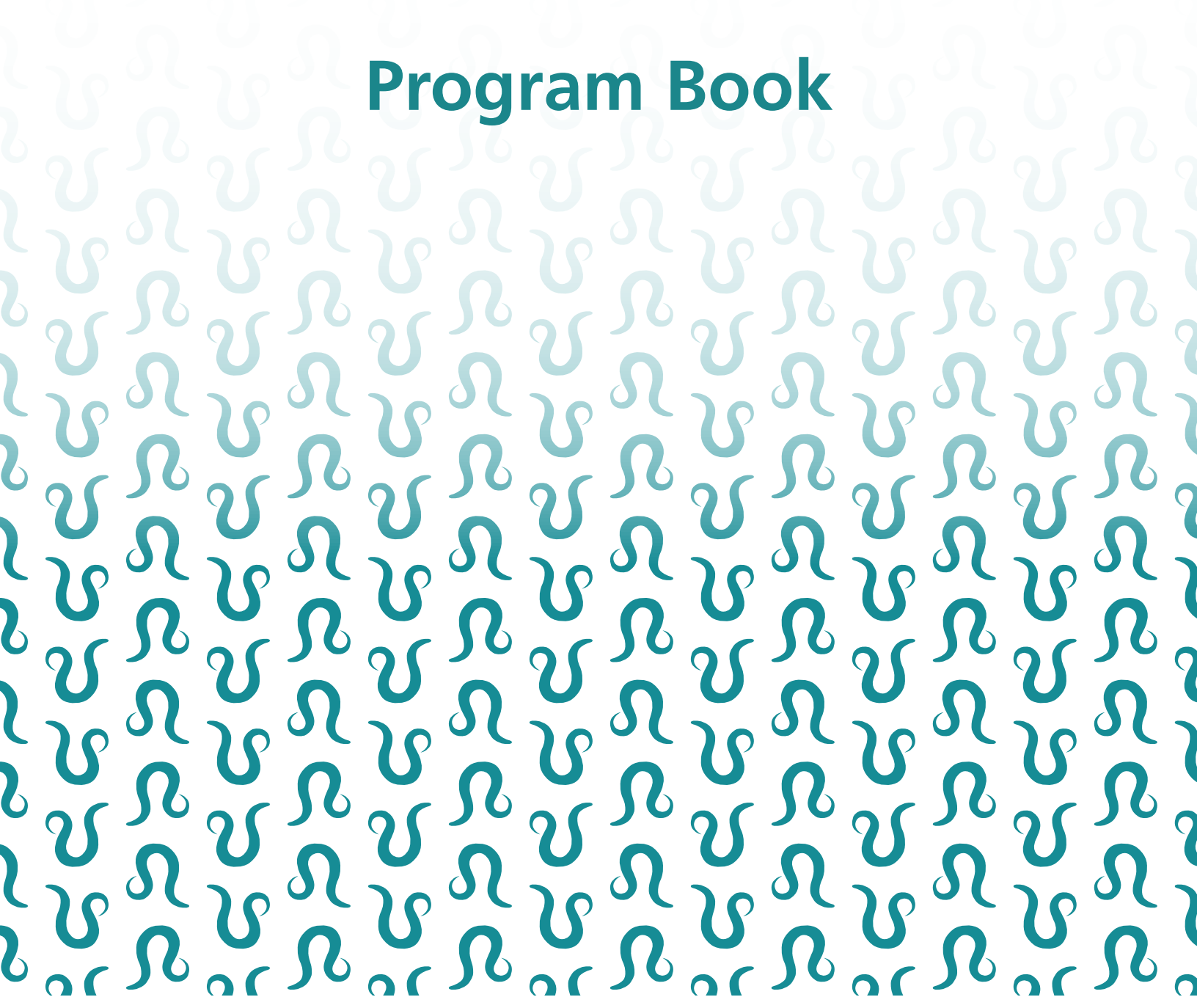# International C. elegans Conference

June 21 – 24, 2021

Program Book

GSA GENETICS G3 Genes|Genomes|Genetics

Table of Contents

Genetics Society of America

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

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

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

2021 GSA Board of Directors

Officers

Hugo Bellen, *President*

E. Jane Hubbard, *Vice-President*

Denise J. Montell, *Immediate Past President*

Erika L. Matunis, *Secretary*

Michael Buszczak, *Treasurer*

Directors

Swathi Arur

Rebecca Burdine

Pamela K. Geyer

Maitreya Dunham

Oliver Hobart

Folami Ideraabdullah

Irene Miguel-Aliaga

Steven Munger

C. Brandon Ogbunu

Jordan D. Ward

Noah Whiteman

Journal Editors

Brenda J. Andrews, *Editor in Chief, G3: Genes|Genomes|Genetics*

Howard Lipshitz, *Editor in Chief, GENETICS*

Early Career Representative

Gavin Rice

Executive Director

Tracey DePellegrin

Conference Organizers

Organizing Committee

Chair: Barbara Conradt, *University College London, UK*

Chair: Piali Sengupta, *Brandeis University, USA*

Javier Apfeld, *Northeastern University, USA*

Kavita Babu, *Indian Inst of Science and IISER Mohali, India*

Heather Bennett, *Bard University, USA*

Daphne Cabianca, *Helmholtz Center Munich, Germany*

John Calarco, *University of Toronto, Canada*

Yee Lian Chew, *Flinders University, Adelaide, Australia*

Colin Conine, *University of Pennsylvania School of Medicine, USA*

Marina Ezcurra, *University of Kent, UK*

Jessica Feldman, *Stanford University, USA*

Steven Flavell, *MIT, USA*

Jonathan Karpel, *S. Utah University, USA*

Kyung Won (Kai) Kim, *Hallym University, Korea*

Yumi Kim, *Johns Hopkins University, USA*

John Labbadia, *University College London, UK*

Dengke Ma, *UCSF, USA*

Lesley MacNeil, *McMaster University, Canada*

Katherine McJunkin, *NIH, USA*

John Murray, *University of Pennsylvania, USA*

Misako Okumura, *Hiroshima University, Japan*

Maria Olmedo, *University of Sevilla, Spain*

Meital Oren-Suissa, *Weizmann Institute, Israel*

Diego Rayes, *INIBIBB, Universidad Nacional del Sur, Argentina*

Anne-Cécile Reymann, *IGBMC, France*

Suzan Ruijtenberg, *Utrecht University, Netherlands*

Buck Samuel, *Baylor College of Medicine, USA*

Monika Scholz, *Research Institute Caesar, Germany*

Asuka Takeishi, *RIKEN, Japan*

Ye Tian Chinese, *Academy of Sciences, China*

Benjamin Towbin, *University of Bern, Switzerland*

Benjamin Weaver, *UT Southwestern Medical Center, USA*

Suhong Xu, *Zhejiang University, China*

GSA *C. elegans* Conference Poster Award Organizers

Jason Chan, *Juniata College*

Piya Ghose, *University of Texas, Arlington*

Tina Gumienny, *Texas Women's University*

Laura Vallier, *Hofstra University*

Jared Young, *Mills College*

Worm Art Show Organizer

Ahna Skop, *University of Wisconsin-Madison*

Worm Variety Show Organizers

Morris Maduro, *University of California, Riverside*

Curtis Loer, *University of San Diego*

International *C. elegans* Board 2021

International *C. elegans* Board 2021

Sponsors

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

Premier Sponsors

Sponsors

Schedule of Events

All times are listed in Eastern Daylight Time (EDT)

FRIDAY, June 18

10:00 am - 11:00 am	**Worm21 Early Career Leadership Program Welcome and Conference Success** *Session Chair*: Erin Suderman
11:15 am - 12:15 pm	**Getting Involved in GSA's Early Career Professional Development Programs** *Session Chair*: Erin Suderman
1:00 pm - 3:00 pm	**Multilingual Networking** *Session Chair*: Jessica Velez
2:00 pm - 4:00 pm	**Career Exploration Panel** *Session Chair*: Jessica Velez
4:00 pm - 5:00 pm	**Careers in Academia** *Session Chair*: Teresa Lee and Jessica Velez

MONDAY, June 21

9:45 am - 11:35 am	**Opening Plenary** *Invited Speakers*: Luisa Cochella, Oded Rechavi, Emily Troemel
12:00 pm - 2:00 pm	**Concurrent Platform**
	Aging and stress I *Session Chairs*: John Labbadia; and María Olmedo
	Mitosis, Meiosis, & the Cytoskeleton *Session Chairs*: Jessica Feldman; and Yumi Kim
	Synaptic Function and Circuits *Session Chairs*: Steven Flavell; and Misako Okumura
	Transcriptional and post-transcriptional gene regulation *Session Chairs*: Colin Conine; and Inna Nechipurenko
2:15 pm - 3:15 pm	**Poster and Exhibits Session - Even numbered "A" posters**
3:15 pm - 4:15 pm	**Poster and Exhibits Session - Odd numbered "A" posters**
4:30 pm - 6:00 pm	**Concurrent Workshops**
	Modeling Rare Human Diseases in *C. elegans* *Session Chair*: Andrew Golden
	Utilizing neuron-specific gene expression data from the CeNGEN project Session Chairs: David Miller; Seth Taylor; and Marc Hammarlund

All times are listed in Eastern Daylight Time (EDT)

MONDAY, June 21 (continued)	
6:15 pm - 7:15 pm	**Meet-ups** *The first hour will be in Zoom breakout rooms and then you can continue the conversation in Remo for a smaller group chat. All career stages are welcome.*
7:15 pm - 8:15 pm	**Meet up in Remo for smaller group discussions**

TUESDAY, June 22	
7:45 am - 8:45 am	**COPAS VISION™: The worm sorter that takes pictures. Presented by Union Biometrica** *Session Chairs*: Rock Pulak; and Deborah Frenkel
7:50 am - 8:45 am	**Meet-ups**
9:00 am - 11:00 am	**Concurrent Platform**
	Behavior *Session Chairs*: Monika Scholz; and Asuka Takeishi
	Epigenetics and Genome Organization *Session Chairs*: Daphne Cabianca; and John Calarco
	Intracellular Trafficking, Organelles, & Cell Polarity *Session Chairs*: Diego Rayes; and Anne-Cécile Reymann
	Pathogenesis *Session Chairs*: Jon Karpel; and Dengke Ma
11:30 am - 1:00 pm	**Concurrent Workshops**
	Embracing the microbial side: 3rd *C. elegans* microbiome workshop *Session Chair*: Buck Samuel
	Publishing Workshop *Session Chair*: Ruth Isaacson
	Spatiotemporal control of gene expression and protein levels *Session Chairs*: Peter Askjaer; David Q. Matus; and Jordan D. Ward
	The diversity of data in WormBase; how to find it and use it *Session Chairs*: Ranjana Kishore; and Chris Grove
1:15 pm - 2:15 pm	**Building an equitable scientific community: lessons from *C. elegans* researchers involved in DEI initiatives** *Session Chair*: Anna Allen

All times are listed in Eastern Daylight Time (EDT)

TUESDAY, June 22 (continued)

2:45 am - 3:45 pm	**Poster and Exhibits Session – Even numbered "B" posters**
3:45 pm - 4:45 pm	**Poster and Exhibits Session – Even numbered "B" posters**
5:00 pm - 6:00 pm	**Active learning mentorship for postdocs and junior faculty: the PALM Network** Session Chairs: Teresa Lee; and Jennifer Schisa
5:15 pm - 6:15 pm	**Meet-ups** *The first hour will be in Zoom breakout rooms and then you can continue the conversation in Remo for a smaller group chat. All career stages are welcome.*
6:15 pm - 7:15 pm	**Meet up in Remo for smaller group discussions**

WEDNESDAY, June 23

7:45 am - 8:45 am	**Automating *C. elegans* lifespan, stress, and behavior studies with NemaLife**
7:50 am - 8:45 am	**Meet-ups**
9:00 am - 11:00 am	**Concurrent Platform**
	Aging and stress II *Session Chairs*: Yee Lian Chew; and Benjamin Towbin
	Germline, Sex determination and Signaling *Session Chairs*: John Murray; and Suzan Ruijtenberg
	Neuronal development and novel methods *Session Chairs*: Kavita Babu; and Heather Bennett
	RNA interference and non-coding RNAs *Session Chairs*: Katherine McJunkin; and Benjamin Weaver
11:30 am - 1:00 pm	**Concurrent Workshops**
	Applying for the NSF CAREER Grant for Assistant Professors Session Chairs: Matthew Buechner; Steven L. Klein; and Paulynn Cartwright
	Live RNA Imaging Strategies in *C. elegans* Session Chairs: Christopher M. Hammell; Erin Nishimura; and Sevinc Ercan
	The male *C. elegans* nervous system: connectomics, molecular maps, and functional analysis Session Chair: Robert W. Fernandez

All times are listed in Eastern Daylight Time (EDT)

WEDNESDAY, June 23 (continued)

1:30 pm - 2:30 pm	**Poster and Exhibit Session - Even numbered "C" posters**
2:30 pm - 3:30 pm	**Poster and Exhibit Session - Odd numbered "C" posters**
3:45 pm - 4:45 pm	**Worm Variety Show**
5:15 pm - 6:15 pm	**Meet-ups** *The first hour will be in Zoom breakout rooms and then you can continue the conversation in Remo for a smaller group chat. All career stages are welcome.*
6:15 pm - 7:15 pm	**Meet up in Remo for smaller group discussions**

THURSDAY, June 24

7:45 am - 8:45 pm	**Meet-ups**
9:00 am - 11:00 am	**Concurrent Platform**
	Cell fate, patterning and morphogenesis *Session Chairs*: Ye Tian; and Sughong Xu
	Metabolism & Dauer Larvae *Session Chairs*: Lesley MacNeil; and Javier Apfeld
	Natural Variation, Evolution, and the Microbiome *Session Chairs*: Marina Ezcurra; and Buck Samuel
	Regeneration and Degeneration *Session Chairs*: Kyung Won (Kai) Kim; and Meital Oren
11:30 am - 12:15 pm	**Presentation of Art Show Awards and GSA Poster Awards**
12:30 pm - 1:30 pm	**Closing Plenary Session – Past, Present, and future of worms: Our community and our research** *Session Chairs*: Julie Ahringer; and Needhi Bhalla
1:45 pm - 2:45 pm	**Worming into Relevance – Disease modeling using humanized *C. elegans* models.** Presented by InVivo Biosystems
3:30 pm - 6:45 pm	**5th Parasitic Nematode Workshop: Bridging the Divide**
3:30 pm - 5:30 pm	**Teaching Workshop**

General Information

Conference App

To attend the conference presentations, you will need to sign into the Conference App using your registration badge ID number and last name. The App will be available in two formats: Desktop App (for desktop and laptop computers), or Mobile App (for Apple iOS and Android mobile devices).

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

Access the app at:

genetics-gsa.org/celegans-2021/conference-app/

Oral Presenters

Please log into your session ten minutes before the start of your session (not your talk) using the special link you received in an email from worm21 Zoom. A final video/audio/screen share check will be conducted.

View the oral presenter instructions here:

genetics-gsa.org/celegans-2021/for-presenters/oral-presenter-guidelines/

Poster Presenters

Poster presenters should enter Remo using the "Live Poster Hall" link on the App home screen (also available from the "More" tab). You should log in to Remo using the same email address as you used to register for the conference.

When you enter the Remo session, you will be assigned to a random table and floor in the appropriate "building". You must now navigate to your correct floor and table. Move to your poster table by double-clicking it. Once you are at your table, click "Whiteboard" at the bottom of the screen to upload a pdf of your poster. Note that uploading your poster to the App does not upload it to Remo. There are two poster sessions each day, be sure you are in the correct session.

View the poster presenter instructions here:

genetics-gsa.org/celegans-2021/for-presenters/virtual-poster-presentations/

Viewing Oral Sessions

Registrants will access all live sessions through the App. Five minutes before an oral session starts, log in using your registration badge number and last name. Tap the "Join Webinar" button on your chosen session. The Join Webinar button will be visible ten minutes before the start of the session.

A recording of each session will be available, in the session listings on the App, around 24 hours after the session ends. The recordings will be available until July 16.

View full instructions for joining oral sessions here:

genetics-gsa.org/celegans-2021/poster-attendee-guidelines/

Attending Live Poster Sessions

Access the live poster sessions on Remo using the "Live Poster Hall" link on the App home screen (also available from the "More" tab). You will need to log in to Remo with the email address you used to register for the conference. The first time you join Remo you will also be asked to create a password. Once you enter the site, you will be assigned to a random table and floor. You can move between posters by double clicking on any table. Please share your video and microphone so poster presenters can see everyone who is attending.

In addition to the live poster sessions, poster files will be available via the App for the duration of the conference.

Note that you cannot participate in the live poster sessions using an iPad or tablet device.

View full instructions for live poster sessions here:

genetics-gsa.org/celegans-2021/poster-attendee-guidelines/#live

Live Poster Session Schedule

All live poster sessions will be held in the Remo platform, which can be accessed using the "Live Poster Hall" link in the App. There are three buildings for each session so be sure to visit all buildings and all nine floors. Within Remo, the grid on the left will allow you to move between floors. On the left hand side of the floor plan there are links to move to the other two buildings. Posters in the Remo platform will be removed at the end of each session.

If you are unable to attend the Live Poster Sessions, you can also leave questions for presenters on the app in the "Discussion" field at the bottom of the poster entry.

Building 1	Building 2	Building 3
Floors 1-3 - Cell Biology	Floors 1-3 Gene Regulation	Floor 1 - Neurobiology and Physiology
Floors 3-6 Development	Floor 3-9 Neurobiology	Floors 2-6 Physiology
Floors 7-8 Ecology and Evolution		Floor 7 Physiology and Other
Floor 8 Education		Floor 8 Other
Floor 9 Gene Regulation		

Posters by Building and Floor

Monday, June 21 Poster Presentations (Group A)

Even numbered 2:15 p.m. - 3:15 p.m.

Odd numbered 3:15 p.m. - 4:15 p.m.

Building 1		Building 2		Building 3	
Floor 1	172A-211A	Floor 1	559A-598A	Floor 1	940A-976A
Floor 2	214A-253A	Floor 2	601A-640A	Floor 2	979A-1018A
Floor 3	256A-295A	Floor 3	643A-682A	Floor 3	1021A-1057A
Floor 4	298A-337A	Floor 4	685A-727A	Floor 4	1060A-1096A
Floor 5	340A-379A	Floor 5	730A-769A	Floor 5	1099A-1135A
Floor 6	382A-421A	Floor 6	772A-811A	Floor 6	1138A-1174A
Floor 7	424A-469A	Floor 7	814A-853A	Floor 7	1177A-1210A
Floor 8	472A-511A	Floor 8	856A-895A	Floor 8	1213A-1240A
Floor 9	514A-556A	Floor 9	898A-937A		

Tuesday, June 22 Poster Presentations (Group B)

Even numbered 2:45 p.m. - 3:45 p.m.

Odd numbered 3:45 p.m. - 4:45 p.m.

Building 1		Building 2		Building 3	
Floor 1	173B-212B	Floor 1	560B-602B	Floor 1	941B-977B
Floor 2	215B-254B	Floor 2	605B-644B	Floor 2	980B-1019B
Floor 3	257B-296B	Floor 3	647B-686B	Floor 3	1022B-1058B
Floor 4	299B-338B	Floor 4	689B-728B	Floor 4	1061B-1097B
Floor 5	341B-380B	Floor 5	731B-770B	Floor 5	1100B-1136B
Floor 6	383B-422B	Floor 6	773B-812B	Floor 6	1139B-1175B
Floor 7	425B-646B	Floor 7	815B-854B	Floor 7	1178B-1208B
Floor 8	470B-515B	Floor 8	857B-896B	Floor 8	1211B-1241B
Floor 9	518B-557B	Floor 9	899B-938B		

Wednesday, June 23 Poster Presentations (Group C)

Even numbered 1:30 p.m. - 2:30 p.m.

Odd numbered 2:30 p.m. - 3:30 p.m.

Building 1		Building 2		Building 3	
Floor 1	174C-213C	Floor 1	552C-591C	Floor 1	930C-966C
Floor 2	216C-255C	Floor 2	594C-633C	Floor 2	969C-1005C
Floor 3	258C-297C	Floor 3	636C-675C	Floor 3	1008C-1044C
Floor 4	300C-339C	Floor 4	678C-717C	Floor 4	1047C-1083C
Floor 5	342C-381C	Floor 5	720C-759C	Floor 5	1086C-1125C
Floor 6	384C-423C	Floor 6	762C-801C	Floor 6	1128C-1164C
Floor 7	426C-465C	Floor 7	804C-843C	Floor 7	1167C-1203C
Floor 8	468C-507C	Floor 8	846C-885C	Floor 8	1206C-1239
Floor 9	510C-549C	Floor 9	888C-927C		

Sponsor and Exhibitor Education Sessions

GENETICS and G3 - Publishing Workshop
Join Tracey DePellegrin, Executive Editor of GENETICS and G3, Howard Lipshitz, Editor in Chief of GENETICS and David Fay, Senior Editor, G3 at the Publishing Workshop on Tuesday, June 22, 11:30 a.m. - 1:00 p.m. EDT

Development - Publishing Workshop
Join Swathi Arur and editors from other journals at the Publishing Workshop on Tuesday, June 22, 11:30 a.m. - 1:00 p.m. EDT.

eLife - Publishing Workshop
Join Piali Sengupta and editors from other journals at the Publishing Workshop on Tuesday, June 22, 11:30 a.m. - 1:00 p.m. EDT.

InVivo Biosystems - Worming into Relevance – Disease modeling using humanized *C. elegans* models
Thursday, June 24, 1:45 - 2:45 p.m. EDT

Ellen Gregory from UC Davis and Dr. Ken Dawson-Scully from Florida Atlantic University will discuss how humanized *C. elegans* models and novel assays are used for disease modeling with the goal of assaying the clinical significance of predicted disease-causing variants and for uncovering neurotoxins and biowarfare antidotes. Also be sure and visit us at the Poster and Exhibits sessions on Monday, Tuesday and Wednesday in Building 2, Floor 1.

Nemalife - Automating *C. elegans* lifespan, stress, and behavior studies
Wednesday, June 23, 7:45 - 8:45 a.m. EDT

NemaLife, Inc invites you to experience how our hardware and software solutions can help improve the experimental throughput of your lab. We will demonstrate how our microfluidic platforms reduce the need for intensive manual assays. We will also highlight how our new software tools can speed up data analyses. Retire your worm picks with us! Stop by and visit us during the Poster and Exhibit sessions on Monday, Tuesday and Wednesday in Building 2, Floor 2!

PALM Network - Active learning mentorship for postdocs and junior faculty
Tuesday, June 22, 5:00 - 6:00 p.m. EDT

Learn how to advance your teaching skills through the Promoting Active Learning and Mentoring (PALM) Network. We will examine why to use active learning, key features of PALM, examples of PALM Fellow projects, how to get matched with a mentor, and the fellowship application form.

Union Biometrica - COPAS VISION™: The worm sorter that takes pictures
Tuesday, June 22, 7:45 - 8:45 a.m. EDT

COPAS VISION is a flow cytometer that can analyze and sort all stages of *C.elegans* and collect brightfield images of those worms. This lets the researcher screen through populations for rare variants, selecting differences in fluorescence levels, and dispensing worms to wells for various assays. All this and worm snapshots! Also be sure and visit us at the Poster and Exhibits sessions on Monday, Tuesday and Wednesday in Building 1, Floor 2.

Daily Meet-ups via Zoom and Remo

Socials will be held each day giving an opportunity to meet with professors, or participate in a hosted, themed virtual discussion on scientific, professional development, and community topics. The first hour will be in Zoom breakout rooms and then you can continue the conversation in Remo for a smaller group chat. All career stages are welcome. The below schedule shows the times and topics. In addition to the topics listed, at each Meet-up, there will be rooms for undergraduate and graduate students, postdocs and Meet the Professors.

