International Worm Meeting

June 28–July 2, 2025 | UC Davis | Davis, CA | #Worm25

Program Book

GSA | GENETICS | G3

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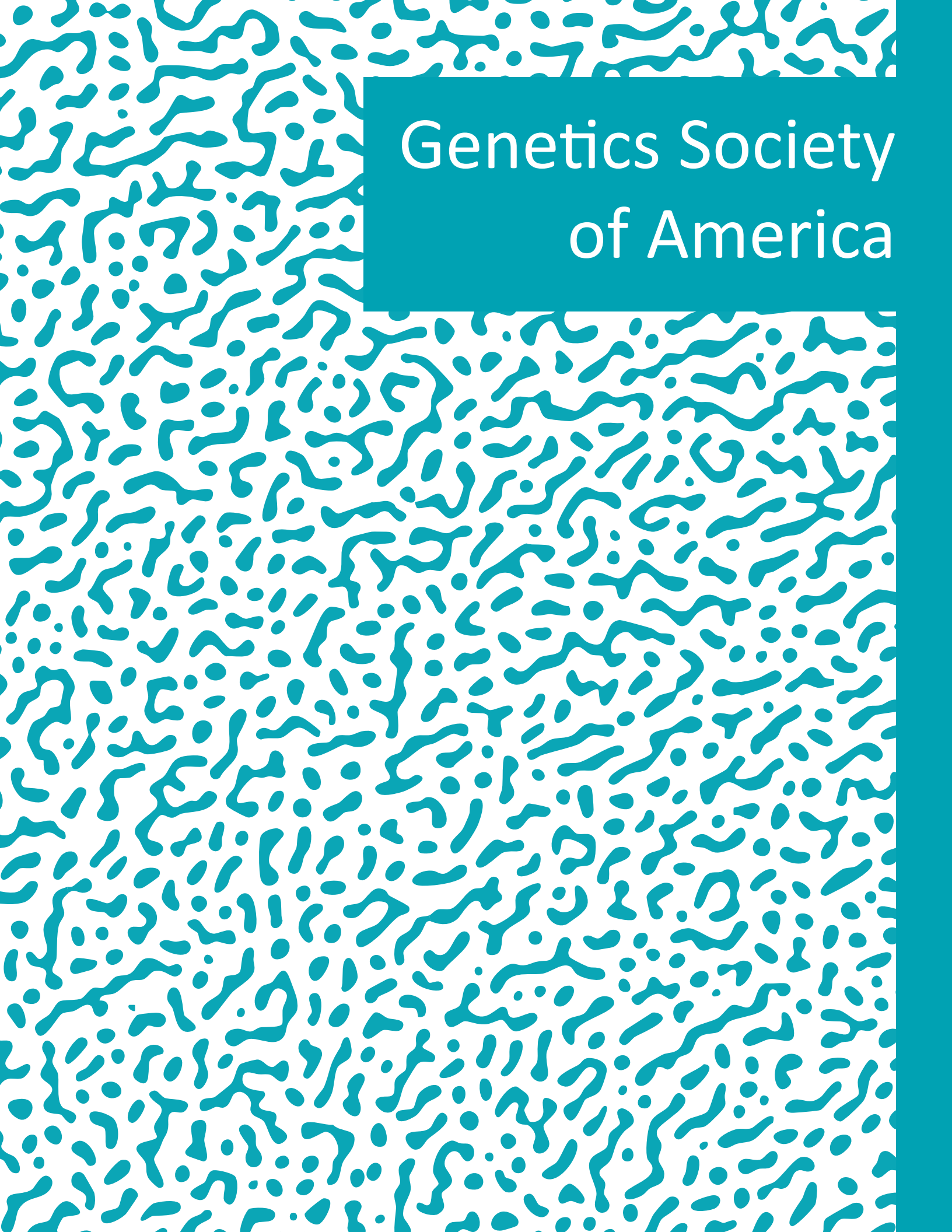
Genetics Society
of America

GSA is an international scientific society representing more than 5,000 researchers and educators around the world. In addition to connecting researchers through conferences and career programs, the Society publishes two peer-reviewed scholarly journals, GENETICS and G3: Genes|Genomes|Genetics. GSA encourages you to become a member so you can make use of exclusive benefits and get involved in the Society's many programs, including professional development training, awards, advocacy, and more. Join the GSA community as we work to advance the field and serve the genetics 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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Conference Sponsors

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Premier Sponsors

General Information

Conference App

Download the Conference 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.

You can find your registration badge ID, which is needed to log-in, in your conference registration confirmation email and on your badge, which was sent from GSA Conferences or NoReply@events.cdsreg.com.

Registration Desk

Registrants were emailed their badge to print at home. Print it out (in color) and bring it with you to the meeting. Badge printing will not be available on site. Show your pre-printed badge to the registrar to collect your badge holder and lanyard. The Registration Desk will be open in the Mondavi Center Lobby during the following hours:

Saturday, June 28	3:00 p.m.–9:00 p.m.
Sunday, June 29	12:30 p.m.–6:00 p.m.
Monday, June 30	12:30 p.m.–6:00 p.m.
Tuesday, July 1	12:30 p.m.–3:00 p.m.

For admission to all sessions, posters, the Exhibit Hall, and mixers, attendees must be wearing their badge.

Oral Presenters

If you are giving an oral presentation (except in a workshop), you must load and check your presentation in the Speaker Ready Room the day before the start of your session. The Speaker Ready Room (UC Davis Conference Center Meeting Room A) will be open at the following times:

Saturday, June 28	3:00 p.m.–9:00 p.m.
Sunday, June 29	7:30 a.m.–6:00 p.m.
Monday, June 30	7:30 a.m.–6:00 p.m.
Tuesday, July 1	7:30 a.m.–3:00 p.m.
Wednesday, July 2	7:30 a.m.–10:30 a.m.

NOTE: Presentations cannot be uploaded in the meeting room; you must check in at the Speaker Ready Room. Workshop speakers should coordinate directly with the workshop organizers and should not upload their talks in the Speaker Ready Room.

Poster Presentation Schedule

All posters and exhibits will be in the University Credit Union Center. See schedule below for times when authors will be presenting their posters. Posters will be taken up and down each day.

Sunday, June 29	All **A poster authors** will present. Posters can be displayed beginning at 7:00 p.m.	
	7:30 p.m.–8:00 p.m.	Open Viewing
	8:00 p.m.–9:00 p.m.	Even-numbered A posters
	9:00 p.m.–10:00 p.m.	Odd-numbered A posters
	10:00 p.m.–10:30 p.m.	Open Viewing
	10:30 p.m.	A posters must be removed
Monday, June 30	All **B poster authors** will present. Posters can be displayed beginning at 7:00 p.m.	
	7:30 p.m.–8:00 p.m.	Open Viewing
	8:00 p.m.–9:00 p.m.	Even-numbered B posters
	9:00 p.m.–10:00 p.m.	Odd-numbered B posters
	10:00 p.m.–10:30 p.m.	Open Viewing
	10:30 p.m.	B posters must be removed
Tuesday, July 1	All **C poster authors** will present. Posters can be displayed beginning at 3:00 p.m.	
	3:30 p.m.–4:00 p.m.	Open Viewing
	4:00 p.m.–5:00 p.m.	Even-numbered C posters
	5:00 p.m.–6:00 p.m.	Odd-numbered C posters
	6:00 p.m.–6:30 p.m.	Open Viewing
	6:30 p.m.	C posters must be removed

All posters must be removed from poster boards at the end of your poster session. After that time, remaining posters will be removed and recycled. Posters may only be removed by their own authors.

Contacting Presenters

Oral Sessions: Leave a comment in the “Join the Discussion” field at the bottom of the session listing, which all attendees can see, or you can directly message them. To Direct Message, go to the attendee tab, click on the name and then tap on the message icon right above their name.

Poster Sessions: At the bottom of each poster listing, enter a comment in the "Join the Discussion" field to give the author feedback or ask questions. You can also directly message them by going to the attendee tab, clicking on their name, and then tapping on the message icon right above their name.

Security and Lost and Found

For emergencies contact the Davis Police Department emergency number (911 or 530-752-1230) and for non-emergency issues contact 530-752-1727.

Lost and found items can be turned in at the Conference Registration Desk.

Meals

UC Davis offers a variety of dining options for meeting attendees. The following restaurants and cafes will be available during the conference:

- **Tercero Dining Commons** serves breakfast, lunch, and dinner every day. Attendees staying in the Cuarto Dorms and those that purchased a lunch plan will have a meal card. The cafeteria accepts credit card payments if you would like to purchase an individual meal.
- **Food trucks** are scheduled to be at the Silo Patio for lunch each weekday.
- **Spokes Grill** at the Silo is open weekdays 10:30 a.m.–2:30 p.m.
- **Peet’s Coffee** at the Silo is open weekdays 7:30 a.m.–2:30 p.m.
- **Peet’s Coffee** at the ARC and King Hall Coffee is open weekdays 8:00 a.m.–2:00 p.m.

Quiet Room

For individuals looking for a quiet space to pray, meditate, or reflect, there are reflection rooms in two locations on campus.

Student Community Center: Located on the first floor. Ask the front desk staff if you need assistance finding it. Please note that the Student Community Center is on the way to the Mondavi Center.

Women's Resources and Research Center in North Hall. Please inquire at the front desk.

Advocate for Sustained Research Funding and Help Us Protect Science

GSA is steadfast in its commitment to evidence-based science and to advocating for sustained federal investment in the research enterprise. Continued, robust funding is essential to support scientists, enable discovery in genetics and related fields, and protect the health, safety, and economic well-being of the nation. The Society remains dedicated to protecting the integrity of science, promoting inclusive participation in research, and ensuring that the study of genetics continues to drive innovation and progress.

We encourage members of the genetics community to contact their elected representatives and **advocate for sustained research funding and against significant cuts to the U.S. Health and Human Services (HHS) budget.**

It is vital that members of Congress hear directly from the people they represent. By sharing personal experiences and clearly stating the real-world impact of your research, you can help policymakers make informed decisions and better understand the needs and priorities of their communities.

Scan the QR code to access information and resources GSA has curated to help you navigate advocacy at any level—whether you're calling Congress or contacting your local Representatives.

Thank you for your continued commitment to advancing genetics research and supporting the scientific community. GSA is proud to stand with you in advocating for evidence-based policy and sustained investment in science.

Exhibitors

Exhibitor and Sponsor Information

GSA wishes to thank our exhibitor partners. Please be sure to visit the company representatives during the poster sessions to learn about new technologies.

Cephla
contact@cephla.com
www.cephla.com

As Stanford spinout, Cephla designs and manufactures open and scalable automated microscopes for life science research. By understanding the applications and optimizing hardware and software around them, our goal is to offer performance systems that users love. Working closely with customers and collaborators, we strive to make the latest technologies accessible.

EMbody Biosignals
c.james@warwick.ac.uk
www.embody-biosignals.com

EMbody is about the development of fast, intelligent and automatic diagnostic systems. Extracting markers of behaviour from various complex recording formats is our speciality. From our TrakBox system for worm tracking, and recording drosophila activity, to AutoEPG that automatically analyses electropharyngeal recordings in *C. elegans* – we can extract multidimensional markers of behaviour from your data.

Electron Microscopy Sciences
info@emsdiasum.com
www.emsdiasum.com

EMS offers high-quality lab supplies and equipment for microscopy, histology, and research, along with expertly manufactured lab chemicals. With competitive pricing, fast delivery, and expert support, we're dedicated to helping your lab succeed and advancing research worldwide.

Genetics Society of America
genetics-gsa@thegsajournals.org
http://genetics-gsa.org

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

InVivo Biosystems
sales@invivobiosystems.com
invivobiosystems.com

InVivo Biosystems provides custom *C. elegans* and zebrafish genome editing and phenotyping services to deliver robust biological insights to our partners. We continue to innovate with novel CRISPR-based methods, assays and nematode species to serve the *C. elegans* community, providing a comprehensive platform for basic biological and preclinical research applications.

MBF Bioscience
peter@mbfbioscience.com
www.mbfbioscience.com

Nagi Bioscience harnesses *C. elegans* to develop innovative biological testing solutions. Its seamless lab integration enhances high-throughput studies, improves accuracy, and enables ethical research in aging, neurobiology, and genetics. By prioritizing reproducibility and efficiency, Nagi empowers scientists to accelerate discoveries, advancing *C. elegans*-driven research with customer-focused expertise.

WormBase and microPublication
daniela.raciti@micropublication.org
www.wormbase.org

Discover WormBase, the authoritative resource for *C. elegans* and nematode biology, and a key founding member of the Alliance of Genome Resources. Explore microPublication Biology—a peer-reviewed, open-access journal for single-figure findings, seamlessly integrated into community databases. Visit our booth for live demos, insights, and all your questions answered!

National Science Foundation
akallen@nsf.gov
https://www.nsf.gov/funding/opportunities/developmental-systems

NSF does not have a booth this year, but PIs are always welcome to contact any NSF Program Officer directly regarding proposal inquiries or NSF submission questions. If you are unsure who to contact, feel free to email Anna Allen (akallen@nsf.gov) or Diana Chu (dschu@nsf.gov) with any questions.

Phylumtech SA
ssimonetta@phylumtech.com
https://www.phylmtech.com/

Phylumtech's WMicrotracker ONE, ARENA and SMART deliver automated, high-throughput, real-time behavioral quantification of *C. elegans* and parasitic nematodes. Utilizing infrared microbeam interruption and optical detection in multiwell plates and Petri dishes, our devices support robust 96–384-well assays and multiworm path tracking. Applications include toxicity screening, disease modeling, healthspan measurements, and more.

Tau Scientific Instruments
info@tausci.com
www.tausci.com

Tau Scientific Instruments provides innovative laboratory tools for research on *C. elegans*, *Drosophila*, and other organisms. Our products include customized imaging and manipulation systems for high-throughput assays of animal behavior and aging. We are also the creators of the Self-Sterilizing Loop, a handheld, battery-operated tool for flame-free aseptic work with small organisms.

SunyBiotech
service@sunybiotech.com
www.sunybiotech.com

SunyBiotech, established in 2016, is a leading company specializing in *C. elegans*-related services. Leveraging cutting-edge techniques, it offers gene-editing solutions through CRISPR/Cas9 technology, X-ray mediated integration technology, and MosSCI technology. Additionally, it offers plasmid construction and pre-clinical analysis to support biological research in the fields of aging, neuroscience, and drug discovery.

UC Davis College of Biological Sciences
cbsgrads@ucdavis.edu
https://biology.ucdavis.edu/graduate

Attention undergraduate students! Are you interested in pursuing a PhD in Biochemistry, Molecular, Cellular, and Developmental Biology, Biophysics, or Genetics and Genomics? Come visit our booth to learn more about these graduate program opportunities at UC Davis.

UC Davis Genome Center
bcmeyers@ucdavis.edu
https://genomecenter.ucdavis.edu/core-facilities

The UC Davis Genome Center advances genomics and systems biology through innovative research and shared resources. Its core facilities—DNA Technologies, Proteomics, Metabolomics, and Bioinformatics—provide state-of-the-art support for sequencing, mass spectrometry, metabolite profiling, and data analysis, serving campus researchers and external partners across diverse fields of biology and biomedicine.

WormAtlas
david.hall@einsteinmed.edu
www.wormatlas.org

WormAtlas offers detailed descriptions of the anatomy and physiology of hermaphrodite, male, dauer, embryo and aging *C. elegans*. We have expanded to include sections on the nematodes Pristionchus pacificus and Strongyloides stercoralis. Visit our booth during the poster sessions for a demonstration of our content and guidance on new functions and features for WormAtlas, WormImage and our new partner WormFindr, which provides 3-D visualizations of cells from electron microscopy images.

Union Biometrica
sales@unionbio.com
http://www.unionbio.com

Union Biometrica COPAS Infinity™, BioSorter® and COPAS FP™ Large Particle Flow Cytometers automate analysis and sorting of objects too big/fragile for traditional cytometers, e.g., large cells/clusters and small model organisms (2-1500 micron diameter). The COPAS VISION™ cytometer adds brightfield image capture on the fly for convenient identification of objects.

Conference Policies

Code of Conduct

This Code of Conduct covers in-person conferences, online conferences, and other online events hosted by the Genetics Society of America. GSA conferences include keynote presentations, concurrent sessions, live poster Q&A, workshops, and Q&A via Zoom chat.

GSA 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 conference, including but not limited to keynote presentations, concurrent sessions, live poster Q&A sessions, and workshops. Because there is also a virtual nature to the conference, our Code of Conduct extends to communications related to the meeting and its attendees, presenters, exhibitors, sponsors, staff, and vendors. These types of communications include Zoom chat, Zoom Q&A window, live poster Q&A, email, social media, and texts.

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 standing, disability or ability status, or other personal characteristics, including those protected by law
- Inappropriate use of nudity and/or sexual images (including presentation slides, posters, Slack channels, or Zoom chat)
- Deliberate intimidation or stalking
- Violating the rules and regulations of the online provider, Zoom
- Sustained disruption of scientific sessions or other events
- Unwelcome and uninvited attention or contact
- Real or implied threat of physical harm
- Real or implied threat of professional or financial damage or harm
- Photographing or reproducing slides of oral presentations and posters without permission

Recording of scientific and other sessions without permission

Taking action or making a report

To confidentially report a Code of Conduct violation or to file a complaint, including a complaint about a GSA volunteer or GSA staff member, please visit genetics-gsa.ethicspoint.com. To contact our Ethics Committee directly, please email Chair E. Jane Hubbard at jane.hubbard@nyulangone.org. GSA staff is available to assist participants in making a report. Please email GSA Executive Director Tracey DePellegrin at tracey.depellegrin@genetics-gsa.org.

Consequences of non-compliance

Anyone asked by GSA staff, an Organizer, 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 in-person meeting
- Immediate removal from accessing the online meeting
- Immediate removal from Slack channels and the Conferences App 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. If you have difficulty walking long distances, consider renting a scooter from Scoot Around. They will deliver your scooter to your dorm or hotel and pick it up when you no longer need it. For more details, visit www.scootaround.com or call (888) 441-7575.

Diversity and Inclusion

GSA is committed to foregrounding equity, accessibility, and inclusion alongside scientific content, education, and professional development at each step of conference planning. We seek to create opportunities for all individuals to fulfill their scientific potential, regardless of their background, identity, or circumstances.

A commitment to inclusion leads to innovation by attracting the widest possible talent to the community and fostering greater diversity of ideas, approaches, and perspectives. The Allied Program Committee and the Community Organizers aim to select speakers and session chairs that represent the breadth of the discipline and conference participants. GSA encourages the Committee and Organizers to select excellent speakers from groups that have been historically excluded or marginalized in science.

Family Policy

Children are allowed in plenary, concurrent, and poster sessions; this includes babywearing of young children. Those travelling with family members or caregivers who are not in the scientific community and not registered for the meeting can obtain a guest pass from the conference Registration Desk so that they can accompany children into the poster sessions. All guests will be asked to agree to the Conference Code of Conduct and will need a name badge to enter the poster session. Guests must obtain their pass during posted registration hours. To ensure the safety of all children in attendance and to create a productive and fulfilling meeting atmosphere for all attendees, we ask all parents and caregivers to abide by the following guidelines:

- Children ages 14 and under must be accompanied by an adult in all meeting areas.
- Parents and caregivers should do their best to ensure that children are not disruptive to any sessions they attend (including poster sessions).
- For safety reasons, children are not allowed in the Exhibit/Poster Hall during set-up or break-down times.

Social Media/Photo/Video Policy

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

General Safety Tips for Attending Meetings

You should practice common sense safety guidelines when attending any conference:

- Be aware of your surroundings at all times.
- Don't get distracted by your phone.
- Use the buddy system when walking around campus or town, especially during early morning and late evening hours.
- Don't wear your meeting badge outside of the designated meeting space.
- Don't carry a lot of cash or credit cards.
- Don't leave personal property unattended anywhere, at any time.

Schedule of Events

Schedule of Events

All times are listed in Pacific Standard Time (PST)

Monday, June 23, 2025		
10:00 a.m.–11:30 a.m.	**Collaborative multiscale nervous-system models that integrate neuronal molecules, synapses, activity, and behavior**	online
Thursday, June 26, 2025		
10:00 a.m.–11:30 a.m.	**Monitoring inter-individual diversity across multiple levels and timescales**	online
Saturday, June 28, 2025		
1:00 p.m.–2:00 p.m.	**Conference Success Tips and Welcome**	Alumni Center, AGR Hall
2:00 p.m.–5:00 p.m.	**7th Parasitic Nematodes: Bridging the Divide Workshop**	Mondavi Center, Jackson Hall
2:00 p.m.–5:00 p.m.	**Teaching Workshop**	Mondavi Center, Vanderhoef Studio Theater
2:30 p.m.–3:00 p.m.	**Getting Involved in GSA's Early Career Professional Development**	Alumni Center, AGR Hall
3:00 p.m.–9:00 p.m.	**Registration**	Mondavi Center Lobby
3:00 p.m.–9:00 p.m.	**Speaker Ready Room**	UC Davis Conference Center, Meeting Room A
3:30 p.m.–4:30 p.m.	**Individual Development Plan**	Alumni Center, AGR Hall
6:45 p.m.–8:50 p.m.	**Welcome and Plenary Session 1**	Mondavi Center, Jackson Hall
8:45 p.m.–10:00 p.m.	**Opening Mixer**	Mondavi Center Lobby

All times are listed in Pacific Standard Time (PST)

Sunday, June 29, 2025

7:30 a.m.–6:00 p.m.	**Speaker Ready Room**	UC Davis Conference Center, Meeting Room A
8:30 a.m.–11:30 a.m.	**Concurrent Sessions I**	
	Neurobiology 1 (Neurodevelopment & Synapses)	California Hall
	Physiology 1 (Metabolism & Microbial Interactions)	Khaira Hall
8:45 a.m.–11:45 a.m.	**Development 1** (Gene Regulation & Cell fate)	Activities & Recreation Center Ballroom
	Genetics 1 (Gene expression, Inheritance, & Chromatin)	UC Davis Conference Center, Ballroom
12:30 p.m.–6:00 p.m.	**Registration**	Mondavi Center Lobby
1:15 p.m.–2:45 p.m.	**Workshops 1**	
	Aging: Beyond Lifespan Experiments	California Hall
	From Pixels to Discovery: Hands-on AI Unlocking New Frontiers in *C. elegans* High-throughput Research	Khaira Hall
	Strategies for Single-Cell Profiling in *C.elegans*	Mondavi Center, Jackson Hall
	WormBase Data at the Alliance of Genome Resources in 2025: Current Status and Plans	Mondavi Center, Vanderhoef Studio Theater
	Non-*C. elegans* Nematodes as Experimental Systems	UC Davis Conference Center, Ballroom
3:15 p.m.–5:40 p.m.	**Plenary Session 2**	Mondavi Center, Jackson Hall

All times are listed in Pacific Standard Time (PST)

Sunday, June 29, 2025 (continued)

6:00 p.m.–7:00 p.m.	**GSA Conference Mentor Program Dinner** (invitation only)	Student Community Center MPR
7:30 p.m.–10:30 p.m.	**Poster Session 1/Exhibits/Art Show** (A posters present)	University Credit Union Center
	Professional Headshots with Sarah Barnett Photography	University Credit Union Center
8:00 p.m.–9:00 p.m.	**Networking Hotspots**	University Credit Union Center

Monday, June 30, 2025

7:30 a.m.–6:00 p.m.	**Speaker Ready Room**	UC Davis Conference Center, Meeting Room A
8:30 a.m.–11:30 a.m.	**Concurrent Sessions II**	
	Neurobiology 2 (Plasticity, Regeneration & Degeneration)	California Hall
	Cell Biology 1	Khaira Hall
8:45 a.m.–11:45 a.m.	**Ecology and Evolution**	UC Davis Conference Center, Ballroom
	Development 2 (Cell Biology & Signaling)	Activities & Recreation Center Ballroom
12:30 p.m.–6:00 p.m.	**Registration**	Mondavi Center Lobby
1:15 p.m.–2:45 p.m.	**Workshops 2**	
	Peer into Publishing Q&A	Alumni Center, AGR Hall
	Peering into Centrosomes and Cilia	California Hall
	Extracellular Matrix: A New Era of Tools and Discovery	Khaira Hall

All times are listed in Pacific Standard Time (PST)

Monday, June 30, 2025 (continued)

1:15 p.m.–2:45 p.m.	**Emerging Genetic Tools for *C. elegans***	Mondavi Center, Jackson Hall
1:15 p.m.–2:45 p.m.	**Novel Methods to Investigate Cell-type Identity and Diversity Throughout Development and Aging**	UC Davis Conference Center, Ballroom
3:00 p.m.–5:45 p.m.	**Plenary Session 3 and Keynote Address**	Mondavi Center, Jackson Hall
7:30 p.m.–10:30 p.m.	**Poster Session 2/Exhibits/Art Show (B posters present)**	University Credit Union Center
8:00 p.m.–9:00 p.m.	**Networking Hotspots**	University Credit Union Center

Tuesday, July 1, 2025

7:30 a.m.–3:00 p.m.	**Speaker Ready Room**	UC Davis Conference Center, Meeting Room A
8:30 a.m.–11:30 a.m.	**Concurrent Sessions III**	
	Neurobiology 3 (Circuits & Behavior)	California Hall
	Physiology 2 (Aging & Stress)	Khaira Hall
8:45 a.m.–11:45 a.m.	**Cell Biology 2**	Activities & Recreation Center Ballroom
	Genetics 2 (small RNAs and RNAi)	UC Davis Conference Center, Ballroom
12:30 p.m.–3:00 p.m.	**Registration**	Mondavi Center Lobby
1:30 p.m.–2:30 p.m.	**Support of the Genetics Research Community: Challenges, Strategies and Inspiration**	Mondavi Center, Jackson Hall
3:30 p.m.–6:30 p.m.	**Poster Session 3/Exhibits/Art Show** (C posters present)	University Credit Union Center

All times are listed in Pacific Standard Time (PST)

Tuesday, July 1, 2025 (continued)		
4:00 p.m.–5:00 p.m.	**Networking Hotspots**	University Credit Union Center
7:45 p.m.–8:15 p.m.	**Social**	Mondavi Center Lobby
8:15 p.m.–9:00 p.m.	**20th Anniversary Worm Comedy Show and Art Show Awards**	Mondavi Center, Jackson Hall
9:00 p.m.–10:30 p.m.	**Closing Party**	Mondavi Center, Korin Courtyard
Wednesday, July 2, 2025		
8:45 a.m.–12:00 p.m.	**Plenary Session 4**	Mondavi Center, Jackson Hall

Oral Presentation and Workshop Session Listings

Monday, June 23, 2025

10:00 a.m.–11:30 a.m.
Online

Collaborative multiscale nervous-system models that integrate neuronal molecules, synapses, activity, and behavior (online)

This workshop will introduce datasets for multiscale modeling of nervous-system function and behavior. Participants will share knowledge of techniques, datasets, and computation, forging connections with like-minded scientists in the worm community. Topics covered are: 1) neuronal molecular inventory; 2) connectomics; 3) single-neuron activity dynamics; 4) whole-brain communication, and 5) behavior.

