Drosophila **Yixin Li** Colby College

919F Assaying Learning and Memory in neuropeptide transgenics and models of disease in Drosophila **iykemroy Ikemefuna** Middle Tennessee State University

920F Assessing learning and memory in *Drosophila melanogaster* using an Appetitive and Aversive suppression of phototaxis assay **Thilini Wijesekera** University of Texas at Austin

921F The chromatin remodeling protein Kismet and Amyloid Precursor Protein like regulate the same phenotypes at the *Drosophila* neuromuscular junction **Faith Liebl** Southern Illinois University Edwardsville

922S Automated tracking of *D.melanogaster* behavioral phenotypes **Anibal Tornes Blanco** University of Michigan - Ann Arbor

923S Behavioral dissection of hunger states in *Drosophila* **Rachel Rucker** University of Michigan

924S A heteromeric nicotinic acetylcholine receptor promotes sleep by relaying GABAergic signals within a locus of motor and sensory integration **Nicholas Stavropoulos** Waksman Institute, Rutgers University

925S Establishing the desert-dwelling fly *Drosophila mojavensis* as a transgenic model system to study the neurobiology of thermosensory behavior **Matthew Capek** Northwestern University

926S Distinct thermometer circuits for hot and cold temperature adjust *Drosophila* behavior to different thermal conditions **Michael Alpert** Northwestern University

927S Drosophila melanogaster eavesdrops on a yeast quorum-sensing signal to locate food sources **Eva Vigato** University of Utah

928S Reverse engineering *Drosophila* thermotaxis **Jose Miguel Simoes** Northwestern University

929S Sexual dimorphism in gut-brain signaling **Emily Gagliano** University of Montana

930S Serotonergic Control of Feeding Microstructure in Drosophila **Ayesha Banu** Hamad Bin Khalifa University

931S Serotonin Distinctly Controls Behavioral States in Restrained and Freely Moving *Drosophila* **Swetha Gowda** Hamad Bin Khalifa University

932S The response to fatty acids in gustatory tarsal neurons combines combinatorial and labeled-line coding in the taste system **Pavel Masek** Binghamton University

933S Manipulation of neuron transmission in the mushroom bodies, protocerebral bridge, and *neuroligin 3*-expressing neurons affects social behaviour **Abigail Bechard** Western University

934S Defining behavioral gene networks for Autism Spectrum Disorder genes using sleep and circadian rhythms **Bridget Lear** Northwestern University

935S A pair of dopamine-mediated neural circuits regulating reward taste memory and associated cognitive functions in *Drosophila* **Siyuan Yang** Binghamton University

936S *Slumber* neurons in *Drosophila* dissipate sleep drive via the memory gene *radish* **Clark Rosensweig** Northwestern University

937S Characterizing the effects of altered cholinergic synaptic transmission with age **DaShan Osborne** Delaware State University

938S Possible learning and memory modulation in Drosophila mediated by the α1T channel **Maitlyn Pezzo** Pasadena City College

939V Neurogenetic analyses of the PDF neuropeptide maturation **Jae Park** University of Tennessee

940V Understanding the impact of caffeine exposure on sleep using conditional probability **Aishwarya Segu** Indian Institute of Science Education and Research, Thiruvananthapuram

941V Studying Gustatory receptors using the *Drosophila* Genetic Reference Panel (DGRP) **Hyungjun Choi** Sungkyunkwan University

942V Functional evolution of odorant receptors in bark beetles **Jibin Johny** Czech University of Life Sciences Prague

Models of human disease

943T Tau phosphorylation mediates neurotoxicity through actin binding *in Drosophila* **Camila Zanella** Harvard Medical School

944T Characterization of membrane trafficking pathway genes as Alzheimer disease-associated genes in Korean population through functional genomics using *Drosophila* model **Byoungyun Choi** Konkuk University

945T Targeted downregulation of *Hipp1* ameliorates tau-induced deficits in *Drosophila melanogaster* **SUNG YEON PARK** Seoul National University, College of Medicine

946T *Drosophila* models for obesity-induced fibrosis reveal evidence of cardiovascular disease **Rachel Andrews** McMaster University

947T NMNAT promotes glioma growth through regulating NAD+ metabolism **Jiaqi Liu** University of Miami Miller School of Medicine

948T Probing the mechanism of ROS-induced glial lipid droplet formation and implications for Alzheimer's disease **Matthew Moulton** Baylor College of Medicine

949T A Drosophila model for Mucopolysaccharidosis type IIIB (MPS IIIB) **Bibhu Simkhada** Clemson University

950T IRE1 inhibitor STF-083010 decreases Aβ levels at the *Drosophila* neuromuscular junction. **Fatemeh Barmaleki Lighvan** Southern Illinois University-Edwardsville

951T Lipophorin Receptors Genetically Modulate Presenilin-dependent Neuronal Survival in the Aging *Drosophila* Brain **Chen Zhang** Brigham and Women's Hospital, Havard Medical School

952T Effects of Compound M on Parkinsonian-Like Behavior in LRRK and Park Mutant Flies **Anna Paca** Drake University

953T Quantification of the rough eye phenotype of *Drosophila* using ilastik and Flynotyper **Qasim Mujteba** University of Minnesota Duluth

954T *In vivo* drug screen aims to reveal novel therapeutic targets for photo-sensitive epilepsy **Yi Hsiao** National Taiwan University

955T The role of Scully in aging-related deficits in inhibitory control and memory **Paul Rafael Sabandal** The University of Texas at El Paso

956T Investigating the effects of *kdm5* mutations on seizure susceptibility and movement **Bethany Terry** Albert Einstein College of Medicine

957T Traumatic brain injury induces a transposable element landscape similar to aging **Zhecheng Jin** University of Pennsylvania

958T Aldose reductase inhibitor AT-007 prevents neurodegeneration and mitochondrial dysfunction in sorbitol dehydrogenase deficiency-induced neuropathy **Amanda Lobato** University of Miami

959T Development of a Model for Peanut Allergy in *Drosophila melanogaster* **Alexis Hobbs** University of Nebraska at Kearney

960T Evaluating Mitochondrial Transport in CHCHD10^{S59L}-Mediated ALS-FTD **Madeleine Chalmers** Department of Pharmacy Practice and Pharmaceutical Sciences, College of Pharmacy, University of Minnesota

961T Phenylbutyrate modulates polyamine acetylase and ameliorates Snyder-Robinson syndrome in a *Drosophila* model and patient cells **Xianzun Tao** University of Miami Miller School of Medicine

962T A drug repurposing screen to identify therapies for the rare disease DPAGT1-CDG **Hans Dalton** University of Utah

963T Effects of cell-specific expression and deficiency of glucocerebrosidase on sleep in a *Drosophila melanogaster* model of Parkinson's disease **Marissa Williams** Juniata College