Monday, June 21	
6:15 - 7:15 p.m.	Cell Biology and Growth
6:15 - 7:15 p.m.	Immunity and Microbiome
6:15 - 7:15 p.m.	Applying to graduate school
6:15 - 7:15 p.m.	Parents in science
Tuesday, June 22	
7:45 - 8:45 a.m.	Cell Stress and death
7:45 - 8:45 a.m.	Evolution and Population Genetics
7:45 - 8:45 a.m.	Doing science and teaching at a PUI
7:45 - 8:45 a.m.	LGBTQ+ in science
5:15 - 6:15 p.m.	Development, patterning, morphogenesis and organogenesis
5:15 - 6:15 p.m.	Ecology, biotic interactions, chemical signaling
5:15 - 6:15 p.m.	Careers in academia
5:15 - 6:15 p.m.	Science Communication
Wednesday, June 23	
7:45 - 8:45 a.m.	Gene Regulation and expression
7:45 - 8:45 a.m.	Neural Development and Physiology
7:45 - 8:45 a.m.	Careers in industry
7:45 - 8:45 a.m.	Diversity, equity and inclusion
5:15 - 6:15 p.m.	Neural circuits and behavior
5:15 - 6:15 p.m.	Reproduction and gametogenesis
5:15 - 6:15 p.m.	Disability in science
Thursday, June 24	
7:45 - 8:45 a.m.	Physiology, metabolism and aging
7:45 - 8:45 a.m.	Chromatin, epigenetics and genomics
7:45 - 8:45 a.m.	Models of Human Disease
7:45 - 8:45 a.m.	Applying to post-doc positions

Viewing Virtual Posters on the App

Poster files (with 2-minute audio overviews) will be available to view via the App between June 19 and June 24. Look for the "Virtual Poster" link near the bottom of each poster's entry in the App.

View full instructions for viewing virtual posters here:

genetics-gsa.org/celegans-2021/poster-attendee-guidelines/#virtual-posters

Slack Chat Channels

The Worm21 Slack workspace is the place to meet other attendees during the conference. You can join and create chat channels based on your interests. There are channels for getting technical help, discussing new papers and preprints, sharing job ads, and connecting with other attendees around shared Interests.

Learn more about Worm 21 Slack at: genetics-gsa.org/celegans-2021/worm21-slack/

Job Postings

Employers are welcome to add PDFs of job opportunities on the "Job Posting" table's whiteboard in the Poster Sessions and in the a_jobs channel in the Worm21 Slack workspace. Employers can also post student and postdoc positions for free at the GSA Job Board online: jobboard.genetics-gsa.org

Presenting Author Index

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

Access the app at:

genetics-gsa.org/celegans-2021/conference-app/

Conference Policies

Code of Conduct

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

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

All conference participants (regardless of their role) are expected to follow the Code of Conduct while attending any portion of the conference, including but not limited to keynote presentations, concurrent sessions, live poster Q&A sessions, workshops, and all conference Slack channels. Because of the virtual nature of 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, Slack, 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, disability or ability status, or other personal characteristics, including those protected by law
- Inappropriate use of nudity and/or sexual images in public spaces (including presentation slides and posters)
- Deliberate intimidation, stalking, or following
- Violating the rules and regulations of the conference hotel
- Sustained disruption of scientific sessions or other events
- Unwelcome and uninvited attention or contact
- Physical assault (including unwelcome touching or groping)
- Real or implied threat of physical harm
- Real or implied threat of professional or financial damage or harm
- Harassing or unwanted photography
- Photographing slides of oral presentations and posters without permission
- Recording of scientific and other sessions without permission

Taking action or making a report

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

Consequences of non-compliance

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

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

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

Accessibility

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

Diversity and Inclusion

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

Social Media/Photo/Video Policy

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

Exhibits

InVivo Biosystems

An expert in CRISPR genome editing, InVivo Biosystems creates custom genome edited *C. elegans* and zebrafish models to enable aging, developmental and disease studies. InVivo Biosystems also develops and manufactures genotyping and phenotyping products, including instruments, reagents and consumables to allow researchers to explore and discover new phenotypes. Be sure and attend our Worming into Relevance – Disease modeling using humanized *C. elegans* models session on Thursday, June 24, 1: 45 p.m. - 2:45 p.m. EDT and visit our table during the Poster and Exhibit Sessions on Monday, Tuesday and Wednesday.

Nemalife

dhaval.patel@nemalifeinc.com

nemalifeinc.com

NemaLife, Inc. is a dynamic biotechnology company that offers hardware and software solutions to academic labs for automating a variety of assays using *C. elegans*. Our platforms enable high-throughput data acquisition and analysis while allowing precise whole-life control of the environment of the worm. Be sure and attend our *Automating C. elegans lifespan, stress, and behavior studies* with NemaLife session on Wednesday, June 23, 7:45 am – 8:45 am EDT and visit us at our table in the Poster Sessions, Monday, Tuesday and Wednesday.

Union Biometrica

sales@unionbio.com

unionbio.com

Union Biometrica provides flow cytometry for objects that are too large / fragile for traditional cytometers and offer an alternative to manual sorting (under a microscope). These systems sort and dispense objects based on size and fluorescent parameters. Automating this process offers increased speed, sensitivity, quantification, and repeatability of experiments. Be sure and attend our *COPAS VISION™*: The worm sorter that takes pictures session on Tuesday, June 22, 7:45 a.m. - 8:45 a.m. EDT and visit our table during the Poster Sessions on Monday, Tuesday and Wednesday.

WormAtlas

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 a section on the nematode Pristionchus pacificus. During the poster sessions we will demonstrate our content and provide guidance on new functions and features for both WormAtlas and WormImage, our website that provides access to an extensive collection of EM images. Be sure and visit us at our table in the Poster and Exhibit Sessions on Monday, Tuesday and Wednesday.

Oral Presentation and Workshop Session Listings

Oral Presentation and Workshop Session Listings

Tuesday, May 11
1:00 pm - 3:30 pm

New Faculty Workshop

This event is designed to help new faculty (those within their first five years of appointment) and postdocs network, learn, and find support. In the past, topics covered in this event included tools and techniques for managing budgets effectively, tips for negotiating and establishing relationships with vendors, and tips on being a supportive mentor Advance registration is required.

1. Introductions to first panel
2. 55 min Panel: setting up a lab with R01 and PUI
    1. Panel:
        1. Teresa Lee
        2. Nicole Crown
        3. Derek Applewhite
    2. Moderator
        1. Justin DiAngelo
3. 5 min break
4. Introductions to second panel
5. 55 min Panel: teaching at an R01 and PUI
    1. Panel:
        1. Rob Ward
        2. Julie Hall
        3. Te-Wen Lo
    2. Moderator
        1. Justin DiAngelo
6. 5 min break
7. 30 minutes networking break
    1. Breakout rooms
        1. Research-intensive (Rob Ward and Nicole Crown)
        2. 50/50 research/teaching (Teresa Lee and Justin DiAngelo)
        3. Teaching-intensive (Te-Wen Lo and Julie Hall)

Thursday, May 13
1:00 pm - 2:00 pm

Grants and Funding

This workshop provides attendees with important and useful information related to applying for research funding. Attendees hear talks from experienced investigators and program officers, and they have a chance to ask questions in a friendly, low-stress environment. Advance registration is required.

Panelists:
- Dr. Arcady Mushegian, National Science Foundation Program Director
- Dr. Bob Coyne, National Institute of General Medical Sciences Program Director - Developmental and Cellular Processes
- Dr. Victoria McGovern, Burroughs Wellcome Fund Senior Program Officer
- Dr. Janka Mátrai, European Research Council Executive Agency Scientific Officer
- Etsuko Kifune, Japan Society for the Promotion of Science Deputy Director, Washington, D.C. Office
- Dr. Christopher McMaster, Canadian Institutes of Health Research Institute of Genetics Director

Friday, June 18
10:00 am - 11:00 am

Worm21 Early Career Leadership Program Welcome and Conference Success

Session Chair:
Erin Suderman, Genetics Society of America

This event helps attendees make the most of the conference. Topics covered may include: introduction to organizers of the meeting, advice on having meaningful interactions in a virtual space, a chance to meet other attendees in an informal setting, and an introduction to events in the scientific and other programming. Registration required.

Friday, June 18
11:15 am - 12:15 pm

Getting Involved in GSA's Early Career Professional Development Programs

Session Chair:
Erin Suderman, Genetics Society of America

GSA Early Career Leadership Program members will join us in sharing how to get involved in the ECLP focusing on how the program has advanced their scientific skill sets and careers. GSA will walk through how and when to apply and showcase programming Early Career Scientists can participate in throughout the year. Registration required. For undergrads, grads and postdocs.

Friday, June 18
1:00 pm - 2:00 pm

Multilingual Networking

Session Chair:
Jessica Velez, Genetics Society of America

This multilingual networking event is where fellow #Worm21 participants who speak languages other than English will have a chance to network and talk science in their native language or language of choice with other participants. Join us for this exciting event to network in the language of your choice! Advance registration required.

Friday, June 18
2:00 pm - 4:00 pm

Career Exploration Panel

Session Chair:
Jessica Velez, Genetics Society of America

A panel of individuals from multiple career paths will show the broad options available to those with a PhD. The career sectors highlighted will be: academic research, government research, science communication and writing, science policy, non-profit, business, outreach, and academic administration.

Friday, June 18
4:00 pm - 5:00 pm

Careers in Academia

Session Chair:
Jessica Velez, Genetics Society of America

This event for graduate students and postdocs will show the broad options available to those with a PhD by hosting a panel of individuals from multiple career paths.

Moderator:
Teresa Lee, University of Massachusetts, Lowell

Panelists:
Swathi Arur, *The University of Texas MD Anderson Cancer Center*
Oliver Hobert, *Columbia University*
Jane Hubbard, *NYU Grossman School of Medicine, Skirball Institute*
Jordan Ward, *University of California, Santa Cruz*

Monday, June 21
9:45 am - 11:35 am

Opening Plenary

1   9:45 am   Welcome and Opening Remarks from Conference Chairs. **Barbara Conradt and Piali Sengupta**

2   9:51 am   GSA Welcome. **Jane Hubbard**, NYU Grossman School of Medicine

3   9:55 am   CGC and tribute to Don Moerman. **Ann Rougvie**, University of Minnesota

4   10:00 am   The diversity of data in Wormbase; how to find it and use it . **Paul Sternberg**

5   10:05 am   Roles of miRNAs in *C. elegans* development. **Luisa Cochella**

6   10:30 am   Worms frozen in time. **Oded Rechavi**, Tel Aviv University

7   10:55 am   Worm Health Organization: Understanding the pandemics facing *C. elegans*. **Emily Troemel**, University of California, San Diego

8   11:20 am   Speaker Question and Answer

Oral Presentation and Workshop Session Listings

Monday, June 21
12:00 pm - 2:00 pm

Mitosis, Meiosis, & the Cytoskeleton

Session Chairs:
Jessica Feldman, Stanford University
Yumi Kim, Johns Hopkins University

9   12:00 pm   Rewiring quality control in *C.elegans* meiosis using a new chemically-induced proximity system. **Chenshu Liu**, University of California, Berkeley

10   12:18 pm   R-loop-induced irreparable DNA damage in *C. elegans* meiosis. **Tara Hicks**, University of Iowa

11   12:30 pm   Multiple levels of regulation ensure robust cell cycle exit during *C. elegans* vulva formation. **Vincent Portegijs**, Utrecht University

12   12:42 pm   The Ran pathway uniquely regulates cytokinesis in cells with different fates in the early *C. elegans* embryo. **Imge Ozugergin**, Concordia University

13   12:54 pm   DNA repair is altered during *C. elegans* germline aging. **Erik Toraason**, University of Oregon

14   1:06 pm   Deciphering the mechanism of mitotic spindle orientation in *Caenorhabditis elegans* germline stem cells. **Réda M. Zellag**, Université de Montréal

15   1:18 pm   Characterising single-stranded telomere binding proteins in *C. elegans*. **Helder Ferreira**, University of St Andrews

16   1:30 pm   Using the *C. elegans* zygote to study principles of actin cytoskeleton self-organization. **Sarah Yde**, University of Chicago

17   1:42 pm   Identification of factors regulating the localization of a microtubule regulator EFA-6. **Xiaohui Lyu**, University of California San Diego

18   1:54 pm   Speaker Question and Answer

Monday, June 21
12:00 pm - 2:00 pm

Synaptic Function and Circuits

Session Chairs:
Steven Flavell, MIT, USA
Misako Okumura, Hiroshima University, Japan

19   12:00 pm   Nerve ring reconstructions reveal principles of brain organization across larval development. **Christopher Brittin**, Memorial Sloan Kettering Cancer Center

20   12:18 pm   A computational approach linking neuron-specific gene expression with connectivity. **Erdem Varol**, Columbia University

21   12:30 pm   The HSPG Syndecan is a core organizer of cholinergic synapses in *C. elegans*. **Xin Zhou**, University of Lyon, Institute Neuromyogene

22   12:42 pm   Mapping the neuropeptidergic connectome of *Caenorhabditis elegans*. **Lidia Ripoll-Sánchez**, MRC Laboratory of Molecular Biology

23   12:54 pm   The molecular atlas of *C. elegans* glia across sex and age. **Maria Purice**, Fred Hutchinson Cancer Research Center

24   1:06 pm   Insulin-like signaling regulates left/right asymmetric synaptic connection. **Leo Tang**, Albert Einstein College of Medicine

25   1:18 pm   Sexually-dimorphic responses to noxious stimuli in *C. elegans* result from differences in interneuron connectivity rather than in sensory processing. **Vladyslava Pechuk**, The Weizmann Institute of Science

26   1:30 pm   Age-related decline of neuronal function is linked to a loss of inhibitory signaling in *C. elegans*. **Gregory Wirak**, Boston University School of Medicine

27   1:42 pm   The DEG/ENaC ion channel DEL-4 maintains neuronal ionstasis and promotes neuronal survival under stress. **Dionysia Petratou**, Institute of Molecular Biology and Biotechnology

28   1:54 pm   Speaker Question and Answer

Oral Presentation and Workshop Session Listings

Monday, June 21
12:00 pm - 2:00 pm

Aging and stress I

Session Chairs:
John Labbadia, University College London, UK
María Olmedo, University of Sevilla, Spain

29 12:00 pm End-of-life targeted auxin-mediated degradation of DAF-2 Insulin/IGF-1 receptor promotes longevity free from growth-related pathologies. **Collin Ewald**, ETH Zurich

30 12:18 pm piRNA pathway-mediated Hedgehog signaling encodes a germline-to-soma pro-aging signal. **Cheng Shi**, Princeton University

31 12:30 pm A single-cell expression atlas of *C. elegans* adulthood uncovers new aging trajectories. **Antoine Roux**, Calico Life Sciences LLC

32 12:42 pm A *daf-18*/*PTEN* variant uncouples longevity from impaired fitness *via* differentially calibrating the activities of DAF-16 and SKN-1. **Hae-Eun Park**, Korea Advanced Institute of Science and Technology

33 12:54 pm Intergenerational adaptations to stress are evolutionarily conserved, stress specific, and have deleterious trade-offs. **Nick Burton**, University of Cambridge

34 1:06 pm *C. elegans* provide milk for their young. **Carina Kern**, Genetics, Evolution and Environment, University College London

35 1:18 pm The DRM complex functions as master regulator of somatic DNA repair capacities. **Arturo Bujarrabal**, CECAD, Institute for Genome Stability in Ageing and Disease, University of Cologne

36 1:30 pm A robotic system for automated manipulation of *C. elegans* on agar media. **Zihao Li**, University of Pennsylvania

37 1:42 pm Transcriptomic analyses of hermaphrodite responses to the male pheromone. **David Angeles-Albores**, Northwestern University

38 1:54 pm Speaker Question and Answer

Monday, June 21
12:00 pm - 2:00 pm

Transcriptional and post-transcriptional gene regulation

Session Chairs:
Colin Conine, University of Pennsylvania School of Medicine, USA
Inna Nechipurenko, Worcester Polytechnic Institute

39 12:00 pm Transcription rates in the early embryo. **Priya Sivaramakrishnan**, University of Pennsylvania

40 12:18 pm Translation dependency of *erm-1* mRNA localization to the cell cortex in the early *C. elegans* embryo. **Lindsay Winkenbach**, Colorado State University

41 12:30 pm A genome-wide analysis of developmentally regulated alternative splicing across *C. elegans* tissues. **Bina Koterniak**, University of Toronto

42 12:42 pm Principles of mRNA Cleavage and Polyadenylation in *C. elegans*. **Marco Mangone**, Arizona State University

43 12:54 pm Critical contribution of 3' non-seed base pairing to the *in vivo* function of the evolutionarily conserved *let-7a* microRNA. **Ye Duan**, UMass Medical School

44 1:06 pm *In vivo* DNA Topology and Transcriptional Regulation in *Caenorhabditis elegans*. **Bolaji Isiaka**, University of Bern

45 1:18 pm Spliceosomal component PRP-40 regulates alternative splicing of microexons. **Bikash Choudhary**, Southern Methodist University

46 1:30 pm A nutrient-dependent epigenetic priming mechanism by the pioneer factor BLMP-1 modulates transactional output to control gene dosage during temporal patterning *in C. elegans*. **Kelly Hills-Muckey**, Cold Spring Harbor Laboratory

47 1:42 pm Cytoplasmic polyadenylation by TENT-5 regulates the innate immune response in worms. **Vladyslava Liudkovska**, International Institute of Molecular and Cell Biology in Warsaw

48 1:54 pm Speaker Question and Answer

Monday, June 21
4:30 pm - 6:00 pm

Modeling Rare Human Diseases in *C. elegans*

Session Chair:
Andrew Golden, NIDDK/NIH

There are ~7000 rare human diseases, the majority of which are monogenic diseases. Less than 5% have therapies and for most, the mechanism of disease is not understood. For the majority of disease genes, there exists a C. elegans ortholog. Modeling these rare diseases in C. elegans has revealed a better understanding of the cell biology of these mutations as well as novel therapies based on drug or genetic suppressor screens. This program will highlight a variety of approaches used to model these rare diseases.

Speakers
Catherine Rankin, University of British Columbia, The success of the Canadian Rare Disease Models and Mechanisms program

Todd Lamitina: TBD

Oliver Blacque: Interpreting ciliopathy patient mutations using *C. elegans* knock-in models

Monday, June 21
4:30 pm - 6:00 pm

Utilizing neuron-specific gene expression data from the CeNGEN project

Session Chairs:
David Miller, Vanderbilt University
Seth Taylor, Vanderbilt University
Marc Hammarlund, Yale University

This workshop will provide a practical guide for exploiting neuron-specific RNA seq data sets from CeNGEN (C. elegans Neuronal Gene Expression Map & Network). The CeNGEN project has produced a single-cell RNA-seq profile of every type (128) of neuron in the C. elegans nervous system. We will describe methods for generating and annotating these scRNA-Seq results, a website for data analysis (CeNGENapp), a complementary bulk RNA-Seq strategy for neuron-specific whole transcriptome data, and a computational approach that links neuron-specific gene expression to the wiring diagram.

Tuesday, June 22
7:45 am - 8:45 am

COPAS VISION™: The worm sorter that takes pictures. Presented by Union Biometrica

Session Chairs:
Rock Pulak, Union Biometrica
Deborah Frenkel, Union Biometrica

COPAS VISION is a flow cytometer that can analyze and sort all stages of *C.elegans* and collect brightfield images of those worms. This lets the researcher screen through populations for rare variants, selecting differences in fluorescence levels, and dispensing worms to wells for various assays. All this and worm snapshots!

Also be sure and visit us at the Poster and Exhibits sessions on Monday, Tuesday and Wednesday.

Tuesday, June 22
9:00 am - 11:00 am

Intracellular Trafficking, Organelles, & Cell Polarity

Session Chairs:
Diego Rayes, INIBIBB, Universidad Nacional del Sur, Argentina
Anne-Cécile Reymann, IGBMC, France

49   9:00 am   Impaired peroxisomal import triggers a peroxisomal retrograde signaling. **Stephane Rolland**, Institute for Basic Science - Center for Genomic Integrity

50   9:18 am   Deciphering the ciliary extracellular vesicle (EV) proteome. **Inna Nikonorova**, Rutgers University

51   9:30 am   Ectosome uptake by glia sculpts *Caenorhabditis elegans* sensory cilia. **Adria Razzauti Sanfeliu**, Universite Libre de Bruxelles

52   9:42 am   A three-step activation of autoinhibited RME-8 controls recycling and degradative activities on the endosome. **Anne Norris**, Rutgers University

53   9:54 am   Super microscopy reveals zinc dependent morphological changes of intestinal gut granules and localization of zinc transporters in *C. elegans*. **Daniel Herrera**, Washington University

54   10:06 am   Imaging of native transcription and transcriptional dynamics in vivo using a tagged Argonaute protein. **Antoine Barriere**, CNRS/IBDM

55   10:18 am   Loss of a conserved protease can suppress molting defects. **Braveen Joseph**, University of Wyoming

56   10:30 am   PAR polarity proteins buffer against epithelial assaults to create a continuous and functional intestinal lumen. **Maria Sallee**, Stanford University

57   10:42 am   DAPC and Wnt pathways pattern distinct planar-polarized membrane domains in *C. elegans* muscles. **Alice Peysson**, INMG

58   10:54 am   Speaker Question and Answer

Tuesday, June 22
9:00 am - 11:00 am

Behavior

Session Chairs:
Monika Scholz, Research Institute Caesar, Germany
Asuka Takeishi, RIKEN, Japan

59   9:00 am   Forgetting generates a novel brain state that can reactivate memory. **He Liu**, Beijing Normal University at Zhuhai

60   9:18 am   Sleep is required for odor exposure to consolidate memory and remodel olfactory synapses. **Rashmi Chandra**, University of California

61   9:30 am   Arrestin-mediated Desensitization Enables Olfactory Discrimination in *C. elegans*. **Daniel Merritt**, University of Toronto

62   9:42 am   Distinct neural circuits establish similar chemosensory behaviors across life stages in *C. elegans*. **Navonil Banerjee**, University of California Los Angeles

63   9:54 am   Experience-dependent gene expression changes across a defined neural circuit in *C. elegans*. **Giulio Valperga**, IST Austria

64   10:06 am   Mechanosensitive Piezo Channel, PEZO-1, regulates food deglutition in *C. elegans*. **YeonJi Park**, DGIST

65   10:18 am   Diverse sensory cues and internal state converge on AWA chemoreceptor expression to enhance sensitivity to food odors. **Ian McLachlan**, Massachusetts Institute of Technology

66   10:30 am   A genetically linked gene pair determines organismal self-identity in predatory nematodes. **James Lightfoot**, caesar institute - Center of Advanced European Studies and Research

67   10:42 am   Toward the understanding of molecular mechanism of electrical sensation and response. **Ling Fei Tee**, Nagoya City University

68   10:54 am   Speaker Question and Answer

Tuesday, June 22
9:00 am - 11:00 am

Pathogenesis

Session Chairs:
Jon Karpel, Southern Utah University
Dengke Ma, University of California, San Francisco

69 9:00 am A novel in vitro *Caenorhabiditis elegans* transcription system. **Jingru Sun**, Washington State University

70 9:18 am The purine nucleoside phosphorylase *pnp-1* regulates epithelial cell resistance to infection in *C. elegans*. **Eillen Tecle**, UCSD

71 9:30 am Hyperactive SKN-1 drives an innate immune response but inhibits the ability to learn pathogen avoidance. **James Nhan**, University of Southern California

72 9:42 am The *alg-1* gene is necessary for Orsay virus infection of *Caenorhabditis elegans*. **Ciro Cubillas**, Washington University in St. Louis, School of Medicine

73 9:54 am Rotenone modulates the *Caenorhabditis elegans* immunometabolism and pathogen susceptibility. **Danielle Mello**, Duke University

74 10:06 am NHR-49/PPAR-α and HLH-30/TFEB cooperate for *C. elegans* host defense via a flavin-containing monooxygenase. **Khursheed Wani**, University of Massachusetts Medical School

75 10:18 am Nuclear hormone receptors mediate adaptive responses to the mold *Penicillium brevicompactum*. **Sean Wallace**, The Rockefeller University

76 10:30 am A parental transcriptional response to microsporidia infection induces inherited immunity in offspring. **Alexandra Willis**, University of Toronto

77 10:42 am Regulation of DNA repair mechanism by NPR-8. **Mahamudul Haque**, Washington State University

78 10:54 am Speaker Question and Answer

Tuesday, June 22
9:00 am - 11:00 am

Epigenetics and Genome Organization

Session Chairs:
Daphne Cabianca, Helmholtz Center Munich, Germany
John Calarco, University of Toronto, Canada

79   9:00 am   Chromo domain proteins maintain germline immortality and restrict transgenerational RNAi inheritance. **Arneet Saltzman**, University of Toronto

80   9:18 am   A novel sperm-specific compartment secures a cytoplasmic Argonaute protein for paternal epigenetic inheritance of small RNA-mediated gene silencing. **Jan Schreier**, Institute of Molecular Biology

81   9:30 am   Regulation of transgenerational epigenetic H3K27me3 inheritance. **Isa Ozdemir**, University of Geneva

82   9:42 am   Interrogating the role of paternally contributed tRNA fragments in *C. elegans* fertilization and development. **Olivia Crocker**, University of Pennsylvania

83   9:54 am   Concentrates of histone methyltransferase MET-2 promotes gene silencing independent of its H3K9 methyltransferase catalytic activity. **Colin Delaney**, Friedrich Miescher Institute for Biomedical Research (FMI)

84   10:06 am   Dissecting the functional genomic landscape of epidermal patterning in *C. elegans* using Targeted-DamID. **Dimitris Katsanos**, Imperial College London

85   10:18 am   Condensin DC spreads linearly and bidirectionally from recruitment sites to create loop-anchored TADs in C. elegans. **David Jimenez**, NYU

86   10:30 am   Mis-regulation of mtDNA 6mdA methylation causes enhanced oxidative stress and ageing in *C. elegans*. **Anne Hahn**, Queensland Brain Institute - University of Queensland

87   10:42 am   *C. elegans* as a Nestor Guillermo Progeria Syndrome Model. **Raquel Romero Bueno**, Centro Andaluz de Biologia del Desarrollo

88   10:54 am   Speaker Question and Answer

Tuesday, June 22
11:30 am - 1:00 pm

Publishing Workshop

Session Chair:
Ruth Isaacson, Genetics Society of America

Not ready to publish yet, but curious about the peer review process? Join us for an overview of peer review presented by the Executive Editor of GSA Journals GENETICS and G3: Genes|Genomes|Genetics. Editors from multiple journals, including GENETICS, G3, eLife and Development will then participate in a panel discussion answering attendee questions about the entire process—from submission to review to publication. Students and postdocs are invited to attend. All questions welcome!