10:00 a.m. Workshop introduction Miriam Goodman, Stanford University Eviatar Yemini, UMass Chan Medical School

10:10 a.m. Small groups discuss each topic

Topic Leaders:

1 Neuronal molecular inventory – Seth Taylor and Talmage Barney (Brigham Young University)

2 Connectomics – Scott Emmons (Albert Einstein College of Medicine), Luciano Dyballa (IE University Spain), and Eviatar Yemini (UMass Chan Medical School)

3 Single-neuron activity dynamics – Miriam Goodman and Wagner Nors (Stanford University)

4 Whole-brain communication – Monika Scholz and Luis Alvarez (Max Planck Institute for Neurobiology of Behavior)

5 Behavior – Greg Stephens and Tosif Ahamed (Vrije Universiteit Amsterdam)

10:30 a.m. Faculty present key conclusions of group discussions (5 minutes/topic)

10:55 a.m. Trainees present their current research (7 minutes/person)

Neuronal molecular inventory – Talmage Barney, Brigham Young University

Connectomics – Luciano Dyballa, IE University Spain

Single-neuron activity dynamics – Wagner Nors, Stanford University

Whole-brain communication – Luis Alvarez, Max Planck Institute for Neurobiology of Behavior

Behavior – Tosif Ahamed, Vrije Universiteit Amsterdam

Thursday, June 26, 2025

10:00 a.m.–11:30 a.m.
Online

Monitoring inter-individual diversity across multiple levels and timescales (online)

The workshop will focus on state-of-the-art methods in *C. elegans*, allowing researchers to probe the mechanisms underlying diversity in gene expression, neuronal activity states, behavior, and aging patterns, as well as variation across evolution. The interplay among these factors gives rise to the rich variation observed among *C. elegans* individuals.

Organizers: Meital Oren-Suissa, Weizmann Institute of Science and Shay Stern, Technion- Israel Institute of Technology

10:00 a.m. Neural mechanisms underlying state-dependent behaviors in *C. elegans*, Steven Flavell, MIT

10:10 a.m. Organization of behavioral individuality across development, Shay Stern, Technion

10:20 a.m. Gene expression differences across genetically identical individuals predict reproductive traits, Amy Webster, Florida State University

10:30 a.m. Shared genetic determinants of gene-expression and lifespan variation, Nicholas Stroustrup, CRG

10:40 a.m. Genotypic and phenotypic variation across the *C. elegans* species, Erik Andersen, Johns Hopkins University

10:50 a.m. Unraveling behavioral individualism through sex-dependent neuronal variability, Meital Oren-Suissa, Weizmann Institute

11:00-11:30 am. Discussion

Saturday, June 28, 2025

1:00 p.m.–2:00 p.m.
Alumni Center, AGR Hall

Conference Success Tips and Welcome

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

Saturday, June 28, 2025

2:00 p.m.–5:00 p.m.
Mondavi Center, Jackson Hall

7th Parasitic Nematodes: Bridging the Divide Workshop

Parasitic nematodes of humans infect over a billion people worldwide, and parasitic nematodes of livestock and plants result in billions of dollars in agricultural damage and food loss each year. This workshop will highlight current research on parasitic nematodes, with the goal of facilitating interactions between *C. elegans* and parasitic nematode researchers.

Organizers: Astra Bryant, University of Washington and Elissa Hallem, UCLA

2:00 p.m. Welcome, Elissa Hallem, UCLA and Astra Bryant, UW

2:10 p.m. Independent mechanisms of benzimidazole resistance across Caenorhabditis nematodes, Amanda Shaver, Johns Hopkins University

2:25 p.m. Selections of macrocyclic lactones resistant Caenorhabditis elegans strains revealed adaptative mechanisms to anthelmintics, Rémy Bétous, University of Toulouse

2:40 p.m. Unraveling the genome of entomopathogenic nematodes: a model for entomopathogenicity and symbiotic interactions, Anil Baniya, University of California, Riverside

2:55 p.m. Entomopathogenic Steinernema nematodes arose from parasites and retain the capability for parasitism, Hillel Schwartz, Caltech

3:10 p.m. Break 3:25 p.m. Elucidating the role of migpsy peptides in interaction between plants and root-knot nematodes, Ching-Jung Lin, University of California, Davis

3:40 p.m. DEET inhibits skin penetration in a skin-invading, human-parasitic nematode, Gloria Bartolo, University of California, Los Angeles

3:55 p.m. Functional characterization of thermosensory receptor-type guanylate cyclases in parasitic nematodes, Yi Zhang, University of Washington

4:10 p.m. Break

4:25 p.m. Comparative genomics of the major human hookworm Necator americanus, Erich Schwarz, Cornell University

4:40 p.m. A high-throughput anthelmintic screening pipeline uncovers novel and repurposed anthelmintics targeting filarial and intestinal parasites, Hala Fahs, New York University, Abu Dhabi

Saturday, June 28, 2025

2:00 p.m.–5:00 p.m.
Mondavi Center, Vanderhoef Studio Theater

Teaching Workshop

This workshop brings together all who are interested in the dynamics of working at a primarily undergraduate institution (PUI). Topics include a roundtable discussion of getting a job at a PUI and how to thrive while balancing a heavy teaching load, *C. elegans* research and life at the same time.

Organizer: Jon Karpel, Southern Utah University

2:00 p.m. PUI roundtable: How to get a job and be successful at a Primarily Undergraduate Institution

3:00 p.m. Integrating worm research into undergraduate lab courses, Dr. Olivia Long, University of Pittsburgh – Greensburg

3:30 p.m. Orchestrating impactful research with only a team of novice researchers, Dr. Caroline Goutte, Amherst College

4:00 p.m. CUREs, Research in troubling times, and other community building amongst PUI faculty

Saturday, June 28, 2025

2:30 p.m.–3:00 p.m.
Alumni Center, AGR Hall

Getting Involved in GSA's Early Career Professional Development

GSA Early Career Leadership Program (ECLP) members will join us in sharing how to get involved in GSA's professional development programming for early career scientists. GSA will walk through upcoming events and programs including how and when to apply to join the ECLP.

Saturday, June 28, 2025

3:30 p.m.–4:30 p.m.
Alumni Center, AGR Hall

Individual Development Plan

This event will walk early and mid-career scientists through completing an Individual Development Plan using two free virtual tools. The workshop will encourage participants to break out of the linear career path through process and practice of informational interviews.

Saturday, June 28, 2025

6:45 p.m.–8:50 p.m.
Mondavi Center, Jackson Hall

Welcome and Plenary Session 1

Session Chairs: Michael Hart, University of Pennsylvania, United States; and Amy Webster, Florida State University, United States

6:45 p.m. GSA Welcome **Maureen Barr**

6:50 p.m. GSA Journals Welcome **Howard Lipshitz**

6:57 p.m. Welcome from Organizers **Cathy Savage-Dunn and Baris Tursun**

7:02 p.m. Neuronal fate to function - unexpected answers from simple questions **Roger Pocock** Monash University

1 7:32 p.m. Sexual adaptation across evolution: the neural basis of female sexual motivation **Eya Wolfson** Weizmann Institute of Science

2 7:44 p.m. wormFISH: A whole-animal *In Situ* spatial transcriptomics technique for *C. elegans* **Wenhan Chang** HHMI/MIT

3 7:56 p.m. Nematode Hunters: CUREing Intracellular Infections **Jessica Sowa** West Chester University of Pennsylvania

8:08 p.m. Sydney Brenner Dissertation Thesis Award Introduction

8:15 p.m. Sydney Brenner Dissertation Thesis Award

4 8:35 p.m. Caenorhabditis Genetics Center **Aric Daul** Univ of Minnesota

8:41 p.m. WormBase and the Alliance of Genome Resources **Paul Sternberg**

Sunday, June 29, 2025

8:30 a.m.–11:30 a.m.
California Hall

Neurobiology 1 (Neurodevelopment & Synapses)

Session Chairs: Yuuki Ishita, Niigata University, Japan; and Melissa LaBonty, Southern Oregon University, United States

5 8:30 a.m. The Kinetochore Protein, KNL-1, regulates the actin cytoskeleton to control dendrite branching **Dhanya Cheerambathur** University of Edinburgh

6 8:42 a.m. The functions of *unc-43/CaMKII* and *pkc-2/PKC* in Wnt-dependent neurite pruning **Menghao Lu** University of British Columbia

7 8:54 a.m. Expanding the boundaries of memory: Sleep-dependent storage beyond the brain in *C. elegans* **Rashmi Chandra** University of California San Francisco

8 9:06 a.m. Examining the role of chemical neurotransmission on *C. elegans* post-embryonic nervous system maturation **Gabrielle Prince** University of Alabama at Birmingham

9 9:18 a.m. Dissecting the Molecular, Functional, and Regulatory Properties of Novel "Heterochannel" Electrical Synapses **Atal Vats** National Centre for Biological Sciences

10 9:30 a.m. Cell-extrinsic and intrinsic mechanisms of axon initial segment development **Kelsie Eichel** University of Colorado Boulder

11 9:42 a.m. Non-canonical mechanisms of Toll-like receptor function in the chemosensory nervous system **Brian Griffin** NYU School of Medicine

9:54 a.m. Coffee break

12 10:18 a.m. Shaping axons with intestinal lipids **Wenyue Wang** Monash University

13 10:30 a.m. Mechanical Anchoring of SYG-1/Neph1 and SAX-3/Robo Directs Neurite Branching in *C. elegans* **Yun-Hsien Lin** National Taiwan University

14 10:42 a.m. Towards identifying the critical period for the embryonic origins of individualized behavior **Christopher Brittin** Memorial Sloan Kettering Cancer Center

15 10:54 a.m. Glial Neuropeptide Signaling and Non-Canonical Release Mechanisms **Maria Purice** Oregon State University

16 11:06 a.m. Innexin gap junctions carry a cytosolic cap structure consisting of a ring of UNC-1 Proteins **Nils Rosenkranz** Buchmann Institute, Goethe University

17 11:18 a.m. An activity-dependent transcriptional program coupled with coordinated mRNA export drives synaptogenesis during development **Callista Yee** Stanford University

Sunday, June 29, 2025

8:30 a.m.–11:30 a.m.
Khaira Hall

Physiology 1 (Metabolism & microbial interactions)

Session Chairs: Andre Brown , United Kingdom; and Aaron Reinke, University of Toronto, Canada

18 8:30 a.m. Dissecting an intestinal scaffold for commensal bacterial adherence in the lumen **Anupama Singh** San Diego State University

19 8:42 a.m. Pathogen apathy: how depletion of serotonin from SKN-1 activation modifies behavior **Tripti Nair** University of Southern California

20 8:54 a.m. *C. elegans* innate immune OFF/ON switch proteins PALS-22 and -25 localize to mitochondria **Max Strul** University of California San Diego

21 9:06 a.m. *Stenotrophomonas indicatrix* Induces Intracellular Pathogen Defense in *Caenorhabditis elegans* **Jordan West** The George Washington University

22 9:18 a.m. Redundant, non-cell-autonomous regulation of the oomycete recognition response **Manish Grover** Imperial College London

23 9:30 a.m. Yersinia biofilm-dependent killing reveals functional ncRNA polymorphism and social transfer of glycosylated surface material **Jonathan Hodgkin** Univ Oxford

24 9:42 a.m. CHN-1 knock-out impairs TBP proteasomal degradation leading to functional alteration of mechanosensory neurons. **Giuliana Madonna** Fondazione IRCCS Istituto Neurologico Carlo Besta

9:54 a.m. Coffee break

25 10:18 a.m. Activation of *C. elegans* fatty acid desaturation pathway by dietary sugar is dependent on *E. coli* Pyruvate Dehydrogenase Complex **Marco Mechan Llontop** Van Andel Institute

26 10:30 a.m. *gda-1* and *gda-2* encode paralogous guanine deaminases that act together to maintain purine homeostasis in *C. elegans* **Sushila Bhattacharya** Sanford Research

27 10:42 a.m. Constitutive expression of the mitochondrial unfolded protein response protects against germ cell ferroptosis in *C. elegans* **Jimena Ruiz** Washington State University

28 10:54 a.m. *mot-1* encodes a putative molybdate transporter required for embryonic viability in *C. elegans* **Robin Fettig** Sanford Research

29 11:06 a.m. Tissue-specific responses to low PC allow an ARF GTPase "swap" as membrane properties change **Amy Walker** UMASS Medical School

30 11:18 a.m. Discovery of genetic suppressors of frataxin deficiency **Joshua Meisel** Brandeis University

Sunday, June 29, 2025

8:45 a.m.–11:45 a.m.
Activities & Recreation Center Ballroom

Development 1 (Gene Regulation & Cell fate)

Session Chairs: Nathan Harris, Georgia State University; and Peter Kropp, Kenyon College, United States

31 8:45 a.m. A balancing-act mechanism to maintain precise transcription factor levels and neuronal identity in adult *C. elegans* motor neurons **Honorine Destain** University of Chicago

32 8:57 a.m. The importance of transcription rates for embryonic cell fate specification **Priya Sivaramakrishnan** Children's Hospital of Philadelphia/University of Pennsylvania

33 9:09 a.m. The role of two terminal selectors on the evolution of left-right neuronal asymmetry **Dylan Castro** California State University Northridge

34 9:21 a.m. The LIN-42-MYRF-1 complex drives pulsatile transcription to couple developmental progression and temporal cell fate specification **Peipei Wu** Cold Spring Harbor Laboratory

35 9:33 a.m. Transcriptional and post-translational control of oscillatory gene expression in development **Simona Ligorio** Friedrich Miescher Institute for Biomedical Research

36 9:45 a.m. Developmental shedding and regrowth of sensory cilia **Rachel Swope** Harvard Medical School

37 9:57 a.m. *daf-16/FOXO* and *daf-12/NHR* coordinate stage-specific cell fate with dauer arrest and recovery **Xantha Karp** Central Michigan University

10:09 a.m. Coffee break

38 10:33 a.m. 3’ UTR-dependent regulation of *ifet-1* is essential for sperm production and fecundity in *Caenorhabditis elegans* **Rita Okeke** Marquette University

39 10:45 a.m. FBFs cooperate with small RNAs in *C. elegans* germline stem and progenitor cells **Ekaterina Voronina** University of Montana

40 10:57 a.m. Nuclear RNAi machinery promotes direct reprogramming of somatic cells **Gizem Köse** Molecular Cell Biology Unit, Institute of Cell and Systems Biology of Animals, University of Hamburg

41 11:09 a.m. How is the Number of Natural Cell Reprogramming Events Restricted in *C. elegans*? **Jeanne Cury** University of Strasbourg

42 11:21 a.m. Sexually dimorphic Argonaute structure and localization facilitate sex specificity of small RNA pathways in *C. elegans* germ cells. **Acadia DiNardo** University of Oregon

43 11:33 a.m. Locked or flexible? Heterogeneity in the plasticity of sexual state in the *C. elegans* nervous system **Jiarui Zhang** University of Rochester

Sunday, June 29, 2025

8:45 a.m.–11:45 a.m.
UC Davis Conference Center, Ballroom

Genetics 1 (Gene expression, Inheritance, & Chromatin)

Session Chairs: Brandon Carpenter, Kennesaw State University, Australia; and Haosheng Sun, University of Alabama, Birmingham

44 8:45 a.m. Uncovering translation regulation during *C. elegans* development using cell-type specific ribosome profiling **Suzan Ruijtenberg** Utrecht University

45 8:57 a.m. The sequence requirement for DNA double-strand breaks and neotelomere formation during programmed DNA elimination in *Oschieus tipulae* **Jianbin Wang** The University of Tennessee, Knoxville

46 9:09 a.m. Genes have expression ceilings that predict overexpression sensitivity **Swetha Iyer** University of Texas at Austin

47 9:21 a.m. SUMOylation of Chromodomain Protein MRG-1 Regulates Cell-Fate Specification **Johan Girgenrath** UMass Chan Medical School

48 9:33 a.m. Ectopic transcription due to inappropriately inherited histone methylation may interfere with the ongoing function of terminally differentiated cells **Monica Reeves** Emory University

49 9:45 a.m. CAGE-FC: An Accessible Tool for Optical Control of Gene Expression with Single-Cell Resolution **Jose Vazquez** University of Edinburgh

50 9:57 a.m. tRNA fragments, how 30-40 nucleotides impact fertility and development **Blair Schneider** Children's Hospital of Philadelphia

10:09 a.m. Coffee break

51 10:33 a.m. RNA Pol I maintains the H3K4me3 gradient and chromatin organization required for oogenesis **Elif Sarinay Cenik** University of Texas at Austin

52 10:45 a.m. Inappropriate inheritance of histone methylation perturbs muscle structure and function **Josh Labus** Kennesaw State University

53 10:57 a.m. Exploring post-transcriptional regulation of gene expression throughout *C. elegans* embryonic development **Felicia Peng** University of Pennsylvania

54 11:09 a.m. The role of LIN-41 RNA binding protein in the neuronal maturation of *Caenorhabditis elegans* hermaphrodites **Craig Peters** University of Alabama at Birmingham

55 11:21 a.m. Single-cell transcriptomic profiling of the Q neuroblast lineage during migration and differentiation **Felipe Teixeira** University of Kansas

56 11:33 a.m. Prion-like patterns of inheritance in *C. elegans* **Orkan Ilbay** Stanford University

Sunday, June 29, 2025

1:15 p.m.–2:45 p.m.
California Hall

Aging: Beyond Lifespan Experiments

This workshop introduces trainees to new approaches in aging research beyond traditional lifespan assays. Short talks address memory, imaging, reproduction, AI, and -omics methods. A moderated 30-minute discussion between audience and panelists will focus on technical details and further applications of these novel approaches, inspiring attendees for their longevity projects.

Organizers: Carlos Giovanni Silva-Garcia, Brown University and Teresa Lee, University of Massachusetts, Lowell

1:15 p.m. Nuclear architecture changes induced by environmental stimuli, Yuri D'Alessio, Helmholtz Zentrum München

1:27 p.m. Using *C. elegans* to identify regulators of cognitive healthspan, Rachel Arey, Baylor College of Medicine

1:39 p.m. Studying aging with agent-based models, Andrea Scharf, Missouri University of Science and Technology

1:51 p.m. Organelle remodeling as a marker and driver of aging, Kris Burkewitz, Vanderbilt University

2:13 p.m. Studying aging from an industrial perspective, Lina Verbakel, Nagi Bioscience

2:15 p.m. Q&A discussion

Sunday, June 29, 2025

1:15 p.m.–2:45 p.m.
Khaira Hall

From Pixels to Discovery: Hands-on AI Unlocking New Frontiers in *C. elegans* High-throughput Research

This workshop explores how AI is transforming *C. elegans* behavioral research through robust imaging, tracking, and analysis in complex environments. Featuring expert talks and hands-on coding demonstrations, it covers cutting-edge technologies including high-throughput imaging, computer vision, machine learning, and robotics. No coding experience required—just bring your laptop and scan the QR code!

Organizers: Rashmi Chandra, University of California San Francisco and Zihao (John) Li, The Ohio State University

1:15 p.m. Introduction: How pixel classifications lead to discoveries, Rashmi Chandra, University of California San Francisco

1:18 p.m. High-content computational phenotyping André Brown, Imperial College London, Overview and live demo of the Tierpsy tracker (15 mins)*, Discussion (5 mins)*

1:38 p.m. Animal segmentation in complex environment Jacob Wheelock and Erin Shappell, Georgia Institute of Technology, AI-assisted locomotion and feeding analyses (15 mins)

Hongfei Ji, Stanford University, High-throughput multimodal behavioral screening (10 mins)

Zihao (John) Li, The Ohio State University Demo: Automated image segmentation (10 mins)*

Discussion (12 mins)*

2:25 p.m. Robotic automation for high-throughput experiments Chris Fang-Yen, The Ohio State University, Robotic systems for automated *C. elegans* genetics (15 mins) Discussion (5 mins)* * indicates interactive session

Sunday, June 29, 2025

1:15 p.m.–2:45 p.m.
UC Davis Conference Center, Ballroom

Non-*C. elegans* Nematodes as Experimental Systems

A growing number of labs are working on an increasingly diverse range of nematode genera and species. Presenters will describe the tools they are making available and the species they are using them on, making it feasible to explore a broadening scope of nematode biology.