964T Characterizing C2C10H^{S81L} (CHCHD10^{S59L}) knock-in *Drosophila* as a model of amyotrophic lateral sclerosis and frontotemporal dementia **Tate Madson** University of Minnesota Duluth

965T Robinow Syndrome *DVL1* mutations cause an imbalance in Wnt signaling pathways during development **Esther Verheyen** Simon Fraser University

966T Tumor invasion initiates at Invasion Hotspots, an epithelial tissue-intrinsic microenvironment **Yoichiro Tamori** Kyoto University

967T A role for the phospholipid transport protein Vps13 in neuronal mitophagy **Ryan Insolera** Wayne State University School of Medicine

968T Screening for Genetic Modifiers of *MED12/kto* Using Naturally Occurring Variation in *Drosophila melanogaster* **Kristin Bussey** Clemson University

969T A genetic screen for model of PIGA deficiency identifies *GSK3B* as a candidate modifier **Miriam Aziz** University of Utah

970T Using *Drosophila* to design optimized therapeutic exercise programs across neurodegenerative diseases **Alyson Sujkowski** Wayne State University

971T The 21 bp deletion mutant calpain3 does not inhibit wild type calpain3 activity. **Nam Chul Kim** University of Minnesota

972F Differential Impacts of Manipulated Microbiome Composition of Natural Diets on *Drosophila's* Fitness and Metabolic Phenotypes **oluwatobi fijabi** University of Alabama

973F Cooperated regulation of Notch and Yki promotes Mmp1 production in transition-zone tumorigenesis **Chun-Ming Lai** Tulane University School of Medicine

974F Metabolic Disruptions Link Fragile X Syndrome and Glycogen Storage Disease Type IX **Aashi Gurijala** Vanderbilt University

975F PolyQ Expansion and traumatic brain injury (TBI) cause mitochondria dysfunction via distinct mechanisms **Kelsey Swinter** University at Buffalo

976F The Human Antimicrobial Peptide, LL-37, Mitigates Aβ's Effects on Gene Expression in a Drosophila Model of Alzheimer's Disease **Marissa Joe** University of California, Santa Cruz

977F *Drosophila* nutrigenomics to identify diets that treat inherited amino acid disorders **Jiayi Lin** Monash University

978F The role of the mitochondrial enzyme Scully in dementia **Maya Solis** The University of Texas at El Paso

979F Neurodegenerative Phenotypes Associated with Mutant tRNA Endonuclease RNase Z in *Drosophila* **Saathvika Rajamani** Fordham University

980F Oncogenic stress-induced Netrin reprograms systemic metabolism as a humoral inter-organ molecule in *Drosophila* **Morihiro Okada** RIKEN

981F Insulin signaling activation in the fat body suppresses wing disc tumor growth through regulating lipid metabolism and transfer **Chen Yang** Hong Kong University of Science and Technology

982F Identification of cyst-reducing molecules to improve polycystic kidney disease **Chiara Gamberi** Coastal Carolina University

983F Mapping Convergence of Oncogenic Ras, Notch and Yki Signaling in a *Drosophila* Tumor Model **WANG YING** HKUST

984F Investigation of metabolism reprogramming in *Drosophila scribble* mutant tumor model **Mingxi DENG** Hong Kong University of Science and Technology

985F *Drosophila* harboring epilepsy-associated mutations in the vitamin B6 metabolism gene *PNPO* display allele-specific and diet-dependent excitability phenotypes **Atulya Iyengar** University of Alabama

986F Localization of Transgenes for *Drosophila* Models of Myotonic Dystrophy Type 1 **Delaney Baratka** University of Mary Washington

987F Fly Fam161 is a Centriole and Connecting Cilium Protein Essential for Coordinated Behavior and Male Reproduction **Ankit Jaiswal** The University of Toledo

988F A large genetic screen of human UAS-transgenes in *Drosophila* uncovers modifiers of Aβ42 and tau toxicity **Vanlalrinchhani Varte** University of Florida

989F From human to fly genetics: Identifying the genetic links between cardiovascular disease and insomnia **Farah Abou Daya** University of Alabama at Birmingham

990F Neuronal mutant huntingtin causes synaptic loss and peripheral dysfunction in *Drosophila* **Jonathan Roth** University of Alabama at Birmingham

991F An RNA Polymerase subunit, Polr3c alters TDP-43^{M337V} toxicity in a fly model of ALS **Deepak Chhangani** McKnight Brain Institute, University of Florida

992F The cytoskeletal gene *shortstop* regulates Tau-induced neurodegeneration in *Drosophila* model of Alzheimer's Disease **Tom Lee** Baylor College of Medicine

993F An *in vivo* screen identifies small molecule modulators of the endoplasmic reticulum stress response **Katherine Beebe** University of Utah

994F Rare *de novo* missense variants in *DOT1L* are associated with developmental delay and facial dysmorphisms, and alter *grappa* activity in *Drosophila* **Zelha Nil** Baylor College of Medicine

995F Repeated TBI leads to less severe acute outcomes, but worse long-term outcomes, than a single, severe TBI **Kamden Kuklinski** Lake Forest College

996F *nckx30c*, a *Drosophila* K^+-dependent Na^+/Ca^{2+} exchanger, is implicated in temperature-sensitive paralysis and age-dependent neurodegeneration **Al Nahian Khan Majlish** The University of Alabama

997F Investigating pathogenic human CDK19 variant functions using Drosophila as a model organism **Zhe Liao** Simon Fraser University

998F Effects of Long-Term Nicotine Exposure on Adult *Drosophila melanogaster* **Blake Tellinghusen** Lewis & Clark College

999F Functional analysis of rare genetic variants in *SATB2* using *Drosophila melanogaster* **Hirokazu Hashimoto** Baylor College of Medicine

1000F Rare *ZDHHC15* variants are associated with a human neurological disease based on fly studies **Mei-Chu Huang** Baylor College of Medicine

1001S *Drosophila* modeling reveals a conserved role for *ALG10/ALG10B* and the *N*-glycosylation pathway in the sleep-epilepsy axis. **Torrey Mandigo** Massachusetts General Hospital

1002S Functional tests of variants of uncertain significance for genetic enhancement of muscle laminopathies **Nathaniel Mohar** University of Iowa Carver College of Medicine

1003S Biallelic variants in *INTS11* are associated with a novel complex neurological disorder **Burak Tepe** Department of Molecular and Human Genetics, Baylor College of Medicine

1004S De Novo Variants in MRTFB have gain of function activity in Drosophila and are associated with a novel neurodevelopmental phenotype with dysmorphic features. **Jonathan Andrews** Baylor College of Medicine

1005S A *Drosophila* model of PIGA deficiency, a rare X-linked intellectual developmental disorder, reveals that distinct PIGA deficiency phenotypes arise from independent cell types **Emily Coelho** University of Utah Human Genetics