Tracey DePellegrin, Executive Editor, GENETICS and G3, Publishing Overview

Panel Members
Swathi Arur, Editor, Development
David Fay, Senior Editor, G3
Howard Lipshitz, Editor in Chief, GENETICS
Piali Sengupta, Senior Editor, eLife

Tuesday, June 22
11:30 am - 1:00 pm

Spatiotemporal control of gene expression and protein levels

Session Chairs:
Peter Askjaer, Andalusian Centre for Developmental Biology
David Q. Matus, Stony Brook University
Jordan D. Ward, University of California

This workshop is dedicated to technological advances that allow precise control of gene expression and protein abundance. Ground breaking work by Andrew Fire and Craig C. Mello on RNAi as a potent tool to silence gene expression has had a tremendous impact on the C. elegans field and beyond. Nevertheless, additional layers of manipulation are important to obtain experimental alternatives that often provide faster, more precise and/or reversible regulation of gene activity. Leading researchers involved in the development of tools for drug inducible gene expression, genome recombination and targeted protein degradation and localization will share their recent advances and experience with the audience through open discussion.

Schedule

11:30 a.m.   Introduction by Jordan D Ward, University of California-Santa Cruz

11:34 a.m.   Mike Nonet, Washington University School of Medicine, RMCE and RMHE integration approaches and bipartite expression systems

11:41 a.m.   Mohammed Al Johani, King Abdullah University of Science and Technology, Efficient germline expression of transgenes

11:48 a.m.   Justin Shaffer, Columbia University, FLExon: a FLoxed Exon approach to conditional gene expression

11:55 a.m.   Lloyd Davis, University of Edinburgh, Controlling Gene Expression with Light

12:02 p.m.   Peter Askjaer, Andalusian Centre for Developmental Biology, Expanding the FLP/Frt Toolkit

12:09 p.m.   Theresa Gibney, University of Virginia, Genome engineering methods to visualize and manipulate endogenous proteins with cell-type specificity

12:16 p.m.   Maria Sallee, Stanford University, Tissue-specific degradation of endogenous proteins using the ZIF-1/ZF system

12:23 p.m.   Kelly Hills-Muckey, Cold Spring Harbor Laboratory, Auxin-TIR1 pair mutation improves efficacy and specificity of the Auxin Induced Degron (AID) system

12:30 p.m.   Open discussion

Tuesday, June 22
11:30 am - 1:00 pm

The diversity of data in WormBase; how to find it and use it

Session Chairs:
Ranjana Kishore, WormBase, California Institute of Technology
Chris Grove, WormBase, California Institute of Technology

This workshop will be an interactive session with talks related to the breadth and depth of data in WormBase, tools for querying and analyzing data and community curation. We will discuss use cases and introduce users to new/improved community curation forms such as our Author First Pass and Phenotype submission forms. A highlight of this workshop will be a discussion about the Alliance of Genome Resources (Alliance; www.alliancegenome.org), of which WormBase is a founding member.

Schedule
11:30 a.m.	Magdalena Zarowiecki, EMBL-EBI, A whistle-stop tour of all the types of data you can find in WormBase

11:45 a.m.	Chris Grove, California Institute of Technology, Researching transcriptional regulation using WormBase transcription factors, TF binding sites and the modENCODE data

12:00 p.m.	Ranjana Kishore, California Institute of Technology, Comparative genomics and disease research using Alliance of Genome Resources

12:15 p.m.	Daniela Raciti, California Institute of Technology, How can you contribute? Community curation and tools, and the author-first-pass (AFP) pipeline

12:30 p.m.	Chris Grove, California Institute of Technology, Open Discussion / Q & A

Tuesday, June 22
11:30 am - 1:00 pm

Embracing the microbial side: 3rd C. elegans microbiome workshop

Session Chair:
Buck Samuel, Baylor College of Medicine

This great new era of *C. elegans* natural biology has unearthed a new field in the community dedicated to understanding the role that microbes have played in sculpting the physiology of our beloved model system. In the wild, microbes not only act as potential food or pathogen, but can also colonize the intestines of *C. elegans* in simple communities ('microbiomes'). Interest in this field has exploded since the first descriptions of these communities in wild *C. elegans* and introduction of the characteristic core microbiome in the first workshop, yet there is still great opportunity ahead. The aim of this third workshop is to provide an overview of this emerging field and the evolving directions, to facilitate cross-fertilization between the different approaches, and to introduce members of the *C. elegans* community to useful research pipelines and available resources.

Tuesday, June 22
1:15 pm - 2:15 pm

Building an equitable scientific community: lessons from *C. elegans* researchers involved in DEI initiatives

Session Chair:
Anna Allen, Howard University

89   1:15 pm   The Pipeline CURE: lowering institutional barriers to research by reiteratively incorporating original *C. elegans* experiments throughout a biology curriculum. **David Katz**, Emory University

90   1:30 pm   Strategies to improve equity in faculty hiring. **Needhi Bhalla**, University of California, Santa Cruz

91   1:45 pm   Building intentional networks and partnerships within and across scientific societies to reach true diversity, equity, and inclusion in STEM. **Pamela Padilla**, Univ North Texas

92   2:00 pm   Speaker Question and Answer

C. elegans researchers share the work they're doing to address the lack of diversity within our field at various scientific stages. This session aims to include talks from individuals working at increasing diversity at the undergraduate research level through the professoriate. Our intention is that this session will generate communication within the community, spur individual ideas and actions, and express our plans to continue facilitating these conversations at future Worm meetings. We hope that highlighting these topics communicates that building a diverse, equitable, and inclusive scientific enterprise should be a priority for all scientists, and we want to give our community concrete ideas to take back to the classroom and the lab.

Tuesday, June 22
5:00 pm - 6:00 pm

Active learning mentorship for postdocs and junior faculty: the PALM Network

Session Chairs:
Teresa Lee, University of Massachusetts
Jennifer Schisa, Central Michigan University

Are you interested in learning to teach more effectively? Would you like to make your classroom more inclusive and engaging? Could you use guidance on how to implement active learning in your classes? Learn about the PALM Network (Promoting Active Learning and Mentoring), funded by the NSF and sponsored by the GSA and ASCB. This workshop is led by a current PALM Mentor and a former PALM Fellow. We will examine the benefits of active learning strategies, highlight advantages of belonging the PALM Network, describe examples of PALM projects, and discuss how to craft a successful application.

Wednesday, June 23
7:45 am - 8:45 am

Automating *C. elegans* lifespan, stress, and behavior studies with NemaLife

NemaLife, Inc invites you to experience how our hardware and software solutions can help improve the experimental throughput of your lab. We will demonstrate how our microfluidic platforms reduce the need for intensive manual assays. We will also highlight how our new software tools can speed up data analyses. Retire your worm picks with us! Stop by and visit us during the Poster and Exhibit sessions on Monday, Tuesday and Wednesday!

Wednesday, June 23
9:00 am - 11:00 am

RNA interference and non-coding RNAs

Session Chairs:
Katherine McJunkin, NIH, USA
Benjamin Weaver, UT Southwestern Medical Center, USA

93 9:00 am Plasticity of Argonautes and their associated small RNA pathways in nematodes. **Jianbin Wang**, The University of Tennessee, Knoxville

94 9:18 am A Systematic Analysis of Argonaute Proteins in *C. elegans*. **Uri Seroussi**, University of Toronto

95 9:30 am Arginine methylation promotes siRNA-binding specificity for a spermatogenesis-specific isoform of the Argonaute protein CSR-1. **Carolyn Phillips**, University of Southern California

96 9:42 am Reprogramming the piRNA pathway for multiplexed and transgenerational gene silencing in *C. elegans*. **Monika Priyadarshini**, KAUST

97 9:54 am LOTR-1, the *C. elegans* TDRD5/7 homolog, helps maintain 22G siRNA distribution and fertility. **Elisabeth Marnik**, Husson University

98 10:06 am Proteolysis dependent gene silencing in *C.elegans* germline. **Takao Ishidate**, UMass Medical School

99 10:18 am Negative feedback between NHR-23 and *let-7* regulates developmental pace and number of molts in *C. elegans*. **Himani Anand Galagali**, Johns Hopkins University

100 10:30 am Screening by deep sequencing reveals mediators of miRNA tailing in *C. elegans*. **Karl-Frederic Vieux**, National Institute of Health

101 10:42 am Independent nuclear and cytoplasmic silencing mechanisms contribute to transgenerational RNAi. **John Paul Ouyang**, The Johns Hopkins University School of Medicine

102 10:54 am Speaker Question and Answer

Oral Presentation and Workshop Session Listings

Wednesday, June 23
9:00 am - 11:00 am

Germline, Sex determination and Signaling

Session Chairs:
John Murray, University of Pennsylvania, USA
Suzan Ruijtenberg, Utrecht University, Netherlands

103 9:00 am ELT-3 regulates cuticle collagen expression in response to environmental stimuli. **Lesley MacNeil**, McMaster University

104 9:18 am A single cell multiomics approach to resolve genomic drivers of *C. elegans* development. **Martin Fabry**, University of Cambridge

105 9:30 am Oscillatory expression of molting cycle genes is coordinated with pharynx growth in larvae. **Timo Louisse**, AMOLF

106 9:42 am Analysis of OEF-1 as a potential epigenetic reader of H3K36me3 in the *C.elegans* germ line. **Mariateresa Mazzetto**, Yale University

107 9:54 am LOTUS-domain containing proteins recruit *C. elegans* Vasa to germline granules and control the formation and size of the condensates. **Patricia Giselle Cipriani**, New York University

108 10:06 am Transgenerational regulation of sex determination. **Matthew Eroglu**, University of Toronto

109 10:18 am Defining the function of EXC-4/CLIC in Ga-Rac signaling using TurboID to identify physical interactors. **Anthony Arena**, University of Illinois - Chicago

110 10:30 am The secreted modular calcium binding protein (SMOC-1) can function as both a long-range and a short-range modulator of BMP signaling in *C. elegans*. **Melisa DeGroot**, Cornell University

111 10:42 am COP9 signalosome component CSN-5 stabilizes stem cell regulators FBF-1 and FBF-2. **Emily Osterli**, University of Montana

112 10:54 am Speaker Question and Answer

Wednesday, June 23
9:00 am - 11:00 am

Neuronal development and novel methods

Session Chairs:
Kavita Babu, Indian Inst of Science and IISER Mohali, India
Heather Bennett, Bard University, USA

113 9:00 am An Electron Microscopy Pseudo Time Series of the *C. elegans* Embryo. **Anthony Santella**, Sloan Kettering Inst

114 9:18 am A retrograde zippering mechanism regulates neurite placement in the *C. elegans* nerve ring. **Titas Sengupta**, Yale University

115 9:30 am Temporal Maturation of the C. elegans Post-Embryonic Nervous System. **HaoSheng Sun**, Columbia University

116 9:42 am cAMP controls a trafficking mechanism that directs the neuron specificity and subcellular placement of electrical synapses. **Sierra Palumbos**, Vanderbilt University

117 9:54 am How do neurexins promote presynaptic development? **Marcos Schaan Profes**, Albert Einstein College of Medicine

118 10:06 am Sensory cilia architecture shapes olfactory response dynamics. **Alison Philbrook**, Brandeis University

119 10:18 am Mechanisms of selective neuron-glia attachment. **Leigh Wexler**, Boston Childrens Hospital/Harvard Medical School

120 10:30 am The optogenetic voltage clamp (OVC) – A closed-loop all-optical approach for true optogenetic control of muscles and neurons in live animals. **Amelie Bergs**, Goethe University Frankfurt

121 10:42 am Real-time volumetric whole-animal imaging at cellular resolution with SCAPE microscopy in NeuroPAL worms. **Wenwei Richard Yan**, Columbia University

122 10:54 am Speaker Question and Answer

Oral Presentation and Workshop Session Listings

Wednesday, June 23
9:00 am - 11:00 am

Aging and stress II

Session Chairs:
Yee Lian Chew, Flinders University, Adelaide, Australia
Benjamin Towbin, University of Bern, Switzerland

123 9:00 am HPK-1 prevents the decline of proteostasis through neuroendocrine control of the proteostatic network. **Maria Lazaro-Pena**, University of Rochester Medical Center

124 9:18 am What *C. elegans* can tell us about the misfolded tau toxicity? **Carmina Natale**, Istituto di Ricerche Farmacologiche Mario Negri IRCCS

125 9:30 am The Mitochondrial Permeability Transition Pore Activates a Maladaptive Mitochondrial Unfolded Protein Response. **Suzanne Angeli**, Buck Institute for Research on Aging

126 9:42 am TCER-1-regulated alternative splicing promotes stress resilience. **Francis RG Amrit**, University of Pittsburgh

127 9:54 am Embryo Integrity Regulates Maternal Proteostasis and Stress Resilience. **Ambre Sala**, Northwestern University

128 10:06 am A neuronal thermostat controls membrane fluidity in *C. elegans*. **Laetitia Chauve**, Babraham Institute

129 10:18 am Neuronal HLH-30/TFEB Regulates Longevity and Heat Stress Resistance Via Distinct Non-Cell Autonomous Mechanisms. **Shiquan Wong**, Brown University

130 10:30 am *Caenorhabditis elegans* processes sensory information to choose between freeloading and self-defense strategies. **Jodie Schiffer**, Northeastern University

131 10:42 am Inheritance of associative memories in *C. elegans*. **Noa Deshe**, The Hebrew University of Jerusalem

132 10:54 am Speaker Question and Answer

Wednesday, June 23
11:30 am - 1:00 pm

The male *C. elegans* nervous system: connectomics, molecular maps, and functional analysis

Session Chair:
Robert W. Fernandez, Columbia University

Over the past few years, a number of technological advancements to study the male C. elegans nervous system have been established. First, there is the male nervous system connectome, established by Scott Emmons and colleagues. Second, there are now tools to effectively manipulate gene function and visualize neuronal activity. Third, in unpublished work, the Hobert lab has established a multicolor atlas, NeuroPAL, that color-codes all male-specific neurons which hugely facilitates the identification of gene expression patterns, cell fate analysis and neuronal activity imaging in the male tail. Our panelists will discuss these tools to study the development and function of the C. elegans male nervous system.

SCHEDULE
11.30 a.m. **Scott W. Emmons**, Albert Einstein College of Medicine, Studies on the *C. elegans* male, how we got to where we are today

11.45 a.m. **Arantza Barrios**, University College London, Switching odour preferences through neuromodulation

12.00 p.m. **Vladislav Susoy**, Harvard University, Brain-wide functional analysis of mating behavior

12.15 p.m. **Tessa Marie Tekieli**, Columbia University, Visualizing the organization of the male-specific nervous system of *C. elegans*

12.30 p.m. **Chen Wang**, Columbia University, Mutant analysis of the DM-domain transcription factors using *C. elegans* male gene expression atlases

12.45 p.m. Questions from the audience

Wednesday, June 23
11:30 am - 1:00 pm

Live RNA Imaging Strategies in *C. elegans*

Session Chairs:
Christopher M. Hammell, Cold Spring Harbor Laboratory
Erin Nishimura, Colorado State University
Sevinc Ercan, New York University

Imaging single molecules in intact cells has the potential to reveal features of gene expression that are not possible to measure using standard, ensemble-based strategies. While a number of model organisms have successfully employed aptamer-based transcript imaging systems (MS2, PP7, etc.) to track individual RNAs in real time, these approaches have had only limited success in *C. elegans*. This workshop intends to build momentum toward establishing these systems throughout *C. elegans* research community which will complement this powerful genetic model and enable aspects of RNA transcription, export, localization, translation, and turnover to be studied in detail.

SCHEDULE
11:30am   Introduction: C.M. Hammell (CSHL), Sevinc Ercan (NYU, and Erin Osborne Nishimura (CSU).

11:35am   ChangHwan Lee (SUNY Albany), "Capturing dynamics of transcriptional bursting *in vivo* using the MS2 system."

11:55am   Hongjie Zhang, Universidade de Macau, "PP7/PCP-based visualization of membrane-associated transcripts in epithelia."

12:15pm   Wolfgang Keil, Curie Institute, "Monitoring spatiotemporal patterns of post-embryonic miRNA transcription using the MS2 system."

12:35pm   Erin Osborne Nishimura, Colorado State University, "Best practices in mRNA live imaging."

12:45pm   General Discussion and Panel Questions.

Wednesday, June 23
11:30 am - 1:00 pm

Applying for the NSF CAREER Grant for Assistant Professors

Session Chairs:
Matthew Buechner, National Science Foundation
Steven L. Klein, National Science Foundation
Paulynn Cartwright, National Science Foundation

This Workshop will help with professional development of untenured faculty members, by helping to understand the special requirements to apply successfully for the 5-year CAREER Award to establish a strong independent research program. Several Program Directors (PDs) from the BIO Directorate of NSF (in cell and developmental biology) will discuss the Application for the CAREER Award. All attendees should prepare a one-page research summary for a 5-year grant, which will be discussed and critiqued by the Directors and other attendees to help guide attendees towards planning and writing a proposal that can be highly reviewed at panel.