Organizers: Chieh-Hsiang Tan, California Institute of Technology, Hillel Schwartz, California Institute of Technology, Anil Baniya, University of California, Riverside and Jennifer Heppert, University of Tennessee, Knoxville

1:15 p.m. Welcome and introduction, Chieh-Hsiang Tan, California Institute of Technology

1:17 p.m. Nomenclature update, Hillel Schwartz, California Institute of Technology

1:18 p.m. WormBase update, Paul Sternberg, California Institute of Technology

1:20 p.m. Genomes for all: realising the 959 nematode genomes project, Mark Blaxter, Sanger Institute

1:25 p.m. Moving Caenorhabditis into the pangenomic era, Anastasia Teterina, University of Oregon

1:30 p.m. Computational tools to facilitate genomics research in non-model nematodes, Astra Bryant, University of Washington

1:35 p.m. New nematode model species in clade III, Erik Andersen, Johns Hopkins University 1:40 p.m. Culturing "unculturable" nematodes, Michael Werner, University of Utah

1:45 p.m. Establishing the parthenogenetic nematode Plectus sambesii as a highly divergent evolutionary comparison to nervous system organization in *C. elegans*, Luke Geiger and Joke Evenblij, Columbia University

1:50 p.m. Efficient targeted recombination with CRISPR/Cas9 in hybrids of Caenorhabditis briggsae and C. nigoni, Jeffrey Dongying Xie, Hong Kong Baptist University

1:55 p.m. Microparticle bombardment as a method for transgenesis in non-model nematode, Nami Haruta, Tohoku University

2:00 p.m. Adapting HI-C and DNA FISH to study Programmed DNA Elimination in non-model nematodes, Ryan Simmons, University of Tennessee, Knoxville

2:05 p.m. Using electron microscopy for other nematodes, Nathan Schroeder, University of Illinois Urbana-Champaign

2:10 p.m. Questions and panel discussion

Sunday, June 29, 2025

1:15 p.m.–2:45 p.m.
Mondavi Center, Jackson Hall

Strategies for Single-Cell Profiling in *C. elegans*

This workshop will provide a practical guide for single cell RNA sequencing (scRNA-Seq). We will discuss different scRNA-seq technologies, sample preparation strategies, and use cases. We will discuss analytical methods, including differential gene expression and integration across modalities and datasets, and how to access and use existing data.

Organizers: Seth Taylor, Brigham Young University and John Murray, University of Pennsylvania

1:15 p.m. Single-cell RNA sequencing technologies and datasets, Seth Taylor, Brigham Young University

1:23 p.m. Decoding sexual dimorphism of the sex-shared nervous system at single-neuron resolution, Meital Oren-Suissa, Weizmann Institute of Science

1:31 p.m. Pros, Cons, and Best Practices for Single-nucleus Sequencing, Jonathan St. Ange, Princeton University

1:39 p.m. Generating and mining neuronal scRNA-seq datasets across multiple Caenorhabditis species, Itai Toker, Columbia University

1:47 p.m. Integrative analysis and visualization of nematode single cell data, Chris Large, University of Pennsylvania

1:55 p.m. Pathway enrichment strategies for single cell data, Amy Walker, University of Massachusetts Medical School

2:03 p.m. Open Discussion

Sunday, June 29, 2025

1:15 p.m.–2:45 p.m.
Mondavi Center, Vanderhoef Studio Theater

WormBase Data at the Alliance of Genome Resources in 2025: Current Status and Plans

The Alliance of Genome Resources (www.alliancegenome.org) is a repository of integrated model organism data and will ultimately replace WormBase. This workshop will be an interactive session with a focus on key *C. elegans* data types at the Alliance, tools, and the microPublication and ACKnowledge community curation platforms.

Organizer: Ranjana Kishore, California Institute of Technology

1:15 p.m. WormBase data at the Alliance: what's there and not yet there. Chris Grove (10 min talk + 5 min Q&A)

1:30 p.m. Updates to the Alliance website: gene paralogy, sequence and extended disease models data. Ranjana Kishore (10 min talk + 5 min Q&A)

1:45 p.m. Alliance Tools for Worm Researchers. Chris Grove (10 min talk + 5 min Q&A)

2:00 p.m. Community Contributions to WormBase and the Alliance: how you can help keep data as up-to-date as possible. Kimberly Van Auken (10 min talk + 5 min Q&A)

2:15 p.m. Open Discussion. Q&A session with audience

Sunday, June 29, 2025

3:15 p.m.–5:40 p.m.
Mondavi Center, Jackson Hall

Plenary Session 2

Session Chairs: Javier Apfeld, Northeastern University, United States; and Jadiel Wasson, New York University, United States

3:15 p.m. RME-8, Master Regulator of Endosome and Lysosome Function **Barth Grant** Rutgers University

57 3:45 p.m. Giant KASH proteins, nuclear lamins, and ribosomes shape cytoplasmic biophysical properties *in vivo* **Xiangyi Ding** University of California, Davis

58 3:57 p.m. Cell lineage-resolved embryonic morphological map reveals novel signaling associated with cell fate and size asymmetry **Guoye Guan** Harvard Medical School and Dana-Farber Cancer Institute

59 4:09 p.m. An ancient and essential miRNA family controls cellular interaction pathways in *C. elegans* **Luisa Cochella** Johns Hopkins University School of Medicine

4:21 p.m. Coffee break

60 4:50 p.m. A 4D transcriptomic atlas for the *Caenorhabditis elegans* embryo **Ryan Christensen** Janelia Research Campus / HHMI

61 5:02 p.m. Glia-derived serotonin is required for nose touch responses in *C. elegans* **David Logan** University of Miami

62 5:14 p.m. Ribocin is a nuclease produced by the bacterial pathogen *P. aeruginos* that mediates a novel mode of host translational inhibition during infection of *C. elegans* **Alejandro Vasquez Rifo** UMass Medical School

5:26 p.m. A Nobel Moment with **Victor Ambros** UMass Chan Medical School and **Gary Ruvkun** Massachusetts General Hospital

Monday, June 30, 2025

8:30 a.m.–11:30 a.m.
Khaira Hall

Cell Biology 1

Session Chairs: Suzanne Angeli, University of Maine, United States; and Teresa Lee, University of Massachusetts Lowell, United States

63 8:30 a.m. The KASH protein UNC-83 differentially regulates kinesin-1 activity to control developmental stage-specific nuclear migration **Selin Gumusderelioglu** University of California Davis

64 8:42 a.m. Intestinal RICT-1 regulates the larval germline progenitor pool via the vitellogenin VIT-3 in *C. elegans* **Anke Kloock** NYU Grossman School of Medicine

65 8:54 a.m. The NUC-1 Exonuclease acts in the lysosomes of the engulfing cell to degrade apoptotic cell DNA **Jonathan Pickett** Baylor College of Medicine

66 9:06 a.m. A role for the spectrin cytoskeleton in cuticle alae patterning **Prioty Sarwar** University of Pennsylvania

67 9:18 a.m. Differential contributions of b-tubulin isotypes maintain a balance between microtubule-crosslinking and microtubule-severing activities in *C. elegans* oocyte spindles **Emmanuel Nsamba** Stanford University

68 9:30 a.m. AltZyxin, an alternative protein translated from the same transcript as Zyxin, regulates muscle biology **Noémie Frébault** Université du Québec à Montréal

69 9:42 a.m. A doublecortin-like kinase regulates the development of mechanosensory cilia **Adria Razzauti Sanfeliu** Boston Children's Hospital - Harvard Medical School

9:54 a.m. Coffee break

70 10:18 a.m. Elucidating the trafficking mechanism of electrical synapse components **Abhishek Bhattacharya** National Centre for Biological Sciences

71 10:30 a.m. RanGAP prevents premature centriole disengagement in the *C. elegans* germline **Laura Thomas** HHMI / Johns Hopkins University School of Medicine

72 10:42 a.m. Sexual dimorphisms in meiotic chromosome structures drive heat induced male infertility in *C. elegans* **Cori Cahoon** Colorado State University

73 10:54 a.m. The role of DNA topology in meiosis and genome integrity **Rui Jiang** University of California, Berkeley

74 11:06 a.m. Clathrin-mediated endocytosis associates with transient clusters of branched F-actin in the activated *C. elegans* oocyte **Archit Bhatnagar** Institute of Biotechnology of Czech Academy of Sciences, Prague

75 11:18 a.m. Deciphering the mechanisms regulating PIEZO channel membrane trafficking. **Milagros Rincon Paz** University of Florida

Monday, June 30, 2025

8:30 a.m.–11:30 a.m.
California Hall

Neurobiology 2 (Plasticity, Regeneration & Degeneration)

Session Chairs: Dhanya Cheerambathur, University of Edinburgh, Australia; and Chaogu Zheng, The University of Hong Kong

76 8:30 a.m. Effects of early life adversity on the adult brain of *Caenorhabditis elegans* **Giulio Valperga** Columbia University

77 8:42 a.m. Stage-specific circuit rewiring in *C. elegans* dauer preserves avoidance index but shortens reversal response **Daniel Choe** Seoul National University

78 8:54 a.m. NCAM (Neural Cell Adhesion Molecule) promotes synaptic remodeling in developing GABAergic neurons **Casey Gailey** Vanderbilt University

79 9:06 a.m. The histone methyltransferase *set-4* regulates expression of *unc-44* and *gap-2* and modifies GABA neuron remodeling **Michael Hart** University of Pennsylvania

80 9:18 a.m. The metalloprotease SUP-17/ADAM10 inhibits axonal repair **Keerthana Ponniah** Clem Jones Centre for Ageing Dementia Research, Queensland Brain Institute, The University of Queensland

81 9:30 a.m. GPX modulation promotes regenerative axonal fusion and functional recovery after injury through PSR-1 condensation **Lizhen Chen** University of Texas Health Science Center San Antonio

82 9:42 a.m. TFEB/HLH-30-mediated expansion of lysosomal capacity protects *C. elegans* neurons during aging **Ruiling Zhong** University of Wisconsin-Madison

9:54 a.m. Coffee break

83 10:18 a.m. UNC-40/DCC netrin receptor stabilization leads to sex-specific, selective dopaminergic neuron degeneration **Yehuda Salzberg** Weizmann Institute of Science

84 10:30 a.m. Epidermal Hormone Signaling Drives Sexually Dimorphic Degeneration of Dopaminergic Neurons in Later Life **Xia-Jing Tong** ShanghaiTech University

85 10:42 a.m. Optogenetic control of TDP-43 aggregation in *C. elegans* as an ALS model **Kyung Won Kim** Hallym University

86 10:54 a.m. Regulation of local translation of Flippases by OMA-1/ZFP36L is required for axon degeneration **Zhongwei Qu** Duke University Medical Center

87 11:06 a.m. Investigating lysosomal-autophagy pathway dysfunction in a *C. elegans* model of tau and TDP-43 synergy **Heino Hulsey-Vincent** University of Washigton

88 11:18 a.m. Potassium Homeostasis Regulates Presynaptic Organization Independent of Membrane Potential **Jun Meng** KU Leuven

Monday, June 30, 2025

8:45 a.m.–11:45 a.m.
Activities & Recreation Center Ballroom

Development 2 (Cell Biology & Signaling)

Session Chairs: Aimee Jaramillo-Lambert, University of Delaware, United States; and Patrick Narbonne, Universite du Quebec Trois-Rivieres, Canada

89 8:45 a.m. Building the Cell Observatory: Project Worm **David Matus** University of California Berkeley

90 8:57 a.m. Deep-learning based automated reconstruction of anatomical axis coordinates in developing *C. elegans* larvae **Jeroen van Zon** AMOLF

91 9:09 a.m. Single-cell-RNA-sequencing reveals novel cell- and non-cell-autonomous roles for a conserved terminal selector gene **Jayson Smith** University of Chicago

92 9:21 a.m. A genetic approach to identifying egg specific fertilization genes and the role of glycans in this process **Katherine Maniates** Rutgers University

93 9:33 a.m. Evolutionary diversification of actomyosin-driven early embryo morphogenesis **Teije Middelkoop** Institute of Molecular Genetics

94 9:45 a.m. Regulation of cell polarity orientation by expression gradients of Wnt receptors **Hitoshi Sawa** National Institute of Genetics

95 9:57 a.m. The Raf/LIN-45 C-terminal distal tail segment negatively regulates signaling in *Caenorhabditis elegans* **Claire de la Cova** University of Wisconsin-Milwaukee

10:09 a.m. Coffee break

96 10:33 a.m. PP1cb functions with myosin phosphatase-targeting subunits to promote anterior enclosure during embryogenesis **Neha Varshney** University of California San Diego

97 10:45 a.m. Insulin signaling acts in the somatic gonad to regulate dauer entry in *C. elegans* **Julia Wittes** Columbia University

98 10:57 a.m. Formylglycine and an alternative maturation system regulate nematode sulfatases **Catia Igreja** Max Planck Institute for Biology

99 11:09 a.m. Ras switching from Raf to RalGEF during VPC induction: basal vs. apical recruitment **David Reiner** Texas A&M University

100 11:21 a.m. Neighboring tissues align apical surfaces via cell-cell contact and HMR-1-mediated signaling to enable continuous digestive tract formation **Lauren Cote** Stanford University

101 11:33 a.m. *Steinernema hermaphroditum* is a genetically tractable nematode with a highly plastic body size and cell number **Chieh-Hsiang Tan** California Institute of Technology

Monday, June 30, 2025

8:45 a.m.–11:45 a.m.
UC Davis Conference Center, Ballroom

Ecology and Evolution

Session Chairs: Tim Crombie, Florida Institute of Technology, United States; and Lisa van Sluijs, Wageningen University and Research, Netherlands

102 8:45 a.m. The retention landscape of interspecies hybridization is driven by selfish elements in minor genome **Yanwen Shao** City University of Hong Kong

103 8:57 a.m. Non-uniform inheritance of mtDNA among wild isolates of *C. elegans* reveals natural variation in mitochondrial purifying selection **Samantha Fiallo** UC Santa Barbara

104 9:09 a.m. Lineage-resolved analysis of embryonic gene expression evolution in the *Caenorhabditis* nematodes **Christopher Large** University of Pennsylvania

105 9:21 a.m. Analysis of *Caenorhabditis* tetraploids reveals the mechanisms underlying Haldane's rule **Ronald Ellis** Rowan Virtua SOM

106 9:33 a.m. A genome-wide association study of *Caenorhabditis elegans* quantitative behaviors **Maya Mastronardo** Johns Hopkins University

107 9:45 a.m. The population genomics of *Caenorhabditis tropicalis* **Bowen Wang** Johns Hopkins University

108 9:57 a.m. Signals of recent adaptive evolution in the genomes of *C. remanei* and *C. latens* **Daniel Fusca** University of Toronto

10:09 a.m. Coffee break

109 10:33 a.m. The 959 Nematode Genomes Project: the first 100 genomes **Martha Mercy Mulongo** Wellcome Sanger Institute

110 10:45 a.m. RNAi in pooled populations enables high-throughput detection of background-dependent effects **Stefan Zdraljevic** UCLA

111 10:57 a.m. SRD-12: A novel olfactory GPCR for regulating foraging in *C. elegans* **Ritika Siddiqui** University of Dundee

112 11:09 a.m. *Caenorhabditis* nematodes self-assemble into living towers for collective dispersal **Serena Ding** Max Planck Institute of Animal Behavior

113 11:21 a.m. Identification of a potential mucin required for bacterial adherence to the intestinal epithelium of *C. elegans* **Cayla Cruse** San Diego State University

114 11:33 a.m. From cytosol to centrosome: the evolution of novelty through the lens of a selfish element **Julian Ross** Institute of Molecular Biotechnology (IMBA)

Monday, June 30, 2025

1:15 p.m.–2:45 p.m.
Mondavi Center, Jackson Hall

Emerging Genetic Tools for *C. elegans*

There has been tremendous progress on new genetic tools for *C. elegans* in the past few years. The goal of the workshop is to present emerging genetic tools to make transgenes, manipulate gene activity, and tag endogenous proteins, which we believe will benefit the entire worm community.

Organizers: Han Wang and Michael Nonet

1:15 p.m. Creating and manipulating transgenes with recombinases, Michael Nonet, Nonet lab, Washington University in St. Louis

1:27 p.m. A site-directed and swappable gene trap strategy for simultaneous gene disruption and transgene control in *C. elegans*, Han Wang, Wang lab, University of Wisconsin–Madison

1:39 p.m. Creating modular gene tags, Adam Hefel, Jorgensen lab, University of Utah

1:51 p.m. Library based transgenesis and gene targeting using TARDIS, Megan Moerdyk-Schauwecker, Phillips lab, University of Oregon

2:03 p.m. FLInt 2.0: a high-precision method for transgene integration in *C. elegans*, Nawaphat Malaiwong, previously at Krieg lab, ICFO at Spain; and now at O'Donnell's lab, Yale University

2:15-2:45 pm General discussion

Monday, June 30, 2025

1:15 p.m.–2:45 p.m.
Khaira Hall

Extracellular Matrix: A New Era of Tools and Discovery

A recent burst of publications has revealed the extraordinary complexity and dynamics of the extracellular matrix (ECM), from basement membrane to cuticle and sensory endings. This student-organized workshop will bring the *C. elegans* ECM community together to share discoveries, discuss current methods and available tools, and identify open questions.

Organizers: Rachel Swope, Harvard Medical School, Boston Children's Hospital and Jack Clancy, University of California Santa Cruz

1:15 p.m. The ciliary matrix, Rachel Swope, Harvard Medical School, Boston Children's Hospital

1:30 p.m. Experimental considerations for study of *C. elegans* lysosomal proteins, Jack Clancy, University of California, Santa Cruz

1:45 p.m. Beyond the Basement: Non-canonical roles for basal lamina proteins in *C. elegans* touch neurons, Alakananda Das, California Institute of Technology

2:00 p.m. Patterns in the Matrix: Revealing apical ECM architecture with fluorescent protein tagging, Pooranachithra Murugesan, University of California, San Diego

2:15 p.m. Spatial and temporal dynamics of the pre-cuticle, Helen Schmidt, University of Pennsylvania

2:30 p.m. Panel Discussion

Monday, June 30, 2025

1:15 p.m.–2:45 p.m.
UC Davis Conference Center, Ballroom

Novel Methods to Investigate Cell-type Identity and Diversity Throughout Development and Aging

This workshop will highlight novel methods and applications for cell-subtype identification, genetic inventories, and physiologies (e.g., for neurons and glia), throughout development and aging. We aim to connect scientists in need of these tools with toolmakers, sparking collaborative projects and future innovations that serve community needs.

Organizers: Eviatar Yemini, UMass Chan Medical School, Saba Baskoylu, MIT and Steven Flavell, MIT

1:15 p.m. Introduction 1:25 p.m. Sensory stimuli control *C. elegans* arousal via a defined set of integrator neurons that have diverse temporal properties, Saba Baskoylu (Steven Flavell Lab), MIT

1:35 p.m. GliaPAL: A multicolor fluorescent strategy for invariant labeling of *C. elegans* glia, Liza Severs (Aakanksha Singhvi Lab), Fred Hutchinson

1:45 p.m. A neurotransmitter atlas of *C. elegans* males and hermaphrodites–insights and applications, Chen Wang (Hobert Lab), Columbia University

1:55 p.m. Single-nucleus RNA sequencing (snRNAseq) for *C. elegans* research, Max Gao (Meng Wang Lab), HHMI Janelia Research Campus 2:05 p.m. Analyzing transcriptomic data – biological insights from theory to function, Hagar Setty (Meital Oren-Suissa Lab), Weizmann Institute of Science

2:15 Community Discussion

Monday, June 30, 2025

1:15 p.m.–2:45 p.m.
Alumni Center, AGR Hall

Peer into Publishing Q&A

Organizer: Ruth Isaacson

The GSA Journals are hosting a question and answer session with editors from GENETICS and G3. Join us at the session to learn more about submitting to the journals, the peer review process, and publishing with Society journals.

Monday, June 30, 2025

1:15 p.m.–2:45 p.m.
California Hall

Peering into Centrosomes and Cilia

Centrosomes and cilia, small organelles crucial for cell division, morphogenesis, and signaling, pose challenges due to their size, complex molecular composition, and diverse functional roles. This workshop brings together the *C. elegans* centrosome and cilia community to discuss how new techniques reveal aspects of their function and regulation in vivo.

Organizers: Adrià Razzauti Sanfeliu, Boston Children's Hospital and Harvard Medical School; and Jeremy Magescas, Stanford University

1:15 p.m. Introduction, Jeremy Magescas and Adria Razzauti

1:25 p.m. Exploring the centriolar foundation of PCM matrix assembly, Wanying Tian, University of California San Diego

1:35 p.m. Super-resolution imaging of ciliary EV release and cargo sorting in real time, Juan Wang Ph.D., Rutgers University

1:45 p.m. Mechanisms of Sensory Cilia Regrowth, Kirsten Judge, Brandeis University

1:55 p.m. Inactivating the microtubule organizing capacity of the centrosome is required for neuronal development, Jessica Feldman Ph.D., Stanford University

2:15 p.m. Panel discussion

Monday, June 30, 2025

3:00 p.m.–5:45 p.m.
Mondavi Center, Jackson Hall

Plenary Session 3 and Keynote Address

Session Chairs: Te-Wen Lo, Ithaca College, United States; and Ho Yi Mak, Hong Kong University of Science and Technology, Hong Kong

3:00 p.m. The apical ECM and why you need to know about it! **Meera Sundaram** University of Pennsylvania Perelman School of Medicine

115 3:30 p.m. Reconstituting the force transmission pathway during touch – revisiting the role of stomatin-microtubule interaction **Neus Sanfeliu-Cerdán** ICFO - The Institute of Photonic Sciences

116 3:42 p.m. Programmed DNA elimination was likely present in the last common ancestor of *Caenorhabditis* nematodes **Lewis Stevens** Wellcome Sanger Institute

117 3:54 p.m. Proteolytic cleavage of synaptic adhesion molecules regulates aversive learning in *Caenorhabditis elegans* **Yu-Hsuan Liu** National Taiwan University

118 4:06 p.m. Molecular patterns of evolutionary changes throughout the whole nervous system of multiple nematodes species **Itai Antoine Toker** Columbia University

4:18 p.m. Coffee break

4:45 p.m. Introduction of Keynote Speaker **JoAnne Engebrecht**

4:48 p.m. Illuminating mechanisms of genome inheritance **Anne Villeneuve** Stanford University

Tuesday, July 1, 2025

8:30 a.m.–11:30 a.m.
California Hall

Neurobiology 3 (Circuits & Behavior)

Session Chairs: Serena Ding, Max Planck Institute of Animal Behavior, Germany; and Maria Purice, Oregon State University

119 8:30 a.m. *C. elegans* avoids *Todstoff*, a novel necrotaxis cue from dead worms **Erik Toraason** Princeton University

120 8:42 a.m. Dopamine signaling drives skin penetration by mammalian-parasitic nematodes **Ruhi Patel** University of California, Los Angeles

121 8:54 a.m. A variant ionotropic receptor expressed exclusive in the I3 pharyngeal enteric neuron senses salts to regulate high salt stress **Laurie Chen** Brandeis University

122 9:06 a.m. Working Memory in *C. elegans* emerges from internalized distributed motor command oscillators **Raymond Dunn** University of California, San Francisco

123 9:18 a.m. Why Deprivation Makes Food Taste Better? **Diego Rayes** Instituto de Investigaciones Bioquímicas de Bahía Blanca (CONICET)-Dtto. Biologia, Bioquímica y Farmacia (UNS)

124 9:30 a.m. Modeling antagonistic sensors and directional confidence in *C. elegans* chemotaxis **Xuan Wan** Caltech

125 9:42 a.m. Cold and Lithium delay forgetting of olfactory memories in *C. elegans* **Kesem Goldstein** Tel Aviv University

9:54 a.m. Coffee break

126 10:18 a.m. Hierarchical Competing Inhibition Circuits Govern Motor Stability in *C. elegans* **Shangbang Gao** Huazhong Univ. of Sci. & Tech.