1006S Detecting phenotypic differences of Alzheimer's progression using GAL4-UAS lines in Drosophila **Michaela Jemison** Widener University

1007S *EZH1-variant* related developmental delay case-study displays functional deficits in *Drosophila melanogaster* **Sharayu Jangam** Baylor College of Medicine

1008S HAP40 is a conserved central regulator of Huntingtin and a potential modulator of Huntington's disease pathogenesis **Sheng Zhang** The University of Texas Health Science Center at Houston (UTHealth)

1009S Interactions between stv and p38Kb as a Charcot-Marie-Tooth disease model **Shira Archie** Illinois State University

1010S Cellular progression of the huntingtin protein throughout development and its impact on the health and physiology of Drosophila melanogaster **Tadros Hana** Middle Tennessee State University

1011S Knockdown of *Tpr2* Rescues *Drosophila* Models of ALS **Jonah Boardman** Brown University

1012S An inducible Drosophila model to identify genetic modifiers of insulin deficiency **Xuan Zhuang** University of Arkansas

1013S Linking disruptions in synaptic vesicle trafficking to neurodegeneration: implications for a noncanonical endocytic regulator, Tsp42Eg **Emily Hendricks** Southern Illinois University Edwardsville

1014S A Malpighian tubule phenotype in *parkin* mutant *Drosophila melanogaster* **Samantha Chagolla** Midwestern University

1015S Development of *Drosophila* model for retinal vasculopathy and cerebral leucoencephalopathy (RVCL) **Elena Gracheva** Washington University in St Louis

1016S Kekkon5's interaction with dopaminergic signaling on inhibitory control **Bryan Hernandez** The University of Texas at El Paso

1017S Rare *de novo* missense variant in *IP6K3* is associated with developmental delay and microcephaly, and causes neurological phenotypes in *Drosophila* **Megan Cooper** Baylor College of Medicine

1018S A Genetic screen to identify therapeutic targets for a neurodevelopmental syndrome **Udai Pandey** Children's Hospital of Pittsburgh of UPMC

1019S The P3 Peptide Has Similar but Less Severe Effects than the Alzheimer's-associated Peptide Aβ(1-42) on Drosophila Longevity, Behavior, Neurodegeneration, and Gene Expression **Alfredo Rojas Moreno** University of California, Santa Cruz

1020S Determining the Synthetic Lethality of Cancer-Related Mutations with Methyl and Ethyl Parabens in *Drosophila melanogaster* **Mikesha Carter** San Francisco State University

1021S Exploring the mechanistic roles of APC in the β-catenin destruction complex **Julia Kiefer** Franklin & Marshall College

1022S Effects of Lactate dehydrogenase A (LDH-A) knockdown in *Drosophila* model of Alzheimer's disease **Fang Ju Lin** Coastal Carolina University

1023S *Drosophila ifc/degs1* mutants as a model for uncovering the pathogenesis of hypomyelinating leukodystrophy 18 (HLD18) in human **Yuqing Zhu** Washington University School of Medicine

1024S Yki/YAP/TAZ transcriptional co-activators drive neuro-glial stem/progenitor cell identity in high grade gliomas **Renee Read** Emory University School of Medicine

1025S Disrupted endoplasmic reticulum-mediated autophagosomal biogenesis in a *Drosophila* model of C9-ALS/FTD **Elaine Yang** Johns Hopkins University

1026S Biallelic missense variants in *OGDH* encoding oxoglutarate dehydrogenase lead to a neurodevelopmental disorder characterised by global developmental delay, movement disorder and metabolic abnormalities **Wan Hee Yoon** Oklahoma Medical Research Foundation

1027S Traumatic brain injury (TBI)-induced metabolic dysfunction and response to dietary restriction in female fruit flies **Rebecca Ray** Lake Forest College

1028S Functional contribution of Scully and its interacting molecules to dementia **Carolyne Chepkosgei** The University of Texas at El Paso

1029S Using *Drosophila* as a Model to Study Environmental Toxicity Relevant to Parkinson's Disease **Angeline Claudia Atheby** Delaware State University

1030S Assessing the roles of *BUD13* in rare human genetic diseases **Mikiko Oka** Baylor College of Medicine

1031V The epigenetic modifier EHMT/G9a regulates sleep via its role in metabolism-relevant cellular substrates **Mireia Coll-Tané** Radboud University Medical Center

1032V The microRNA miR-33 regulates mutant TDP-43 toxicity in transgenic flies **Swapnil Pandey** University of Florida

1033V Tumour-induced muscle wasting is mediated by mitochondrial β-oxidation in a *Drosophila* model of cancer cachexia **Callum Dark** Peter MacCallum Cancer Centre

1034V Multiple pre-cachexic changes occur in larval muscles **Mardelle Atkins** Sam Houston State University

1035V Identification of Candidate Genetic Modifiers in a *Drosophila melanogaster* Model of *ARID1B*-Related Coffin-Siris Syndrome **Rebecca MacPherson** Clemson University

1036V Mortality Index and Assessment of Motor Function of Wild- Type Drosophila melanogaster, following multiple TBI events, utilizing the H.I.T. Device **Megan Ashworth** Lynn University

1037V Insights into mitochondrial dynamics of familial Parkinson's Disease (PD) **Sonia Narwal** BITS-Pilani, Pilani Campus

1038V Investigating autophagy dysregulation in C9orf72-linked Amyloid Lateral Sclerosis and Frontal Temporal Dementia **Paulien Smeele** Univeristy of Milan

1039V Adult neurogenesis during brain metastasis in *Drosophila* **Yuichiro Nakajima** The University of Tokyo

1040V oxt mutants, developmental patterning and Desbuquois Dysplasia/Spondyloocular syndrome **Rahul Warrior** University of California, Irvine

1041V Toxicity of glyphosate based herbicide Roundup® on non-target organisms: A mechanistic insights using *Drosophila melanogaster* a model of human disease **Anathbandhu Chaudhuri** Stillman College

1042V Behavioral sensitivity and toxicity of the anesthetic isoflurane in *Drosophila* is modulated by expression of *Ndi1*, a yeast single-subunit NADH dehydrogenase **Luke Borchardt** University of Wisconsin-Madison

Techniques and technology

1043T A collection of flippase-dependent conditional inactivation and reactivation alleles of conserved genes in *Drosophila* **Ming Fa** GenetiVision Corporation

1044T Fourth Chromosome Resource Project **Stuart Newfeld** Arizona State Univ

1045T Exploiting single-cell RNA sequencing data in FlyBase **Damien Goutte-Gattat** University of Cambridge

1046T *Drosophila Genomics Resource Center: research and reagent updates* **Daniel Mariyappa** Indiana University