Thursday, June 24
9:00 am - 11:00 am

Natural Variation, Evolution, and the Microbiome

Session Chairs:
Marina Ezcurra, University of Kent, UK
Buck Samuel , Baylor College of Medicine, USA

133 9:00 am Repeated Sampling of *Caenorhabditis elegans* Across the Hawaiian Islands Reveals Spatiotemporal Patterns of Genetic Diversity. **Tim Crombie**, Northwestern University

134 9:18 am Natural genetic variation in *irld* genes modifies insulin signaling to influence starvation resistance. **Amy Webster**, Duke University

135 9:30 am Complex interactions among quantitative trait loci explain natural variation in *C. elegans* germ stem cell niche activity. **Sarah Fausett**, University of North Carolina Wilmington

136 9:42 am Genomic analysis of natural *Stenotrophomonas* bacteria and their effects on wild and domesticated *C. elegans*. **Michael Herman**, University of Nebraska-Lincoln

137 9:54 am Dissecting the Sequential Evolution of a Selfish Mitochondrial Genome in *Caenorhabditis elegans*. **Joseph Dubie**, Texas A&M

138 10:06 am T-box radiation: A window into evolution in real time. **Emily Baker**, University of Oxford

139 10:18 am Genetic determinants of host-microbiome interactions in *Caenorhabditis elegans*. **Dana Blackburn**, Baylor College of Medicine

140 10:30 am Commensal versus pathogenic bacterial adherence to the intestinal epithelium of *C. elegans*. **Dalaena Rivera**, San Diego State University

141 10:42 am A closer look at cuticle-resident microbes and their impact on host physiology. **Nadia Haghani**, Salk Institute for Biological Sciences

142 10:54 am Speaker Question and Answer

Thursday, June 24
9:00 am - 11:00 am

Cell fate, patterning and morphogenesis

Session Chairs:
Ye Tian, Chinese Academy of Sciences, China
Sughong Xu, Zhejiang University, China

143   9:00 am   Cell fate plays critical roles in promoting collective cell movements in *C. elegans* gastrulation and ventral cleft closure during embryogenesis. **Amanda Zacharias**, Cincinnati Children's Hospital Med Ctr

144   9:18 am   A novel biosensor reveals the timing and dynamics of LIN-12/Notch activation underlying resolution of the AC/VU decision during gonadogenesis. **Justin Shaffer**, Columbia University

145   9:30 am   Translation-dependent mRNA localization to *Caenorhabditis elegans* adherens junctions. **Cristina Tocchini**, Biozentrum

146   9:42 am   A folder mechanism ensures size uniformity among *C. elegans* individuals by coupling growth and development. **Benjamin Towbin**, University of Bern

147   9:54 am   The mitotic spindle and the cytokinetic furrow cooperatively align the dorsoventral axis with embryo geometry. **Teije Middelkoop**, MPI-CBG & Biotec/Tu Dresden

148   10:06 am   BBLN-1 is essential for intermediate filament organization and apical membrane morphology. **Sanne Remmelzwaal**, Utrecht University

149   10:18 am   Developmentally programmed H3 expression changes embryonic plasticity and reinforces cell fate specification. **Ryan Gleason**, Johns Hopkins University

150   10:30 am   A molecular clock to control skin regeneration. **Helge Grosshans**, Friedrich Miescher Institute for Biomedical Research (FMI)

151   10:42 am   Conserved extracellular proteins determine mechanoelectrical transduction channel localization and function in *C. elegans* touch receptor neurons. **Alakananda Das**, Stanford University

152   10:54 am   Speaker Question and Answer

Thursday, June 24
9:00 am - 11:00 am

Regeneration and Degeneration

Session Chairs:
Kyung Won (Kai) Kim, Hallym University, Korea
Meital Oren, Weizmann Institute, Israel

153   9:00 am   Intracellular calcium management is key in diapause-induced neuroprotection. **Scarlett Delgado**, University of Valparaiso

154   9:18 am   B-Raf contribution to motoneuron degeneration. **Federica Cieri**, National Research Council of Italy - Institute of Biosciences and Bioresources

155   9:30 am   Dendrite regeneration in PVD neuron is controlled by the RAC GTPase CED-10 and the RhoGEF TIAM-1. **Harjot Kaur Brar**, National Brain Research Centre

156   9:42 am   The metalloprotease ADAM17/ADM-4 promotes regenerative axonal fusion by stabilising the fusogen EFF-1. **Xue Yan Ho**, The University of Queensland

157   9:54 am   The extracellular matrix protein MIG-6/papilin mediates the maintenance of neuronal architecture. **Malika Nadour**, Universite du Quebec A Montreal

158   10:06 am   The nuclear ubiquitin ligase adaptor SPOP is a conserved regulator of C9orf72 dipeptide toxicity. **Todd Lamitina**, Univ Pittsburgh

159   10:18 am   Neurohormonal signalling modulates polyQ aggregation by controlling fat metabolism. **Ana Pilar Gómez Escribano**, Health research institute La Fe

160   10:30 am   Stress-induced increases in neuronal exopher extrusion require lipid biosynthesis and FGF/RAS/MAPK signaling. **Ryan Guasp**, Rutgers University

161   10:42 am   Investigating The Phase Transition of EFA-6 and Its Role In Microtubule Regulation. **Gilberto Gonzalez**, University of Texas Health Science Center San Antonio

162   10:54 am   Speaker Question and Answer

Thursday, June 24
9:00 am - 11:00 am

Metabolism & Dauer Larvae

Session Chairs:
Lesley MacNeil, McMaster University, Canada
Javier Apfeld, Northeastern University, USA

163 9:00 am A Large Family of Enzymes Responsible for the Modular Architecture of Nematode Pheromones. **Rebecca Butcher**, University of Florida

164 9:18 am Identification of modular glucoside in *C. elegans* a new class of putative signaling molecules. **Jingfang Yu**, Cornell University

165 9:30 am Nutrient-induced rewiring of microbial metabolic pathways modulate 5-fluorouracil efficacy in *C. elegans*. **Tanara Peres**, MRC London Institute of Medical Sciences, Imperial College London

166 9:42 am Interkingdom transfer of molybdenum cofactor from bacteria to *C. elegans*. **Kurt Warnhoff**, Massachusetts General Hospital

167 9:54 am Interneuron Control of Diapause Entry. **Mohammad Torkashvand**, Northeastern University

168 10:06 am The CHARGE syndrome gene *chd-7* plays a role in dauer formation and longevity. **Daniel Hochbaum**, University of Buenos Aires. Argentina

169 10:18 am The kynurenine pathway and biosynthesis of NAD$^+$ and Rhodoquinone in worms. **Rosina Comas**, Institut Pasteur de Montevideo

170 10:30 am Glycerol-3-phosphate phosphatase / PGPH: a novel calorie restriction mimetic enzyme in *C. elegans*. **Elite Possik**, University of Montreal - CrCHUM

171 10:42 am The SR protein RSP-2 regulates the expression and physiological responses of the truncated DAF-2 isoform. **Bryan Martinez**, The Scripps Research Institute-Florida

172 10:54 am Speaker Question and Answer

Thursday, June 24
12:30 pm - 1:30 pm

Closing Plenary Session – Past, Present, and future of worms: Our community and our research

Session Chairs:
Julie Ahringer, University of Cambridge, UK
Needhi Bhalla, University of Caifornia, Santa Cruz

Invited panel members will reflect on successes and challenges in the field and discuss the future of C. elegans research. The speakers will bring their unique perspectives to the discussion and will answer attendee questions submitted in advance of the session. We are hoping for a lively and interesting discussion that highlights the strengths and diversity of our field.

Panel Members

Kavita Babu, *Indian Institute of Science, India*

Arantza Barrios, *University College London, U.K*

Martin Chalfie, *Columbia University, USA*

Andrew Fire, *Stanford University School of Medicine, USA*

H. Robert Horvitz, *Massachusetts Institute of Technology, USA*

Craig Mello, *University of Massachusetts Medical School, USA*

Guangshuo Ou, *Tsinghua University, China*

Thursday, June 24
1:45 pm - 2:45 pm

Worming into Relevance – Disease modeling using humanized *C. elegans* models. Presented by InVivo Biosystems

Session Chairs:
Ken Dawson-Scully
Ellen Faith Gregory, University of California, Davis

Ellen Gregory from UC Davis and Dr. Ken Dawson-Scully from Florida Atlantic University will discuss how humanized *C. elegans* models and novel assays are used for disease modeling with the goal of assaying the clinical significance of predicted disease-causing variants and for uncovering neurotoxins and biowarfare antidotes.

Thursday, June 24
3:30 pm - 6:45 pm

5th Parasitic Nematode Workshop:

Bridging the Divide

Session Chairs:
Elissa Hallem, University of California, Los Angeles
Jordan Ward, University of Caifornia, Santa Cruz
Mostafa Zamanian, University of Wisconsin

Each year infections of animals and plants by parasitic nematodes cause many billions of dollars of agricultural damage. Over 1.5 billion people worldwide, particularly in developing nations, are infected by nematodes and suffer from the resulting debilitating diseases. Currently, only a few investigators address problems of parasitic nematodes using C. elegans. To encourage and facilitate more interactions between the C. elegans and parasitic nematode communities, workshops have been held for experts in plant, animal and human parasitic nematodes to speak on the life history and unique biology of these parasitic species and on outstanding issues in their field. A key goal of this workshop is to make C. elegans scientists aware of the issues and problems that parasitic nematode researchers face and pave the way for applying the powerful approaches and technologies that have advanced C. elegans research to parasitic nematodes.

Schedule
Session 1
3:30 p.m. - 4:00 p.m. Vicky Hunt, piRNA-like small RNAs target transposable elements in the clade IV parasitic nematode *Strongyloides ratti*

4:00 p.m. - 4:10 p.m. Kyriaki Neophytou, Elucidating the interaction partners of an extracellular Argonaute protein

4:10 p.m. - 1:20 p.m. Astra Bryant, Parasite-specific encoding of thermosensory signals by the human threadworm *S. stercoralis*

4:20 p.m. - 4:30 p.m. Sophia Parks (Dillman lab), Parasitic nematode fatty acid- and retinol-binding proteins compromise host immunity by interfering with host lipid signaling pathways

4:30 p.m. - 4:40 p.m. Break, Q&A.

Session 2
4:40 p.m. - 5:10 p.m.. Louise Atkinson, Advances in Nematode Parasite Omics Seeding Drug Discovery Pipelines

5:10 p.m. - 5:20 p.m. Stephen Doyle, Improving parasite genomes in the post-genome era

5:20 p.m. - 5:30 p.m. Jonathan Stoltzfus, Utilizing transcriptomics to examine dauer and sex determination pathways in the human parasitic nematode Strongyloides stercoralis

5:30 p.m. - 5:40 p,m.. Break, Q&A.

Session 3
5:40 p.m. - 6:10 p.m. Erik Anderson, The genetics of resistance in free-living and parasitic nematodes

6:10 p.m. - 6:20 p.m. Jessica Knox, Exploiting *C. elegans* and Tractable Parasitic Nematodes for the Discovery and Characterization of Anthelmintics and Nematicides

6:20 p.m. -6:30 p.m. Nate Schroeder/David Hall, Developing WormAtlas beyond *C. elegans*

6:30 p.m. - 6:45 p.m. Closing remarks

Thursday, June 24
3:30 pm - 5:30 pm

Teaching Workshop

Session Chair:
Jonathan Karpel, S. Utah University

Postdocs and junior faculty are invited to attend this workshop which will address the following topics:

- What is a PUI and how do I get a job at one?

- Navigating the PUI and getting tenure.

Poster Session Listings

Cell Biology

172A Deciphering how the Ubiquitin Proteasome System executes Linker Cell-type Death **Lauren Bayer Horowitz**

173B Dietary Composition Modulates Neurodegeneration in a *C. elegans* Parkinson's Disease Model **Anthony Gaeta**

174C Organismal death triggered by oyster mushrooms via mitochondrial dysfunction **Ching-Han Lee**

175A Depletion of *cdc-25.2* in the intestine induces mitochondrial oxidative stress and germ cell apoptosis through a *cep-1*-dependent pathway **mijin lee**

176B Investigation of the In vivo and In vitro effects of Essiac® Liquid Herbal Extract on Health and Cancer **Sylvia Lopez-Vetrone**

177C The loss of *psf-2* GINS leads to the inappropriate survival of cells programmed to die during *C. elegans* development **Nadin Memar**

178A Autophagy and the degradation of apoptotic cells **Omar Pena-Ramos**

179B The cytoskeletal regulator UNC-53/Nav2 controls cell death processes in *Caenorhabditis elegans* **Kristopher Schmidt**

180C Genetic Control of Caspase-mediated and Caspase-independent Cell Elimination in *C. elegans* **Nolan Tucker**

181A *cep-1*/p53 mediated DNA damage response - understanding apoptosis in *Caenorhabditis elegans* germ cells **Pavana Lakshmi Vaddavalli**

182B Identifying the key players of phosphatidylserine externalization in non-apoptotic dying cells **Ann Wehman**

183C Calcium Ions Trigger the Exposure of Phosphatidylserine on the Surfaces of Necrotic Cells **Zheng Zhou**

184A The role of the Insulin Signaling Pathway in *C. elegans* Germline Stem Cell Mitosis **Eric Cheng**

185B Investigating the regulation of CDC-20 recruitment to kinetochores **Jack Houston**

186C Interactions between the PAM-1 aminopeptidase and the cell-cycle machinery during oocyte maturation and early development **Sophie Lear**

187A Role of Cohesin in Chromosome-Dependent Meiotic Spindle Assembly **Francis McNally**

188B Dissecting cell cycle entry: Insights from a *cdk-4* allele with a sex myoblast-specific proliferation defect **Frances Moore**

189C The Chromatin Remodeling Protein CHD-1 and the EFL-1/DPL-1 Transcription Factor Cooperatively Down Regulate CDK-2 to Control SAS-6 Levels and Centriole Number **Kevin O'Connell**

190A The conserved histone deacetylase, HDA-1, functions in cell cycle-dependent and independent roles to promote invasive differentiation **Nicholas Palmisano**

191B Multiple Phosphorylation Events Regulate Centriole Assembly. **prabhu sankaralingam**

192C Asymmetric mitochondrial inheritance in the context of a *C. elegans* cell death lineage **IOANNIS SEGOS**

193A Reciprocal interactions between the apoptosis pathway and cell size **Aditya Sethi**

194B The SWI/SNF chromatin remodeling assemblies BAF and PBAF differentially regulate cell cycle exit and cellular invasion *in vivo* **Jayson Smith**

195C Elucidating the Role of Securin in Regulating Separase during Cortical Granule Exocytosis **Christopher Turpin**

196A The role of CDK-4 in cell size and metabolism **Rachel Webster**

197B Linking centromeric factors to chromosome condensation in *C. elegans* embryos **Joanna Wenda**

198C A polarity pathway for exocyst-dependent intracellular tube extension **Joshua Abrams**

199A The dynamic partnered dance between PLK-1 and MEX-5: interpreting gradient formation with computational modelling. **Sofia Barbieri**

200B A GSP-2/PKC-3 balance is required for polarity establishment in *C. Elegans* **Ida Calvi**

201C Intestinal-rectal valve cells form an epithelial bridge between two different tissues **Lauren Cote**

202A Positioning of organelles during the polarization of intestinal epithelial cells **Greg Hermann**

203B Investigating the symmetry breaking cue and mechanism of polarity reestablishment in the *C. elegans* P1 cell. **Laurel Koch**

204C Growth Cone-Localized Microtubule Organizing Center Establishes Microtubule Orientation in Dendrites **Xing Liang**

205A The BAG2 co-chaperone UNC-23 regulates amphid sensory morphology **Cecilia Martin**

206B Global regulation of cell polarization by two Wnt receptors, Frizzled/MOM-5 and Ror1/CAM-1 in *C. elegans* mid-stage embryo **Takefumi Negishi**

207C PP1/SDS-22 phosphatase is required for germ plasm segregation in the one-cell *C. elegans* embryo **Aparna Nurni Ravi**

208A PAR-3 independent mechanisms contribute to apico-basolateral polarity establishment in the embryonic *C. elegans* intestinal epithelium **Melissa Pickett**

209B Cancellled/Unprogrammed

210C Single-embryo expression-phenotype mapping reveals highly canalized response of asymmetric division to perturbation of PAR protein balance **Nelio Rodrigues**

211A Epithelial apical/basal polarity requires WAVE-dependent transport of E-Cadherin/HMR-1 **Martha Soto**

212B Identification of aPKC substrates and interactors in the early *C. elegans* embryo to elaborate a model for anterior PAR protein cooperation **Iolo Squires**

213C The *bli-4*/proprotein convertase genetically interacts with *pmr-1*/calcium ATPase during cell migration in *Caenorhabditis elegans* **Stephany Dos Santos**

214A Identifying the In Vivo Role of Non-centrosomal Microtubule Organizing Centers During Cell Migration **James Ferguson**

215B Perturbed intermediate filament regulation causes aggregate toxicity **Florian Geisler**

216C The RGD (Arg-Gly-Asp) is a potential cell-binding motif of UNC-52/PERLECAN mediating interaction to βPAT-3 integrin **Myeongwoo Lee**

217A The mutation analysis of RGD (Arg-Gly-Glu) cell-binding motifs in the nematode *Caenorhabditis elegans* **Myeongwoo Lee**

218B Nuclear lamina cooperates with inner nuclear membrane proteins to counteract LINC-mediated forces during oogenesis in *C. elegans* **Chenshu Liu**

219C MTOC function at the centrosome and the ciliary base is driven by specific PCM protein **Jeremy Magescas**

220A Study of the relation between molecular content, actin architectures and cell identity throught C. *elegans* early embryogenesis **Grégoire Mathonnet**

221B Distinct properties of broadly-expressed and tissue-specific tubulin isotypes examined by ectopic and heterologous expression **Kei Nishida**

222C Kinetic Control of the Temporal Dynamics of a RhoA Signaling Cascade **Serena Prigent Garcia**

223A Probing formin FHOD-1 contributions to body-wall muscle structure and function **David Pruyne**

224B Regulation of syncytial germline mechanics by the actin capping protein CAP-1 **Shinjini Ray**

225C The kinase *pig-1/MELK* is a conserved cytoskeletal regulator in *C. elegans* tubulogenesis and in human endothelial cells. **Alexandra Socovich**

226A Nuclear deformation during P-cell nuclear migration **Daniel Starr**

227B A good GEF gone GAP: investigating the mechanism that switches the Rac1/CED-10 GEF, CED-5/CED-12, into an inhibitor of F-actin formation during ventral enclosure **Thejasvi Venkatachalam**

228C The proteasome is not only about degradation-using the *C. elegans* germ line to study proteasome assembly dynamics and subunit specific germ line functions *in vivo* **Anna Allen**

229A The role of ATX-2 and VPR-1 in sperm positioning within the *C. elegans* meiotic embryo **Cynthia Bailey**

230B Characterization of sperm components required for female meiosis II in *C. elegans* **RUDRA Banerjee**

231C Investigating the role of 5'-tyrosyl-DNA phosphodiesterase 2 (*tdpt-1)* Mediated Suppression of DNA Topoisomerase 2 (*top-2)* during meiosis in *C. elegans* **Nirajan Bhandari**

232A GLH protein at the heart of P granule network **James Bosco**

233B Models predicting the partitioning of phosphorylated domains on *C. elegans* fusion chromosomes **Peter Carlton**

234C Characterization of the transition between meiosis I and meiosis II during spermatogenesis in *Caenorhabditis elegans* **Yu-Hao Chen**

235A A screen to identify new genes involved in homeostatic regulation of germline stem cell proliferation **Alexandre Clouet**

236B Regulation of oocyte number in *C.elegans*: Counting on RAS/ERK pathway **Debabrata Das**

237C Meiosis modifications at the origin of asexuality in *Mesorhabditis* pseudogamous nematodes **Marie Delattre**

238A DAF-18/PTEN functions in the muscles and proximal somatic gonad to couple to promote oocyte arrest in the absence of sperm **Jichao Deng**

239B Characterizing the Role of Sperm-Supplied Proteins, SPE-11 and F07A5.2, during Spermatogenesis and the Early Embryonic Development in *C.elegans* **Nancy Marian Duker**

240C The role of MAP Kinase in modulating condensation of RNA binding proteins in the germ line **Mohamed Elaswad**

241A C. elegans maximize the number of euploid progeny from zim-2 parents with crossover failure on chromosome V. **Ting Gong**

242B DAF-16/FoxO are necessary to induce Germ Cell apoptosis under starvation **Alan Gonzalez Rangel**

243C Chromosome pairing and segregation during meiosis require the nuclear envelope protein MJL-1 in *C. elegans* **Jun KIM**

244A Role of *spe-11* and *oops-1* in early embryogenesis and eggshell formation **Ji Kent Kwah**

245B An Exploration of the protein FIGL-1 in the *Caenorhabditis elegans* Germline and Insights into its role in Homologous Recombination **Zachary Leydig**

246C The HECD-1 ubiquitin ligase acts with the STRIPAK complex to regulate MEI-1/katanin microtubule-severing in meiosis and mitosis **Tammy Lu**

247A CCAR-1 regulates reproduction, lifespan, and apoptosis in *Caenorhabditis elegans* **Doreen Lugano**

248B GRAS-1 is a conserved novel regulator of early chromosome dynamics during meiosis in *C. elegans*. **Marina Martinez-Garcia**

249C Deciphering the mechanisms of temperature-induced DNA damage in *C. elegans* spermatocytes **Alice Naftaly**

250A Post-translational modifications of the synaptonemal complex protein SYP-4 C-terminus are involved in the regulation of crossover interference in *C. elegans* meiosis **Ana Neves**

251B The CCT chaperonin selectively regulates phase transitions in the *C. elegans* germline **Chloe Pestrue**

252C Proteasome non-ATPase subunits regulate timing and polymerization of synaptonemal complex proteins in C. elegans **Cristina Quesada-Candela**

253A Characterization of the meiotic double-strand break complex and its sensitivity to maternal age **Marilina Raices**

254B Depletion of Cdc48 homologs during meiotic prophase results in synaptonemal complex defects in *C. elegans* **Carlos Mario Rodriguez Reza**

255C Characterizing the Sexually Dimorphic Role of Topoisomerase II During the Sister Chromatid Cohesion Release Pathway **Christine Rourke**

256A Meiotic roles of FANCM-related helicases in *C. elegans* **Takamune Saito**

257B Knockdown of Bora homolog *spat-1* results in crossover and synapsis defects in *C. elegans* meiotic prophase **Aya Sato-Carlton**

258C DNA replication and chromosome decondensation occur concurrently in *C. elegans* germ cells **Hannah Seidel**

259A RACK-1 is required for proper GLD-1 sub-cellular localization and function **Kara Vanden Broek**

260B Characterization of stress-induced phase transitions in the *C. elegans* germline **Brooklynne Watkins**

261C Characterizing the function of the histone H3 kinase HASP-1 in the germline **David Wynne**

262A Revealing hidden roles of RAD-54.B during meiotic prophase **Kei Yamaya**

263B Meiotic cell cycle progression requires adaptation to a constitutive DNA damage signal **Liangyu Zhang**

264C Removal of cell body haze with inverse square fit **Sabrina Civale**

265A Cancellled/Unprogrammed

266B Autonomous Adaptive Data Acquisition for Scanning Hyperspectral Imaging in *Caenorhabditis elegans* **Elizabeth Holman**

267C Light-induced protein clustering to study protein-protein interactions in *C. elegans* **Jason Kroll**

268A High-throughput phenotypic screening to identify neurotoxic chemicals causing neuro-degeneration **Yunki Lim**

269B A simple and inexpensive add-on enables confocal imaging capacity on a widefield microscope **Yao Wang**

270C The role of novel identified regulator, SFXN-1.2 in mitochondrial dynamics in neurons and establishing linked neurological disease models **Syed Nooruzuha Barmaver**

271A Oxidative regulation of cholesterol transport in *Caenorhabditis elegans* **Bernabe Battista**

272B Insight into the effect of tubulin post-translational modifications on axonal transport **Odvogmed Bayansan**

273C A new role for the conserved G-protein regulator RIC-8/Synembryn in primary cilia biogenesis **Christina Campagna**

274A Identification of novel regulators involved in transport of synaptic vesicle proteins **Badal Singh Chauhan**

275B Intraflagellar transport is required for enrichment of CLHM-1 into a distinct subpopulation of extracellular vesicles released from ciliated sensory neurons **Michael Clupper**

276C Analysis of endomembrane-resident zinc transporter mutants that suppress the systemic RNAi defects of *rsd-3* mutant **Katsufumi Dejima**

277A Regulation of vesicular trafficking by NEK family kinases **David Fay**

278B TORC1, BORC, and ARL-8 drive tubulation of cell corpse phagolysosomes in *C. elegans* embryos **Gholamreza Fazeli**

279C MEL-28-mediated regulation of microtubule motors affects oogenic fertility **Anita Fernandez**

280A Sorting of different dense core vesicle cargos in the same neuron **Pralaksha Gurung**

281B The KASH-independent role of ANC-1 in positioning organelles in *Caenorhabditis elegans* **Hongyan Hao**

282C Uniform mitochondrial positioning in *C. elegans* touch receptor neurons is regulated by actin and contributes both to cytosolic calcium dynamics and touch responsiveness **Sneha Hegde**

283A *C. elegans* modeling and human studies of a rare *RAB5B* patient variant reveal a novel role of RAB5B in regulated secretion of pulmonary surfactant **Huiyan Huang**

284B Examination of P5B ATPase function *in vivo* **Eric Lambie**

285C Interpreting human missense variants of unknown significance (VUS) in the nematode orthologue of ciliopathy-associated genes **Karen Lange**

286A A fluorescent toolkit for live analysis of mitochondrial genome maintenance in C. elegans **Jessica Leslie**

287B MEL-28 and dynactin impact male fertility in *C. elegans* **Kaitlin Levangie**

288C The *C. elegans* TspanC8 tetraspanin TSP-14 exhibits isoform-specific localization and function **Zhiyu Liu**

289A Investigating the role of Kinesin-3 motor UNC-104 in regulating polarized distribution of synaptic vesicle proteins **Amal Mathew**

290B *xbx-4*, a novel Joubert syndrome-related gene, acts in the CCRK/RCK kinase cascade to regulate cilia length and morphology **Ashish Maurya**

291C Investigating the role of SYD-2/Liprin-α in synaptic vesicle protein trafficking **Sravanthi Nadiminti**

292A Understanding Interactions Between Microtubule-Associated Proteins And Post-Translational Modifications Of Microtubules In Sensory Neurons **Robert O'Hagan**

293B Unraveling the role of *clk-1* in the modulation of mtDNA heteroplasmy **Claudia Pereira**

294C Identification of a potential regulator of proteasome nuclear localisation **Johanna Pispa**

295A Identifying novel interactors of the guanylate cyclase GCY-22 involved in NaCl chemotaxis **Suzanne Rademakers**

296B Investigating the function of TAT proteins in lipid transport within ciliated neurons. **Shapour Rahmani**

297C Syndapin Interacting Proteins in Recycling Endosome Function **Wilmer Rodriguez**