127 10:30 a.m. The molecular coding of intercellular Ca^{2+} waves of the defecation motor program **Rebekka Anderson** UMass Chan Medical School

128 10:42 a.m. Fertility reversibly modulates *C. elegans* behavior via gonad to nervous system signaling **Emily Bayer** University of Basel

129 10:54 a.m. Context-dependent serotonin signaling links dietary quality to foraging decisions **Likui Feng** The Rockefeller University

130 11:06 a.m. Identification of a kin-recognition receptor in *Pristionchus pacificus* **Fumie Hiramatsu** Max Planck Institute for Neurobiology of Behavior – caesar

131 11:18 a.m. The role of cAMP-Dependent Protein Kinase A Signaling in *C. elegans* Nociception and Nociceptive plasticity **Parvathi Sushama Gopinath** University of Fribourg

Tuesday, July 1, 2025

8:30 a.m.–11:30 a.m.
Khaira Hall

Physiology 2 (Aging & Stress)

Session Chairs: Arjumand Ghazi, University of Pittsburgh School of Medicine, United States; and Carlos Silva-García, Brown University

132 8:30 a.m. Eukaryotic Elongation Factor 2 Kinase EFK-1/eEF2K promotes starvation resistance by preventing oxidative damage in *C. elegans* **Junran Yan** University of British Columbia

133 8:42 a.m. A Nose for Trouble: Oxidant Detection in Olfactory Neurons Mediate Stress Responses in *C. elegans* **Victoria Yarmey** NC State University

134 8:54 a.m. LIN-39 functions as a neuron-specific developmental determinant of longevity in *Caenorhabditis elegans* with reduced insulin/IGF-like signaling **Christian Riedel** Stockholm University

135 9:06 a.m. Tissue-specific roles for the miRNA Argonaute ALG-1 in healthy aging **Corrina Elder** UC San Diego

136 9:18 a.m. Adenylosuccinate Synthetase Is Required for Neuromuscular Health – Insights into Its Biological Functions and Implications in ADSSL1-Myopathy **Rishika Patil** The Pennsylvania State University

137 9:30 a.m. A novel cell non-autonomous mitochondrial stress response pathway mediated by gas sensing machinery **Rebecca Cornell** Monash University

138 9:42 a.m. RNA editing in response to mitochondrial dysfunction drives accelerated aging **Sean Curran** University of Southern California

9:54 a.m. Coffee break

139 10:18 a.m. From Reproduction to Aging: Investigating the Physiological Roles of NAD^+ Metabolism and Signaling **Abdulkareem Alshaheeb** The Pennsylvania State University

140 10:30 a.m. Raptor-RagA-Interacting residues control hypoxic sensitivity, development, and lifespan **Chun-Ling Sun** University of Washington

141 10:42 a.m. Molecular mechanisms of *Bacillus subtilis*-induced protection against α-synuclein aggregation in *Caenorhabditis elegans* **Deep Prakash** University of Edinburgh

142 10:54 a.m. Endocytic recycling of DAF-2B in the nervous system **Matthew Gill** University of Minnesota

143 11:06 a.m. Brain-Gut Tyramine signaling promotes bacterial immunity through HLH-30/TFEB-Mediated mitophagy in *C. elegans* **Yu-Chun Wu** National Taiwan University

144 11:18 a.m. Ribonuclease DIS-3 promotes longevity by generating tRNA halves that reduce translation via binding ribosomal proteins **Gee-Yoon Lee** Korea Advanced Institute of Science and Technology

Tuesday, July 1, 2025

8:45 a.m.–11:45 a.m.
Activities & Recreation Center Ballroom

Cell Biology 2

Session Chairs: Joshua Meisel, Brandeis University, United States; and Inna Nechipurenko, Worcester Polytechnic Institute, United States

145 8:45 a.m. Extracellular vesicle (EV) profiling in *C. elegans*: new insights into cargo selection and cellular communication **Inna Nikonorova** Rutgers University

146 8:57 a.m. Lost in Translation No More: Midbodies as Hubs of RNA Activity and Large Extracellular Vesicle Biogenesis **Ahna Skop** Univ Wisconsin-Madison

147 9:09 a.m. Defining the impact of superoxide dismutase on extracellular vesicle biogenesis and cargo sorting **Nahin Siara Prova** University of Delaware

148 9:21 a.m. From the filament to the tissue: the impact of myosin filament stoichiometry on embryonic morphogenesis. **Daniel Plura** Sorbonne (IBPS)

149 9:33 a.m. GENTIS: A Nuclear Translocation Biosensor for Intracellular Ionic Stress in Live *C. elegans* **Zhijian Ji** Cardiovascular research institute UCSF

150 9:45 a.m. SPD-5 forms a dormant MTOC halo around sperm DNA **Jeremy Magescas** Stanford University

151 9:57 a.m. RAB-35 regulates distinct steps of trogocytosis in the biting and bitten cell **Julie Manikas** NYU School of Medicine

10:09 a.m. Coffee break

152 10:33 a.m. Single cell transcriptomics identifies MYRF-1/Myelin-regulatory factor as a novel transcriptional regulator of non-apoptotic cell death **Olga Yarychkivska** The Rockefeller University

153 10:45 a.m. Notch activity is modulated by the Adhesion GPCR Latrophilin binding to the Notch ligand LAG-2 **Willem Berend Post** Heinrich Heine University Düsseldorf

154 10:57 a.m. RME-1-associated Recycling Endosomes Participate in Vitellogenin Secretion in *Caenorhabditis elegans* **Chao Zhai** National Institute of Biological Sciences, Beijing

155 11:09 a.m. Non-canonical V-ATPase complexes regulate polarized membrane biogenesis **Liakot Khan** Massachusetts General Hospital and Harvard Medical School

156 11:21 a.m. Kinetochore dynein is sufficient to biorient chromosomes and remodel the outer kinetochore **Bram Prevo** University of Edinburgh

157 11:33 a.m. A small N-terminal region of the histone kinase HASP-1 is essential for its role in chromosome segregation in meiosis **India Rosario** University of Portland

Tuesday, July 1, 2025

8:45 a.m.–11:45 a.m.
UC Davis Conference Center, Ballroom

Genetics 2 (small RNAs and RNAi)

Session Chairs: Katherine McJunkin, NIH/NIDDK, United States; and Alicia Rogers, University of Texas Arlington, Australia

158 8:45 a.m. Dynamic Control of Argonautes by a Rapidly Evolving Immunological Switch **Chee Kiang Ewe** Tel Aviv University

159 8:57 a.m. Pleiotropic triggers underlying larval arrest in *mutator*-class mutants **Alicia Rogers** University of Texas Arlington

160 9:09 a.m. Maternal histone mRNA stabilization by piRNA biogenesis factors **Joana Pereirinha** Institute of Molecular Biology, Mainz

161 9:21 a.m. Heterochromatin readers CEC-3 and CEC-6 regulate the duration of transgenerational epigenetic inheritance in response to heat stress. **Phoebe Bhagoutie** University of Toronto

162 9:33 a.m. The unusual case of miRNAs in transgenerational epigenetic inheritance of the predatory mouth-form **Shiela Pearl Quiobe** Max Planck Institute for Biology

163 9:45 a.m. Multi-dimensional regulation of *lin-28* expression in the *C. elegans* heterochronic network **Charles Nelson** University of Massachusetts Chan Medical School

164 9:57 a.m. DAF-16/FOXO maintains multipotency during dauer though regulation of the transcription factor NHR-23/ROR and inhibition of the *let-7* miRNA family **Amelia Alessi** Johns Hopkins

10:09 a.m. Coffee break

165 10:33 a.m. 3’ Nucleotide asymmetry directs miRNA strand selection **Jeffrey Medley** Kansas State University

166 10:45 a.m. Investigating the composition of SIMR foci and germ granules using TurboID proximity labeling **Shihui Chen** University of Southern California

167 10:57 a.m. Muscle-Specific and Direct Transcriptional Targets of DAF-16/FOXO Activated by Reduced Insulin/IGF-1 Signaling **Wesley Hung** Lunenfeld-Tanenbaum Research Institute

168 11:09 a.m. Argonaute-siRNA loading via the RNA binding protein RDE-4 **Thiago Leite Knittel** Colorado State University

169 11:21 a.m. Genetically distinct silencing pathways monitor 5' and 3' splicing site defects in *C.elegans* **Min Li** UMass Chan Medical School

170 11:33 a.m. A lncRNA degrades an embryonic microRNA family in a noncanonical mechanism **Acadia Grimme** National Institute of Diabetes and Digestive and Kidney Diseases

Tuesday, July 1, 2025

1:30 p.m.–2:30 p.m.
Mondavi Center, Jackson Hall

Support of the Genetics Research Community: Challenges, Strategies and Inspiration

Dr. Pamela Padilla and Dr. Crystal D. Rogers will give presentations on their personal experiences of addressing challenges in the advancement of genetic research and their scientific careers. Through their research and community involvement they have worked to deal with the situations and obstacles faced by people in STEM. They will share strategies for how to handle issues that arise. After the talks, they will be joined by session chairs Javier Huayta and Aimee Jaramillo-Lambert for a panel discussion and to answer questions from attendees.

Wednesday, July 2, 2025

8:45 a.m. – 12:00 p.m.
Mondavi Center, Jackson Hall

Plenary Session 4

Session Chairs: Olufemi Akinkuoto, Texas Tech University School of Veterinary Medicine; and Eviatar Yemini, UMass Chan Medical School, United States

8:45 a.m. Poster Awards

171 9:00 a.m. Proximity Labelling at H3K9me3 Reveals VRK-1 as a Candidate Anti-Silencing Factor **William Smith** University of Bern

172 9:12 a.m. A *C. elegans* model of *PNPT1*-dependent hereditary hearing loss **Xu Bai** Life Sciences Institute, University of Michigan

173 9:24 a.m. Presynaptic adaptation of the co-transmitter AFD thermosensory neuron modulates navigation across a thermal gradient **Andrea Cuentas Condori** Yale University

174 9:36 a.m. Interspecies relationships and microbial ensembles shape Dauer formation in natural and extreme environments **Marcela Serey** Centro Interdisciplinario de Neurociencia de Valparaíso, Universidad de Valparaíso

175 9:48 a.m. Nictation: Neurons, Genes, and Connectome **Junho Lee** Seoul National University

10:18 a.m. Coffee break

176 10:48 a.m. SRS microscopy identifies inhibition of vitellogenesis as a mediator of lifespan extension by caloric restriction in *C. elegans* **Bowen Yang** UC Berkeley

177 11:00 a.m. The SPN-4 RNA-binding protein promotes maternal mRNA clearance during the oocyte-to-embryo transition **Erin Osborne Nishimura** Colorado State University

178 11:12 a.m. Dynamic regulation of the proteasome by ECPS-1/Ecm29. **Nicolas Lehrbach** Fred Hutchinson Cancer Center

179 11:24 a.m. The *C. elegans* Connectome Toolbox: consolidating and analyzing datasets of multimodal connectivity for *C. elegans* **Padraig Gleeson** University College London

180 11:36 a.m. A Molecular Balancing Act: X-Chromosome Dosage Compensation **Rajarshi Ghosh** HHMI / UC Berkeley

11:48 a.m. Closing Remarks

Poster Session Listings

Cell Biology

181A A hybrid non-motile Cilium requires motility apparatus for mechanosensation **Dhruvin Akbari** Simon Fraser University

182A Using a kinesin-1 auxin-inducible degron to investigate the roles of kinesin-1 in locomotion and dense core vesicle transport in *C. elegans* **Viki Allan** University of Manchester

183A Nuclear vesicle release during neuronal extrusion events **Rebecca Androwski** Rutgers University

184A Germline regulation of the intestinal mitochondrial unfolded protein response **Suzanne Angeli** University of Maine

185A Inward transport of organelles drives outward migration of the spindle during *C. elegans* meiosis **Alma Aquino** University of California, Davis - Davis, CA

186A Temporal Regulation of Longevity Due to Loss of OXPHOS Subunits **Seth Ashby** University of Maine

187A Expression patterns of EGFR ligands in *C. elegans* **Marine Barsegyan** California State University, Northridge (CSUN)

188A The microfluidic *C. elegans* imaging toolbox **Simon Berger** University of Zurich

189A LGL-1 and the RhoGAP protein PAC-1 act redundantly to control apical-basal polarity in the embryonic epidermis **Mike Boxem** Utrecht University

190A *C. elegans* huntingtin, *htt-1*, promotes robust autophagy induction and survival under stress conditions **Christine Chung** Seoul National University

191A Non-autonomous TIR-1/SARM1 and PMK-1/p38 MAPK orchestrate homeostatic downregulation of germline stem cell proliferation in *C. elegans* **Alexandre Clouet** Université du Québec à Trois-Rivières

192A Characterizing the sex-specific role of SYP-6 in spermatocyte heat sensi=vi **Karissa Coleman** Colorado State University

193A Repairing a broken gut: PAR-3 re-expression enables L1 larvae with cystic guts to repair into a functional and continuous gut **Lauren Cote** Stanford University

194A Alternative meiotic DNA repair pathways coordinate the repair of heat-induced DNA double strand breaks in *C. elegans* spermatogenesis **Caroline Crahan** University of Oregon

195A A novel tethering mechanism that drives the autophagosome-phagosome fusion in *Caenorhabditis elegans* **Omar Cruz Ramirez** Rice University

196A Loss of a VIMP ortholog in *C. elegans* reduces clearance of misfolded proteins at the endoplasmic reticulum (ER) but does not induce expression of an ER stress reporter **Caroline Dahlberg** Western Washington University

197A The acyl-CoA dehydrogenase ACDH-11 functions in the formation of lysosome-related organelles **Madeline Daniel** Lewis & Clark College

198A PLAA/UFD-3 regulates P-bodies through its intrinsic disordered domain **Alakananda Das** California Institute of Technology

199A The role of kinesin-1 in organizing the ER envelope around the meiotic spindle **Rebecca Do** University of California Davis

200A Exploring the Role of the Kinesin-8 KLP-13 and its Relationship to the NIMA-related Kinase NEKL-4 in Maintaining Ciliary Structure **Leah Dobossy** Rutgers University

201A Investigating the role of the AFD cilium in regulating AFD sensory ending structure and function **Priya Dutta** Brandeis University

202A The nature of mitochondrial DNA deletions dictates the cellular response to heteroplasmy **Samantha Fiallo** UC Santa Barbara

203A Sexually dimorphic morphology and heat-sensitive localization of PRG-1 aggregates in the *C. elegans* germline **Lily Francis** University of Oregon

204A Genetic Screen in *C. elegans* Uncovers Non-Canonical Autophagy Regulators **Joshua Gill** Louisiana State University

205A rRNA intermediates coordinate the structure of nucleolus in *C. elegans* **Shouhong Guang** University of Science and Technology of China

206A Genomic and live imaging analysis of programmed DNA elimination in *Caenorhabditis auriculariae* **Nami Haruta** Tohoku University

207A Investigating the initial formation and maintenance of gut granules **Greg Hermann** Lewis & Clark College

208A Characterizing kinetochore component HCP-1 germline condensates and its role for successful cell division in *C. elegans* **Hannah Hertz** The Ohio State University

209A Activity-dependent neuronal regulation of mitochondrial morphology and ROS production **Frederic Hoerndli** Colorado State University

210A Tetraspan protein SCAMP/SCM-1 maintains endosomal microdomains and membrane trafficking **Kam Hu** Rutgers

211A Frequent paternal mitochondrial transmission in *Caenorhabditis briggsae* hybrids **Liliana Huerta Mora** California State University, Fresno

212A The *C. elegans* WASH complex supports transport and microtubule function. **Patricia Irizarry** Rutgers Univeristy

213A Two tau tubulin kinases redundantly necessary for *C. elegans* sperm motility **Jenna Jablonski** William & Mary

214A A sperm-oocyte protein complex required for egg activation **Aimee Jaramillo-Lambert** University of Delaware

215A The immunoglobulin domain of SISS-1/EGF is critical for its function **Jesse Jones** California State University, Northridge

216A Katanin-mediated severing regulates microtubule patterning during neurite outgrowth. **Dane Kawano** Stanford

217B The coupling of global Actin self-organization and endocytosis in the developing *Caenorhabditis elegans* oocyte **Lily Zahwa Khamizan** New York University Abu Dhabi

218B FHOD-1 and profilin collaborate to promote muscle growth and protect sarcomeres from contractile damage in body wall muscle **Michael Kimmich** SUNY Upstate Medical University

219B The role of KFERQ motif in protein degradation **Robert Kinobe** The Graduate Center, City University of New York

220B Investigating the role of autophagy in stress granule dynamics and proteostasis **Laurel Koch** Buck Institute for Research on Aging

221B Cytoplasmic Kinetochore Linear Elements Regulate Vesicle Transport **Shane Kowaleski** Wayne State University School of Medicine

222B Intercellular glia-glia and glia-neuron interactions regulate AMsh glial apical boundary (GAB) **Alexandra Kravchuk** Fred Hutchinson Cancer Center

223B A sexually dimorphic role for HSF-1 in the production of heat-induced DNA damage in the germline **Nicole Kurhanewicz** University of Oregon

224B Analysis of cuticle remodeling induced by hypoxia exposure **Mary Ladage** University of North Texas

225B Challenges in Humanising *C. elegans*: Insights from the ciliary transition zone protein MSKR-2/B9D2 **Karen Lange** University College Dublin

226B Control of ciliary extracellular vesicles biogenesis in *C. elegans* **patrick laurent** Université Libre de Bruxelles

227B Identification of Gene Regulators of Germline Development in *C.elegans* **Sheldon Lawrence** Oxford College of Emory University

228B Y45G5AL.1 is a potential kinesin-1 interacting protein on the surface of yolk granules during meiotic spindle translocation **Denisa Lazureanu** University of California Davis

229B Endogenous expression patterns of canonical cell-death genes **Dongyeop Lee** HHMI/MIT

230B Multi-copy FLP Recombinase Expression Disrupts Glutamate Receptor Trafficking in *C. elegans* **Zephyr Lenninger** Colorado State University

231B Centrosome Maturation Inhibition during *C.elegans* Female Meiosis **Wenzhe Li** UC Davis

232B Understanding Axonal mRNA Localization Mechanism in *C. elegans* **Hui Yuan Lim** The University of Hong Kong

233B Tissue-Specific perinuclear localization of the APAF-1 homolog CED-4 **Mona Liu** Harvard Medical School

234B Genes Needed for Benomyl Resistance and Hypersensitivity in *Caenorhabditis elegans* **Sophie López** Columbia University

235B *C. elegans* IGEG-2 is a functional EGFR ligand **Melissa Mailhot** California State University, Northridge

236B Characterization of the Receptor Accumulation and Degradation in the Absence of Recycling (RADAR) pathway in *C. elegans* **Ho Yi Mak** Hong Kong University of Science and Technology

237B Dual screens of a *C. elegans* Joubert Syndrome model **Anastasios Mazarakis** University College Dublin

238B Modulating activities and/or targeting of protein kinases during meiosis by protein phosphatase complexes **Savannah McCoy** Stanford University

239B Identification of new players regulating uniparental mitochondria inheritance **Jorge Merlet** Sorbonne Université, CNRS, INSERM, Development, Adaptation and Ageing, Dev2A

240B A high-glucose diet decreases fertility in male *C. elegans* by reducing sperm size, competitiveness, and quantity **Michelle Mondoux** College of the Holy Cross

241B Reversible aggregation of nucleoporins under extreme heat shock **Paula Monterrubio Asensio** Andalusion Centre for Developmental Biology

242B Assessing heat-induced DNA damage in H3K9 methyltransferase mutants during *C. elegans* spermatogenesis **Daela Montgomery** University of Oregon

243B Optical manipulation of insulin-like signaling in *Caenorhabditis elegans* **Jim Mullin** Johns Hopkins University

244B Mechanotransduction in the *C. elegans* digestive tract requires the intermediate filament protein IFA-4 **HoJin Nam** DGIST

245B Visualizing the trafficking route of the polycystins LOV-1 and PKD-2 to cilia and extracellular vesicles in health and disease **Carlos Nava Cruz** Rutgers- The State University of New Jersey

246B Dissecting the contribution of giant KASH proteins to dendritic arborization **Alex Neupauer** UC Davis

247B Novel infection by *Mucor hiemalis* kills *Caenorhabditis* hosts through intestinal perforation **Jay Ni** West Chester University of Pennsylvania

248B Retrograde communication from peripheral tissues in modulating Neuronal Proteostasis and health **Khairun Nisaa** Brown University

249B Analysis of *rad-51* separation of function allele suggests divergence of the SDSA and dHJ pathways prior to RAD-51 filament disassembly **Joseph Oberlitner** University of Iowa

250B Investigating the molecular mechanism of reproductive dysfunction caused by transgenerational ethanol exposure **Iván Olaya** University of California, Los Angeles

251B CCPP-1 plays cilia-dependent and cilia-independent roles in fertility **Nina Peel** TCNJ

252C Spatial distribution of PLK-1 regulated by a nuclear envelope protein controls mitotic timing in *C. elegans* embryos **Victória Puccini de Castro** Yale University

253C An extragenic enhancer of the *pix-1* phenotype in muscle is *ipmk-1* **Hiroshi Qadota** Emory University

254C HUM-7, a type IX unconventional myosin, is a novel regulator of integrin adhesion complexes in *C. elegans* muscle **Hiroshi Qadota** Emory Univ

255C Investigating the role of a conserved 14-3-3 protein, FTT-2, in smooth muscle contractility **Mustafi Raisa Amin** Northeastern University

256C A model for non-muscle myosin based contractility in endosomal tubule fission **Wilmer Rodriguez** Rutgers University

257C Exploring Glycolysis in the Primary Cilium of Caenorhabditis elegans **Laura Romanelli Cedrez** Institut Pasteur de Montevideo

258C TBC-2, a RAB-5 GAP antagonizes Insulin signaling through endosomal regulation of CNK-1 **Soumyendu Saha** McGill University

259C Chromosomal rearrangements alter the crossover distribution **Takamune Saito** Kindai University

260C Genetic suppressor screen of separase mutants identifies cohesin subunits **Cody Saraceno** Wayne State University

261C Intermediate filaments shape host-microbe interactions in C. *elegans* **Jadirah Sarmad** Institute of Molecular and Cellular Anatomy, RWTH Aachen University

262C The CYK-4 GAP domain regulates the cortical targeting of centralspindlin to promote positive feedback during contractile ring assembly and facilitates ring dissolution **Aleesa Schlientz** University of California, San Diego

263C Defining the mechanism of action of the chromosomal passenger complex during cytokinesis **Aleesa Schlientz** University of California, San Diego

264C Uncovering the role of the CELF/Bruno protein ETR-1 in germline apoptosis **Farzaneh Shahabi** Howard University

265C Comparison of SEL-12 and HOP-1 presenilin protein distribution in *C. elegans* embryos **Bryan Shi** Amherst College

266C Regulation of MSP polymerization by a CK1 kinase and an intrinsically disordered protein **Nirvanjyoti Sharma Shimul** William & Mary

267C Characterization of telomere binding proteins in *Caenorhabditis elegans* **Jan Sluka** Friedrich-Loeffler-Institut

268C Strategies toward the identification of telomerase RNA component in the nematode **Hobum Song** Seoul National University

269C Exploring tissue-specific mechanisms and requirements for Nucleolin organization **Emily Spaulding** MDI Biological Laboratory

270C Deciphering Synaptonemal Complex Protein Networks: A Cross-Species Perspective **Autumn Stronach** Marquette University

271C An *ex ovo* culture protocol for *Caenorhabditis elegans* embryos **Clover Stubbert** University of California Los Angeles

272C Assembly and Clearance of the Pre-cuticle matrix **Meera Sundaram** University of Pennsylvania School of Medicine

273C Dying cells are recognized by transthyretin-like TTR-53 for phagocytosis **Dylan Suriadinata** Texas A&M University

274C The shift in DSB repair pathway choice is executed in mid-pachytene in *C. elegans* meiosis. **Hui Tian** University of Iowa

275C Targeted RNAi screens reveal novel regulators of RNA-binding protein phase transitions in *Caenorhabditis elegans* oocytes **Victoria Tice** Central Michigan University

276C LINCing lifespan to cytoplasmic biophysics: Giant KASH proteins regulate age-dependent changes in *C. elegans* cellular architecture **Zoe Upham** University of California Davis

277C FISH Analysis of Programmed DNA Elimination in *Caenorhabditis auriculariae* **Naoki Uwatoko** Graduate School of Life Sciences, Tohoku University

278C Inhibitor-2 motif docking onto Protein Phosphatase 1 mediates hand-off to adapters involved in chromosome segregation **Neha Varshney** University of California San Diego

279C Using MAPH-9 to investigate the formation and maintenance of microtubule doublets **Nabor Vazquez Martinez** Stanford University