1047T Optimization of cardiac optogenetic control for ChRmine opsin in *Drosophila melanogaster* **Fei Wang** Washington University in St. louis

1048T Graphene enables optical control of Drosophila heart function **Abby Matt** Washington University in St. Louis

1049T Orange maker: make red to orange. **Hee Su Park** University of Minnesota Duluth

1050T Resources for genome-wide mosaic analysis in Drosophila by MAGIC **Rhiannon Clements** Cornell University Weill Institute for Cell and Molecular Biology

1051T Utilizing the Drosophila Activity Monitors (DAM2) from TriKinetics to automate heat tolerance assays in *Drosophila melanogaster* **Blase Rokusek** University of Nebraska at Kearney

1052T Targeted protein degradation using nanobodies and the STUB1 E3 ligase domain in *Drosophila* **Ah-Ram Kim** Harvard Medical School

1053F Mosaic analysis by gRNA-induced crossing-over mediated by nickase Cas9 **Ann Yeung** Weill Institute for Cell and Molecular Biology, Cornell University

1054F Characterization of shock wave effects using fluorescent nanoparticles in syncytial embryos of *Drosophila melanogaster* **Daniel Tapia Merino** Universidad Nacional Autonoma de Mexico

1055F Development of hybrid RNA FISH protocol in *Drosophila* polytenes **Hannah Gilbonio** Emory University

1056F The Gene Disruption Project Update: An expanded toolkit for gene tagging using synthesized homology donor constructs for CRISPR mediated homologous recombination **Oguz Kanca** Baylor College of Medicine

1057F Exploring Affects Within Drosophila's Central Complex Using Computational Affective Neuroscience **Saul Garnell** Auckland University of Technology

1058F Imaging the Molecular Kinetics of Functional Nuclear Organization During Development **Apratim Mukherjee** Children's Hospital of Philadelphia

1059F Quantification of properties of Zelda in *Drosophila* embryo using Raster Image Correlation Spectroscopy **Sadia Siddika Dima** Texas A&M University

1060F The *Drosophila* eye as a model for nanoparticle-based drug delivery. **Emily Brown** University of Massachusetts Boston

1061F Dual-color optogenetic tool enables non-invasive heart pacing and restorable heart arrest in *D. melanogaster* **Jiantao Zhu** Washington University in St. Louis

1062F Engineered tandem duplications of varying sizes using CRISPR and recombinases **David Loehlin** Williams College**Techniques and technology**

1063S ModelMatcher: An online resource to facilitate cross-disciplinary collaborations between scientists, clinicians and beyond **Shinya Yamamoto** Baylor College of Medicine

1064S A versatile automated robotic system for high-throughput microinjection of Drosophila embryos **Andrew Alegria** University of Minnesota Twin-Cities

1065S Expression of small tandem duplications of the Adh gene **Elise Root** Williams College

1066S Fijiwings and FijiwingsPolarity: tools to measure tissue and cell size and polarity **Leonard Dobens** Univ Missouri, Kansas City

1067S Strong and heritable RNA knockdown using a self-cleaving ribozyme in *Drosophila* **Kevin Nyberg** Northwestern University

1068S Generation and validation of pX-UASTattB for dose-dependent misexpression studies in Drosophila **Jung Hwan Kim** University of Nevada, Reno

1069S pBS-GMR-eya2(shRNA), an improved vector for visible counter-selection against vector insertion during CRISPR gene editing **Gregory Beitel** Northwestern University

1070S Optimization of Cut&Run for transcription factors during Drosophila zygotic genome activation **Puttachai Ratchasanmuang** The Children's Hospital of Philadelphia

1071S A fluorescent sex-sorting technique for insects with the demonstration in Drosophila melanogaster **Junru Liu** University of California, San Diego

1072S A computational approach for determining developmental gene expression trajectories and combinatorial gene regulatory patterns in fly motor neurons **Erdem Varol** Columbia University

1073V REDfly: The Regulatory Element Database for *Drosophila* and other insects **Soile Keränen** None

1074V Drosophila: A metazoan model to study the biological functions of inorganic polyphosphate **Sunayana Sarkar** Tata Institute of Fundamental Research Hyderabad India

1075V Live embryo confocal microscopy screen to capture protein localization signals **Sumaiya Hasan** Illinois State University

1076V Development of Gal4/UAS system for elucidating the mechanism of the wing color pattern formation of *Drosophila guttifera* **Masato Koseki** Hokkaido University, Graduate School of Environmental Science

1077V Automated quantification of cardiac parameters and aging prediction using machine learning in a Drosophila model **Girish Melkani** Heersink School of Medicine, University of Alabama at Birmingham

1078V Improved CRISPR systems for the generation of highly penetrant loss-of-function phenotypes in *Drosophila* **Fillip Port** German Cancer Research Center

1079V Tools for investigating the subcellular distribution of channels in motion-sensing neurons of *Drosophila* **Renee Vieira** Max Planck for Biological Intelligence

Initiatives in Education and DEI

1080T A CRISPR screen for 5' UTR mutants affecting *gurken* translation in the context of a sophomore genetics lab **Scott Ferguson** State University of NY at Fredonia

1081T The Genomics Education Partnership: Accessible and Equitable Research Opportunities **Raffaella Diotti** Bronx Community College

1082F An improved gene trapping lab for introductory cell and molecular biology courses **Anna Foltz** Penn State Univ

1083F Melanogaster: Catch The Fly!: a citizen science network in adaptation genomics **Josefa Gonzalez** CSIC