298A UNC-104 anterograde bias is regulated by ubiquitination **Vidur Sabharwal**

299B Neuronal mitochondria utilize a novel fission mechanism during extrusion into exophers **Joelle Smart**

300C RAB-10 functions opposite of the AGEF-1/Arf GTPase/AP-1 pathway to regulate vesicle trafficking **Aida Sobhani**

301A The *C. elegans* homolog of Nucleolin, NUCL-1, contributes to nucleolar organization through its intrinsically disordered RG/RGG repeat domain **Emily Spaulding**

302B Perturbation of RME-8 results in elongation of endosomes in ALM neurites. **Sierra Swords**

303C Disruption of Golgi function induces pathogen response gene expression **Amy Walker**

304A Determining the function of the LOV-1 polycystin-1 adhesion GPCR and TRP PKD-2 on cilia and extracellular vesicles **Jonathon Walsh**

305B Phagocytosis and processing of neuron-derived exophers by the *C. elegans* hypodermis. **Yu Wang**

306C NuRD mediates mitochondrial stress–induced longevity via chromatin remodeling in response to acetyl-CoA level **Di Zhu**

Development

307A Towards a quantitative gene network underlying robustness of seam cell fate **Alicja Brozek**

308B Positioning *sea-2* and *lin-66* in the heterochronic pathway in the context of continuous and L2d-interrupted development **Reyyan Bulut**

309C Studying cell-fate convergence in the mesodermal lineage of C. elegans **Aleksandr Bykov**

310A *C. elegans* establishes germline versus soma by balancing histone methylation **Brandon Carpenter**

311B *ztf-16* opposes adult cell fate after dauer in *Caenorhabditis elegans* **Anuja Dahal**

312C The polarity protein PAR-4 controls intestinal cell number by regulating cell fate in *C. elegans* embryos **Flora Demouchy**

313A The RAP-2 Small GTPase and MIG-15 MAP4 kinase promote tertiary fate in *C. elegans* VPC Patterning **Razan Fakieh**

314B Proliferation/differentiation control by the SWI/SNF nucleosome remodeler *in vivo* **Tessa Gaarenstroom**

315C Speed and fate diversity tradeoff in nematode's early embryogenesis **Guoye Guan**

316A Cell-fate decisions in dynamically perturbed signaling environments during *C. Elegans* vulval development **Ismail Hajji**

317B Uncovering highly conserved factors that contribute to phenotypic robustness of seam cell patterning in *C. elegans* **mark hintze**

318C Evolutionary conservation of the heterochronic pathway in *C. elegans* and *C. briggsae*. **Maria Ivanova**

319A Determining the role of ZEN-4/KIF23 in *C. elegans* reproductive organ development **Tatsuya Kato**

320B The Mechanism of LIN-42 Regulation of Temporal Patterning in C. elegans **Brian Kinney**

321C Opposing roles of DAF-16 and NHR-156 in regulation of metabolism downstream of gut specification **Morris Maduro**

322A Lineage-specific paths to the same cell type **Karolina Mizeracka**

323B Tagged endogenous ERL/MPK-1 MAP Kinase provides a novel tool for examining its activation *in vivo* **Neal Rasmussen**

324C Regulation of the duration of breast cancer dormancy by UNK **Itzel Rosas Gutierrez**

325A Analyzing the spatiotemporal structure of heterochronic miRNA transcription using microfluidics live-imaging of nascent miRNA dynamics **Shubham Sahu**

326B Identifying genes regulating cell fate and multipotency in the SGP/hmc cell fate decision **Evan Soukup**

327C Quantitative model formation of the heterochronic pathway in *C. elegans* **Marit van der Does**

328A Sub-toxic concentrations of perfluoroalkyl substances (PFAS) dose-dependently delay *C. elegans* larval development and population growth **Celine Breton**

329B Temporal scaling in C. elegans larval development **Burak Demirbas**

330C Recursive Transcriptional Feedforward Loops Ensure Robust Endoderm Development in *C. elegans* **Chee Kiang Ewe**

331A Coordinating proliferative and invasive cellular fates: insights from C. elegans somatic gonad development **Taylor Medwig-Kinney**

332B Y-to-PDA transdifferentiation occurs through an epithelial cell intermediate and requires *ngn-1, hlh-16, unc-44, unc-119,* and *unc-33* **Alina Rashid**

333C Sexually dimorphic glia-neuron reprogramming in *Caernorhabditis elegans.* **Vicky Rook**

334A Characterization of two evolutionarily conserved *C. elegans* Ceh-6/Oct and Sox-2/Sox2 transcriptional factors during a natural Y-to PDA transdifferentiation event **Shashi Kumar Suman**

335B *daf-16*/FOXO blocks adult cell fate in *C. elegans* dauer larvae via a branched pathway involving *lin-41/*TRIM71 **Matthew Wirick**

336C Cancellled/Unprogrammed

337A The 3'UTR is required for MEX-3 expression pattern and contributes to animal fecundity **Mennatalalh Albarqi**

338B Modeling the *C. elegans* Germline Stem Cell Genetic Network using Automated Reasoning **Ani Amar**

339C Cytokinesis incompletion drives the initial expansion of the *C. elegans* syncytial germline **Jack Bauer**

340A GLP-1 Notch - LAG-1 CSL control of the germline stem cell fate is mediated by transcriptional targets *lst-1* and *sygl-1* **Jian Chen**

341B Significance of RNA Binding Motif Protein (RBM-39) in developmental processes in *C. elegans* **Yuzhu Cheng**

342C 3' UTR mediated post-transcriptional regulation of *glp-1* in the germline of *Caenorhabditis elegans* **Peren Coskun**

343A FBF binding elements in the *gld-1* 3'UTR and their role in germline regulation **Sarah Crittenden**

344B DLC-1 promotes germ granule integrity in *C. elegans* embryo **Mary Ellenbecker**

345C Investigating the basis for the *aak-1*-specific requirement in homeostatic regulation of GSC proliferation **Nasim Eskandari**

346A Regulation and function of the "PUF hub" governing *C. elegans* germline stem cells **Ahlan Ferdous**

347B Two eIF4E isoforms regulate distinct mRNAs and effect one another in germ cells **Gita Gajjar**

348C Regulation of GLP-1/Notch signaling in *C. elegans* Germline Stem Cells by Protein Interactions **Xue Han**

349A PAR-CLIP experiments used to identify parallel pathways to the core germline development pathway **Jonathan Karpel**

350B The PAF1 complex cell-autonomously regulates oogenesis in *Caenorhabditis elegans* **Yukihiko Kubota**

351C MIG-6 PLAC domain affects Notch signaling and the extracellular matrix composition. **Pier-Olivier Martel**

352A Determining the mechanism of attachment of the *C. elegans* germline stem cell niche, the distal tip cell **Lauren McMillan**

353B A secreted immunoglobulin domain-containing protein, SPE-51, is required for sperm function at fertilization **Xue Mei**

354C The *C. elegans* spermiogenesis-inducing compound DDI-4 can trigger the acrosome reaction in mouse spermatozoa **Hitoshi Nishimura**

355A EGGD-1 and EGGD-2 are novel LOTUS domain proteins that promote perinuclear localization of P granules **Ian Price**

356B A male pheromone that improves quality of the oogenic germline uncovers a strategy to counteract reproductive aging **Ilya Ruvinsky**

357C Understanding the Role of Scaffold Protein Activated C Kinase 1 (RACK-1) in Germ Line Stem Cells of *Caenorhabditis elegans* **Sadaf Sangari**

358A Investigating the germline function of the RNA-binding protein *cfim-1* **Anson Sathaseevan**

359B Combinatorial analysis of human PAF1 complex-interacting proteins using *in silico* phylogenetic profiling and RNAi knockdown screening **Hisashi Takatsuka**

360C Analysis of Class I histone deacetylase in the regulation of oocyte size and embryonic development in *Caenorhabditis elegans* **Takuma Unno**

361A Temperature stress effects cytoplasmic streaming during oogenesis **Katherine Uttal**

362B A multi-organism genetic model for microbiota-driven parasite burden **Mericien Venzon**

363C The Role of the RNA-Induced Silencing Complex (RISC) Component VIG-1 in *C. elegans* Germline Stem Cell Regulation **Dan Zhang**

364A Distal tip cell-specific mRNA profiling sheds light on the molecular mechanism of gonad morphogenesis **Priti Agarwal**

365B Multiple lipocalins are required for apical extracellular matrix organization **Trevor Barker**

366C Characterizing a Matrix Protease important for epithelial tissue shaping in C. elegans **Susanna Birnbaum**

367A FRK[src-2] is a Novel Candidate as a Hemifacial Microsomia and Mandibular Dysplasia Gene that Exhibits Developmental Defects in Zebrafish (D. rerio) and C. elegans Tao Cai

368B BAR-1/β-catenin and PRY-1/Axin show asymmetric and complementary expression in neuroblasts during *C. elegans* ventral nerve cord assembly **Wesley Chan**

369C A partial nuclear atlas of the post-twitching *Caenorhabditis elegans* embryo **Ryan Christensen**

370A Discerning the temporal organization of development **Denis Faerberg**

371B Plugs and sheaths made to molt **Alison Frand**

372C *C. elegans* Anterior Morphogenesis: A Tale of Three Tissues **Stephanie Grimbert**

373A Establishment of a morphological atlas of the *Caenorhabditis elegans* embryo using deep-learning-based 4D segmentation **Guoye Guan**

374B Computable early *C. elegans* embryo with a data-driven phase field model **Guoye Guan**

375C Identification of a mitochondrial transfer sequence in a folic acid metabolism gene *mel-32* **Alyson Hally**

376A *C. elegans prk* mutants exhibit pleiotropic defects. **Karunambigai Kalichamy**

377B UPR[mt] required for anal depressor symmetry and male muscle remodeling **Brigitte LeBoeuf**

378C EFF-1 ectopic expression promotes body wall muscle fusion **Xiaohui Li**

379A Spontaneous cell internalization of a spatially-confined proliferating blastomere: a mechanical interpretation on worm gastrulation **Jiao Miao**

380B Two of the 30 EGF domains in FBN-1/Fibrillin are required for sensory dendrite extension **Karolina Mizeracka**

381C The role of the kinase MRCK-1 in excretory canal development **Evelyn Popiel**

382A ERM-1 phosphorylation and NRFL-1 redundantly control lumen formation in the *C. elegans* intestine **Jorian Sepers**

383B Investigating the Mechanisms of Vesicular Trafficking and Unicellular Tube Growth in the *C. elegans* Excretory Duct Cell **Nicholas Serra**

384C Coordinated tissue growth ensures uniformity of gastro-intestinal size proportions **Klement Stojanovski**

385A Differential expression analysis of migrating cells in *C. elegans* embryogenesis **Jasper Yang**

386B Evolution of *fem-1* activity in *Caenorhabditis* **James Kennedy**

387C Sperm fate is promoted by the *mir-44* microRNA family in the *Caenorhabditis elegans* hermaphrodite germline **Katherine Maniates**

388A Dramatic alteration of TRA-2/TRA-1 interactions in the sperm/oocyte decision **Yongquan Shen**

389B Exploring the role(s) of FOG-2 in the hermaphrodite germ line **Lauren Skelly**

390C Deciphering the functional roles of PIEZO mechanosensors in reproduction **Xiaofei Bai**

391A Mechanisms in the role of the DBL-1/ BMP Pathway in the Innate Immune Response of *Caenorhabditis elegans* **Moshe Bendelstein**

392B A Life cycle alteration can correct defects in molting **Shaonil Binti**

393C Gα/GSA-1 works upstream of PKA/KIN-1 to regulate calcium signaling and contractility in the Caenorhabditis elegans spermatheca **Perla Castaneda**

394A The role of furrow-associated collagen DPY-7 in regulating stress responses varies during larval development **Luke Chandler**

395B Heparan sulfate proteoglycans, guidance molecules and Rho-family GTPases regulate the number of cellular extensions in developing polarized cells **Raphael DIMA**

396C Defining the molecular determinants by which EXC-4/CLICs regulate Rho-family GTPase signaling **Julianna Escudero**

397A Nfya-1 functions as a substrate of ERK-MAP kinase during *Caenorhabditis elegans* vulval development **Douglas Fantz**

398B Probing the molecular mechanism of receptor tyrosine kinase activation through the analysis of heterodimers of the *C. elegans* FGF receptor, EGL-15 **Melissa Garcia Montes de Oca**

399C A genome-wide RNAi screen for factors of tissue growth coordination **Ioana Gheorghe**

400A Detection of clinically relevant ERK/MAPK signaling inhibitors using *C. elegans* **Szymon Gorgon**

401B Uncovering a novel endocannabinoid (2-AG) pathway required to modulate cholesterol metabolism in *Caenorhabditis elegans* **Bruno Hernández Cravero**

402C The Alimentary Cuticle of *C. elegans* Plays Multiple Roles in Mediating Xenobiotic Sensitivity **Muntasir Kamal**

403A Two RapGaps in *C. elegans* differently regulate development and behavior. **Seung Hyun Kim**

404B SEL-5 kinase interacts with retromer complex to regulate QL.d migration and excretory cell canals outgrowth **Filip Knop**

405C Integrative role of the DBL-1/BMP signaling pathway with BLMP-1/BLIMP1 in *Caenorhabditis elegans* development **Mohammed Farhan Lakdawala**

406A PPK-1, the *Caenorhabditis elegans* homolog PIP5K regulates *let-7* miRNA expression through interaction with the nuclear export protein XPO-1 **Chun LI**

407B TOM-1/Tomosyn is an inhibitor of growth cone protrusion and works with the UNC-6/Netrin receptor UNC-5 **Snehal Mahadik**

408C Parallel Rap1>RalGEF>Ral and Ras signals sculpt the *C. elegans* nervous system. **Jacob Mardick**

409A Regulation of aging and recovery in arrested L1 larvae **Alejandro Mata Cabana**

410B Elucidating the role of SUP-17/ADAM10 in the BMP signaling pathway in *C. elegans* **Ines Muravin**

411C Physical constraints on cuticle stretch guide *C. elegans* developmental trajectories **Joy Nyaanga**

412A Differential regulation of developmental stages supports a linear model for *C. elegans* postembryonic development. **Maria Olmedo**

413B Beta-catenin centrosomal localization regulates Wnt signaling in C. elegans development and human cells **Bryan Phillips**

414C Coordinating neuronal signaling pathways with anterior epidermal cell migration **Victoria Richard**

415A Understanding the regulation and function of the CRISP protein LON-1 in C. elegans **Maria Serrano**

416B Calumenin functions in cuticle collagen modification **Hyun-Ok Song**

417C Nutritional status and fecundity are synchronised by muscular exopheresis **Michał Turek**

418A Wide-Spread Non-Canonical CED-3 Caspase Activities Regulate Gene Expression Dynamics Including Antagonizing PMK-1 p38 MAPK Stress-Priming Function to Support Development **Benjamin Weaver**

419B Insulin signaling and osmotic stress response regulate arousal and developmental progression at hatching **Bruce Wightman**

420C Relatives of Ras regulate function of the *C. elegans* exocyst complex in development **You Wu**

421A A cilia-independent function of BBSome mediated by DLK MAPK signaling in *C.Elegans.* **Xinxing Zhang**

Ecology and Evolution

422B The effects of venlafaxine on behavior and central nervous system of *Caenorhabditis elegans* **Carla Alves**

423C Neural and Molecular Mechanisms of Microbe-sensing in the Control of Animal Behavior **Benjamin Brissette**

424A Does programmed organismal death promote fitness at the *C. elegans* colony level? **Hannah Chapman**

425B Microbiome perturbations moderately modulate *Caenorhabditis elegans* health and life history traits **Ashley Foltz**

426C Skin-penetrating nematodes exhibit life-stage-specific interactions with host-associated and environmental bacteria **Ivan Chavez**

427A Cancellled/Unprogrammed

428B Gut-brain-axis signaling in regulation of the *Caenorhabditis elegans* microbiome **Ciara Hosea**

429C Behavioral analysis of *P. pacificus* mutants encoding for a novel repeat-containing protein **Daniel Kazerskiy**

430A Cancellled/Unprogrammed

431B Interaction of genetic variation and diet on stress resistance in *Caenorhabditis tropicalis* isolates **Tzitziki Lemus Vergara**

432C The involvement of host genes in shaping the *C. elegans* gut microbiome **Barbara Pees**

433A Evidence for the inclusion of *Caenorhabditis elegans* in Environmental Risk Assessment routines **Libania Queiros**

434B Assortative mating and the potential for sperm-mediated reproductive interference in co-occurring nematodes *C. macrosperma* and *C. nouraguensis* **Rebecca Schalkowski**

435C A population state shift supports aging as a cause of adult death **Andrea Scharf**

436A Carboxyesterases and intestinal granules in the biosynthesis of novel families of nematode small molecule signals **Frank Schroeder**

437B Dissecting the genetic architecture underlying mouth dimorphism in *Pristionchus pacificus* identifies *cis* -regulatory variation in a supergene locus. **Mohannad Dardiry**

438C Translation of *fem-3* is regulated somatically to prevent abnormal TRA-1 activation **Ronald Ellis**

439A Sex-determination in the male/female species *C. nigoni* **Jonathan Harbin**

440B Significant differences in the sex determination pathways between *C. inopinata* and *C. elegans* **Ryuhei Hatanaka**

441C Chromosome dynamics in sex determination of the parthenogenetic nematode *Strongyloides ratti* **asuka Kounosu**

442A Comparative analysis of cellular dynamics of *C. inopinata* and *C. elegans* zygotes **Shun Oomura**

443B NHR-1 and NHR-40 in *C. elegans* – an outgroup approach to the origin of a novel trait **Tobias Theska**

444C Exploring the mechanisms of MSS-mediated sperm competition in *C. briggsae* **Justin Van Goor**

445A Widespread changes in gene expression accompany body size evolution in nematodes **Gavin Woodruff**

446B Regulatory differences in wild *C. elegans* strains from investigation of allele-specific expression **Avery Bell**

447C Genetic architecture of alcohol sensitivity in *C. elegans* **Benjamin Clites**

448A Utilizing Quantitative Molecular Techniques to Capture Expression Level Differences in *C. elegans* Wild Isolates **Samiksha Kaul**

449B Natural variations in reproductive aging phenotypes reveal the importance of early reproductive period in *Caenorhabditis elegans* **Jiseon Lim**

450C The evolution of developmental genetic biases explains the evolution of evolutionary trends **Joao Picao Osorio**

451A Biochemical and structural characterization of a tRNA-synthetase-based selfish element in *C. tropicalis* **Julian Ross**

452B *C. elegans* has lost a regulatory motif that represses *fog-3* transcription in *C. briggase* **Yongquan Shen**

453C Genetic background-dependent expression of *clec-62* in *Caenorhabditis elegans* **Mark Sterken**

454A Evolution of selfishness from a core tRNA synthetase in *C. tropicalis* **Polina Tikanova**

455B Why do some wild-type strains fail at germline RNAi? **Francisco Valencia**

456C Compensatory evolution in mitochondrial tRNAs **Ling Wang**

457A Dose-response relationships reveal complex patterns of natural variation in susceptibility to diverse toxicants **Samuel Widmayer**

458B Evaluating the power and limitations of *C. elegans* genome-wide association mappings **Samuel Widmayer**

459C Natural variation in the aldehyde oxidase, *gad-3*, confers oxidative stress resistance between *C.elegans* strains **John Willis**

460A Natural variation in differential *C. elegans* responses to the broad-range anthelmintic emodepside **janneke wit**

461B Genome-wide association study for nictation behavior of the nematode *C. elegans* **Heeseung Yang**

462C The genetic architectures of gene expression variation in wild *C. elegans* **Gaotian Zhang**

463A Natural variation in fertility is correlated with species-wide levels of divergence in *Caenorhabditis elegans* **Gaotian Zhang**

464B Isolation, Characterization, and Antibiotic Resistance Profile of Staphylococci from the Indoor Air of the Students' Halls of Residence at the Obafemi Awolowo University, Ile Ife, Nigeria **Kayode Adeyemi**

465C Neglected strongylid nematodes: Metabarcoding reveals hidden transmission patterns between great apes and humans **Vladislav Ilik**

466A Deconstructing Male Fertility: Functional and Evolutionary Characterization the NSPF Gene Family **Katja Kasimatis**

467B Cancelled/Unprogrammed

468C A recombination modifier greatly affect C.elegans linkage map without inducing a direct fitness cost **Tom Parée**

469A Climate Change and Extinction – Lessons from *C. elegans* Population Dynamics **Andrea Scharf**

470B Genomic mechanisms of asexual reproduction **George Chung**

471C Investigating the Diversity and Distribution of *Caenorhabditis elegans* in Georgia **Zaki Hafeez**

472A Direct estimate of the distribution of fitness effects (DFE) of spontaneous mutations in *C. elegans* **Charles Baer**

473B Cancelled/Unprogrammed

474C High-throughput phenotyping of *C elegans* wild isolates reveals that microsporidia genotype-specific interactions are common in *C. elegans* **Meng Xiao**

475A Genomic architecture of 5S rDNA cluster and its variations within and between species **Zhongying Zhao**

476B Dissecting the Molecular Mechanism of the *peel-1/zeel-1 S*elfish Genetic Element **Lews Caro**

477C Studying inter-species genome size variation using C. nigoni and C. briggsae hybrids **Runsheng Li**

478A Reproductive incompatibility among populations of *Caenorhabditis inopinata* **Ryusei Tanaka**

Education

479B Using First-year Students To Do Research While Learning Biology **Yun Choi**

480C Using student annotations of published data in the *C. elegans* database, WormBase, to foster collaboration during an online laboratory course **Caroline Dahlberg**

481A Wormfinding: a semester-long CURE for introductory biology **Theresa Grana**

482B Using worms in a Molecular Biology course to teach cloning. **Theresa Grana**

483C Creating choice in molecular genetics lab through the use of toxicology **Julie Hall**

484A Screening bacterial isolates for novel therapeutics: a CURE approach **Christian Holmstrom**

485B Utilizing CRISPR to Reinforce Genetics **Mary Kroetz**

486C Making online exams more secure in an introductory cell/molecular biology course by using banks of questions made with Python **Morris Maduro**

487A Virtual Active Science Engagement (VASE): unveiling the hidden curriculum of academic science through peer networking, career discussions, and skill building **Molly Matty**

488B Collection of Wild Isolates as a Remote Hands-on Research Experience **Jacqueline Rose**

489C Development of a GFP RNAi Experimental Module in *C. elegans* **Erika Sorensen**

490A Characterization of RNAi phenotypes in *C. elegans* from understudied genes in a Cell and Molecular Biology course **Jessica Sullivan-Brown**

491B Snip-SNP mapping of a trembler *C. elegans* mutant strain with undergraduate students **Remington Taylor**

492C Tips for early career scientists on NSF-CAREER award proposals **Cheryl Van Buskirk**

493A Modeling *C. elegans* Protein Structures as part of Undergraduate Research Projects **Katherine Walstrom**

494B Integration of research ethics training in a course-based undergraduate research experience (CURE) exploring genetic incompatibilities in *C. briggsae* **Joseph Ross**

495C Nematode hunters: a citizen science approach to identifying new systems for the study of host-virus interactions **Catherine Byrnes**

Gene Regulation and Genomics

496A The *Caenorhabditis* Natural Diversity Resource: expanded and enhanced **Erik Andersen**

497B WormBiome: A pipeline to predict functional profiles of *C. elegans* associated microbial communities **Adrien Assie**

498C Single Cell Tools for WormBase **Eduardo da Veiga Beltrame**

499A Updating the *Caenorhabditis elegans* Natural Diversity Resource Variant Browser **Sophia Gibson**

500B Novel tools for analysis of *C. elegans* gene expression data based on organism-wide ICA-derived gene co-expression modules **Katerina Podshivalova**