280C Identification of resistance alleles to intracellular infection using natural variation in *Oscheius tipulae* **Candyd Lace Velasquez** San Diego State University

281C Organelle crosstalk among mitochondria, cilia, and extracellular vesicles **Juan Wang** Rutgers University

282C Investigating the role of H3K9 methylation in heat-induced transposon excision **Hannah Wilson** University of Oregon

283C Nascent Protein Synthesis in Male Meiosis I Drives the MI-MII Transition Through PLK-1-Dependent Centrosome Maturation **Jui-ching Wu** National Taiwan University

284C Twisting Cytokinesis: Cell Adhesion and Cortical Flow Underlie Chiral Morphogenesis in *Caenorhabditis elegans* Embryos **YuXuan (Rain) Xiong** University of British Columbia

285C Exploring endogenous genes associated with exopher increase and probing exopher-associated proteins **Yongzhi Yang** Rutgers University

286C Mining Disorder for New Fertility Loci **Judith Yanowitz** Magee-Womens Research Institute/U. Pittsburgh

287C Conversion of chromosome type from holocentric to monocentric by constructing an artificial kinetochore **Hiroki Yoshida** Graduate School of Life Sciences, Tohoku University

Development

288A Homeodomain transcription factors delineate glial diversity **G. Robert Aguilar** Columbia University

289A Identification of the spatial requirement(s) of the DAF-2 insulin receptor in food type-dependent oogenesis onset and fertilization in *C. elegans* **Asra Akhlaq** Wayne State University

290A Notch pathway regulation of reproductive aging in germline stem cells **Aaron Anderson** Washington University

291A Understanding the role of an essential microRNA during early development in *C. elegans* **Orazio Bagno** Johns Hopkins University

292A Distinct polarity feedback loops regulate the enrichment of the MEX-5 and MEX-6 proteins via PLK-1 **Sofia Barbieri** University of Geneva

293A *spe-58* is a new regulator of sperm development in *Caenorhabditis elegans* **Lyna Benhammou** St. John's University

294A Three is a Crowd: Sometimes CED-2 Works with CED-5 and CED-12...Sometimes it Doesn't **Victoria Brown** Rutgers University New Brunswick

295A Cold shock domain protein LIN-66 coordinates developmental cell fate via microRNA pathway in *C. elegans* **Reyyan Bulut** UMass Chan Medical School

296A The collagen COL-177 is required for COL-53 localization at specialized sensory aECM **Julia Burnett** Harvard Medical School

297A Uncovering mechanisms that govern nucleolar organization and nuclear translation **Wei Cao** Monash University

298A Clathrin regulates nucleolar organization - who knew? **Wei Cao** Monash University

299A Programmed DNA Elimination in *Auanema rhodense* **Tsz Wai Chan** University of Warwick

300A Implication of the BORC complex in homeostatic regulation of germline stem cell proliferation in *C. elegans* **Armi Manharbhai Chaudhari** Universite du Quebec A Tois-Rivieres

301A Non-autonomous insulin signaling delays mitotic progression in *C. elegans* germline stem and progenitor cells **Eric Cheng** McGill University

302A Two *C. elegans* VCP Homologs, CDC-48.1 and CDC-48.2, are Upregulated During Oocyte Development and Respond to Germline Protein Stress **Md Helal Uddin Chowdhury** Louisiana State University - Baton Rouge

303A Regulation of metalloprotease activity during apical extracellular matrix remodeling **John Clancy** University of California, Santa Cruz

304A Defining the Molecular and Physiological Consequences of the Loss of miRNA Mediated Regulation of the *C. elegans* Notch Receptor *lin-12* **Eric Cormack** Johns Hopkins School of Medicine

305A A conserved insulin signaling pathway in the parasitic nematode *Brugia malayi* **Kirsten Crossgrove** Univ Wisconsin, Whitewater

306A Investigating P granule function in *Caenorhabditis* nematodes **Andrew Delvoye** Marquette University

307A LEM-3/Ankle1 nuclease prevents the formation of syncytium and safeguards neuronal differentiation in *C. elegans* **Siyu Deng** The University of Hong Kong

308A Genetic interactions impacting sperm competence and oocyte maturation **Anita Fernandez** Fairfield University

309A *mpk-1* promotes germline stem cell proliferation from the soma via direct stimulation of cytidine deaminases **Lloyd Venceslas Fotso Dzuna** Université du Québec à Trois-Rivières

310A Targeting cyclic Nucleotide Phosphodiesterases as potential nematicides using chemical and molecular agents **Kranti Galande** University of New Hampshire

311A Control of cell-cycle transitions by heterochronic factor LIN-14 in the *C. elegans* intestine **Matilde Galli** Hubrecht Institute

312A Determining the essential roles of CRM-1 (cysteine rich transmembrane BMP regulator 1) in the absence of BMP signaling **Dillon Gardner** Cornell University

313A ZTF-30: a transcription factor required for coordinated dauer stage remodeling **Luciana Godoy** Universidad Maimonides

314A BUB-1 functions post-mitotically in the epidermis to drive embryonic elongation **Rebecca Green** UCSD

315A Molecular and genetic interactions between the DBL-1/BMP signaling pathway and BLMP-1/BLIMP1 regulate organismal traits in *Caenorhabditis elegans* **Tina Gumienny** Texas Woman's University

316A Identification of a new gene important to sperm activation in *C. elegans* **Anushree Suvrutt Gurjar** University of Delaware

317A Light exposure affects mouth-form plasticity through oxidative stress in *Pristionchus pacificus* **Hirokuni Hiraga** Hiroshima University

318A Implication of the HSP110/70/40 chaperone complex in germline protein aggregate management and developmental control **Emily Hirsch** University of Iowa

319A Developing genetic markers for neuronalIdentification in *Pristionchus pacificus* **Ray Hong** Cal State U Northridge

320A Canonical and non-canonical Hippo signaling during development **Linh Huynh** Texas A&M University

321A Characterization of a new uterine eggshell layer in the nematode *C. elegans* **Sara Olson** Pomona College

322A An auxin-inducible degradation-based toolkit for tissue-specific protein degradation during *C. elegans* embryogenesis **Noura Yassir** UCSD

323B Toward cloning of genes regulating developmental speed **Kaho Ieda** Nagoya City Univ

324B Full-length TRA-1 is a Gli activator that requires TRR-1 to function **Jibran Imtiaz** Rowan-Virtua SOM

325B The role of neuropeptides in developmental progression and arrest **Erin Jackson** Muhlenberg College

326B The PP2A complex, the scaffold RACK-1, and 14-3-3 proteins interact with EXC-4/CLIC to regulate excretory canal outgrowth **Jordan Jesse** University of Illinois Chicago

327B Screening for Invasion Inhibitors: Insights from *In Vivo* and *In Vitro* Systems **Weichen Kao** University of Zurich

328B Suppressor screens of ddx-15 helicase do not show interacting partners **Jonathan Karpel** Southern Utah Univ

329B The AP-1 clathrin adaptor complex differentially regulates LIN-12/Notch signaling **Tatsuya Kato** Research Institute of the McGill University Health Centre

330B Novel regulatory interactions in *C. tropicalis* sex determination **James Kennedy** Rowan-Virtua SOM

331B Role of TXBP-3 in regulating spermathecal contractility through Rho Signaling in *C. elegans* **Maria Khalid** Northeastern university

332B Reproductive consequences of developmental arrest and evolutionary changes in lab cultured *C. elegans* **Ashley Kim** Muhlenberg College

333B unc-32 interferes with EMS spindle orientation and the cell cycle of the E-blastomere **Jiyu Kim** University of Cologne

334B Role of MAB-3 in robustness of morphogenesis **Karin Kiontke** New York University

335B *pde-2* regulation by FBF proteins is crucial for brood size maintenance in *Caenorhabditis elegans* **Kamal Kishore** Indian Institute of Science

336B The mitochondrial trans-2-enoyl-coA reductase is necessary for oogenesis in *C. elegans* **Peter Kropp** Kenyon College

337B An Ultrastructural Time Series Covering *C. elegans* Embryogenesis **Eric Krueger** HHMI Janelia Research Campus

338B Context-dependent Ligand Activity of TGF-β signaling in Innate Immunity of *C. elegans* **VenkataKrishna Lappasi Mohanram** Queens College

339B Cyclin B3 coordinates cell division with cell fate specification during *C. elegans* early embryogenesis **Pablo Lara-Gonzalez** University of California Irvine

340B Stress prevents sex-specific muscle remodeling in males lacking ATFS-1 **Brigitte LeBoeuf** Texas A&M Univ

341B Dissecting the role of dhhc-8, a palmitoyl transferase, in fertility in *C. elegans* **Aastha Lele** Rutgers University

342B MIG-21 is a novel regulator of Wnt and Netrin signaling in gonad migration identified from published scRNA-seq data and functionally validated in *C. elegans* **Xin Li** University of North Carolina, Chapel Hill

343B Temporal Analysis of Embryonic Epidermal Morphogenesis in *Caenorhabditis elegans* **Fangzheng LI** Ritsumeikan University

344B The ubiquitin-ligase HECD-1 counteracts conversion of germ cells to neurons **Qinming Li** Institute of Cell and Systems Biology of Animals, University of Hamburg, Germany

345B Investigation of dauer entry genes and role of phase separation during dauer molt **Daisy Lim** Seoul National University

346B HSP90 co-chaperones promote GLP-1/Notch signaling during germline and embryonic development in *C. elegans* **James Lissemore** John Carroll University

347B The Secreted Protein SPE-36 is Dependent on Multiple Proteins for Proper Localization in *C. elegans* Sperm **A'Maya Looper** University of Delaware

348B Systematic perturbation of NOTCH signaling activity and its application in drug discovery **Xin Luo** University of Zurich

349B A redundant GATA factor network specifies gut in *Pristionchus pacificus* **Morris Maduro** University of California, Riverside

350B Development of a Deep Learning-Based System for Cell Classification to Elucidate Cell Fate Mechanisms in Early *C. elegans* Embryos **Isseki Maeda** Ritsumeikan University

351B Deciphering the pathways that maintain mitochondrial uniparental maternal inheritance **Valentine Melin** Sorbonne-Université, CNRS, INSERM

352B Uncovering the function of XOL-1, the binary switch protein governing sex determination and dosage compensation in *Caenorhabditis elegans*. **Hector Mendoza** University of Michigan

353B Class I histone deacetylase HDA-3 is involved in the regulation of oogenesis in *Caenorhabditis elegans* **Tomoki Mimura** Graduate School of Life Sciences, Ritsumeikan University

354B Serine/Threonine Phosphatase SPE-57 is Involved in the Genetic Regulation of Sperm Activation **Emily Mincher** St. John's University

355B Multi-pathway post-transcriptional regulation of SCFPROM-1 in *C. elegans* germline. **Ariz Mohammad** Washington University in St Louis

356B Machine-learning-assisted analysis of *C. elegans* developmental parameters using a high-throughput microfluidic technology **Sudip Mondal** vivoVerse

357B Spatial control of expression of the LIN-31/FOXB transcription factor and exploration of its role in VPC fate patterning **Snigdha Musugunthan** Texas A&M University

358B Structure-Function Analysis of the LET-99 Protein During Asymmetric Division **Y Vy Nguyen** University of California, Davis

359C Temporal Scaling Properties of Cell Cycle Phases During Embryogenesis **Neil Peinado** University of California, Los Angeles

360C Is the intracellular domain of LAG-2 ligand required for germline Notch signaling? **Yang Peng** Amherst College

361C WEE-1.3 is required for proper chromosome segregation during *C. elegans* spermatogenesis **Shannon Pfeiffer** University of Delaware

362C Roles of PAR-1 and NTL-9 in apico-basolateral polarity in the intestine **Melissa Pickett** The College of Idaho

363C Insulin signaling in the somatic gonad regulates dauer entry and contributes to coupling gonad development with the non-gonadal soma in *C. elegans* **Grace Przybyl** Columbia University

364C Nutritional status-inked dual cleavage control of MYRF as a gating mechanism for *C. elegans* larval stage transition **Yingchuan Qi** ShanghaiTech University

365C The kinesin KLP-20 directly interacts with miRISC component VIG-1 and regulates the *let-7* miRNA during epidermal morphogenesis **Dan Quesnelle** Queen's University

366C Characterizing the role of *spe-57* in spermiogenesis through a temperature-sensitive allele *as47* **Allison Ramz** Saint John's University

367C Exploring Connections between Dystrophinopathies and Autism Spectrum Disorder: Investigating the Role for *dys-1* in *C. elegans* Social Feeding Behavior **Ava Remoll** Ithaca College

368C Histone methyltransferases differentially regulate transcription and chromosome structure in oogenesis and spermatogenesis **Carolyn Remsburg** University of Delaware

369C Intestinal morphology guides the placement of the gonad along the left-right body axis **Bryn Romig** Lewis & Clark College

370C Searching for Asymmetry During the Asymmetric Division of the EMS Cell **Lesilee Rose** Univ California, Davis

371C Intentionally left blank

372C Investigation of ABCF-1 as a Regulator of *C. elegans* Developmental Protein Aggregation **Daniela Santos Da Mata** University of Iowa

373C Decoding vulval cell identity: Insights from single-nucleus RNA Sequencing **Helen Schmidt** University of Pennsylvania

374C A sequencing-based, whole animal screening method identifies regulators of EGFR signaling in *Caenorhabditis elegans* **Hillel Schwartz** California Institute of Technology

375C Characterizing the Transdifferentiation of the Steroidogenic Neuroendocrine Cell XXX in *C. elegans* **Njeri Sparman** Columbia University

376C Investigating the association between FBF-1 function and germ granule compartment organization in *C. elegans* germlines **Camille Spencer** University of Montana

377C Collagen-Mediated Regulation of Distal Tip Cell Migration Cessation in *Caenorhabditis elegans* **Victor Stolzenbach** Northeastern University

378C Identifying new cell fate conversion barriers in *C. elegans* **Marcel Studt** University of Hamburg

379C CWN-2/Wnt localization on seam cells challenges gradient-dependent polarity regulation by Wnt **Samal Tazhibayeva** National Institute of Genetics

380C TDRD-3: A Novel Tudor Domain Protein Linking P Granules and Stress Granules in *C. elegans* **Sushmita Thakuri** New York University

381C The *pos-1* 3' untranslated region governs POS-1 localization and contributes to germline development in *C. elegans* **Haik Varderesian** University of Massachusetts Chan Medical School

382C Conditional GLD-2 depletion in the adult *C. elegans* germline reveals novel dose-dependent functions at different stages of the oocyte-to-embryo transition **Karl-Frederic Vieux** WPI

383C Insulin signaling during the second half of embryogenesis is required for developmental progression **Sydney Vogel** Muhlenberg College

384C A panoramic view of expression and function of the diverse and expanded Doublesex/Mab-3/DMRT gene family in *C. elegans* **Chen Wang** Columbia University

385C Identification of *E. coli* SodB iron superoxide dismutase as a regulator of DAF-7/TGFβ “neuron-to-niche” signaling **Sophia Wasel** NYU Grossman School of Medicine

386C It takes a crowd to keep FBF in check: multiple E3 ligases regulate FBF accumulation in *C. elegans* germline **Gabriella Weiss** University of Montana

387C Embryonic development of *C. elegans* sense organs **Leland Wexler** Boston Children's Hospital

388C Lineage-Specific Developmental Variation in Wild *C. elegans* Isolates **Charlotte Weymer** UCLA

389C Identifying factors that regulate Gli activation through genetic suppressor screens **Sanese White-Brown** Rowan-Virtua SOM

390C *tab-1/Bsx* regulates neuroglial and mesodermal lineage and fate specification **William Wilkerson** University of Pennsylvania, Perelman School of Medicine

391C Identification of novel therapeutic targets for the treatment of Mitochondrial Fatty Acid Synthesis Deficiency **Devia Williams** Van Andel Institute

392C The Ral small GTPase is essential for exocyst-mediated exocytosis and can enhance exocytosis in response to signaling **David Reiner** Texas A&M Health Science Center

393C Structure-directed gain-of-function and RBD-selective loss-of-function mutations in the AGE-1/PI3K catalytic subunit **David Reiner** Texas A&M Health Science Center

Ecology and Evolution

394A Impacts of wildfire exposure on food-seeking behaviors in nematodes in Southern Oregon **Nikki Andrews** Southern Oregon University

395A The impact of dauer diapause on population dynamics **Galayna Baur** Missouri University of Science and Technology

396A Microbial evolution to stress enhances host resilience and lifespan through metabolic reprogramming **Ajay Bhat** University of Michigan

397A Applications for nuclear genetic markers discordant with the *C. briggsae* phylogeny **Sierra Cantu-Gutierrez** California State University, Fresno

398A *E. coli* Nissle association with insect-parasitic nematode *Steinernema hermaphroditum* **Mengyi Cao** Carnegie Institution for Science

399A Determining the genetic basis that defines microsporidia host specificity in *Caenorhabditis briggsae and Caenorhabditis nigoni* **Carolyn Chen** University of Toronto - St. George

400A Monte Carlo simulation of somatic twist in ancient marine worms **Adam Cheong** Proof School

401A Unichromosomal nematode genomes shaped by an evolutionary history of parthenogenesis, telomere dysfunction, and chromosome rearrangements **George Chung** New York University

402A Genetic variation in xenobiotic metabolism influences chlorfenapyr resistance in *C. elegans* **Timothy Crombie** Florida Institute of Technology

403A Natural variation in *C. elegans* aggregation behavior reveals possible adaptation to changing environments **Serena Ding** Max Planck Institute of Animal Behavior

404A Natural variation reveals hidden divergence in the evolution of a polyphenism **Stephen Dreyer** Indiana University

405A Environmentally acquired gut bacteria protect *C. elegans* from the toxic pesticide Chlorpyrifos. **Sarah El Khoury** University of California, Berkeley

406A Nervous system evolution in highly divergent nematodes **Joke Evenblij** Department of Biological Sciences, Howard Hughes Medical Institute, Columbia University

407A Competitors matter: transmission upon death selects for a higher pathogen load but not always an increase in virulence **Najmussher Ghani** Institute of Biology

408A Network properties constrain natural selection on gene expression in *Caenorhabditis elegans* **Simon Groen** University of California Riverside

409A The role of *C. elegans*-microbiome interaction in environmental adaptation **Inga Hamerich** Kiel University

410A Sensory behavior promotes proper migration, and population growth and distribution in a soil-fruit simulated natural habitat **Jong-In Hwang** Yonsei University Mirae Campus, Wonju

411B Natural Variation in Gut Microbiome Bacterial Colonization Across Wild Strains of *Caenorhabditis elegans* **Wade Ingersoll** San Diego State University

412B Interrogating the influence of *Xenorhabdus* symbiotic bacteria on the transcriptional landscape of *Steinernema* nematodes **Sally Ireri** Carnegie Science

413B Preparation of staged *Caenorhabditis elegans* embryos using size filtration **Nikita Jhaveri** Johns Hopkins University

414B Imaging microbiome population dynamics **Svilen Kolev** Northeastern University

415B The ecology of *C. elegans* generational population growth in a soil-fruit natural habitat setting in the laboratory **Jin Lee** Yonsei University Mirae Campus, Wonju

416B Isolation and genomic analysis of *Oscheius tipulae* and its associated microbiome from Yeonpyeongdo Island, Incheon, Korea **Daisy Lim** Seoul National University

417B A fig-associated *Klebsiella* isolate reveals microbe-dependent life history evolution in *Caenorhabditis* nematodes **Austin Link** University of Oklahoma

418B A gene encoding ubiquitin ligase adapter suppresses directional hybrid lethality between *Caenorhabditis briggsae* and *C. nigoni* **Yiqing Liu** Hong Kong Baptist University

419B An empirical test of Baker's law: Dispersal favors increased rates of self-fertilization **Michelle McCauley** Florida International University

420B Decoding microbiome-mediated modulation of *Pseudomonas aeruginosa* infection dynamics in *Caenorhabditis elegans* **Vy Nguyen** Northeastern University

421B Pangenome gene-set analysis in *Caenorhabditis elegans* **Lance O'Connor** Johns Hopkins University

422B Genome-wide variant annotation in selfing *Caenorhabditis* species **Lance O'Connor** Johns Hopkins University

423B Cardiac glycoside resistance in steinernematids and wild isolates of *C. elegans* **Robert Pena** University of California, Riverside

424B The role of bacterial biosynthetic gene clusters in microbiota-mediated protection **Lena Peters** Kiel University

425B Isolation and Characterization of Worm Attractants Secreted By Beneficial *Pantoea* Gut Commensals **Jeremy Pietropaolo** UC Berkeley

426B Evolution of selfishness via recycling of ancestral protein interaction modules **Florian Puehringer** IMBA Vienna

427B Dissecting genetic components of heat stress-induced apoptosis and fertility levels using a new recombinant inbred line panel **Kristen Quaglia** Marquette University

428C Increased male production in *C. briggsae* hybrids without a *him* mutation **Karla Reyes Barajas** California State University, Fresno

429C Conjugative plasmids are associated with commensal bacterial attachment to the intestinal epithelium **Dalaena Rivera** San Diego State University

430C Phoresis Survey of Nematoda Species In Soil Dwelling Invertebrates **Annika Samayoa** La Sierra University

431C More than gut feelings: neuroendocrine regulation of the gut microbiome **Buck Samuel** Baylor College of Medicine

432C Comparing between synthetic and spontaneous tetraploid *C. elegans*. **Mara Schvarzstein** City University of New York, Brooklyn College and The Graduate Center

433C Independent mechanisms of benzimidazole resistance across *Caenorhabditis* nematodes **Amanda Shaver** Johns Hopkins University

434C Ecological, molecular and comparative insights into *Caenorhabditis brenneri* as a complementary model organism to *C. elegans* **Md. Talukder** Bangladesh Agricultural University

435C Moving into the pangenomics era: population genomics of the hyperpolymorphic *Caenorhabditis brenneri* using variation graphs **Anastasia Teterina** University of Oregon

436C The developmental plasticity switch locus *eud-1* is a mutational hotspot in natural isolates of the nematode *Pristionchus pacificus* **Penghieng Theam** Max Planck Institute for Biology Tübingen

437C Exploring the mechanisms through which MSS glycoproteins modulate sperm competitiveness **Asan Turdiev** University of Maryland, College Park

438C Hitchhiking Bacteriophages use Nematodes to Travel Through Spatially Structured Habitats **Lisa van Sluijs** Wageningen University and Research

439C Initial sampling of terrestrial nematodes in Hong Kong and Southern China to assess their biodiversity and potential as an indicator for soil health **Tongshu Wen** Hong Kong Baptist University

440C Variation in the genomic architecture of Oxidative Stress Resistance between *C.elegans* strains **John Willis** University of Oregon

441C Potential amplification of collagen gene copy number in the elongated *Caenorhabditis inopinata* **Gavin Woodruff** University of Oklahoma

442C Investigating the evolution of transcriptional regulation underlying morphogenesis **Alyssa Woronik** Sacred Heart University

443C Pan-genome analysis reveals protein-degradation pathways as key drivers for inter- and intraspecific divergence **Jeffrey, Dongying Xie** Hong Kong Baptist University

444C Meiotic chromosome pairing and parent-of-origin allele silencing in *C. briggsae* and *C. nigoni* interspecies hybrids **Rayka Yokoo** Stanford University

445C Experimental evolution in multispecies communities **Peter Zee** University of Mississippi

Gene Regulation and Genomics

446A Transcriptome and translatome profiling of domain-specific *lotr-1* alleles to better understand the balance of epigenetic signals in the germline. **Kehinde Abayomi** The Mount Desert Island Biological Laboratory

447A The G3BP1 ortholog regulates the degradation of select circular RNAs in *C. elegans* **Emmanuel Adeyemi** University of Nevada, Reno

448A Perinuclear germ granules as regulators of RNAi-targeted transcript fate **Saima Akhter** University of Texas at Arlington

449A Investigating the Small RNA Loading Preferences of *C. elegans* Argonaute Proteins. **Khlifa Alnaim** University of Southern California