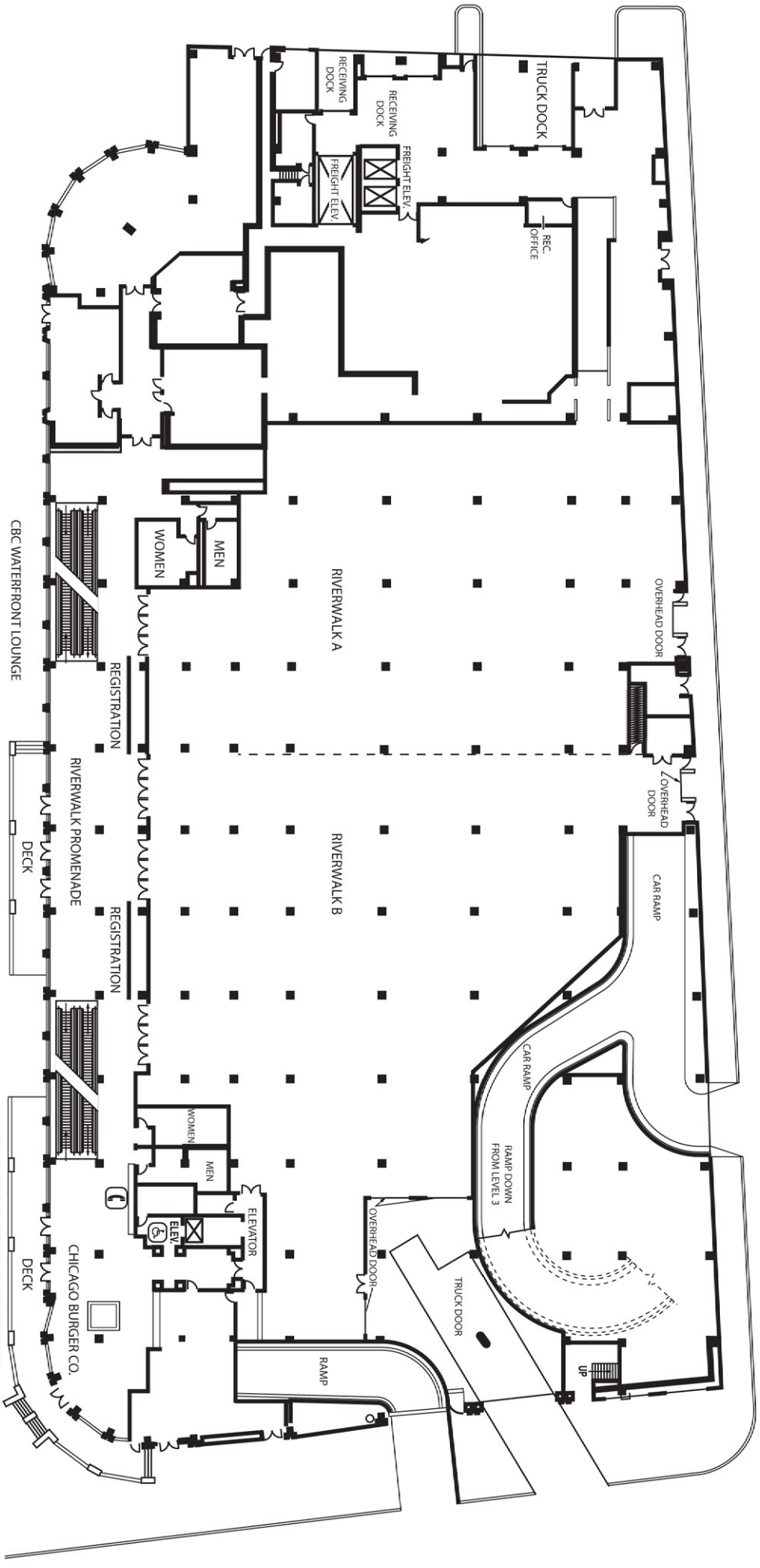
1084S Teaching inheritance of traits using a model organism: Implementing inquiry-based learning **Suparna Chatterjee** Arkansas Tech University

1085S LacApp: A platform to help students master gene regulation through retrieval practice **Caitlin Hanlon** Quinnipiac University

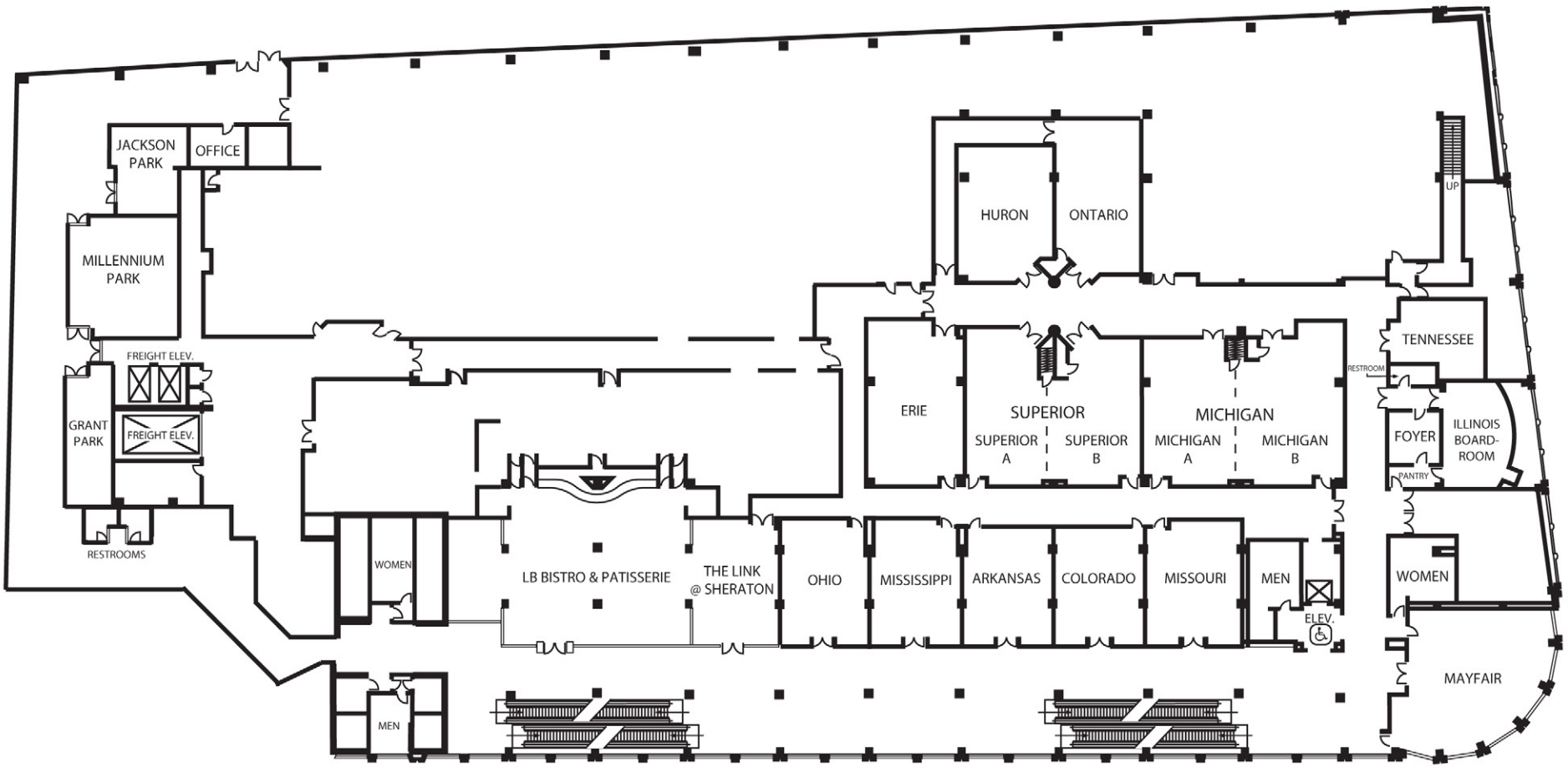
1086T Tissue-specific mutagenesis of spastin, mediated by CRISPR/Cas9, to elucidate neuronal or glial function at the NMJ **Emily Ozdowski**, Duke University