501C Caenorhabditis Genetics Center (CGC) **Ann Rougvie**

502A WormCat 2.0: improving annotations and visualization for RNA seq, genetic screens, or proteomics data **Amy Walker**

503B Discovery of new small molecule inhibitors of methyltransferase G9a for Alzheimer's disease treatment **Aina Bellver-Sanchis**

504C The effect of age on epigenetic transgenerational reprogramming in the *C. elegans* germline **Onur Birol**

505A The transgenerational accumulation of repressive H3K9me2 affects health and lifespan in *C. elegans* **Jaime Croft**

506B Cancellled/Unprogrammed

507C Understanding the role of SAM synthases under heat stress **Adwait Godbole**

508A Horizontal and vertical transmission of transgenerational memories via the *Cer1* transposon **Rachel Kaletsky**

509B Repressive histone marks-associated reproductive defects in *Caenorhabditis elegans* exposed to chemical additives in plastics **Jiwan Kim**

510C Roles of the histone variant H2A.Z in post-embryonic development of C. elegans **Saho Kitagawa**

511A Redundant Mechanisms of X Chromosome Repression in the *C. elegans* Male Germline **Braden Larson**

512B Chromodomain proteins CEC-3 and CEC-6 promote germ granule integrity and genome stability **Tammy Lee**

513C Temporary loss of the shelterin proteins POT-1 or POT-2 alters telomeric protein localization for multiple generations **Evan Lister-Shimauchi**

514A Investigating the role of the chromatin remodeler LET-418/Mi2 in gene regulation and chromatin landscape during post-embryonic development of *Caenorhabditis elegans*. **Shweta Avinash Rajopadhye**

515B Regulation of embryonic cell specification by histone methylation **Juan Rodriguez**

516C Chromatin context in the regulation of germline genes by the zinc-finger transcription factor LSL-1 **David Rodriguez Crespo**

517A Independent initiation and maintenance of germline and somatic epigenetic silencing **Andrei Shubin**

518B Defining the functional components of constitutive heterochromatin through genetic interaction screening **Anna Townley**

519C Control of *C. briggsae* germline development by TRA-1-interacting co-factors **Satheeja Santhi Velayudhan**

520A H3K4me2 regulates the recovery of protein biosynthesis and homeostasis following DNA damage **SIYAO WANG**

521B Towards the mechanistic understanding of H3K23me3 in transgenerational epigenetics **Anna Zhebrun**

522C Histone methyltransferase inhibitor chaetocin strongly and specifically affects metal responsive genes **Elijah Abraham**

523A Dissecting the structure-function mechanism of SEM-2/SoxC in *C. elegans* **Marissa Baccas**

524B Studying chromatin regulation at single cell resolution during *C. elegans* postembryonic development **Alexander Blackwell**

525C Precise quantification of mRNAs across all *C. elegans* embryonic stages through a microscopy and machine learning-based approach **Laura Breimann**

526A An autoregulation loop in *fust-1* for circular RNA regulation in *Caenorhabditis elegans* **Dong Cao**

527B Mutations in the mRNA export complex NXF-1/NXT-1 affect heat-shock driven gene-expression **Michael Crawford**

528C Condensin I organizes the *C. elegans* interphase genome **Moushumi Das**

529A Cancellled/Unprogrammed

530B Characterization of the Role of the Terminal Adenosine Located at the pre-mRNA Cleavage Site **Bridget Diviak**

531C Modelling mutations in human Argonaute *AGO1* that cause neurodevelopmental disorders: Identical mutations in the *C. elegans* homolog *alg-1* impair *in vivo* microRNA function, with global gene expression perturbance*. **Ye Duan**

532A Cadmium hijacks the high zinc response by binding and activating the HIZR-1 nuclear receptor **Brian Earley**

533B Parallel genetics of regulatory sequences using induced genome editing **Jonathan Froehlich**

534C Polymorphic modifiers of human α-synuclein in *Caenorhabditis elegans* **Yuqing Huang**

535A Post-transcriptional regulation of *egl-1*[BH3-only], the key activator of apoptosis during *C. elegans* development **Yanwen Jiang**

536B A specific window of NHR-23 activity is required for developmental progression **Londen Johnson**

537C Isoforms of eIF4G (*ifg-1*) are differentially expressed to modulate mRNA translation initiation mechanism in development. **Brett Keiper**

538A Identification of the biologically relevant MEC-2 isoform **Talia Magdolna Keszthelyi**

539B Apoptosis in the context of autophagy and lifespan in *C. elegans* **CHANDRIKA KONWAR**

540C Alternative splicing through m^{6}A modification at a 3' splice site for SAM synthetase homeostasis **Hidehito Kuroyanagi**

541A Detection of induced gene repression using an *in vivo* protein recruitment system **Chengyin Li**

542B Modelling BAP1 malignant pleural mesothelioma mutations in *C. elegans* reveals synthetic lethality between *ubh-4*/BAP1 and the proteasome subunit *rpn-9*/PSMD13 **Carmen Martínez-Fernández**

543C Defining the Roles of *lin-28* and *hbl-1* in Gonad Development **Madeleine Minutillo**

544A Systematically uncovering transcriptional regulation of metabolism in *Caenorhabditis elegans* **Shivani Nanda**

545B RNA Binding Proteins Coordinately Control Lifespan in *C. elegans* **Rebekah Napier-Jameson**

546C The Role of mRNA Decay in Embryonic Cell Fate Specification **Felicia Peng**

547A The role of parental diet on progeny´s proteome and fitness **Sigma Pradhan**

548B Identifying the role of Pashas WW domain in primary microRNA recognition and processing **Kailee Reed**

549C Growth Regulation Mediated by Feedback Mechanisms in the DBL-1/BMP Pathway of *Caenorhabditis elegans* **Hannah Reich**

550A Identification of transcriptional regulators impacted by a glucose-supplemented diet in *C. elegans* **Jose Robledo**

551B Regulation of anterior genes in the *C. elegans* embryo **Jonathan Rumley**

552C Defining the mechanism by which SNPC-4 and PRDE-1 regulate piRNA expression across large genomic domains in *C. elegans* **Nancy Sanchez**

553A ADR-2 Cellular Localization is Highly Regulated and Affects its Functionality **Noa Schneider**

554B DREAM interrupted: Using CRISPR/Cas9-targeted mutagenesis to assess DREAM complex formation and function **Spencer Snider**

555C A Worm's Perspective on Early Birds: Probing Links Between Conserved Biological Timing Mechanisms in Nematodes and Mammals **Rebecca Spangler**

556A SNA-3: an essential, nematode-specific protein is a novel key component of the spliced leader *trans*-splicing machinery **Rosie Spencer**

557B Investigating the interplay between sRNA pathways and germ granules in *Caenorhabditis elegans* **Adam Sundby**

558C Identifying the role of BRCA1 in transcriptional regulation using *Caenorhabditis elegans* **ishor Thapa**

559A Dissecting interactions across gene regulatory layers: FUST-1, TDP-1, and CEH-14 are coordinately required for gonad development **Morgan Thompson**

561C Transcriptional analysis of the response of *C. elegans* to ethanol exposure **Marijke van Wijk**

562A The role of circadian rhythm homologs LIN-42 and KIN-20 in gene regulation and development **Priscilla Van Wynsberghe**

563B Genetic regulators of Integrator complex mediated snRNA processing in *C. elegans* **Brandon Waddell**

564C Auxin-Inducible Degradation of DREAM Proteins, LIN-9 and LIN-54, in *Caenorhabditis elegans* **Emily Washeleski**

565A Tissue-specific transcriptional regulation by ELT-2 and ELT-7 in the developing *Caenorhabditis elegans* intestine **Robert Williams**

566B Dual role of the RNA-binding protein PUF-8 –PUM1,2 in programmed cell death **Jimei Xu**

567C Programmed DNA Elimination in the parasitic nematode *Ascaris*: Are Argonautes and their associated small RNAs involved? **Maxim Zagoskin**

568A Integrating bulk and single cell transcriptomics for accurate detection of tissue-specific gene expression **Alec Barrett**

569B Deciphering a cis-regulatory code for tissue-specific alternative splicing **Sanjana Bhatnagar**

570C A catalogue of nematode karyotypes **Mark Blaxter**

571A Computational Analysis of UDP-glycosyltransferase Variation across Strains of *Caenorhabditis elegans* **Kyra Chism**

572B Cancellled/Unprogrammed

573C *C. elegans* transposable elements harbor diverse transcription factor DNA-binding motifs **Jacob Garrigues**

574A Genes essentiality in various genetic backgrounds **Paulina Gąsienica**

575B New ends with new technology: chromosome diminution in Oscheius nematodes **Pablo Manuel Gonzalez de la Rosa**

576C Using WGS to identify intragenic suppressors of *zyg-1* in *Caenorhabditis elegans* reveals the importance of genomic context in phenotypic interpretation **Francesca Jean**

577A Long-read sequencing and de novo genome assemblies reveal complex chromosome end structures caused by telomere dysfunction at the single nucleotide level **Eunkyeong Kim**

578B Evidence of loop-extrusion by X-specific condensin in *C. elegans* **Jun Kim**

579C Modeling Timothy Syndrome in *Caenorhabditis elegans* **Kerry Larkin**

580A Genome-wide profiling reveals a dual role for histone H2A mono-ubiquitylation **Kailynn MacGillivray**

581B Characterizing complex genomic rearrangements in *C. elegans* using short-read Whole Genome Sequencing **Tatiana Maroilley**

582C Functional Analysis of Variants in a Gene Associated with Early Onset Epilepsy **Kathryn McCormick**

583A Improved reference genomes for *Caenorhabditis briggsae* **Nicolas Moya**

584B Characterization of the terminal adenosine's influence on cleavage and polyadenylation of *C. elegans* mRNAs **Emma Murari**

585C SLIDR and SLOPPR: Computational pipelines for the discovery and characterisation of spliced leader *trans*-splicing and polycistronic RNA processing reveal the evolutionary dynamics of SL2 *trans*-splicing across the Nematoda **Jonathan Pettitt**

586A Crispr-ing *C. elegans* genes conserved to humans **Ann Rougvie**

587B Genomic landscape of the obligately outcrossing *Caenorhabditis becei* **Jose Salome-Correa**

588C CRISPR- Nanobodies from C. elegans as an therapeutic approach for Erythroblastosis Fetalis **Akanksha Singh**

589A The smallest genome in the genus *Caenorhabditis* **Simo Sun**

590B Genome organization of *Caenorhabditis brenneri* **Anastasia Teterina**

591C Genomes of 15 *Oscheius tipulae* isolates from Chernobyl **Sophia Tintori**

592A Sign and reciprocal sign epistasis across different environments **Katarzyna Toch**

593B Variant Discovery mapping for identification of phenotype causing mutations: case studies and a new online pipeline **Feng Xue**

594C Use of *C. elegans* for investigating functional consequence of orthologous variants **Atiyye Zorluer**

595A CUT&Tag in *Caenorhabditis elegans* **Abraham Aharonoff**

596B A tool for warp speed genetics in C. elegans **Karen Artiles**

597C *Transgenic hph::gfp gene fusion allows streamlined screening for C. elegans gene knockouts* **Sarah Brivio**

598A Non-transgenic Functional Rescue of Neuropeptides **Elizabeth DiLoreto**

599B A faster and more efficient RNASeq protocol supports new approaches for studying gene regulation and tissue composition in *C. elegans* **Matthias Eder**

600C Tissue-specific transcription footprinting in *C. elegans* using RNA PoI DamID (RAPID) and Nanopore sequencing **Georgina Gómez Saldivar**

601A A model for partial depletion of disease gene homologs reveals dose-dependent effects of the Kabuki Syndrome-related factors SET-16/KMT2D and UTX-1/KDM6A **Maxwell Heiman**

602B Whole Gene Humanization as Platform for Disease Diagnostics and Therapeutics Discovery. **Christopher Hopkins**

603C High-contiguity genomes from single nematodes **Manuela Rebecka Kieninger**

604A Single Nucleotide Substitutions Effectively Block Cas9 and Allow for Scarless Genome Editing in *Caenorhabditis elegans* **Jeffrey Medley**

605B Recombination-based approaches for efficient knock-ins, robust transgene expression, and modular strain construction **Michael Nonet**

606C Self-Selecting Clone-Free Transgene Integration in *Caenorhabditis elegans*- Expanding the Toolkit **Zachary Stevenson**

607A RNA Pol II binding changes in auxin-inducible degradation system in *C. elegans* **Siyu Sun**

608B Minimal PAM nucleases and expanded nested CRISPR tools to facilitate CRISPR-Cas genome editing **Jeremy Vicencio**

609C Novel approaches to studying maternal transcript regulation in *C. elegans* **Karl-Frederic Vieux**

610A Investigating the Role of sRNA and Argonautes in Intercellular Communication **Madeline Beer**

611B Sensitized piRNA reporter identifies multiple RNA processing factors involved in piRNA-mediated gene silencing **Jordan Brown**

612C Reverse complementary matches simultaneously promote both back-splicing and exon-skipping **Dong Cao**

613A Characterization of a potential gene interaction between *spr-5*, *met-2*, and *mep-1* in determining germline versus soma in *C. elegans* **Sindy Chavez**

614B piRNAs regulate transcriptional programs during germline development **Eric Cornes**

615C RNA polyphosphatase PIR-1 regulates endogenous small RNA pathways **Hui Dai**

616A Developmentally regulated microRNA decay of the *mir-35* family is seed sequence dependent **Bridget Donnelly**

617B PRG-1 and ZNFX-1 act in parallel to regulate small RNA-mediated transgenerational epigenetic inheritance **Daniel Durning**

618C RNA helicase RHA-1 safeguards thermosensitive sperm fertility by promoting small RNA-mediated mRNA clearance **Olivia Gaylord**

619A Comparative analysis of nematode small-RNA pathways using Gametocyte specific factor-1 (GTSF-1) **Shamitha Govind**

620B Distinguishing between self and non-self siRNA encoded in the C. elegans genome **Sam GU**

621C A convenient strategy for generating small RNA/mRNA high-throughput sequencing libraries **Weifeng Gu**

622A Antisense ribosomal siRNAs inhibit RNA polymerase I-directed transcription in C. elegans **Shouhong Guang**

623B Annotation of primary microRNA transcripts using conditional depletion of Drosha *drsh-1.* **Dustin Haskell**

624C *hrpa-1* coordinates with miRNAs to regulate gene expression in *C. elegans*. **Shilpa Hebbar**

625A Intrinsically disordered protein PID-2 modulates Z granules and is required for heritable piRNA-induced silencing in the *Caenorhabditis elegans* embryo **Ida Isolehto**

626B Deletion of circRNAs derived from the *crh-1* CREB locus increases mean lifespan of *C. elegans* **Brian Jorgensen**

627C Characterizing the regulatory role of uridylation on small RNA activity in *C. elegans* germline development **Leanne Kelley**

628A An alternative ERGO-1 pathway in a sibling species of *C. elegans, C. inopinata* **Taisei Kikuchi**

629B The role of MORC-1 in regulating CSR-1 germline gene licensing **Jessica Kirshner**

630C Target-dependent requirements of regulators for gene silencing during RNA interference **Daphne Knudsen**

631A Studying the tissue-specific functions of the conserved *mir-51* family of microRNAs **Kasuen Kotagama**

632B The role of the microRNA miR-71 in amyloid β plaque formation in a *C. elegans* model **Daniel Lenchner**

633C Functional analysis of HRPK-1 domains reveals domain and subcellular localization requirements for miRNA-mediated gene expression regulation. **Li Li**

634A DOT-1.1 histone methyltransferase loss leads to lethality dependent on RNAi pathways **Thomas Liontis**

635B Functional analysis of male gonad-enriched microRNAs in *Caenorhabditis elegans* **Lu Lu**

636C mRNA Splicing Promotes Polyadenylation and Counteracts Novel Default Argonaute Silencing in the Germline of *Caenorhabditis elegans* **Yekaterina Makeyeva**

637A piRNAs prevent runaway amplification of siRNAs from ribosomal RNAs, histone mRNAs, and other coding gene mRNAs **Taiowa Montgomery**

638B Exploring Argonaute Loading Mechanisms and Unloaded Argonaute Stability **Humberto Ochoa**

639C Annotation of isomiR dynamics across the *C. elegans* developmental stages **Ganesh Panzade**

640A Investigation of the role of the protein complex PETISCO in *C. elegans* embryonic viability **Joana Pereirinha**

641B The Germline KH Protein, TOFU-7, engages the HSP-90 chaperone and PRP-19 spliceosome components to promote piRNA-dependent epigenetic silencing. **Cole Pero**

642C Germline inherited small RNAs facilitate the clearance of untranslated maternal mRNAs in *C. elegans* embryos **Piergiuseppe Quarato**

643A Regulation of antiviral responses in *C. elegans* embryos **Supraja Ranganathan**

644B Father knows best: Small RNA-mediated regulation of male fertility and paternal epigenetic inheritance in *Caenorhabditis elegans* **Mathias Renaud**

645C A small RNA-mediated feedback loop maintains proper levels of 22G-RNAs in *C. elegans* **Alicia Rogers**

646A An RNAi Screen to Identify Factors that Enhance microRNA Activity After Dauer **Himal Roka (Pun)**

647B Natural genetic variation in multigenerational non-genetic phenomena in *C. elegans* **Marie Saglio**

648C Characterizing the PASH-1-independent *mir-1829* family in *C. elegans* **Rima Sakhawala**

649A Exploring the function of an ancient miRNA family that is essential for *C. elegans* embryogenesis **Emilio Santillan**

650B Developing a Comprehensive Tissue-Specific miRNAome by Nuclear Isolation and Small RNA Sequencing in *C. elegans* **Anna Schorr**

651C *De novo* damaging variants in microRNA processor *DROSHA* are associated with a severe progressive neurological disorder **Jacob Seemann**

652A Translation and codon usage regulate Argonaute slicer activity to trigger small RNA biogenesis. **Meetali Singh**

653B Understanding the spatial organization of the somatic RNAi response **Maya Spichal**

654C Exploring the role of small RNA- and sumoylated NuRD complex-mediated silencing in germline identity maintenance **Wendy Tan**

655A pre-piRNA trimming and 2'-O-methylation protect piRNAs from tailing and degradation **Wen Tang**

656B High-resolution microscopy reveals *C. elegans* germ granule organization **Celja Uebel**

657C Extending immunity through small RNA inheritance **Sophie Veigl**

658A Functional interplay between microRNAs, RNA binding proteins, and alternative polyadenylation in *Caenorhabditis elegans.* **Isana Veksler-Lublinsky**

659B Regulation of *C. elegans* Argonaute proteins by Arginine Dimethylation **Dylan Wallis**

660C Neuronal control of maternal provisioning in response to social cues **Jadiel Wasson**

661A *In vivo* CRISPR screening for biologically important *mir-35* targeting sites in *C. elegans* **Bing Yang**

662B Understanding cluster assistance of microRNA biogenesis in *C. elegans* **Bing Yang**

663C Distinct pathways for exporting dsRNA in systemic RNAi **Keita Yoshida**

664A The RNA helicase CGH-1 regulates the liquid condensates of piRNA pathway factors to promote piRNA silencing in *C. elegans* **Donglei zhang**

Neurobiology

665B Neuronal circuits and molecular pathways involved in olfactory imprinting in Caenorhabditis elegans **Aswathy A**

666C Gravitaxis in *C. elegans* requires touch receptor neuron tubulins and TRPA-1 **Caroline Ackley**

667A Discerning the Role of Neuropeptide(s) in *C. elegans* Thermotaxis Behavior **Rhea Ahluwalia**

668B Detecting signatures of evidence accumulation in the feeding circuit **Luis Alvarez**

669C Behavioral and Ca^{2+} imaging analysis of odor and temperature sensory integration in *C. elegans* **Yuki Aoki**

670A Diacylglycerol content controls proper memory utilization through switching between forgetting and retrieving **Mary Arai**

671B Insulin signaling underlies a heavy-tailed temporal organization in *C. elegans* episodic swimming **Yukinobu Arata**

672C Exploring the Role of Neuropeptide receptor 14 (NPR-14) in *Caenorhabditis elegans* Sleep Behaviour **Isabella Asselstine**

673A Sex differences in behavioral, cellular, and physiological responses to nutrient restriction in *C. elegans* **Chance Bainbridge**

674B Wandering versus waiting worms: Loss of nrx-1 decreases hyperactivity induced by food deprivation and octopamine **Brandon Bastien**

676A Vibrations inhibit feeding behavior through a neural bottleneck in *C. elegans* **Elsa Bonnard**

677B Alternative *mec-2* isoforms exhibit neuron type-specific expression and function **Canyon Calovich-Benne**

678C LITE-1 mediates behavioral responses to X-rays in *C. elegans* **Kelli Cannon**

679A Discovery of a Highly-conserved Behavioral Role for an Interneuron Neuropeptide Receptor **Cynthia Chai**

680B A microbial metabolite synergizes with endogenous serotonin to trigger *C. elegans* reproductive behavior **Yen-Chih Chen**

681C Distinct neural circuits drive bimodal ethanol chemotaxis in *C. elegans* **Yuan-Hua Chen**

682A ascr#3 imprinting is mediated by chromatin remodeling **YongJin Cheon**

683B Identify the function of mechanosensitive channel PEZO-1 in *C. elegans* males **Jihye Cho**

684C A chemosensory GPCR is required for a concentration-dependent behavioral switch in *C. elegans* **Woochan Choi**

685A Role of MAPK/ERK signaling in neurons **Amy Clippinger**

686B Lipidomic analysis of the effects of exposure to ethanol on worms. **Tyler Crossen**

687C *Pseudomonas aeruginosa* Associated Volatiles Drive Chemotactic Behaviour and Immune Response In *C. elegans* **Kaling Danggen**

688A Neuropeptidergic modulation of *C. elegans* learning behavior **Nathan De Fruyt**

689B Transcriptional response to UVC irradiation in sleep deficient animals **Hilary DeBardeleben**

690C Using high-throughput behavioural assays to identify heritable natural genetic variants in three *Caenorhabiditis* species **Siyu Serena Ding**

691A Acetylcholine Signaling Genes are Required for Cocaine-Stimulated Egg Laying in *Caenorhabditis elegans* **Soren Emerson**

692B *C. elegans* as tool to study chronic stress implications **Eliana Mailen Fernandez**

693C A glial Cl⁻ channel is the master regulator of ASH neurons' response to touch **Jesus Fernandez**

694A TRPM channels mediate learned pathogen avoidance following intestinal distention **Adam Filipowicz**

695B HACD-1 functioning in neural cells regulates cold acclimation in *C.elegans.* **Akihisa Fukumoto**

696C K2P channel TWK-40 Regulates Rhythmic Motor Program in C. elegans **Shangbang Gao**

697A Investigating the role of neuropeptide receptors npr-16 and npr-24 in Caenorhabditis elegans **Sanaz Ghojeh Biglou**

698B *C. elegans* learning strategy in T-mazes and aging-related interventions **Eleni Gourgou**

699C 3-dimensional behavioral arenas for *C. elegans* **Eleni Gourgou**

700A Cancellled/Unprogrammed

701B Decoding locomotion from population neural activity in moving *C. elegans* **Kelsey Hallinen**

702C Temperature-regulated gene expression changes driving plasticity in the AFD thermosensory neurons **Nathan Harris**

703A Uncovering the Molecular Mechanisms of Thermosensory Adaptation **Tyler Hill**

704B SWI/SNF chromatin remodeling complexes regulate the expression of innate immunity genes and modulate acute responses to alcohol. **Andrew Hsiao**

705C Genetic Mechanisms of Isothermal Tracking Behavior in *Caenorhabditis elegans* **Tzu-Ting Huang**