450A The Phosphoregulation of an H4K20-specific Demethylase in Dosage Compensation of *C. elegans* **Anati Azhar** University of Michigan, Ann Arbor

451A Importin β mRNA and its encoded protein both localize to the nuclear periphery during early *C. elegans* embryogenesis **Ambika Basu** Colorado State University

452A Unraveling the roles of tRNA-derived fragments in animals **Jade Beaudoin-Fredette** CHU de Québec-Université Laval Research Center

453A Transcriptional interactions between host and nested genes during *C. elegans* development **Vincent Bertrand** IBDM, Aix-Marseille University

454A Evolution of the chromosomes of Nematoda and the limits of the Nigon element model **Mark Blaxter** Wellcome Sanger Institute

455A Investigating the transcriptional regulation of autophagy upon heat stress and aging **Michelle Brown** Sanford Burnham Prebys Medical Discovery Institute

456A Bio-ChIP reveals tissue-specific genome distribution of histone variants in *C. elegans* **Idris Selman Bulut** Hamburg University

457A Investigating a novel candidate gene in PVD dendrite morphogenesis **Zipporiah Bush** Albert Einstein College of Medicine

458A N-terminal IDR and small RNA binding regulate HRDE-1 nuclear import **Maria Bustos** University of Southern California

459A Collaboration between two layers of gene repression establishes and maintains cell fate **Megan Butler** Johns Hopkins University School of Medicine

460A The GAGA Factor, EOR-1, is a potential pioneer factor in *C. elegans* **Sylvia Cevallos** Davidson College

461A Understanding the effect of miR-1 mediated repression on V-ATPase assembly in muscle **Lo-Yu Chang** Johns Hopkins University

462A Single-cell RNA sequencing of *C. elegans mpk-1*/ERK mutants **Armi Manharbhai Chaudhari** Universite du Quebec A Tois-Rivieres

463A Chromatin factor MRG-1 interacts with multiple chromatin-modifying complexes to regulate germline gene expression **Mindy Clark** Johns Hopkins University

464A Enhanced RNAi Vectors for Potent Multi-Gene Silencing in *C. elegans* **Sophia Cofone** Northeastern University

465A Oleic acid increases *C. elegans* metabolism and fecundity by altering DAF-12 activity **Frances Compere** Syracuse University

466A Identification of a Genetic Suppressor of Antimorphic alg-1 Mutations **Heather Crawshaw** Kansas State University

467A Uncovering the role of heterochromatin spatial architecture in environmental stress response **Yuri D´Alessio** Helmholtz Zentrum Munich

468A Understanding the role of small RNAs and RNA interference components in DNA damage repair **Yakshi Dabas** The Rockefeller University

469A Investigating CEC-4 Localization and Function in Heterochromatin Anchoring **Julia D'Arca** The University of Michigan

470A HRDE-1 and PRG-1 are required for intergenerational inheritance of starvation memory in postdauer progeny **Savannah Davis** Syracuse University

471A Parental age influences mitochondria-related gene expression to affect early fecundity **Madison DePeri** Florida State University

472A Dynamic regulation of miRNA-mediated silencing through stage-specific miRISC composition **Joseph Dixon** Johns Hopkins

473A Transposable element and gene family evolution across Rhabditidae **Tori Eggers** Florida International University

474A Generating a stable PIWI Argonaute in the absence of piRNAs **Kimberly Elicker** The Rockefeller University

475A Identification and validation of variants impacting pain sensitivity and morphine effectiveness in pediatric cancer patients **Graeme Ernest-Hoar** University of British Columbia

476A Membrane Trafficking Pathways Regulating Exophergenesis in *Caenorhabditis elegans* **Sarah Farah** Rutgers

477A Transcriptomic analysis identifies mechanisms of action of coffee diterpenes in *Caenorhabditis elegans* **Renalison Farias Pereira** Kean University

478A Sequential multiplexed smFISH in *C. elegans* embryos **Sofia Foondos** UCLA

479A Functional characterization of Argonaute syndromes variants in *Caenorhabditis elegans* **Belen Gaete Humada** Kansas State University

480A RNA-binding protein HRPK-1 coordinates with miRNAs to regulate *C. elegans* development **Mika Ghosh** Kansas State University

481A NHR-49/PPARa Coordinates Nutritional Status, Oocyte Activation, and Resource Allocation to Balance Reproduction and Longevity in *C. elegans* **Sharada Gopal** Cornell University

482A Investigating the role of *prg-1* and *rde-3* in small RNA mediated male fertility and epigenetic inheritance in *C. elegans* **Katrin Gross** Children's Hospital of Philadelphia

483A The phosphatase PIR-2 interacts with multiple proteins to regulate germline development **Weifeng Gu** Univ of Calif Riverside

484A Expanding the genetic toolkit of *C. elegans*: Efficient gene activation with sgRNA feeding-based CRISPRa **Rohil Hameed** University of Virginia

485A KH-domain protein FUBL-1: a new player in the ERGO-1 small RNA pathway? **Andrea Hinas** Stockholm University

486A Glia and other cell types exhibit tissue-specific oscillatory gene expression during development **Maxwell Heiman** Harvard Medical School, Boston Children's Hospital

487A Collagen Gene Family Evolution in *Caenorhabditis elegans* **Raymond Hendricks** University of North Texas

488B Argonaute Space-Time: Characterizing the regulatory mechanisms of Argonaute proteins in small RNA pathways during germline development in *Caenorhabditis elegans* **Ismail Irshaid** University of Toronto

489B A parallel array of RNA molecules spans nuage subdomains during inherited RNA silencing **Takao Ishidate** UMass Chan Medical School

490B Development of a heat-inducible gene expression system in *Pristionchus pacificus* **Yuuki Ishita** Niigata University

491B Modular protein tags using PhIT **Adam Hefel** University of Utah

492B Determining the mechanism of FUdR-mediated inhibition of the mitochondrial unfolded protein response **Nathaniel Jordan** University of Maine

493B InVivo Biosystems: Lessons & Highlights from 16 Years of Transgenic Techniques Development and Troubleshooting **Ben Jussila** InVivo Biosystems

494B Exploring Enzymatic and Proteostatic Genes in Exopher Production **Caroline Kaprelian** Rutgers

495B *In-vivo* tethering H3K9 methyltransferase induces silencing in *cis* and the *de-novo* production of trans-acting small RNAs **Sara Keane** UMass Chan Medical School

496B Regulation of Argonaute activity by an N-terminal IDR **Rene Ketting** Institute of Molecular Biology

497B Temporal gene expression shifts underlying transcriptomic divergence of developmental trajectories in *Caenorhabditis* species **Rupa Khanal** University of Pennsylvania

498B Beyond model species: Single individual wild-caught nematode genomes and their insights **Erna King** Wellcome Sanger Institute

499B Exploring the regulation and function of an ancient microRNA family in *C. elegans* **Kasuen Kotagama** National Institute of Diabetes and Digestive and Kidney Diseases

500B Drugging Worms: Examining the Molecular and Behavioral Effects of Acute Cocaine Exposure **Shelby Lauzon** The University of Alabama at Birmingham

501B Optimization of Neuronal Nuclei Isolation for Molecular Profiling in *C. elegans* **Shelby Lauzon** The University of Alabama at Birmingham

502B Determining the role of paternal microRNAs in epigenetic inheritance in *C. elegans* **Alexis Leach** University of Pennsylvania

503B T-CLASS: an online tool for the identification and classification of physiological changes such as aging and longevity using transcriptome data **Gee-Yoon Lee** Korea Advanced Institute of Science and Technology

504B Elucidating chromatin remodeling mechanisms in learning and memory across development **Hee Kyung Lee** The University of Alabama at Birmingham

505B WormPicker 2.0: A robotic system for high-speed automated genetic manipulation and analysis of *C. elegans* **Zihao (John) Li** The Ohio State University

506B Discovery of genes regulating stress-induced sleep in *C. elegans* by using the Sequence Kernel Association Test **Zihao (John) Li** The Ohio State University

507B Exploring the Role of Stress and piRNA Regulation in Germ Cell Immortality **Lu Lu** University of North Carolina at Chapel Hill

508B The role of *miR-238* in healthy aging in *Caenorhabditis elegans* **San Luc** University of California, San Diego

509B Using a Kabuki Syndrome model in *C. elegans* to screen potential therapeutics **Megan Lymburner** Boston Children's Hospital and Harvard Medical School

510B Exploring the Relationship Between Ploidy and Fitness in Wild-Type and Mutant *C. elegans* **Tevon Madry** University of Michigan

511B Absence of R-Loops at the chromosomal breakage regions during programmed DNA elimination in the parasitic nematode *Ascaris* **Prabal Singh Maharjan** The University of Tennessee at Knoxville

512B FLInt 2.0: A high-precision method for transgene integration in *C. elegans* **Nawaphat Malaiwong** Yale University

513B Assembly of the Dosage Compensation Complex on X Is Orchestrated by Self-Association of DCC Subunits and Dynamic Restructuring of Local Genome Architecture **Yuri Malina** HHMI / UC Berkeley

514B An in-depth analysis of 3' untranslated regions in *Caenorhabditis elegans* **Marco Mangone** Arizona State University

515B The SOSS complex as a factor of the piRNA biogenesis pathway **Joao Marques** IMB Mainz

516B Rewriting the sequence of telomeric DNA **Benjamin McCarthy** UNC Chapel Hill

517B Strand Secrets: Uncovering Tissue-Specific Patterns behind microRNA Strand Selection Using the HiTmiSS Assay **Dalton Meadows** Arizona State University

518B Homeostatic small RNA levels are essential for sperm-based fertility **Ha Meem** University of Texas at Arlington

519B Phenotypic Characterization of Mitochondrial Fission, Fusion, and Oxidative Phosphorylation Mutants *drp-1(tm1108)*, *fzo-1(tm1113)*, and *isp-1(qm150)* in *C. elegans* Sperm **Zahra Mohammad** Rutgers University

520B Femtosecond laser microdissection for isolation of regenerating *C. elegans* neurons for single-cell RNA sequencing **Sudip Mondal** The University of Texas at Austin

521B Perturbation of body size genes via RNAi-by-feeding in *C. inopinata* **Kimberly Moser** University of Oklahoma

522B Dynamic association of the piRNA transcription complex with genomic piRNA clusters **Victoria Murphy** Johns Hopkins University

523B A major regulator of germline transcription, LSL-1, contributes to developmental delay when histone methylation is inappropriately inherited **Benjamin Nguyen** Kennesaw State University

524B Comparative genomics approach identifies TRPA-1 ion channel as a regulator of pathogen avoidance **Martin Nicholas** University of Texas at Arlington

525B Intentionally left blank.

526B Creation and manipulation of transgenes using recombinases **Michael Nonet** Washington University Med School

527B Uncovering RNAi and chromatin modifying pathway co-regulation that protects germ cell identity during heat stress. **Favour Nwose** The University of Texas at Arlington

528B An intrinsically disordered region of Drosha selectively promotes miRNA biogenesis, independent of tissue-specific Microprocessor condensates **Bing Yang** National Institute of Diabetes and Digestive and Kidney Diseases

529B A Guide RNA-Deficient Argonaute Reveals Spatial Coupling of Nuclear piRNA Transcription and Perinuclear Processing in *C. elegans* **Humberto Ochoa** UMass Med

530B Alternative Splicing Contributes to Nervous System Maturation in *C. elegans* **Dalton Patterson** University of Alabama at Birmingham

531C Multigenerational Adaptation to Novel Food Sources in *C. elegans* **Alexandria Pete** Harvard University

532C Neuron-specific Transcriptomic Changes in Response to Cocaine in Caenorhabditis elegans **Nico Pinzon** Davidson College

533C A role for long non-coding RNAs in calcium signaling during cell migration and behavior **Vida Praitis** Grinnell College

534C The evolutionary history of nematode Argonautes **Lucas Prescott** UMass Chan Medical School

535C The Molecular Implications of Tetraploidy on Gene Expression **Angelica Previero** University of Michigan

536C Conserved function of *rnt-1* in *Caenorhabditis elegans* and its sister species *Caenorhabditis inopinata* **Md Masudur Rahman** University of Oklahoma

537C Investigating Argonaute-small RNA binding specificity in *C. elegans* **Sanjana Rajeev** University of Southern California

538C Sensory neurons work collaboratively to regulate peroxide resistance **Naadia Rashid** Northeastern University

539C Molecular characterization of an *nhr-25* DNA Binding Domain mutant **John Ready** Davidson College

540C Exploring the *cis*-regulation of a developmental switch gene in *Pristionchus* **Shelley Reich** University of Utah

541C Trivially-easy targeted integration of extrachromosomal arrays using PhiC31 **Matthew Rich** University of Utah

542C Investigating Nuclear RNAi in Small RNA Biogenesis and Transcriptional Termination **Eva Richard** Institute of Molecular Biology

543C Transgenerational defects in chemotaxis behavior caused by the heritable accumulation of histone modifications across generations **Mackenzie Roberson** Emory University

544C Regulation of circuit formation by circuit-organizer transcription factors **Jonathan Rumley** Columbia University

545C The knockdown of lipase *atgl-1* dysregulates autophagy in *C. elegans* **Sara Sampson** Bridgewater State University

546C Nonsense-Mediated Decay Regulates SPD-3, a Mitochondrial-Localized Protein Essential for Cell Division **Samantha Schaffner** Vanderbilt University

547C CGC1, a new reference genome for *Caenorhabditis elegans* **Erich Schwarz** Cornell University

548C Investigating Germline-Specific MicroRNA Regulation **Mathieu Segonds** CHU de Québec-Université Laval Research Center

549C Regulation of gametic gene expression across development via RNAi-to-RNAi cascade in *C. elegans*. **Trilotma Sen** The University of Texas at Arlington

550C SLRanger, a pipeline for the de novo identification of splicing leader (SL) sequences using full-length RNA sequencing data. **Yanwen Shao** City University of Hong Kong

551C Uncovering the transcriptome patterns of *Caenorhabditis briggsae* and *C. nigoni* at different stages using Nanopore sequencing **Yanwen Shao** City University of Hong Kong

552C Neural regulation of insulin-like hormones in brain-body communication **Eva Sheardown** King's College London

553C Spatial Interactions of DNA Break Regions During Nematode Programmed DNA Elimination **James Simmons** The University of Tennessee

554C Investigating how the transgenerational accumulation of repressive H3K9me2 affects health and lifespan **Marybeth Slack** University of Massachusetts Lowell

555C Single-Nucleus Neuronal Transcriptional Profiling of *C. elegans* Reveals Regulators of Cognitive Aging and Sexual Dimorphism **Jonathan St. Ange** Princeton University

556C Transposons nucleate condensation of HSF-1 during heat shock **Natalia Stec** Nencki Institute of Experimental Biology, Polish Academy of Sciences

557C Heritable histone acetylation across generations in SPR-2/INHAT mutants causes germline mortality **Liyang Sun** Emory University

558C Bone Morphogenetic Protein Signaling at a Novel Regulatory Nexus of Lipid Trafficking and Metabolism in *C. elegans* **Allen Sun** City University New York Queens College

559C Dissecting the role of the GHKL ATPase MORC-1 in germline gene regulation **Tian Tan** Johns Hopkins University

560C Evidence for *Mutator* component-independent piRNA silencing **Wendy Tan** UMass Chan Medical School

561C Elucidating the role(s) of ubiquitin-mediated proteolysis factors on SKN-1 activity during pathogen infection of *C. elegans* **Larissa Tavizon** UTHealth Houston

562C Investigating the effect of transcription elongation rates on cell fate decisions in the developing *C. elegans* embryo **Gabriela Vida** Children's Hospital of Philadelphia

563C A versatile site-directed gene trap strategy to manipulate gene activity and control gene expression in *Caenorhabditis elegans* **Han Wang** University of Wisconsin-Madison

564C Auxin-inducible protein degradation of the DRM complex reveals the dynamics of transcriptional repression of its direct gene targets in *Caenorhabditis elegans* **Emily Washeleski** Michigan Technological University

565C Tissue-specific incorporation of Clickable non-canonical amino acids in *C. elegans* via genetic code expansion **Rebekah White** University of Edinburgh

566C Regulation of the age-dependent transcriptional activity of DAF-16 by the PTEN ortholog DAF-18 **Matt Youngman** Villanova University

567C Examining how terminal nucleotide variations in miRNA duplexes influence strand selection throughout *Caenorhabditis elegans* development **Sarah Zhang** Kansas State University

568C Cycloheximide resistant ribosomes reveal adaptive translation dynamics in *C. elegans* **Qiuxia Zhao** The University of Texas at Austin

569C Exploring the Mechanisms of Transcription Regulation by Condensin DC and Cohesin in *C. elegans* **Alexandra Zhikharev** New York University

570C Role of the RNA-binding protein UNK-1/Unkempt in dauer stage miRISC regulation **Julia Zhou** Johns Hopkins University

571C TOFU-7 Facilitates Mitochondrial Coordination of piRNA Processing in *C. elegans* **Cole Pero** University of Massachusetts Chan Medical School

572C SUMOylation of Chromodomain Protein MRG-1 Regulates Cell-Fate Specification **Johan Girgenrath** UMass Chan Medical School

Initiatives in Education and DEI

573A Bridging Inclusion and Scientific Inquiry: Teaching the Impact of Representation Through Genetics and Genomics Learning Modules **Olivia Davir** Ithaca College

574A Bridging Research and Education with Model ORganisms (BREWMOR) **Paul Goetsch** Michigan Technological University

575B Efficacy of a Course-Based Undergraduate Research Experience Focused on Biological Stress (StressCURE) in Biochemistry and Organic Chemistry Laboratory Courses **Jennifer Newell-Caito** University of Maine

576B Integrating worm research into undergraduate laboratory courses **Joseph Ross** California State University, Fresno

577B The *C. elegans*-based “Pipeline CURE” provides apprentice-style research benefits for diverse cohorts of Biology students at a primarily undergraduate institution and a partner Title 1 high school **Karen Schmeichel** Oglethorpe University

Neurobiology

578A Exploring Genes Required to Make an Exopher from Proteostressed Neurons **Mark Abbott** Rutgers

579A "High-Resolution Spatial Transcriptomics and Automated Neuron Annotation in *C. elegans* via seqFISH" **Jose David Aguirre Aguilera** California Institute of Technology

580A Human-associated odorants drive host invasion in the human-infective, skin-penetrating nematode *Strongyloides stercoralis* **Damia Akimori** UCLA

581A Characterizing multiple mechanosensory behaviors through development **Ilana Albert** Northeastern University

582A Aberrant neuronal hyperactivation causes age-dependent thermotaxis decline **Binta Maria Aleogho** Nagoya University

583A Investigating the molecular mechanisms through which age-associated neuronal lysosomal dysfunction promotes synaptic dysfunction. **Manuel Alvarez** University of Wisconsin-Madison

584A Optogenetic Investigation of the Cause of Response Decrement to a Mechanical Stimulus Delivered at Short and Long Interstimulus Intervals **Vania Amani** University of British Columbia

585A Investigating genetic modifiers in a novel *C. elegans C9orf72* ALS/FTD model **Selamawit Asfaw** Brown University

586A Does sleep affect age-dependent locomotory decline? **Christopher Ashih** Northeastern University

587A Sex differences in context-dependent behavioral flexibility in *C. elegans* **Chance Bainbridge** University of Rochester Medical Center

588A The Hox transcription factor *mab-5* is necessary and sufficient for transcriptional differences between left/right Q-derived neuron pairs in *Caenorhabditis elegans* **Talmage Barney** Brigham Young University

589A DEET inhibits skin penetration in a skin-invading, human-parasitic nematode **Gloria Bartolo** University of California, Los Angeles

590A Visualizing neuropeptide signaling using GPCR activation reporters **Isabel Beets** KU Leuven

591A MIG-6/papilin mediates long-term maintenance of neuronal architecture through the regulation of extracellular matrix organization and TGF-β signaling **Claire Benard** Universite du Quebec a Montreal

592A Investigating the role of the long chain polyunsaturated fatty acid eicosapentaenoic acid (EPA) in modulating acute functional tolerance to ethanol **Jill Bettinger** Virginia Commonwealth University

593A Uncovering the neuronal basis of individuality in decision-making across development **Smriti Bhardwaj** Technion, Israel Institute of Technology

594A FLP-15 functions through the GPCR NPR-3 to regulate local and global search behaviours in *Caenorhabditis elegans* **Umer Bhat** Indian Institute of Science, Bangalore

595A Mechanism of feeding state dependent CO2 chemotaxis plasticity **Abhishek Bhattacharya** National Center for Biological Sciences - TIFR

596A Development of an invertebrate model for neurotoxicological risk assessments of Electronic cigarettes **Sonam Bhattarai** Missouri University of Science and Technology

597A TRP-2 mediates proprioceptive ensing by *C. elegans* PDE neurons **Animesh Biswas** The Ohio State University

598A Uncovering molecular regulators of EtOH-induced behavior deficits in *C. elegans* **Katie Brandel-Ankrapp** Baylor College of Medicine

599A Large-scale fluorescence tracking of freely behaving nematodes using megapixel camera arrays **André Brown** MRC Laboratory of Medical Sciences

600A DEP-1 is Implicated in Long-Term Associative Memory in *C. elegans* **Noëlle Burri** University of Basel

601A Predictive modeling to define the locus heterogeneity of tRNA synthetase-related peripheral neuropathy **Allison Cale** University of Michigan

602A Age-progressive neuronal changes are robustly delayed by caloric restriction through PHA-4/FOXA-mediated regulation of the cell adhesion molecule SAX-7/L1CAM **Yann Chabi** Université du Québec à Montréal

603A Exploring AlphaFold Deep Learning Approach for *Caenorhabditis elegans* neuropeptides GPCRs Deorphanization **Amit Chaudhary** The University of Alabama at Birmingham

604A A scaffold attachment factor PHM-2 regulates synaptic transmission through SLO-2 potassium channel in *C. elegans* **Bojun Chen** University of North Texas

605A Function of Alternative Splicing in Regulating Olfactory Learning in *C. elegans* **Maoting Chen** Harvard University

606A Contact-mediated Mate Recognition Evokes A Persistent Behavioral State via Glutamatergic and Neuropeptide Signaling in *Caenorhabditis elegans* Males **Chun-Hao Chen** Institute of Molecular and Cellular Biology

607A Deciphering functions and physiology of different *C. elegans* two-pore domain potassium channels **Li Chen** KU Leuven

608A Epidermal regulation of synapse formation through EAT-20 **Salvatore Cherra** University of Kentucky College of Medicine

609A Optimizing *C. elegans* as a NAMs model for advanced neurotoxicity assessment **Sooji Choi** Hallym University

610A Investigating CED-10's Role in Synaptic Remodeling and Memory Formation in *C. elegans* **Betsy Chow** University of California, San Francisco

611A Developmental plasticity enables flexible feeding and foraging strategies through distinct behavioral state profiles in *Pristionchus pacificus* **Lewis Cockram** Max Planck Institute for Neurobiology of Behavior – caesar

612A Title: Temperature-Dependent Neuroprotection in the MEC-4d Model: Who is the target? **Victoria Collio** Universidad de Valparaíso

613A Examining the impact of receptor affinity on dendrite morphogenesis using synthetic heterodimers **Alec Condon** Stanford

614A Overlap between regulation of behavioral responses to alcohol and behavioral state **Andrew Davies** Virginia Commonwealth University

615A EEL-1: a conserved E3 ligase required for sickness sleep in *C. elegans* **Bryan Paul De Galicia** UP Manila / UPenn

616A Dopaminergic system modulates neurodegeneration in a *C. elegans* model of Spinal Muscular Atrophy **Elia Di Schiavi** IBBR, CNR

617A The impact of bacterial diet on chemosensory decision-making in *C. elegans* **Arindam Dutta** Brandeis University

618A Gap junction-dependent electrical coupling between pharyngeal muscles and marginal cells analyzed by voltage imaging **Nora Isabel Elvers** Buchmann Institute for Molecular Life Sciences, Goethe University

619A Dopaminergic Neurodegeneration in *C. elegans* is Induced Following Exposure to a Novel Compound Produced by *Streptomyces venezuelae* **Osagie Emokpae** The University of Alabama at Tuscaloosa