Poster and Exhibit Map

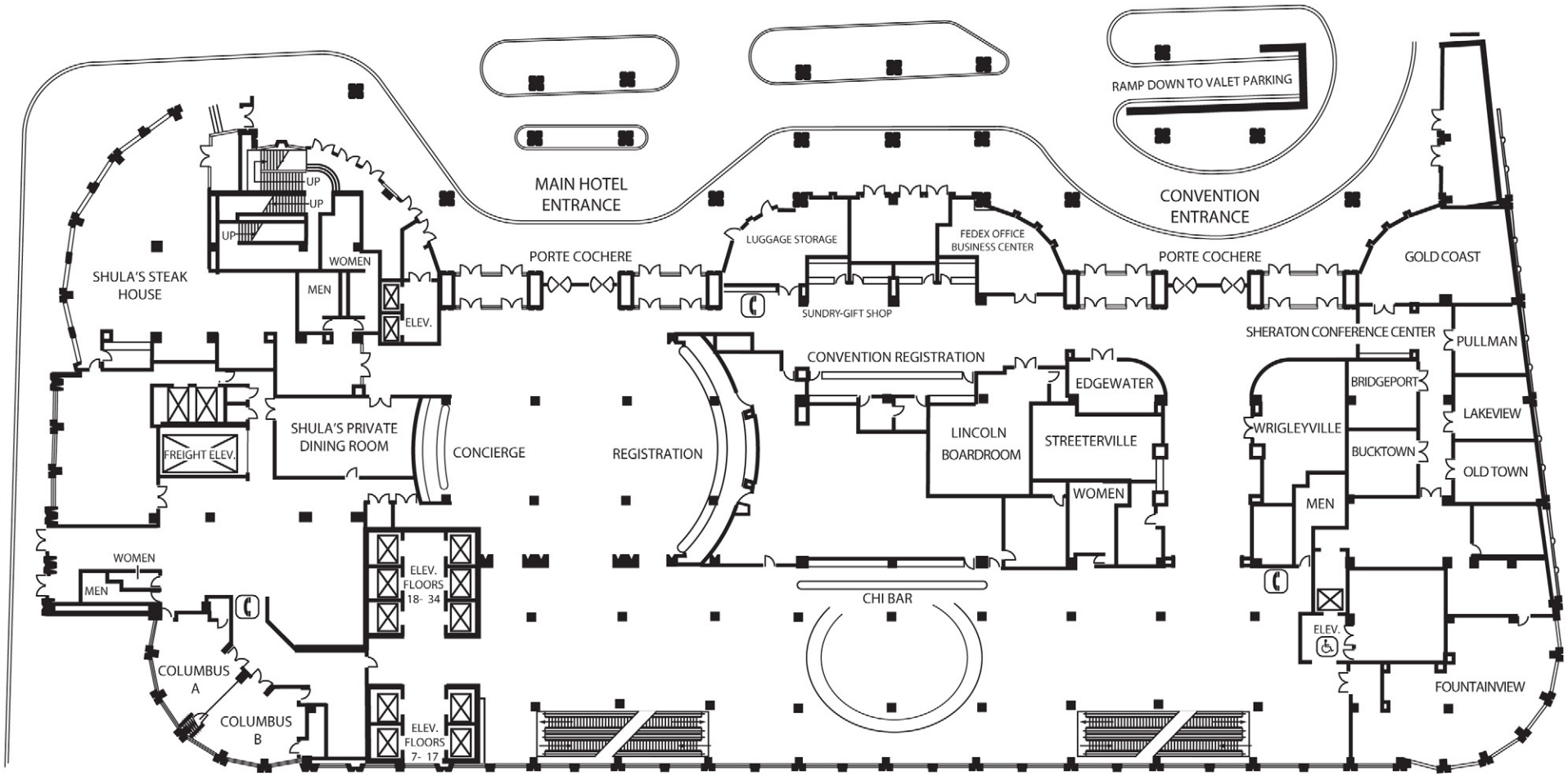
Riverwalk Level 1



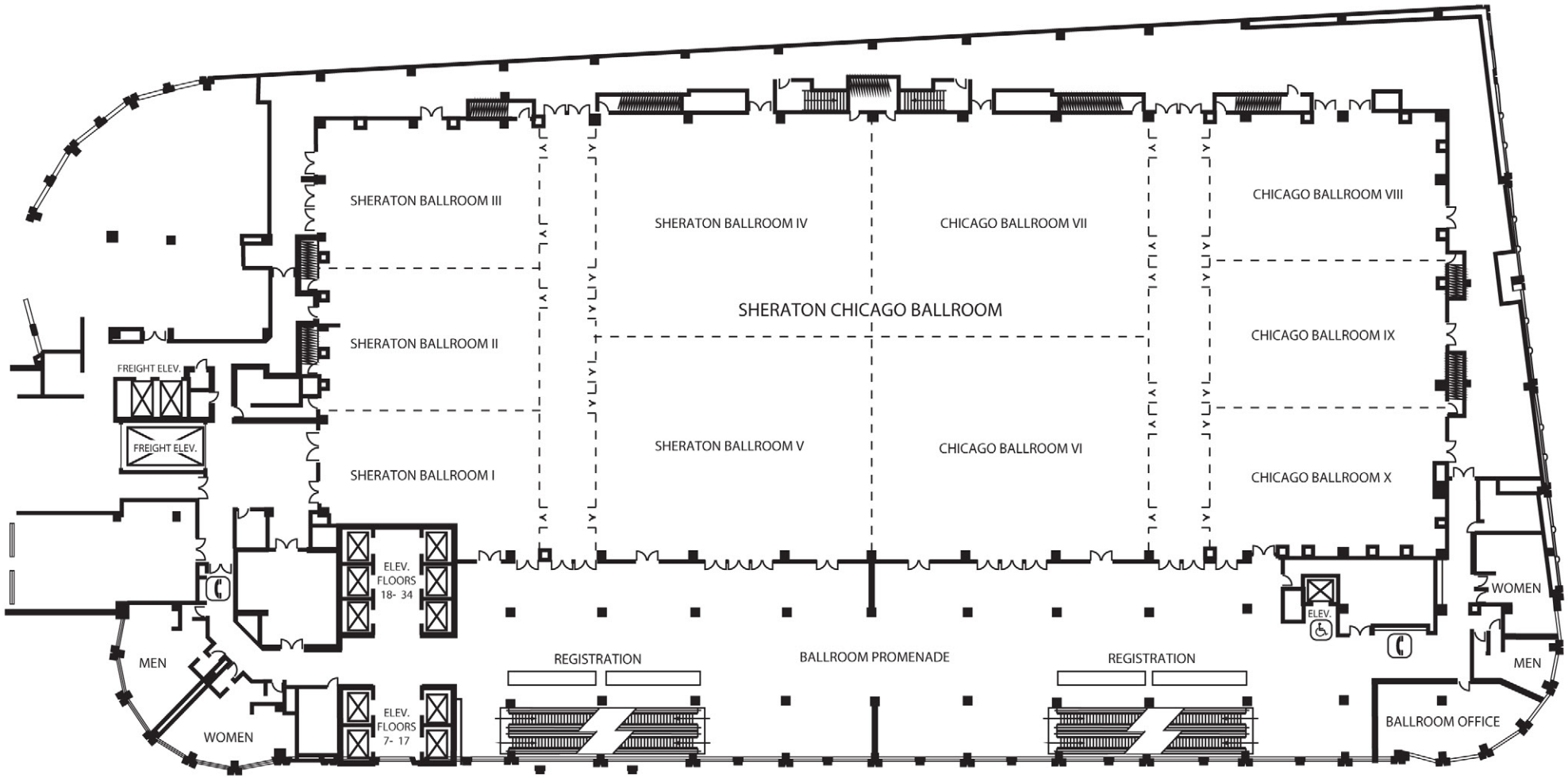
Meeting Room Level 2



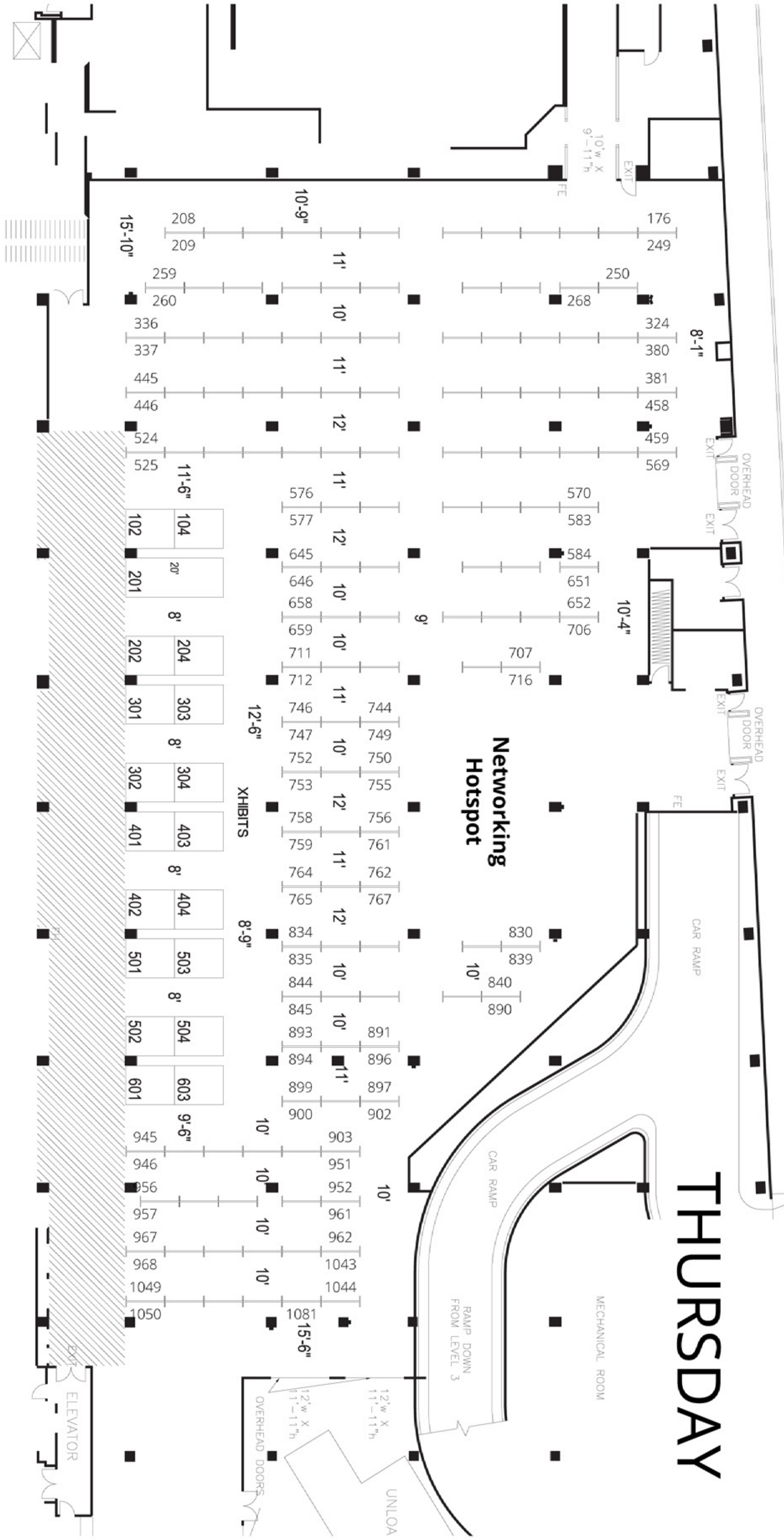
Lobby Level 3



Ballroom Level 4