706A Long isoforms of mechanoreceptor pezo-1 control pharyngeal gland cell activity in the nematode Caenorhabditis elegans **Kiley Hughes**

707B Exoribonuclease ERI-1 regulates ascr#3 avoidance behavior in *C. elegans* **Hyeonjeong Hwang**

708C Viral infection in *C. elegans* causes sleep, which is necessary for survival and energy maintenance **Michael Iannacone**

709A Klinotactic versus klinokinetic steering strategies implemented in neuroanatomical models for *C. elegans* thermotaxis **Muneki Ikeda**

710B Predatory feeding behavior is modulated via three serotonin receptors and other genetic factors in the nematode *Pristionchus pacificus* **Yuuki Ishita**

711C Computational Neuroethology to Bridge the Gap between Connectome, Neural Dynamics, and Behavior **Eduardo Izquierdo**

712A Dopamine signaling mediates a homeostatic compensation of locomotor bending amplitude in *Caenorhabditis elegans* **Hongfei Ji**

713B Human pain gene ortholog screen in *C. elegans* **Aurore Jordan**

714C Behavioral studies, responses and chemical synapses on EphR/ephrin deficient mutants **Karunambigai Kalichamy**

715A Two thermosensory neurons AFD and AWC regulate purity of frequency components in temperature-evoked sinusoidal crawling **Amane Kano**

716B Characterization of *C. elegans* acid-sensing DEG/ENaCs and their role in rhythmic behavior **Eva Kaulich**

717C cGMP phototransduction pathway is involved in light avoidance behavior in the nematode *Pristionchus pacificus* **Nakayama Ken-ichi**

718A Mechanisms of context-dependent processing of odor valence in *C. elegans* **Munzareen Khan**

719B Identify the function of calcium-activated chloride channel Bestrophin in *C. elegans* **Jimin Kim**

720C Construction of the map of odorants and olfactory neurons in *C. elegans* **SeoYeong Kim**

721A Investigating the Genetic Interaction Between Ciliary *bbs-5* and *nphp-4* **Melissa LaBonty**

722B C. elegans-based chemosensation strategy for the early detection of cancer metabolites in urine samples **Enrico Lanza**

723C Comparison of taste preferences between two divergent nematode species **Vivian Vy Le**

724A *C. elegans* Can Learn To Associate a Temporally Precise Delivery of Paired Stimuli **Eugene Li Qun Lee**

725B The role of mitochondria calcium uniporter in C. elegans odor learning **Hee Kyung Lee**

726C Neuropeptides regulate a novel *C. elegans* oviposition behavior displayed in a three-dimensional environment **Tong Young Lee**

727A Stimulation of egg laying in *C. elegans* by *Salmonella* lipopolysaccharides (LPS) is dependent on a Gα protein expressed in chemosensory neurons **Angela Ching-Yee Leung**

728B Mechanism for the munchies: endocannabinoid modulation of food preferences in *C. elegans.* **Anastasia Levichev**

729C Is activation of ASER neurons sufficient to generate state dependent learning? **Jonathan Lindsay**

730A Constructing a tool box for imaging and stimulating pharyngeal neurons to understand foraging behavior in *C. elegans* **Jun Liu**

731B *C. elegans* chooses food exactly as if maximizing economic utility **Shawn Lockery**

732C High-throughput EPG recordings reveal the food exploitation-exploration trade-off **Shawn Lockery**

733A Male-specific Responses to State-dependent Hermaphrodite Signals Facilitate Mate Preference in *C. elegans* **Jintao Luo**

734B Cancellled/Unprogrammed

735C Food Deprivation Induces Behavioral Changes that Require Metabolic Reprogramming and Non-Canonical Insulin Signaling **Molly Matty**

736A Vitamin B12 regulates chemosensory receptor gene expression via the MEF2 transcription factor **Aja McDonagh**

737B C. elegans PEZO-1 is a Mechanosensitive Channel Involved in Food Sensation **Jonathan Millet**

738C Reversal behavior upon encountering a cliff involves mechanosensation **Robin Mitchell**

739A Study on molecular mechanisms of gait switching in *C. elegans* **Kyeong Min Moon**

740B Tyramine influences associative learning outcomes and is linked to a novel learning phenotype in a purine biosynthesis mutant **Corinna Moro**

741C Decision-making in *C. elegans: Neuronal mechanisms underlying behavioral choice* **Caroline Muirhead**

742A Electrophysiological properties of amphid sensory neurons in *C. elegans* **Takashi Murayama**

743B UNC-7/Innexin Regulates Transmission of Temperature Information during *C. elegans* Thermotaxis **Airi Nakayama**

744C Solute Carrier family 46 and aquarius intron-binding spliceosomal factor mediates temperature tolerance **Akane Ohta**

745A acute exposure to thallium acetate results in behavioral changes, activation of the stress response and accumulation of metals in the model *Caenorhabditis elegans* **Amanda Onduras**

746B Identification of Neuropeptides Accelerating Forgetting in *C. elegans* with A Reverse Genetic Approach **Yuuki Onishi**

747C Individual behavioral differences in *C. elegans* **Shiori Onoue**

748A Characterizing the Role of the Mechanosensitive Ion Channel TACAN in *C. elegans* Osmosensation **Hannah Owens**

749B Mechanosensory behaviors associated with host seeking and host infectivity in the skin-penetrating nematode *Strongyloides ratti* **Ruhi Patel**

750C Integration of neuronal connectivity, activity and synaptic plasticity drives sexually dimorphic learning in *C. elegans* **Sonu Peedikayil Kurien**

751A Investigating DNA damage during associative learning in the nematode C. elegans **Laura Persson**

752B Long-term behavioural imaging for characterizing the dauer exit decision **Friedrich Preusser**

753C Principles for coding associative memories in a compact neural network **Christian Pritz**

754A Exploring natural genetic variation influencing ethanol response behaviors. **Elizabeth Quamme**

755B Male Locomotor Responses to Ascaroside Sex Pheromones **Gregory Reilly**

756C Identifying the GPCRs involved in detecting valproic acid, an anticonvulsant and mood-stabilizing drug, by using *C. elegans* as a chemosensor **Lucero Rogel**

757A The conserved transcription factor *mef-2* regulates sickness induced sleep **Alex Rohacek**

758B Identifying genes that contribute to social defects in autism using wild-isolate *C. elegans* **Kaelin Rubenzer**

759C Identification of calcium/calmodulin-dependent protein kinase I (CMK-1) phospho-targets relevant for nociceptive plasticity in *C. elegans* **Martina Rudgalvyte**

760A Glucose impacts HSN morphology and induces an egg-laying defective phenotype dependent of the serotonin-signaling pathway **Manuel Ruiz**

761B Olfactory memory consolidation requires the TRPV channel OSM-9 in sensory neurons of the circuit. **Mashel Fatema Saifuddin**

762C Systematic Behavioral Screen of 21st Chromosome Gene Overexpression in *C. elegans* **Sophia Sanchez**

763A Transducing touch by a titin-related protein in the worm **Neus Sanfeliu-Cerdán**

764B Role of Insulin and Insulin-like pathway in Learning and Memory of *Caenorhabditis elegans* **Rasitha Santhosh Kanakalatha**

765C Discriminating between sleep and exercise-induced fatigue using computer vision and behavioral genetics **Kelsey Schuch**

766A Temperature-stressed *C. elegans* males prioritize food over mating resulting in sterility **Nicholas Sepulveda**

767B Defining the Gap Junction Circuit that Modulates Aversive Chemosensory Behavior in *Caenorhabditis elegans* **Savannah Sojka**

768C Therapeutic Ultrasound's Effects on the Developing Nervous System of *C. elegans* **Louise Steele**

769A Behavior of *C. elegans* on lifespan-promoting bacterial diets **Nicole Stuhr**

770B *C. elegans* regulates its behavior via serotonergic signaling to find food and hydrogen peroxide protection. **Stephanie Stumbur**

771C Rpamide neuropeptides NLP-22 and NLP-23 mediate egg-laying quiescence during stress induced sleep **Sanjita Subramanian**

772A Sperm regulates behavioral states in hermaphrodites **Satoshi Suo**

773B *Neuronal SKN-1B Modulates Nutritional Signalling Pathways and Mitochondrial Networks to Control Satiety* **Nikolaos Tataridas-Pallas**

774C Analysis of AIA interneuron in forgetting of olfactory memory in *Caenorhabditis elegans* **Jamine Teo**

775A Decoding temperature-dependent behavioral states in *C. elegans* **Saurabh Thapliyal**

776B Neuronal transcription elongation factor TCEB-3 positively regulates cold tolerance in C elegans **Hiroaki Teranishi**

777C GRK-2 signaling in sensory neurons regulates the ability of *C. elegans* to travel long distances **Irini Topalidou**

778A Investigating the overlap between on-food exploration behavior and off-food behavioral responses to alcohol **Andrew Davies**

779B Expressing human epithelial Na channel subunits in *C. elegans* to model human salt taste **Laura van Vuuren**

780C CAMTA tunes neural excitability and behavior my modulating Calmodulin expression **Thanh Thi Kim Vuong-Brender**

781A The *C. elegans* Shugoshin (SGO-1) is a cilia resident protein that interacts with TAC-1/TACC **Brandon Waddell**

782B Glial mediators of K⁺ and Cl⁻ transport shape *C. elegans* olfaction and taste **Lei Wang**

783C Untying the Gordian Knot: unravelling spatiotemporal activity in the *C. elegans* neuropeptide-receptor network **Jan Watteyne**

784A Explore novel functions of anti-microbial neuropeptides **Xinyi YANG**

785B Natural variation in *C. elegans* thermosensory behaviors **Jihye Yeon**

786C Regulation of feeding-induced sleep by neuropeptide signaling in *C. elegans* **Young-Jai You**

787A Charactering the roles of neuropeptides in non-associative learning **Alex Yu**

788B Genetic Analyses Reveal Redundant Negative Regulators of *Caenorhabditis elegans* Starvation-Odor Associative Learning **Joyce Yue Zhu**

789C A role for L1CAM/SAX-7 in fluid regulation and vulva development **Caroline Aragon**

790A Multicellular rosettes organize neuropil formation **Christopher Brittin**

791B Forkhead transcription factor FKH-8 is a master regulator of sensory cilia **Rebeca Brocal-Ruiz**

792C A *C. elegans* model for human PACS1 syndrome **Dana Byrd**

793A Novel neurodevelopmental genes in *C. elegans* **Victoria Cerdeira**

794B A novel function for the kinetochore machinery in neural circuit assembly **Dhanya Cheerambathur**

795C DYF-4 regulates patched-related/DAF-6-mediated sensory compartment formation **HuiCheng Chen**

796A The conserved transcription factor UNC-30/PITX1-3 coordinates synaptogenesis with cell identity in *C. elegans* GABA motor neurons. **Edgar Correa**

797B Ubiquitin ligase activity inhibits CDK-5 to promote axon termination **Muriel Desbois**

798C Kinesin-13 mediated regulation of dendritic branch remodeling during the development of PVD neuron **Swagata Dey**

799A Intraspecific evolution of QR.pax final position in *Caenorhabditis elegans* **Clément Dubois**

800B The *C. elegans* Hox gene *ceh-13/labial/Hox1* controls motor neuron terminal identity **Weidong Feng**

801C *ccd-5,* a novel *cdk-5* binding partner, regulates *C. elegans* ventral nerve cord pioneer axon guidance **Abigail Feresten**

802A Membrane-anchored UNC-6/Netrin reveals roles of both close- and long-range interactions in regulating VD growth cone dorsal outgrowth **Kelsey Ferguson**

803B Visualization of Synaptic Remodeling **Leah Flautt**

804C SYG-2/nephrin mediates incorporation of new synapses into preexisting circuits **Elisa Frankel**

805A Neurexin clustering at synapses is mediated by active zone scaffold intrinsically disordered domains **Elisa Frankel**

806B A sex-specific switch in glial gene expression is controlled by a cell-autonomous program involving MAB-3 and NFYA-1 **Wendy Fung**

807C HLH-3 is required for the terminal differentiation of AIM interneurons in adult males **Kimberly Goodwin**

808A Decoding pharyngeal neuron fate specification **Burcu Gulez**

809B UNC- 70 (Spectrin) acts cell autonomously and non-autonomously to maintain the neuronal microtubule cytoskeleton **Martin Harterink**

810C PTRN-1 (CAMSAP) and NOCA-2 (NINEIN) redundantly mediate MTOC localization and microtubule polarity in dendrites **Liu He**

811A Gene regulatory networks underlying cell fate specification of a *C. elegans* sensory/inter/motor neuron-type **Woojung Heo**

812B Elucidating the role of NHR-25 in shaping and maintaining neuron structure **Yael Iosilevskii**

813C Coordination of neuronal activity and transcriptional programs in motor circuit remodeling **Eugene Jin**

814A It takes two: Hox proteins cooperate to specify midbody fates in male CP neurons **Andrea Kalis**

815B Neurodevelopmental toxicity assessment after pesticides exposure using *C. elegans* **Kyung Won Kim**

816C LRON-11 functions in axon guidance within the ventral nerve cord of *C. elegans* **Nikolas Kokan**

817A A noncanonical role for Hox in the *C. elegans* ventral nerve cord **Paschalis Kratsios**

818B Sustained expression of *unc-4/Hox* and *unc-37/Groucho* in postmitotic neurons specifies the spatial organization of the cholinergic synapses in *C. elegans* **Mizuki Kurashina**

819C Molecular mechanisms regulating organization of sensory neuron cilia **Hannah Lawson**

820A EOR-1/PLZF and EOR-2 Inhibit Expression of the RIM or RIC Neuronal Cell Fates **Dongyeop Lee**

821B Microtubule dynamics regulates gap junction trafficking and placement in the motor circuit **Grace Lee**

822C CUT class homeobox genes redundantly control panneuronal identity features in *C. elegans* **Eduardo Leyva Diaz**

823A Characterizing the nervous system of the nematode *Pristionchus pacificus* - similarities and differences with *C. elegans* **Curtis Loer**

824B Investigating the effects of altered gravity on dendritic structures during development in *C. elegans* **Je-Hyun Moon**

825C Inositol pentakisphosphate kinase-1 (IPPK-1) is involved in ventral nerve cord assembly in *C. elegans* **Nathaniel Noblett**

826A The PBAF chromatin remodeling complex is required for cholinergic motor neuron subtype identity **Anthony Osuma**

827B DIP-2 and SAX-2 play synergistic roles to maintain *C. elegans* neuronal morphology **Seungmee Park**

828C Specific N-glycans fine-tune somatosensory dendrite patterning **Maisha Rahman**

829A Specificity in Glia-Neuron Interactions **Sneha Ray**

830B *unc-44* (Ankyrin) is required for axon stability in *C. elegans* **Matthew Rich**

831C Systematic analysis of CAMs expressed in ray neurons in *C. elegans.* **Naoko Sakai**

832A A Rab-like GTPase Restricts Dendritic Branching **Christopher Salazar**

833B Forward Genetic screening to identify novel regulators of neuronal Microtubule cytoskeleton **Sunanda Sharma**

834C A secondary structural motif in the *kpc-1* 3'UTR promotes dendritic transport of transcripts and local translation to regulate dendrite branching and self-avoidance of a nociceptive neuron **Mushaine Shih**

835A The development and functions of GLR glia. **Nikolaos Stefanakis**

836B A negative feedback mechanism regulates DLK-1 signaling in ciliated sensory neurons **Yue Sun**

837C Molecular topology of an entire nervous system **Seth Taylor**

838A Genetic analysis of dendritic tiling and field size **Meera Trivedi**

839B Molecular Mechanism of Coordinating Cilia Intersection and Elongation **Merve Turan**

840C A homeodomain transcription factor required to specify all pharyngeal neurons **Berta Vidal Iglesias**

841A Cancellled/Unprogrammed

842B Coordinated regulation of synaptic genes during development: a tale of a transcription factor and an mRNA export complex **Callista Yee**

843C β-tubulin BEN-1 has a key role in regulating DLK-1 signal transduction **Junxiang Zhou**

844A A combination of artificial intelligence and *C. elegans* in identifying neuronal mitophagy inducers **Ruixue Ai**

845B Interactome analysis of *C. elegans* synapses by TurboID-based proximity labeling **Murat Artan**

846C Exercise using an Acoustic Gym can rescue neuronal loss in worms **Joyita Bhadra**

847A Deep learning tools for *C. elegans* whole-brain imaging **Shivesh Chaudhary**

848B Chemical *in vivo* activation of *C. elegans* neurons using a histamine-gated cation channel **Jeremy Florman**

849C The Role of Alzheimer's disease relevant Tau modifications in Neurodegeneration and Mitochondrial dysfunction **Sanjib Guha**

850A A deep learning approach to calcium imaging analysis **Aurelie Guisnet**

851B Optogenetic tools for manipulation of cyclic nucleotides, functionally coupled to CNG-channels **Thilo Henss**

852C Simultaneous measurements of membrane voltage and intracellular Ca^{2+} of AWA neurons by a gene encoded voltage indicator and GCaMP. **Takeshi Ishihara**

853A Chemical profiling of *C. elegans* single neurons using matrix-assisted laser desorption/ionization mass spectrometry (MALDI-MS) **Tian (Autumn) Qiu**

854B pOpsicle: An all-optical reporter system for synaptic vesicle recycling using pH-sensitive fluorescent proteins **Marius Seidenthal**

855C Quantitative peptidomics in *C. elegans* via targeted mass spectrometry of neuropeptides **Sven Van Bael**

856A Introducing optoSynC – a novel optogenetic tool for synaptic silencing **Dennis Vettkötter**

857B 3DeeCellTracker, a deep learning-based pipeline for segmenting and tracking cells in 3D time lapse images **Chentao Wen**

858C Fast deep learning correspondence for neuron tracking and identification in *C. elegans* using semi-synthetic training **Xinwei Yu**

859A In vivo modeling of tau polymerization using *Caenorhabditis elegans* **Wendy Aquino Nunez**

860B An aggresome-like collection mechanism functions in neuronal expulsion of disease-aggregates **Meghan Arnold**

861C C. elegans precision AD models confirm transcriptional disruption of autophagy by APOE4 but not APOE3, and help to characterize E4-specific drugs **Haarika Ayyadevara**

862A Identifying *C. elegans* genes that suppress neurodegeneration induced by an expanded GGGGCC repeat **Mathieu Bartoletti**

863B Enhanced functional restoration through axon regeneration by swimming exercise **Sibaram Behera**

864C The role of the extracellular matrix in maintaining neuronal architecture against increased mechanical stress **Marie Biard**

865A Neuro-epidermal adhesions protect hyper-fragile axons from mechanical strain **Igor Bonacossa-Pereira**

866B Exploring neuron death in a *C. elegans* model of Alzheimer's disease **Lotti Brose**

867C Effect of Base Excision Repair, Ung-1 Deletion, on Tau Pathology in *C. elegans* **Elisabeth Buvarp**

868A Relation between endogenous TAU levels and neurodegeneration in *C. elegans* **Eric Andrew Cardona**

869B Age-related neuronal changes, lifespan pathways and maintenance of neuronal architecture **Yann Chabi**

870C Effects of Purple Pitanga extract in *C.elegans* transgenic strains for Alzheimer´s disease **Flávia Suelen de Oliveira Pereira**

871A Expression of *trx-1* correlates with intrinsic regenerative capacity **Noa Grooms**

872B Modifiers of TDP-43 Toxicity **Lale Gungordu**

873C The Effects of Cytokine Proteins on the Notch1 Signaling Pathway of Neurogenesis in *Caenorhabditis elegans*. **Amy Hebert**

874A A novel pathway links Microbiota-induced neuroprotection to the innate immune response in *C. elegans* models of Alzheimer's Disease **YUWEI JIANG**

875B Tissue inhibitor of metalloproteinase regulates extracellular beta-amyloid accumulation **Elisabeth Jongsma**

876C Tauopathy Impairs Axon Injury-Induced Autophagic Activity in *C. elegans* **SUHYUK KO**

877A Loss of *aly* genes suppresses toxicity in transgenic *Caenorhabditis elegans* models of tau or TDP-43 **Rebecca Kow**

878B UNC-16 inhibits actin and microtubule dynamics to regulate rate of regrowth and functional regeneration in *C. elegans* neurons. **Sucheta Kulkarni**

879C *hnRNPQ/hrp-2* role in splicing and neurodegeneration. **Federica La Rocca**

880A TDP-43 promotes pathological tau phosphorylation and neurotoxicity in *C. elegans* **Caitlin Latimer**

881B The Effect of Cytochrome P450 Metabolites of Dietary Polyunsaturated Fatty Acids on Age-Associated Neurodegeneration. **Kin Sing Stephen Lee**

882C RNAi screening of a phosphatase library identifies new modifiers of TDP-43 in a *C. elegans* model of ALS and FTLD-TDP **Nicole Liachko**

883A Elucidating Alzheimer's Disease related interactions between amyloid β and the pathogen *P. gingivalis* in the model organism *C. elegans* **James Lichty**

884B Impact of microbiota on neurodegeneration in *C. elegans* models of tauopathy **Hiva Mesbahi**

885C Refining Sugar: A neuroprotective role for high sugar diets despite lifespan and reproductive losses **Katherine Morton**

886A Uncovering a mechanism behind microbiota-induced neuroprotection in *C. elegans* models of Alzheimer's disease **Kim Pho**

887B Modeling a neuropathy-associated *GARS* mutation in *C. elegans* **Jennifer Pierluissi**

888C Investigating the role of ubh-1 in maintaining dopamine neuron health **Jamarcus Robertson**

889A Trehalose-Vitamin E Nanoparticles attenuate motility impairment and reduced longevity in a *Caenorhabditis elegans* Amyotrophic Lateral Sclerosis model **Alisson Rodrigues**

890B An Environmental Contributor of Neurodegeneration impacts lifespan through disruptions in AMPK Signaling in *C. elegans* **Jennifer Thies**

891C Dynamics of nicotine-induced neuroprotection and the ACR-20 receptor **Millet Treinin**

892A Downstream effectors of the synergic activation of AMPK by metformin and salicylate to reduce polyQ aggregation **Cristina Trujillo del Rio**

893B Reverse genetic screen of Parkinson's disease-susceptibility genes identifies novel modulators of alpha-synuclein neurotoxicity in *C. elegans* **Roman Vozdek**

894C The mitochondrial unfolded protein stress response is impacted by alpha-synuclein **Corey Willicott**

895A A Genetic Screen for Identification of UPRmt Effectors Associated with *a-synuclein* Neuroprotection in *C. elegans* **Karolina Willicott**

896B Investigating non-apoptotic roles for *egl-1* **Zheng Wu**

897C Identification of Metabolic Pathways Involved in Neuronal Regeneration **Dilip Kumar Yadav**

898A Suppressors of stress-induced glutamatergic neuron degeneration in *sod-1G85R* ALS model **Katherine Yanagi**

899B Rescuing the Paralysed Phenotype of *unc-18 e81* Mutant *C. elegans* **Khoula Afzal**

900C Specific (co-)transmission of two neuropeptide species from the AVK interneuron **Ichiro Aoki**

901A Eukaryotic initiation factor EIF-3.G augments mRNA translation efficiency to regulate neuronal activity **Stephen Blazie**

902B Encoding principles of a compact sensory system **Eduard Bokman**

903C Neural mechanisms underlying temperature-driven host seeking by a human-parasitic nematode **Astra Bryant**

904A How NLP-3 neuropeptides work with serotonin to activate the *C. elegans* egg-laying circuit **Allison Butt**

905B The *C.elegans* AWC^{ON} olfactory neuron responds to tangential component of mechanical stimuli and its activation is mediated by TAX-4 cGMP-gated cation channel **Davide Caprini**

906C Imaging neuronal dynamics during recovery from anesthesia in *C. elegans* **Andrew Chang**