620A A neuroinformatics toolbox for whole-brain calcium imaging analysis in *C. elegans* **Diego Fasoli** University of Leeds

621A Exposure to imidacloprid and flupyradifurone leads to dopaminergic neurodegeneration and impaired foraging in *Caenorhabditis elegans* **Adam Filipowicz** UCLA

622A Regulation and consolidation of GPCR signaling through *C. elegans* GOA-1-dependent sleep circuits **Adam Friedberg** Brown University

623A Valence of olfactory response in AIY interneuron is determined by integration of multiple sensory inputs **Manabi Fujiwara** Kyushu Univ

624A Sexually dimorphic functional and structural lateralization in the nervous system of *C. elegans* **Dolev Galski** Weizmann Institute of Science

625A Characterizing chemosensory neuronal responses through development in both sexes **Sahana Gangadharan** Northeastern University

626A Functional Characterization of the Orphan GPCR F35H10.10 in Caenorhabditis elegans **Jay Garaycochea** Goucher College

627A Chemosensory activity and sleep regulate sensory synaptogenesis during development in *Caenorhabditis elegans* **Vanessa Garcia** San Jose State University

628A FKH-2 Effects on Mitochondrial Dynamics and Locomotion Patterns in *C. elegans* as a Model for FOXG1 Syndrome Research. **Antonio Garnham Leniz** University at Buffalo

629A Striking divergence of RIP interneurons between *C. elegans* and P. pacificus over more than 100 million years of evolution **Luke Geiger** Howard Hughes Medical Institute, Columbia Unversity

630A Novel roles of UNK-1 and ZK1073.1 in nervous system function **Lexin Gitler** Stanford University

631A Identification of a new odorant that is detected by the AWCOFF neuron in *Caenorhabditis elegans* **Elizabeth Glater** Pomona College

632A OpenWorm Project updates - towards a biologically constrained computational model of *C. elegans* locomotion and development of a worm specific Large Language Model **Padraig Gleeson** University College London

633A Kin identity in *Pristionchus pacificus* is encoded by the structural and chemical properties of the nematode surface **Desiree Goetting** Max Planck Institute for Neurobiology of Behavior

634A Computer vision analysis reveals HIF-1 mediated dendrite regeneration after hypoxic insult through F-actin restructuring **Kin Gomez Canales** North Carolina State University

635A Investigation of a conserved BTB/POZ domain containing protein enriched in dopamine neurons **Alexandro Gonzalez** Fisk University

636A Exploring the impact of intestinal infection and immune response on dopaminergic neurodegeneration in Parkinson's disease models **Juan Carlos Gonzalez-Orozco** MD Anderson Cancer Center, University of Texas

637A A non-apoptotic role of EGL-1 and CED-4 to inhibit anterior QL.a and QL.p migration downstream of MAB-5/Hox **Celeste Gormly** University of Kansas

638A FLWR-1 may be a stimulatory subunit of the plasma membrane Ca2+ ATPase **Alexander Gottschalk** Buchmann Institute, Goethe University

639A Potassium-selective channelrhodopsins can exert hyper- or depolarizing effects in excitable cells, depending on experimental condition **Alexander Gottschalk** Buchmann Institute, Goethe University

640A Synthetic neurobiology in *C. elegans*: engineering permanent ligand-inducible genetic switches to control behavior. **Alessandro Groaz** California Institute of Technology

641A Multiple secondary messenger pathways compose the preconditioning signal and modulate neuroregeneration via CREB **Noa Grooms** Northeastern University

642A Mechanisms of chemical synapse remodeling in the neural circuits of dauers **Alan Gutman-Wei** Columbia University

643A Combinatorial regulation of a sleep-controlling neuron by LIM-homeodomain transcription factors **Fujia Han** University of Wisconsin-Madison

644A Forward genetic screen using transgenic Dendra2::tau *C. elegans* identifies enhancers of tau proteostasis **Marina Han** University of Washington

645A Comparative connectome analysis reveals distinct neuronal network associated with parasitism in the soybean cyst nematode, *Heterodera glycines* **Jaeyeong Han** University of Illinois at Urbana-Champaign

646A Avocado-Derived Fatty Alcohol Induces Reversible Paralysis in *C. elegans* Through a Dopamine-Dependent Mechanism **Raihanah Harion** New York University Abu Dhabi

647A Elucidating the role of neuropeptides in the regulation of amplitude of body bends of *Caenorhabditis elegans* **Sharanya Harish Kumar** Indian Institute of Science, Bengaluru, India

648A Examining candidate modifier genes using a *C. elegans* model of SOD1 ALS **Anne Hart** Brown University

649A A closer look at UNC-33 (CRMP) in neuronal polarity maintenance **Martin Harterink** Utrecht University

650A Variation in social behaviors among *Caenorhabditis* nematodes **Dustin Haskell** University of Pennsylvania

651A Patient-specific NFU-1 mutations result in chemosensory dysfunction in a *C. elegans* model of Multiple Mitochondrial Dysfunction Syndrome 1 **Jiaxi (Reina) He** Kenyon College

652A Investigating the role of IDA-1 in the DAF-7/TGF-B pathway regulation of GLR-1 in *C. elegans* **Taylor Herist** Suffolk University

653A Novel tools for the measurement and manipulation of neuronal lysosomal pH reveals a link between acidification and longevity in *C. elegans* **Molly Hodul** University of California, San Francisco

654A Neurexin function is dynamic throughout the lifespan depending on foraging behavior in *C. elegans* **Fernanda Holloman** University of Pennsylvania

655A *spas-1* is Required for Axon, but not Dendrite, Integrity **Claire Howell** Davidson College

656A Ensheathment of *C. elegans* touch receptor neuron requires extracellular matrix collagens **Yuxin Hu** Columbia University

657A Regulation of sleep by the K+ channel EGL-2 in *C. elegans* **Xinyu Huang** University of Wisconsin-Madison

658A Inhibition of mitochondrial Complex III in *Caenorhabditis elegans* leads to dopaminergic-specific neurodegeneration **Javier Huayta** Duke University

659B Mating dependent modulation of the egg laying circuit **Melissa Ifidzhen** University of Miami

660B Dissection of a panel of turning behaviors that achieve directional navigation in chemotaxis using WormTracer to precisely extract worm centerlines **Yuichi Iino** The University of Tokyo

661B Decoding internal models and dynamics of curiosity using the inverse free energy principle **Muneki Ikeda** University of California San Francisco

662B High-speed and highly accurate tracking microscopy using motion model estimation for interactively manipulating neuronal activity **Kakeru Imada** Keio University

663B A forward genetic screen in *Caenorhabditis elegans* identifies *twk-14* as a modulator of α-synuclein-induced neurodegeneration **Joy Iroegbu** The University of Alabama

664B Variation in *C. elegans* social clumping behavior reveals polygenicity of ASD risk genes **Swetha Iyer** University of Texas at Austin

665B Regulation of associative learning by biogenic amines and their interactions **Melodi Jabaly** Technion

666B Sensory extracellular matrix function and composition in *C. elegans* ciliated neurons **Katherine Jacobs** Rutgers University

667B Impacts of curcumin and chrysanthemin on imidacloprid induced xenobiotic stress and disrupted cholinergic signaling in a *C. elegans* model **Thea Jacobsen** Eckerd College

668B EFN-4 and VAB-8 act downstream of MAB-5/Hox to promote QL cell migration **Vedant Jain** University of Kansas

669B Neurodegeneration and Behavioral Impacts of Uncoupling Mitotoxicant Induced ATP Depletion and Membrane Potential Loss in *C. elegans* **Laura Jameson** Duke University

670B Sensation modulates the temperature-dependence of locomotion and egg-laying in *C. elegans* **Hongfei Ji** Stanford University

671B How Do Size and Orientation Impact Electricity Response in *C. elegans*? **Ambreen Joy** Northeastern University

672B Characterization of cilia regrowth in the adult animal **Kirsten Judge** Brandeis University

673B Exploring cell cycle regulation of sex-specific neuronal development **Andrea Kalis** Carleton College

674B The tardigrade as an emerging model organism for systems neuroscience **Saul Kato** UCSF

675B Characterizing dynamic spatiotemporal requirements of neurodevelopmental disorder risk gene orthologs using Auxin-inducible degradation in *Caenorhabditis elegans* **Lexis Kepler** University of British Columbia

676B Tools for analysis of next-generation whole-brain imaging modalities **Rex Kerr** University of California at San Francisco

677B The kpc-1 3'UTR facilitates dendritic transport and translation efficiency of mRNAs for dendrite arborization of a mechanosensory neuron important for male courtship **Eunseo Kim** University of Illinois at Chicago

678B Argonaute-mediated small RNA pathways mediate maternal age-dependent behavioral plasticity in *C. elegans* **Taehyun Kim** Daegu Gyeongbuk Institute of Science and Technology

679B modWorm: Modular simulation framework for modeling and integrating neural connectomics, dynamics and biomechanics for Caenorhabditis elegans **Jimin Kim** University of Washington

680B Spatiotemporal Traction Force Measurement Toward Understanding the Locomotion Mechanism of *C. elegans* **Ryota Kimura** Keio University

681B GABA and acetylcholine signaling modulate motor response plasticity in *C. elegans*. **Justin King** Western Washington University

682B Investigating the functions of F-actin regulators in neurodevelopment in *C. elegans* **Sydney Ko** The University of British Columbia

683B Beyond sight and smell: The multifunctional LITE-1 receptor in *Caenorhabditis elegans* **Alan Koh** MRC Laboratory of Medical Sciences, London

684B Behavioral and genetic evidence that habituation involves dissociable, interstimulus interval-sensitive processes **Nikolas Kokan** University of British Columbia

685B Regulation of IDA-1 by the DAF-7/TGF-β pathway in *C. elegans*: A developmental and molecular investigation **Alexandra Kovalenko** Suffolk University

686B Mechanisms of FSHR-1 cross-tissue regulation of neuromuscular function in diverse physiological conditions **Jennifer Kowalski** Butler University

687B UNC-43/CaMKII regulates presynaptic assembly in *C. elegans* **Mizuki Kurashina** University of British Columbia

688B Glial GABA receptors control glia-neuron crosstalk in *C. elegans* **Melisa Lamberti** University of Miami

689B The giant KASH protein ANC-1 establishes mechanical stability in aging *C. elegans* neurons **Matthew Laurence** University of California Davis

690B Neurpeptidergic regulation of nictation, a host- and food-seeking behavior in dauers **Tuan Anh Le** KU Leuven

691B *erh-1* loss of function rescues pathological tau mediated neurodegeneration **Katherine LeBlanc** University of Washington

692B A single pair of associatively-coupled inputs induces independent learning across sub-networks in the *C. elegans* nervous system **Eugene L.Q. Lee** HHMI, MIT

693B Natural genetic variation in sexually dimorphic exploratory behavior of *C. elegans* **Harksun Lee** Division of Infectious Diseases, Department of Pediatrics, Boston Children's Hospital and Harvard Medical School

694B A *C. elegans* Model of Fanconi Anemia Neurological Syndrome **Jessica Leighton** University of Rhode Island

695B Catecholamine biosensing in the nIR-II window via functionalized single-wall carbon nanotubes **Rikal Levy** Fisk University

696B Transcription factor cooperation and chromatin accessibility in neuronal identity **Eduardo Leyva Diaz** Instituto de Neurociencias, CSIC-UMH

697B A genetic screen for modulators of stress-induced sleep in *C. elegans* using a robotic worm picking system **Zihao (John) Li** The Ohio State University

698B Sensory Integration Across Development Drives Behavioral Sensitization in Male *C. elegans* **Yu-Chen Lin** National Taiwan University

699B Establishing *C. elegans* nervous system biophysical atlas by systematic electrophysiological recording **Qiang Liu** City University of Hong Kong

700B Effect of psychedelics on locomotion in *C. elegans* **Shawn Lockery** University of Oregon

701B Identification of monoaminergic neurons in *Pristionchus pacificus* **Curtis Loer** Univ San Diego

702B A microfluidic sorter to separate *Caenorhabditis elegans* by gravitaxis **Hui Ma** University of Pennsylvania

703B Calcium Imaging in *Pristionchus pacificus* ASE Neurons Reveals Laterally Asymmetric Responses to Ammonium Salts **Marisa Mackie** California State University, Northridge

704B Nematode behavior in complex, soil-like environments **Sima Maleki** Wayne State University

705B Modeling the *EBF3* neurodevelopmental syndrome in *C. elegans* **Jessica Markman** University of Chicago

706B A genetic toggle switch for touch sensation **Filipe Alberto Gonçalves Marques** University of Chicago

707B Fluorescent tagging of SISS-1/EGF to reveal ectodomain shedding **Darlene Mendez** California State University, Northridge

708B Exploring the molecular and neural basis of gustation in the skin-penetrating, human-parasitic nematode *Strongyloides stercoralis* **Patricia Mendez** University of California, Los Angeles

709B Characterization of Neuropeptide Expression Strains **Daviana Menendez Escalera** National Institute of Diabetes and Digestive and Kidney Diseases

710B CAN as a Regulator of Osmotic Homeostasis **Daniel Merritt** Columbia University

711B Building axons with the NF-Y complex **Pedro Moreira** Monash University

712B Mapping neuropeptide function – One neuron at the time **Pedro Moreira** Monash University

713B Establishing a Chronic Cocaine Paradigm in *C.elegans* **Prince Mosley** The University of Alabama at Birmingham

714B Understanding how the vulval muscles are mechanically activated in *C. elegans* **Srishti Mullick** University of Miami

715B Exploring the Distinct Roles of CNG and L-VGCC Regeneration Pathways by Pharmacology **Emma Nace** Northeastern University

716B A multilayered gap-junction network is essential for social decision-making **Shunji Nakano** Nagoya University

717B A hyperpolarizing neuron recruits undocked innexin hemichannels to transmit neural information during *C. elegans* thermotaxis **Airi Nakayama** Nagoya University

718B Synergistic interaction of the homeobox gene *ceh-36* with the terminal selector *che-1* in long-term maintenance of ASE neuron fate **Ananya Natarajan** AMOLF

719B Functional classification of *GNAI1* disorder variants in *C. elegans* uncovers conserved and cell-specific mechanisms of dysfunction **Inna Nechipurenko** Worcester Polytechnic Institute

720B Polycomb Repressive Complex 1 deposits histone H2AK119ub to regulate gene expression, neuronal migration, and behaviour **Jevithen Nehru** University of Toronto

721B Involvement of CaMKIIγ in Learning and Memory through Behavior and GLR-1 Glutamate Receptor Expression **Kevin Nelson** Western Washington University

722B The role of tomosyn in alcohol-modulated habituation in *Caenorhabditis elegans* **Yi Qing Yvette Ni** The University of British Columbia

723B A nuclear hormone receptor *nhr-76* programs age-dependent chemotaxis decline **Kentaro Noma** Graduate School of Science, Nagoya University

724B A cytidine deaminase regulates axon regeneration by modulating the functions of the *Caenorhabditis elegans* HGF/plasminogen family protein SVH-1 **Takafumi Nomachi** Nagoya University

725B Post-training sleep and olfactory synapses are impacted in aged *C. elegans* with declining long-term memory **Emma Odisho** San Jose State University

726B A neuropeptide signaling pathway mediates pheromone avoidance behavior in *C. elegans* **Eujeong Oh** Daegu Gyeongbuk Institute of Science and Technology

727B The molecular mechanisms of light adaptation in the nematode *Pristionchus pacificus* **Misako Okumura** Hiroshima University

728B Repurposing the mitotic chromosome-microtubule coupling machinery to regulate axon termination **Vasileios Ouzounidis** University of Edinburgh

729B SRO-1, a homologue of mammalian Melanopsin OPN4, Modulates Light Avoidance Behavior in *Caenorhabditis elegans*. **Kazuki Ozawa** University of Tsukuba

730B The Characterization of a Novel Presynaptic Protein ROGDI in *C. elegans* Neurons **Beyza Ozen** The University of Edinburgh

731B Identification of the Novel Ben Domain Containing Ben-a as A New Heterochronic Gene That Affects the Timing of Neuronal differentiation **Jill Pan** University of Illinois Chicago

732B Exploring neuronal dynamics and therapeutic strategies in *C. elegans* models of *GNAO1* encephalopathy **Luca Pannone** Istituto Superiore di Sanità

733B Neuron-glia interactions through SAX-7/L1CAM maintain neuronal architecture **Marin Pascal** Université du Québec à Montréal

734B PXF-1 promotes presynaptic assembly through multiple small GTPases **Kate Pauss** University of Kentucky College of Medicine

735B bHLH-mediated regulation of Neuronal CUT Homeobox gene expression **Karinna Pe** Columbia University

736B Physics lessons from worms: How a strange worm behavior revealed electromagnetic sensing of water flow **Laura Persson** University of California, San Francisco

737B G-Protein Receptor Kinase 2 is Necessary for Sickness Sleep in *C. elegans* **Marisa Petticord** University of Pennsylvania

738B Inter-class axon-axon interaction defines tiled synaptic innervation of DA-class motor neurons in *C. elegans* **Federico Pini** University of British Columbia

739C Targetting Charcot-Marie-Tooth (CMT) disease in the nematode *Caenorhabditis elegans* **Emili Plastira** University of Hertfordshire

740C EGL-4 wears many hats to turn sensory information into proteostatic action **Tatiana Popovitchenko** Rutgers University

741C Regulation of glutamatergic synapses and behavior by neurexin and calsyntenin **Regina Powers** Tufts University School of Medicine

742C NLP-67 and its receptor NPR-28 regulate stress-induced sleep in *C. elegans* **Vishnu Raj** University of Wisconsin

743C Ingestion of A53T mutant alpha-synuclein expressing E. Coli induces behavioral deficits in *C. elegans* **Srikrishnan Raju** Medical College of Georgia

744C MACSPI enables tissue-selective proteomic and interactomic analyses in multicellular organisms **Qiao Ran** The University of Hong Kong

745C Caenorhabditis arcana **James Rand** Oklahoma Center for Neuroscience

746C Phenomic characterization of *C. elegans* orthologs of Parkinson's Disease-Associated genes leads to identification of best candidate for GWAS hit **Catharine Rankin** Univ British Columbia

747C New mechanisms of embryonic brain assembly; focus on a non-canonical Hedgehog-like pathway **Georgia Rapti** European Molecular Biology Laboratory

748C Dopamine Receptor D2 contributes to the phenotypic severity in a *C. elegans* model of spinal muscular atrophy **Saman Rashid** University of Hertfordshire

749C OpenAutoScopeV2: A single-worm tracker to probe behavior and physiology throughout the lifetime of a worm **Sina Rasouli** Northeastern University

750C Mitochondrial stress in the GABAergic neurons non-cell-autonomously regulates organismal health and longevity in *Caenorhabditis elegans* **Laxmi Rathor** University of Florida

751C Neuropeptides regulate the plasticity and function of a mature, dimorphic neuron in *C. elegans* **Tammy Ray** University of Pennsylvania

752C Investigating the role of SSRIs' as a potential therapeutic for neurodegenerative diseases **Olivia Reed** Rice University

753C The Loss of Mojo Project: Leveraging the Variable Decay of Mating Prowess in *C. elegans* for Behavioral Genetics **Gregory Reilly** University of Maryland

754C The role of gap junction channel INX-19 in nervous system function across the lifespan **Molly Reynolds** University of Alabama at Birmingham

755C Neurotoxic Impact of TMEM106B C-Terminal Co-Aggregation in Caenorhabditis *elegans* **Ruben Riordan** University of Washington / VAPSHCS

756C Differential regulation and functional analysis of Major Sperm Proteins in ADL neurons **Isabel Ross** Syracuse University

757C Regulatory Roles of NID-1/Nidogen in Pioneer Axon Navigation in the Ventral Nerve Cord **Debapriya Roy** Simon Fraser University

758C Inheritance of probiotic-mediated neuroprotection in a model of Amyotrophic Lateral Sclerosis **Rocio Rubiano** The University of Texas MD Anderson Cancer Center

759C Diet, Chemotherapy, and Neuropathy: Investigating Shared Molecular Pathways in a *C. elegans* Model **Manuel Ruiz** Stanford School of Medicine

760C *srrt-1* loss of function rescues proteinopathy in *C. elegans* models of neurodegenerative disease **Aleen Saxton** Geriatrics Research Education and Clinical Center, Veterans Affairs Puget Sound Health Care System

761C Optogenetic inhibition of glutamatergic transmission by clustering of synaptic vesicles **Noah Schuh** Johann Wolfgang Goethe-University Frankfurt

762C Phosphatidylinositol (4,5)-bisphosphate Impacts Ectosome Shedding from *C. elegans* Ciliated Sensory Neurons **Alexis Semmel** University of Delaware

763C The SCRM-1 Phospholipid Scramblase Regulates Shedding of Extracellular Vesicles **Alexis Semmel** University of Delaware

764C Neuronal sexual dimorphism revealed by single-cell transcriptomics **Hagar Setty** Weizmann Institute of Science

765C Glial regulation of sensory processing and sleep in *C. elegans* **Liza Severs** Fred Hutchinson Cancer Center

766C EZ-FRCNN: A fast, accessible, and robust deep learning package for tracking *C. elegans* **Erin Shappell** Georgia Institute of Technology

767C A heteromeric (LGC-47/ACC-1) inhibitory acetylcholine receptor gates context-dependent mechanosensory processing in *C. elegans* **Anuj Sharma** Princeton University

768C Distributed sensory circuit of pheromone avoidance is regulated by neuropeptides and neurotransmitters **Shruti Shastry** Worcester Polytechnic Institute

769C Probiotic-Mediated neuroprotection via the gut-brain axis: Amelioration of neurodegenerative pathology in *C. elegans* models **YongWoon Shin** Myongji University, Republic of Korea

770C Acidifying Lysosome pH by an Optogenetic Tool Improves Animal Fitness in a Neurodegenerative Disease Model **Shunpan Shu** University of California, San Francisco

771C ngn-1/Neurogenin functions in Insulin-dependent arrest **Alyssa Sipman** Muhlenberg College

772C Investigating the roles of *zoo-1/TJP* in synapse patterning in *C. elegans* **Andrew Snow** The University of British Columbia

773C Functional analysis of APL-1/amyloid precursor protein (APP) signaling in the nervous system **Andrew Snow** The University of British Columbia

774C Exploring the metabolic basis of neurobehavioral defects associated with adenylosuccinate lyase deficiency **Sabrina Amita Sony** The Pennsylvania State University

775C Active forgetting is controlled via modulation of translational elongation **Attila Stetak** University of Basel

776C Identifying novel interactors that regulate *lect-2*/LECT2 function during neurodevelopment **Ian Stone** University of Rochester Medical Center

777C A Role for Activity Dependent Alternative Splicing in Regulating Neuronal and Behavioral Plasticity **Jamie Stonemetz** Brandeis University

778C Using *C. elegans* to study a promising therapeutic target for Chemotherapy-Induced Peripheral Neuropathy (CIPN) **Lexy Strom** Stanford University

779C Investigating the protective effects of vitamin B12 on amyloid-beta proteotoxicity **Karli Sunnergren** University of Delaware

780C Whole-brain dynamics underlying persistent response to electric shock **Ryoga Suzuki** Nagoya City Univ

781C Transcriptomic profiling of ASE neurons during associative learning **Leo Tang** University of Vermont

782C The role of early-life stress on post-embryonic neuronal maturation in *Caenorhabditis elegans* **Ananya Theneti** University of Alabama at Birmingham

783C Mild stress affects learning across multiple generations that nicotine may influence **Aicha Tokar Falatah** Western Washington University

784C Investigating mechanisms of NR4A-type nuclear hormone receptors in nervous system development **Candace Tong-Li** NYU Grossman School of Medicine

785C Exploring Olfactory associative learning in *C. elegans* in response to pathogenic bacteria **Tsung-Lin (Gavin) Tsai** UT MD Anderson Cancer Center

786C The effect of novel bacterial metabolites on egg-laying behavior in C. *elegans* **Martina Velasquez Lemaitre** NYU School of Medicine