Floorplan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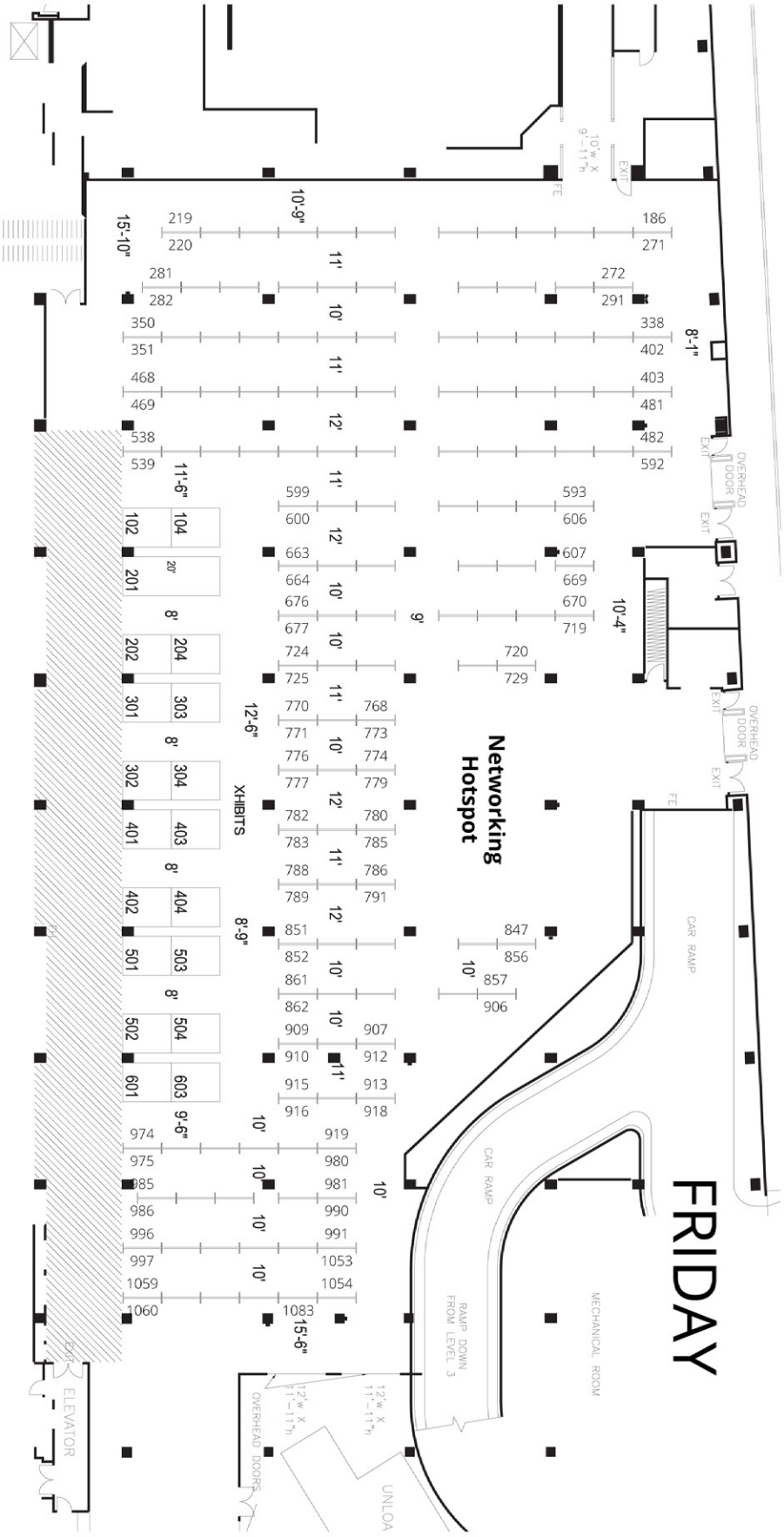
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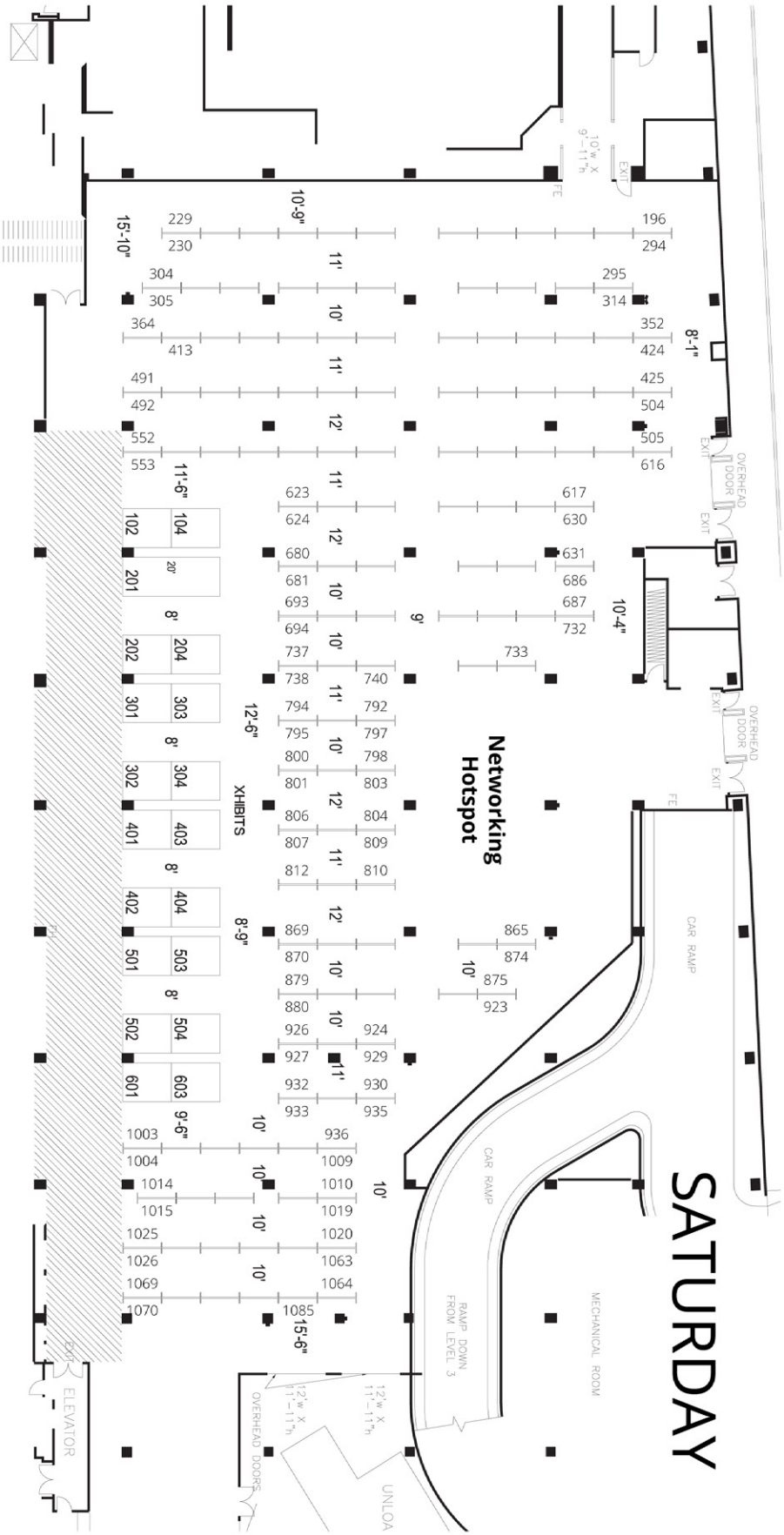
SATURDAY
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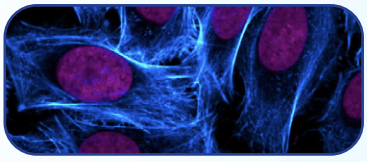
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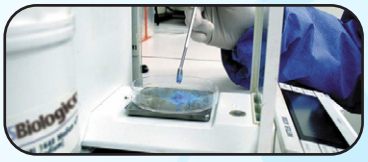
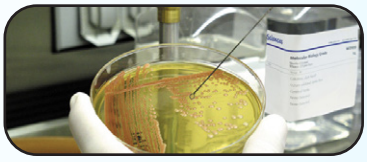

Biochemicals


Biologicals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