787C Peptidergic signaling in establishing experience-dependent behavioral states of *C. elegans* **Sandeep Venkatraman** KU Leuven

788C Serotonin signaling and *rig-6*/CNTN6 establish a framework allowing for neuron remodeling in *C. elegans* adult males **Sophia Villiere** University of Pennsylvania

789C Cell fate maintenance of the touch receptor neurons of *C. elegans* **Manon Vleeming** Erasmus MC

790C Investigating the effects of blast-Induced mild-traumatic brain injury on *C. elegans* survival and associative learning **Briannamarie Wallace** Florida Institute of Technology

791C Arrestin regulates membrane abundance and function of TMC channels **Rui Wang** School of Biological Sciences, Hongkong University

792C Identification of Sensory Cues that Evoke Contact Response in Mating Behaviors of Male *Caenorhabditis elegans* **Chieh Wang** National Taiwan University

793C The loss of a chloride channel in glia extends lifespan via pH regulation and activation of multiple protective programs in *C. elegans* **Lei Wang** University of Miami

794C Connecting mechanosensation and social behavior in relation to ASD risk genes **Lisa Wang** University of Texas in Austin

795C Elucidating the drivers of sex-specific neuronal gene expression in *Caenorhabditis elegans* sensory neurons **Zachary Ward** University of Rochester Medical Center

796C How do social cues modulate intergenerational signaling? **Jadiel Wasson** New York University

797C PXF-1 functions in synaptic vesicle cycling through Rap GTPase signaling **Julie Watkins** University of Kentucky College of Medicine

798C Coelomocytes display immune-like activation by mobilizing and ramifying with alcohol **Chelsea Webber** The University of Texas at Austin

799C Deciphering motor neuron vulnerability in *C9ORF72* ALS by developing novel *C. elegans* models **Ian Weigle** University of Chicago

800C Microbiome-derived Short Chain Fatty Acids Promote Motivation of Mate Searching via A Gut-to-Brain Signaling through Octopamine in *C. elegans* Males **Jen-Wei Weng** National Taiwan University

801C A sensory cilium mediates specific neuron-glia attachment **Leland Wexler** Boston Childrens Hospital

802C Octopamine neurotransmission and CREB activation confer neuroprotection in a *C. elegans* model of Parkinson's disease **Corey Willicott** The University of Alabama

803C The *gba-3* gene encodes a glucocerebrosidase that exacerbates α-synuclein mediated impairments in *C. elegans* mutants **Garry Wong** University of Macau

804C Intercellular Sphingolipid signaling mediates aversive learning in *C. elegans* **Yu-Chun Wu** National Taiwan University

805C Nuclear Hormone Receptor NHR-49 regulates sensory behavior and learning in *C. elegans* **James Wu** University of British Columbia

806C ASD risk allele increases penetrance and degree of normal individual behavioral trait in *C. elegans* **Grace Wulffraat** University of Texas at Austin

807C Intracellular redox wires in sensory neurons of the mouth and nose enable *C. elegans* to evade hydrogen peroxide **Yuyan Xu** Northeastern University

808C Automated analysis of *C. elegans* behavior by LabGym: an open-source, AI-powered platform **L. Amanda Xu** University of Michigan

809C Roles of *lat-2*/Latrophilin and *ten-1/*Teneurin in Developmental Neurite Pruning in *C. elegans* **Sophia Yevlash** University of British Columbia

810C Comparative analysis of neuronal composition in *P. pacificus* and *C. elegans* **Hyunsoo Yim** Columbia University

811C The role of TMEM16F scramblase in neurodegeneration and regeneration **Jialing Yin** The University of Hong Kong

812C Using synthetic cell adhesion molecules to probe the molecular logic of neuronal connections **Jung Hyun Yoo** Harvard Medical School, Boston Children's Hospital

813C Mitochondrial calcium modulates odor-mediated behavioral plasticity in *C. elegans* **Kyoung-Hye Yoon** Yonsei University Wonju College of Medicine

814C Metabolomic analysis of *E. coli* mutants identified potential neuroprotective microbial metabolites **Mengyu Zhang** The University of Hongkong

815C Functional characterization of thermosensory receptor-type Guanylate Cyclases in parasitic nematodes **Yizhe Zhang** University of Washington

816C A dichotomous role of hydrogen peroxide in modulating the function of the photoreceptor LITE-1 **Fengfan Zhang** Life Science Insititute,University of Michigan

817C Functional Interrogation of Neuronal Subtypes via Intersectional Expression of an Optogenetic Actuator Reveals Non-linear Components in a Linear Circuit **Chaogu Zheng** The University of Hong Kong

818C Uncover the molecular mechanism of the effect of Proteinopathy on neurodegeneration through oxylipin metabolism **Kin Sing Lee** Michigan State University

819C Mapping neuropeptide function with single-neuron resolution **Yiwei Zhou** Monash University

Physiology

820A Box C/D snoRNPs and MDT-15/MED15 regulate innate immunity and mitochondrial surveillance via fatty acids **Lois Armendariz** Rice University

821A *ppt-1* knockdown impacts lipid droplet regulation and stress response pathways in *C. elegans* **Deborah Ashiedu** Bridgewater State University

822A Mitochondrial fusion promoter M1 enhances longevity and mitochondrial function in *C. elegans* **Julia Bailey** University of Florida

823A Metformin induced protection against *Streptococcus gordonii* is mediated by SKN-1 via the p38 MAPK and MDT-15 **Boopathi Balasubramaniam** University of Iowa

824A Investigating the role of *phm-2* and *prpf-4* in *C. elegans* reproductive lifespan **Willie Barron** University of North Texas

825A *C. elegans* RIG-I-like receptor DRH-1 Signals via CARDs to activate anti-viral immunity in intestinal cells **Lakshmi Batachari** University of California San Diego

826A Thermal stress adaptation in *Caenorhabditis briggsae* and *C. elegans* **Harvir Bhullar** McMaster University

827A Elucidating Context-Dependent Effects of Gut Microbiome Species *Levilactobacillus brevis* on Healthspan and Age-Related Neurodegeneration **Nicole Braun** Medical College of Georgia at Augusta University

828A Unraveling the pathogenesis of CMT4J using *C. elegans* and advancing drug repurposing efforts. **Constantin Bretonneau** CRCHUM

829A The role of *dur-1* in dauer stress tolerance **Bailey Brown** Southern Methodist University

830A Function of the GID Ubiquitin-Ligase Complex in the Control of Metabolism and Organismal Lifespan **Karl Busch** Faculty of Medicine, HMU Health and Medical University, Potsdam

831A Ciliogenesis mutants reveal a dauer formation pathway acting in parallel to HSD in the dafachronic acid biosynthesis pathway in *Pristionchus pacificus* **Heather Carstensen** California State University, Northridge

832A Sexually transmitted metabolites regulate fat metabolism and fecundity in *C. elegans* **Camila Castellanos-Aldana** Boyce Thompson Institute and Cornell University

833A *idh-1* Neomorphic Mutation Impairs Collagen Maturation and Excretory System Development in *C. elegans* **Muthubharathi Chellammal** University of New Mexico

834A MXL-3 regulates dietary restriction-induced longevity by transcriptionally controlling SAMS-1 expression **Shih-Jung Chen** National Yang Ming Chiao Tung University

835A Intestinal nuclear hormone receptor NHR-21 mediate stress granule formation induced by starvation **Tsui-Ting Ching** National Yang Ming Chiao Tung University

836A Characterization of the cell-specific transcriptional reprograming in response to OP50 to DA1877 diet shift **Yu-Hsuan Chiu** National Yang Ming Chiao Tung University

837A Oocytes response to heat stress: potential cross talk between P granules and stress-induced RNP granules in the germline **Sumaiya Chowdhury** Marquette University

838A UBR-4/KCMF-1, a ubiquitin chain elongating ligase, maintains proteasome robustness **Elyse Christensen** University of Washington

839A Modulating material properties of protein condensates to probe exopher cargo inclusion criteria **Edward Chuang** Rutgers University

840A Elucidating the role of translation inhibition in Caloric Restriction mediated lifespan extension **Catherin DeSousa** University of California, Berkeley

841A Exploring the impact of Albendazole on *C. elegans* egg stage: A model for understanding soil-transmitted Helminth susceptibility and potential pre-infection control strategies **Giselle Domingo Diaz** Lipscomb University

842A *pha-4* knockdown reduces mutant HTT aggregation and alters metabolism in *C. elegans* **Francesca Donley** Bridgewater State University

843A Investigating the crosstalk between dosage compensation and aging: implications for lifespan and healthspan in *C. elegans* **Joshua Eduful** University of Michigan, Ann Arbor

844A Investigating NHR-49 Partner Transcription Factors in Stress and Lifespan Regulation **Glafira Ermakova** University of British Columbia

845A A high-throughput screening pipeline uncovers novel and repurposed anthelmintics with new mechanisms of action **Hala Fahs** New York University

846A Quantifying the influence of phosphagens on the energetics of stress responses **Sarah Fausett** University of North Carolina Wilmington

847A Transgenerational longevity requires DAF-12 germline-to-soma signaling **Tahreem Fiaz** University of Massachusetts Lowell

848A *fat-3* connects lipid droplet metabolism to fecundity and stress response in *C. elegans* **Mindy Garvin-Leighton** Bridgewater State University

849A Uncovering key regulators for the mitochondrial ethanol and stress response element surveillance pathway **Sadie Gaskins** Rice University

850A *Caenorhabditis elegans* as a high throughput screening tool for evaluating therapeutic potential of Nano-enabled Antibacterial Combination Therapy (NeACT) **Saji George** McGill University

851A Wild isolate *Bacillus* species may harbor secondary metabolites that antagonize the *Caenorhabditis elegans* Ras-mediated signaling pathway **Paul Goetsch** Michigan Technological University

852A AFAs: A new class of natural anthelmintic with a multi-target mechanism **Suma Gopinadhan** NYUAD

853A Extending healthspan in aging nematodes through drug repurposing **Spoorthy Gowda** Institute of Biochemistry and Biophysics Polish Academy of Sciences

854A Fitness profiling by RB-TnSeq identifies bacterial genes necessary for *C. elegans* colonization **Lizhen Guo** University of California at Berkeley

855A CEH-60/UNC-62 regulates conditional reversal of aging-like phenotypes by refeeding through UPRER **Ao Guo** National Institute of Biological Sciences

856A Role of the neurotrophic factor MANF in maintaining proteostasis, stress response, and lifespan **Bhagwati Gupta** McMaster University

857A Post-reproductive gene expression shift in *Caenorhabditis briggsae*: a comparative transcriptomic study **Bhagwati Gupta** McMaster University

858A Combined microplastic and phthalate exposure results in decreased lifespan, reproductive toxicity and stress response in *C. elegans* **Jennifer Harr** St. Mary's University

859A Conserved and novel mechanisms of *Steinernema* colonization by *Xenorhabdus* bacteria **Jennifer Heppert** The University of Tennessee

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861A A label-free high-content imaging assay for thermal stress resistance in *C. elegans* **Thomas Hodder** University of Minnesota

862A Behavior and genotype of *C. elegans* exposed to simultaneous hypoxia and heat stress **Helen Hong** UC Irvine

863A Identification and characterization of *C. elegans* genes that *S. maltophilia* targets to evade host insulin-like DAF-2/16 pathway defenses **Sara Hopkins** University of Nebraska-Lincoln

864A Characterizing the interaction between histone H4 and mtDNA in long-lived animals **Hao-Hsiang Hsu** National Yang Ming Chiao Tung University

865A Non-cell-autonomous induction of the endoplasmic reticulum unfolded protein response by COL-75 missense variants **Patrick Hu** Vanderbilt University Medical Center

866A The microsomal triglyceride transfer protein ortholog DSC-4 promotes intestinal endoplasmic reticulum homeostasis by facilitating vitellogenin secretion **Patrick Hu** Vanderbilt University Medical Center

867A *cnnm-5* regulates multiple pathways of proteostasis in a Huntington's Disease model of *C. elegans* **Matthew Hull** Bridgewater State University

868A 6-PPD induces mitochondrial dysfunction and reduces healthspan and lifespan through the SKN-1/Nrf2 pathways in *Caenorhabditis elegans* **Moonjung Hyun** Korea Institute of Toxicology

869A Loss of the distal germline GLP-1 activity gradient in aging *C. elegans* **Rustelle Janse van Vuuren** UQTR

870A NIA *Caenorhabditis* Intervention Testing Program: Identification of Robust and Reproducible Pharmacological Interventions That Promote Longevity Across Experimentally Accessible, Genetically Diverse Populations **Brian Onken** Rutgers, The State University of New Jersey

871A Glutamate Ionotropic NMDA Receptor NMR-2 Regulates innate Immunity via Nervous System in *C elegans* **Benson Otarigho** The University of Texas MD Anderson Cancer Center

872B Tetraspanin-Mediated Membrane Resilience and VHL-1 in Heatstroke Survival **Wei Jiang** Cardiovascular Research Institute, University of California San Francisco

873B Investigating purine degradation inhibition in a *Caenorhabditis elegans* model of ADSSL1 myopathy **Melinda Jin** Penn State University

874B Leveraging *C. elegans* wild isolate variation as a tool to study mitochondrial DNA regulation **Kylie Jozwik** Vanderbilt University

875B PASH-1 rescues CGG repeat-induced RNA toxicity in a *C. elegans* model of FXTAS **Noelle L'Etoile** University of California, San Francisco

876B Anti-obesity effects of black rice bran fermented by shiitake in *C. elegans* **Eunyoung Jun** Hallym University

877B H4K8ac interacting ribosomal protein RPL-10 regulates pathogen aversion **Neethu Kamarudheen** The University of Texas MD Anderson Cancer Center

878B Tissue-specific regulation of the *C. elegans* hypoxia response **Ilona Kesisova** HHMI, Dept. Biology, MIT

879B Investigating the effects of dietary restriction and genetic variation in lifespan using novel recombinant inbred lines of *C. elegans* **Sehrisha Khan** Canterbury Christchurch University

880B Taurine as a promoter of healthy aging via dietary restriction signaling in *C. elegans* **Sangyeong Kim** Hallym University

881B Resistance profile of Cry proteins combating plant parasitic nematodes **Youmie Kim** UMASS Chan Medical School

882B Calcium homeostasis regulates Urolithin A-induced mitophagy to promote healthspan and lifespan **Aikaterini Kitopoulou** National and Kapodistrian University of Athens

883B The *C. elegans* pre-dauer L2 prematurely restricts germline growth in response to nutrient deprivation, correlated with reduced reproductive success **Fred Koitz** University of North Carolina at Chapel Hill

884B Transgenerational adaptive behaviour and immune priming in *C. elegans* upon *Salmonella* Typhi infection via dopaminergic and insulin signalling **Balamurugan Krishnaswamy** Alagappa University, INDIA

885B Learned Aversion of *Chryseobacterium*, a Natural *C. elegans* Pathogen **Yuan-Chen Kuo** National Taiwan University

886B Temporal and spatial regulation of the autophagy-regulating transcription factor HLH-30/TFEB in hormesis and aging **Cheng-Ju Kuo** Sanford Burnham Prebys Medical Discovery Institute

887B Glial regulation of organismal ER stress resistance via XBP1 in *C.elegans* **Saebom Kwon** National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), National Institutes of Health

888B Circadian-mediated phenotypic heterogeneity drives immune variability among clonal individuals **Jonathan Lalsiamthara** UT MD Anderson Cancer Center

889B The role of genetic sex in the regulation of environmental stress responses **Maria Lazaro-Pena** University of Rochester Medical Center

890B Transgenerational regulation of longevity in *hsb-1* mutants of *C. elegans* **Phuong Le** Taiwan International Graduate Program in Molecular Medicine, National Yang Ming Chiao-Tung University and Academia Sinica, Taipei, Taiwan

891B A High Throughput Screen for Compounds That Impair Sleep **William Lee** University of Pennsylvania

892B Sexually dimorphic regulation of lipid metabolism by the hypothalamic-like AVK neuron *in C. elegans* **Chien-Po Liao** Columbia University in the City of New York

893B A Healthspan Screen in *C. elegans* Identifies Novel Compounds for Lifespan Extension **Gordon Lithgow** Buck Inst

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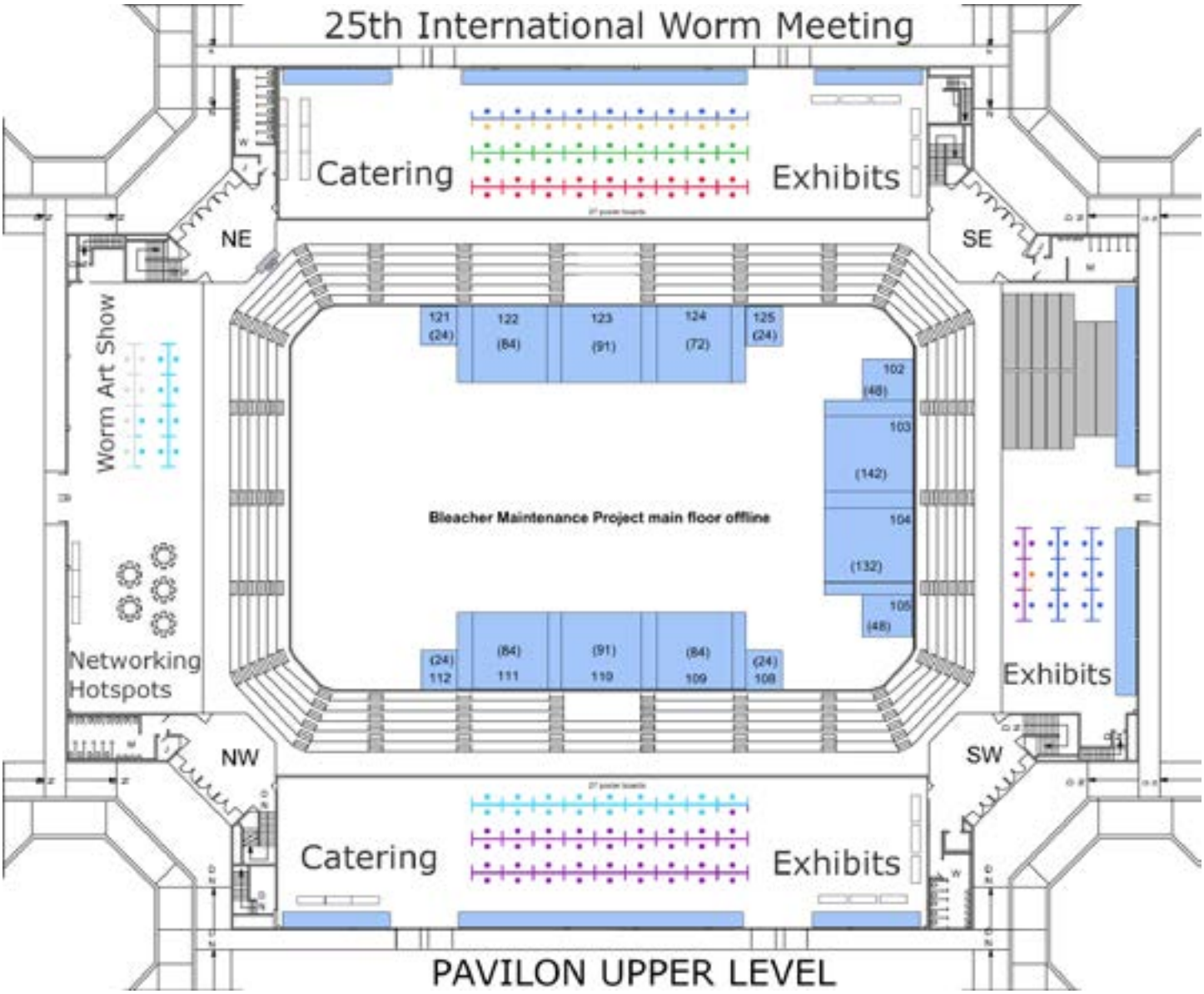

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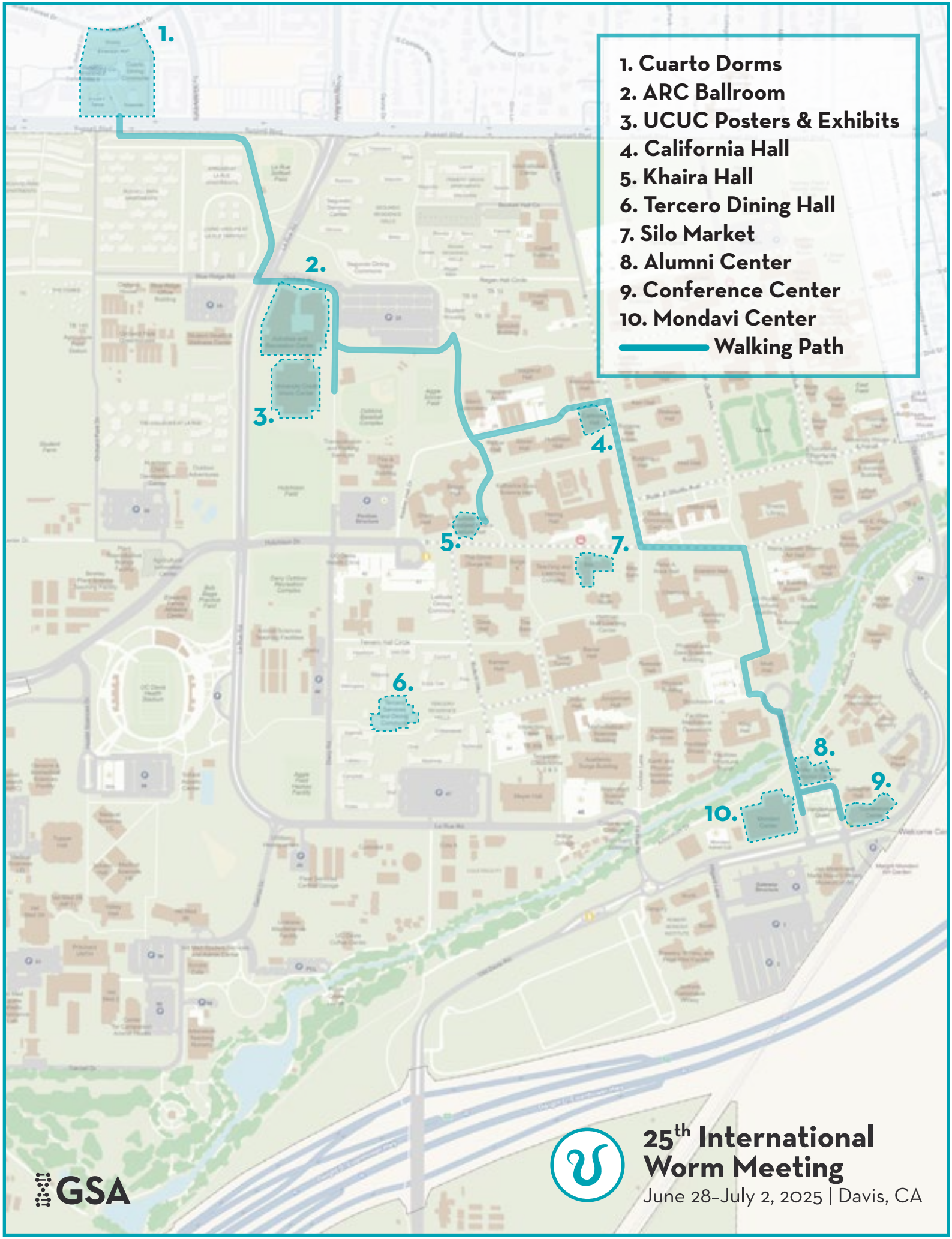
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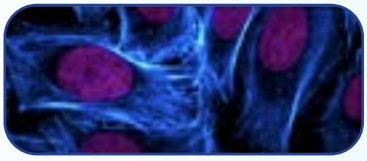
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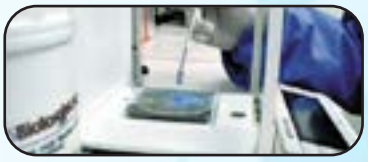
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