907A Opponent vesicular transporters regulate the strength of glutamatergic neurotransmission in a *C. elegans* sensory circuit **Jung-Hwan Choi**

908B Multiple GPCRs function in the head mesodermal cell to rhythmically activate it during a rhythmic behavior in *C. elegans*. **Ukjin Choi**

909C Circuit and Molecular Mechanisms of an Associative Learning Task **Susana Colinas Fischer**

910A Wnt signaling regulates a post transcriptional mechanism for synaptic choice **Becca Collings**

911B A Comprehensive Characterisation of *C. elegans* Neurotransmitter GPCRs Reveals a Novel Adenosine Receptor **Amy Courtney**

912C Developmental sleep disruption induces neuronal plasticity mediated by conserved autism-associated synaptic adhesion molecules **Mara Cowen**

913A Neuromodulation and the relationship between Ca^{2+} transients and neuronal states **Arunima Debnath**

914B Gα_q acts via DAG signaling to modulate serotonin motor circuit activity in *C. elegans* **Pravat Dhakal**

915C Whole-brain imaging with neuronal identities to elucidate the mechanism of a sensory processing **Yuto Endo**

916A The regulation of olfactory circuit by EGL-4/PKG **Manabi Fujiwara**

917B The role of network topology in the performance of the circuit for nociceptive behaviors in *C. elegans* **Gal Goldman**

918C Visualising neuropeptide spatial range of action within the nervous system. **Evie Goss-Sampson**

919A Glial KQT-2 K+ channels are needed for aversive response to octanol **Bianca Graziano**

920B Expansion of Cholinergic Signalling Reveals Polymodal and Novel Ligand Gated Ion Channels Involved in Switching Behavioural States **Iris Hardege**

921C Identifying Triggers for Pathogen Learning in *C. elegans* **Audrey Harnagel**

922A Molecular Encoding and Synaptic Decoding of Memory of Chemical Concentration in C. elegans **Shingo Hiroki**

923B A Dual Role for LAR/PTP-3 in Regulating Long-distance AMPAR Transport and Synaptic Retention Essential for Long Term Associative Memory **Frederic Hoerndli**

924C Contribution of a *FOXD3/4* ortholog to optimization of avoidance behavior mediated by pre- and postsynaptic gene expression for a biphasic calcium response **Sayaka HORI**

925A A neuropeptide-controlled circuit controls rhythmic anterior body wall muscle contraction **Mingxi Hu**

926B Learning-dependent gain control by asymmetric modulation of the first- and second-order time-differential of stimulus in sensory neurons **Yosuke Ikejiri**

927C Mitochondrial hydrogen peroxide in interneurons induces neuropeptide secretion to regulate the intestinal antioxidant response **QI JIA**

928A Connectomic comparison of *P. pacificus* and *C. elegans* anterior nervous system structure **Cristine Kalinski**

929B FSHR-1 regulates cholinergic synaptic vesicle and active zone protein localization to control neuromuscular signaling balance in *C. elegans* **Jennifer Kowalski**

930C Understanding the development, plasticity, and function of synaptic asymmetry in *C. elegans* **Garrett Lee**

931A An adaptive-threshold mechanism for odor sensation and animal navigation **Sagi Levy**

932B UNC-10 (RIM) and RIMB-1 (RIM-binding protein) localize synaptic UNC-2 (Ca$_v$2) channels in a differential manner to regulate transmission in cholinergic and GABAergic motor neuron circuits **Jana Liewald**

933C Biochemical characterization of UNC-47 in *Xenopus* oocytes **Angélique Lubin**

934A Expression of mutant human tau protein drives synaptic loss in *Caenorhabditis elegans* **Molly Massengale**

935B Investigating the connection between the DAF-7/TGF-beta signaling pathway and the dense core vesicle protein IDA-1 **Annette McGehee**

936C Mechanosensory feedback initiates egg-laying circuit activity and behavior of *C. elegans* **Emmanuel Medrano**

937A A central role of AVA in regulating overall motor states activity **Jun Meng**

938B Whole Brain Calcium Dynamics During Aversive Memory Recall **Julia Miller**

939C PDF-1 modulation of aversion and reward during associative learning **Laura Molina-Garcia**

940A LGC-50 - a new serotonin receptor involved in aversive olfactory learning that displays regulated plasma membrane trafficking **Julia Morud**

941B Neurogenetics of modulatory cholinergic signaling in C. elegans interneurons **Marie-Helene Ouellette**

942C Whole-body neural circuit influences experience-dependent temperature acclimation **Haruka Motomura**

943A Quantitative prediction of neuromodulator-programmed behaviors **Navin Pokala**

944B Functional photon-based neurotransmission in a nociceptive avoidance circuit **Montserrat Porta de la Riva**

945C Newly-discovered neural branches may release the excitatory signal potentiated by serotonin to activate the *C. elegans* egg-laying circuit **Shavanie Prashad**

946A Dopaminergic neurons are critical for encoding and retrieval of adaptive memory in *Caenorhabditis elegans* **Vishnu Raj**

947B Nonequilibrium response functions for functional connectivity in the brain **Francesco Randi**

948C Role of Connectome in Concentration-dependent Odor Adaptation in *Caenorhabditis elegans* **Swathy S Nair**

949A Developing a single-synapse functional imaging assay in *C. elegans* **Marcos Schaan Profes**

950B Sexually dimorphic neuronal circuitry drives distinct mechanosensory responses **Hagar Setty**

951C Synapsin is required for dense core vesicle capture and cAMP-dependent neuropeptide release **Jiajie Shao**

952A Investigating the role of complexin-1 function in dopamine signaling **Cassandra Smith**

953B CYLD-1, a lysine 63 deubiquitinase, regulates synaptic transmission and preserves neuronal homeostasis during ageing **Angeliki Sotiriou**

954C A PP1 holoenzyme regulates synaptic neurotransmission **Katerina Stratigi**

955A Redefining the GABAergic neuron **Charlotte Tissot**

956B Monoaminergic molecular pathways in modulating memory and behaviour **Amal Varghese**

957C Comparison of electrophysiological and motility assays to study drug effects in *C. elegans* **Janis Weeks**

958A Understanding how neuroendocrine cells are mechanically activated in *C. elegans* **Lijie Yan**

959B A gut neuroendocrine signal regulates synaptic assembly in the brain **Shi Yanjun**

960C Systematic screening of autism-associated genes for roles in GABAergic neuronal morphologic plasticity **Kristi Zoga**

961A Novel patient-derived mutation in the presynaptic calcium channel UNC-2 reduces synaptic expression yet increases presynaptic release **Maximiliano Zuluaga-Forero**

Physiology

962B *Pseudognaphalium obtusifolium* Extract Improves Lifespan and Thermotolerance in *C. elegans* **Courtney Alexander**

963C Investigating the basis of severe stress resistance in ageing **Irtiqa Ali**

964A Role of the conserved cholinesterase family member CEST-1.1 and its modular metabolite products in life span control **Parker Allen**

965B The impact of calorie restriction mimetics on cellular phenotypes triggered by an Alzheimer disease-related presenilin-1 protein splice variant in *Caenorhabditis elegans* **Carla Almendáriz-Palacios**

966C Protective roles of imidazolium salts in *C. elegans* models of stress and neurodegeneration **Natalia Andersen**

967A The role of FGF signaling in C. elegans' aging **Jessica Antonio**

968B Role of the RNA binding protein, NCL-1, on ribosome biogenesis and stress response **David Aristizabal-Corrales**

969C Ubiquitin-Dependent Dimer-Monomer Switch Defines Substrate Specificity and Processivity of the E3 Ligase CHIP **Vishnu Balaji**

970A All trans retinoic acid extends *C. elegans* lifespan in an *aak-2* and *hsf-1* dependent manner by modulating metabolism. **Stephen Banse**

971B Characterization of downstream steps in the Intracellular Pathogen Response-mediated thermotolerance in *C. elegans* **Mario Bardan Sarmiento**

972C CBP-1/p300 acetyltransferase regulates the heat shock response in *C. elegans* **Lindsey Barrett**

973A Exploring muscarinic regulation of oxidative homeostasis during neuromuscular transmission **Kasturi Biswas**

974B Mitochondrial fusion and fission balance is required for exercise-induced benefits in *Caenorhabditis elegans* **Juliane Campos**

975C AGE-1/PI3K Signaling-Independent Effects of DAF-18/PTEN on Starvation Resistance During L1 Arrest in *Caenorhabditis elegans* **Jingxian Chen**

976A A novel proteostasis adaptation in the long-lived *Caenorhabditis elegans rpn-10* proteasome subunit mutant **Meghna Chinchankar**

977B Age-dependent changes in *C. elegans* gut microbiome composition and their consequences **Rebecca Choi**

978C Genetic regulators of stress-induced RNA mis-splicing in *Caenorhabditis elegans* **Samantha Chomyshen**

979A UNC-45 has a crucial role in preventing sarcopenia in *C. elegans* **Courtney Christian**

980B Material states of protein cargo in neuronal exophers **Edward Chuang**

981C Putative role of *Caenorhabditis elegans huntingtin* in stress response **Christine Chung**

982A Balancing aging, proteostasis and nervous system function: differential effects of multiple lifespan-extending genetic manipulations in MJD/SCA3. **Marta Daniela Araujo Costa**

983B Cancellled/Unprogrammed

984C Local regulation of mRNA fate governs mitochondrial biogenesis during ageing in *C. elegans* **Ioanna Daskalaki**

985A Persistent DNA repair complex binding in the absence of DNA damage excision impairs neuron functionality **Carlota Davo Martinez**

986B Heterochromatin protein 1 regulates longevity and the mitochondrial unfolded protein response **Patricia De La Cruz Ruiz**

987C Prohibitin depletion extends lifespan of a TORC2/SGK-1 mutant through autophagy and the mitochondrial UPR **Patricia De La Cruz Ruiz**

988A Stress discrimination by body-wide, stochastic DAF-16/FoxO nuclear translocation pulses **Burak Demirbas**

989B Nuclear Hormone Receptor NHR-49 controls a HIF-1-independent hypoxia adaptation pathway in *Caenorhabditis elegans* **Kelsie Doering**

990C Effect of individual members of gut microbiome on *C. elegans* stress resistance, lifespan and healthspan **Hunter Edwards**

991A Tissue-Specific Roles of microRNA Argonaute Proteins in Aging **Corrina Elder**

992B Insulin-like signaling and starvation resistance via *daf-16/FoxO*-dependent and independent gene regulatory pathways **Kinsey Fisher**

993C 14-3-3 and its interacting proteins in aging and neurodegeneration **Akshatha Ganne**

994A Rationing yolk affects offspring quality, not quantity, in *C. elegans* **Ellen Geens**

995B Three programmatic mechanisms of aging in *C. elegans* **David Gems**

996C Uncovering protective mechanisms of the probiotic *Bacillus subtilis* against α-synuclein aggregation **Maria Goya**

997A Cancellled/Unprogrammed

998B Cryptic transcription and deregulation of alternative 3' splice site selection are associated with physiological aging in *C. elegans* **Seokjin Ham**

999C Homolog of ELAC2 is responsive to mitochondrial stress and activates the mitochondrial unfolded protein response **James Held**

1000A LEA motifs promote desiccation tolerance *in vivo* **Jon Hibshman**

1001B Identifying the mechanisms of NLP-14/Orcokinin signaling during sleep. **Madison Honer**

1002C Crosstalk between HSR and mTOR regulates hibernation and longevity **Makoto Horikawa**

1003A Are levels of autophagy increased or decreased in *daf-2* insulin/IGF-1 mutants? **Kuei Ching Hsiung**

1004B Quantitative Analysis of DAF-16 Lifelong Spatiotemporal Activity under Dietary Restriction as a Predictor of *C. elegans* lifespan **Javier Huayta**

1005C Defining a functional role for splicing factors in modulating longevity in *C. elegans* **Noel Jackson**

1006A Tubular lysosome induction links starvation to animal longevity **Alyssa Johnson**

1007B *pqm-1/SALL2* promotes oncogenic eicosanoid metabolism following early-life starvation **jim jordan**

1008C A Golgi protein MON-2/MON2 mediates longevity via upregulating autophagy **Yoonji Jung**

1009A Antagonistic pleiotropy in the function of stress-activated kinase KGB-1 is mediated by *mir-71* **Siavash Karimzadegan**

1010B Adult longevity of late-generation Piwi/*prg-1* mutants **Sophia Kennedy**

1011C Disrupting Polyunsaturated Fatty Acid Biosynthesis Modulates Lifespan and Healthspan **Benjamin Kessler**

1012A Air pollution triggers protein misfolding in C. elegans **Elise Kikis**

1013B Spaceflight effects on muscle size in *C. elegans* **BanSeok Kim**

1014C ALGN-2, asparagine-linked glycosylation protein, is critical for longevity conferred by enhanced nonsense-mediated mRNA decay **Eun Ji Kim**

1015A An Alzheimer disease-related phenotype in *C. elegans* is exacerbated by serotonin uptake inhibitor antidepressants **Kaeli Knudsen**

1016B Cold survival driven by ferritin-mediated iron regulation **Alicja Komur**

1017C Understanding the Molecular Basis of Aging of Sensory Neurons in *C. elegans* **Ahsen Konac**

1018A Allele-specific effects of mitochondrial dysfunction: A *C. elegans* model of Multiple Mitochondrial Dysfunctions Syndrome 1 **Peter Kropp**

1019B Nucleolar size is modulated by autophagy protein LGG-1/GABARAP **Anita Kumar**

1020C Dietary vitamin B$_{12}$ impacts amyloid-β proteotoxicity by alleviating oxidative stress and mitochondrial dysfunction **Andy Lam**

1021A Regulation of the hypertonic stress response by the 3' mRNA cleavage and polyadenylation complex **Todd Lamitina**

1022B Role of Stress Granules in Stress Responses and Ageing **Jiaqing Lang**

1023C Tissue-specific DNA repair activity of ERCC-1/XPF-1 **Hannes Lans**

1024A NGLY1 deficiency suppressors reveal connections between nucleotide metabolism, the proteasome, and longevity. **Nicolas Lehrbach**

1025B Increased DNA content in the *C. elegans* intestine promotes body size and lifespan **Alex Lessenger**

1026C Food additives target the gut-neural axis: Impaired peptide trafficking and amyloid protein aggregation lead to premature aging phenotypes **Annette Limke**

1027A *De novo* serine biosynthesis couples mitochondria to longevity **Eirini Lionaki**

1028B Meiotic mutations impact lifespan and healthspan in *C. elegans* **Julia Loose**

1029C A *C. elegans* model to study the molecular pathogenesis of Cockayne Syndrome progeria **Amanda Lopes**

1030A A super-long lived mutant and a multi-omics discovery platform for new regulators of lifespan. **Andreas Ludewig**

1031B Axin-Mediated Regulation of Lifespan and Muscle Health in *C. elegans* Requires AMPK-FOXO Signaling **Avijit Mallick**

1032C Neuroprotective effects of rutin on ASH neurons in *Caenorhabditis elegans* model of Huntington's disease **Larissa Marafiga Cordeiro**

1033A MicroRNA cluster 229-66 promotes longevity through interaction with SKN-1 and DAF-16 in *C. elegans* **Latika Matai**

1034B High Throughput Exopher Whole Genome RNAi Screening with Machine Vision and Machine Learning Approaches **Ilija Melentijevic**

1035C Role of Coelomocytes and Immunity in Axenic Dietary Restriction **Lucas Mergan**

1036A Lipid droplets modulate lifespan and selective autophagy receptor p62/SQST-1 dynamics **Joslyn Mills**

1037B A High-Glucose Diet Reduces Male Fertility and Sperm Quality in *C. elegans* **Michelle Mondoux**

1038C GLA-3/TTP plays an important role in the germline stress response of *Caenorhabditis elegans* **Enrique Morales-Oliva**

1039A KLF Transcription Factors Regulate SKN-1 Activity in *C. elegans* **Natalie Moroz**

1040B The transcriptional signature of long vs. short life is distinct from that of chronological age **Matthew Mosley**

1041C Glucose-induced developmental delay is modulated by insulin signaling in *C. elegans* **Saifun Nahar**

1042A Modulation of small RNA pathways suppresses innate immunity **Nikki Naim**

1043B *Lactobacilli* in a clade prevent age-dependent decline of thermotaxis behavior in *Caenorhabditis elegans* **Kentaro Noma**

1044C H3K4me3 modifiers regulate amyloid toxicity in *C. elegans* **Bryndon Oleson**

1045A Metformin Treatment of Diverse *Caenorhabditis* Species Reveals the Importance of Genetic Background in Longevity and Healthspan Extension Outcomes **Brian Onken**

1046B Dietary restriction promotes healthspan via a glucagon-like signaling pathway in *C. elegans* **Brian Onken**

1047C Compensation and Epistasis in the role of RNA polymerase II in *C.elegans* aging **Natasha Oswal**

1048A Olfaction regulates organismal proteostasis and longevity via microRNA-dependent signalling **Franziska Ottens**

1049B Recovery from Heat Shock Requires the miRNA Pathway in *Caenorhabditis elegans* **Delaney Pagliuso**

1050C Regulation of temperature-induced longevity response by neuronal GPCR NPR-8 in *Caenorhabditis elegans* **Sankara Palani**

1051A Mitochondrial defects manifest an early pathogenic event undermining organismal fitness in a Tauopathy model **Konstantinos Palikaras**

1052B Diacetyl odor shortens food deprivation-induced longevity via downregulating DAF-16 **Sangsoon Park**

1053C Sulfated steroid hormones regulate longevity and aging-related diseases **Mercedes M. Perez-Jimenez**

1054A RNA splicing regulation of lipid metabolism and longevity. **Maria C Perez-Matos**

1055B Sex affects responses to environmental stress in *C. elegans* **Juan Piloto**

1056C RBBP-5 regulated methylation at Histone 3 Lysine 4 promotes longevity in *C. elegans* **Gino Poulin**

1057A Elucidating Valine's pro-survival role during infection via the mitochondrial UPRmt **Mohammed Adnan Qureshi**

1058B A microfluidics-based chemical screening platform for lifespan and healthspan extension in *Caenorhabditis elegans* **Md Mizanur Rahman**

1059C Whole-animal *in vivo* screening for small molecule inhibitors of the mitochondrial UPR **Mustafi Raisa Amin**

1060A Identification of common lifespan-modulating genes through genomic comparison of diverse long-lived genetic mutants **Paige Rudich**

1061B Investigation of the transcriptional response to starvation at the tissue level **Brendil Sabatino**

1062C Soluble Epoxide Hydrolase Inhibitor, AUDA, Recuses Neurodegeneration Induced by Amyloid β and Tau **Morteza sarparast**

1063A The PCP molecule Flamingo regulates body size and lifespan by controlling collagen content in *C. elegans* **Johanna Lena Schön**

1064B Investigating the role of *miro-1* in neurodegeneration using a *C. elegans* Alzheimer's disease model **Mano Senthil**

1065C The AFD temperature sensing neurons adjust *C. elegans* defenses to match the temperature-dependent threat of hydrogen peroxide produced by bacterial pathogens **Francesco Servello**

1066A The heat shock transcription factor HSF-1 protects *Caenorhabditis elegans* from peroxide stress **Francesco Servello**

1067B Collagen gene variants, endoplasmic reticulum homeostasis, and aging **Hung-jen Shih**

1068C Protective effects of caffeine intake on intestinal aging by regulating yolk protein production and autophagy-dependent intestinal atrophy in aged *C. elegans* **Yhong-Hee Shim**

1069A Neuropeptide modulation of insulin signaling in bacteria-dependent survival **Deniz Sifoglu**

1070B toluene-induced bioenergetics changes generate early aging and decreased healthspan in c*aenorhabditis elegans* **Marcell Soares**

1071C HSP90 and HSF-1 regulate lipolysis in *C. elegans* **Milán Somogyvári**

1072A Genetic basis of enhanced stress resistance in long-lived mutants **Sonja Soo**

1073B Relating Behavioral Ageing and Lifespan with the Lifespan Machine v2 **Nicholas Stroustrup**

1074C Protective and reparative effect of dragon fruit upon central nervous system toxicity induced by copper **Wagner Antoino Tamagno**

1075A An autophagy activator extends healthspan and lifespan in *C. elegans* **Ee Phie Tan**

1076B Investigating the effect of stress response pathways on *C. elegans* electrotaxis behaviour **Shane Kevin Taylor**

1077C *C. elegans* TFIIH subunit GTF-2H5/TTDA is a non-essential transcription factor indispensable for DNA repair **Karen Thijssen**

1078A Perturbation of endosomal trafficking by *tbc-2* mutation decreases stress resistance and lifespan by altering nuclear localization of DAF-16 **Annika Traa**

1079B SKN-1 activity in ASI orchestrates cell non-autonomous stress resistance in peripheral tissues **Christian Turner**

1080C Somatic Regulators of the Non-Cell-Autonomous CEP-1/p53-Mediated DNA Damage Response in Primordial Germ Cells **Simon Uszkoreit**

1081A Identification and characterization of DNA repair complexes by proteomics in *C. elegans* **Melanie van der Woude**

1082B Mild impairment of mitochondrial function increases longevity and pathogen resistance through ATFS-1-driven activation of p38-regulated innate immunity **Jeremy Van Raamsdonk**

1083C Mitochondrial unfolded protein response transcription factor ATFS-1 increases resistance to exogenous stressors through upregulation of multiple stress response pathways **Jeremy Van Raamsdonk**

1084A The microbiome-muscle connection: Native microbiota affect muscle ageing and motility **Mireya Vazquez-Prada**

1085B Tyramine modulates the systemic stress response by stimulating the release of intestinal insulin like-peptides (ILPs) **Tania Veuthey**

1086C Host-microbiome interactions with age on *Caenorhabditis elegans* reproduction **Daniela Vidal**

1087A Conserved roles for *alh-6/ALDH4A1* in muscle function over the lifespan **Osvaldo Villa**

1088B Isocitrate lyase protects *Caenorhabditis elegans* from mitochondrial superoxide stress through activation of the mitochondrial unfolded protein response **Guoqiang Wang**

1089C Increased susceptibility to proteostasis collapse in C. elegans following consumption of UV-irradiated bacteria **Rachel Wellman**

1090A Characterization of a membrane stress response to stabilize intracellular trafficking in *C. elegans* **Christofer Welsh**

1091B Neural G protein-coupled receptor OCTR-1 regulates temperature effects on lifespan in *C. elegans* **Shawndra Wibisono**

1092C Protein kinase DRL-1 is required for activation of stress responses in cuticle furrow mutants **Keon Wimberly**

1093A Investigating the dietary restriction phenotype caused by disrupted intestinal cell-to-cell communication **Alexandra Wooldredge**

1094B Identification of *ccf-1* as a novel regulator of stress response and aging in *C. elegans* **Cheng-Wei Wu**

1095C Identifying Metabolic Alterations That Activate the UPR-ER in vivo **Jiaming Xu**

1096A Identifying Downstream Factors in *efk-1*/eEF2K-mediated Starvation Resistance in *C. elegans* **Junran Yan**

1097B Recovery of Muscle Function Dependent on the Impaired Cell Death in a C. elegans Premature Aging Model **Sumino Yanase**

1098C Developing a System to Screen Microbiome-Targeted Neurodegeneration Therapeutics Using Automated Monitoring of *C. elegans* **Giulia Zavagno**

1099A Elongator complex modulates longevity by modifying tRNA nucleotide in C.elegans **Lina Zhao**

1100B Steroid Hormone Pathways Coordinate Developmental Diapause and Olfactory Remodeling **Heather Carstensen**

1101C Peptidergic modulation of dispersal behavior in pathogenic and free-living nematodes **Bram Cockx**

1102A Molecular and neuronal mechanisms underlying early experience-dependent chemosensory plasticity in *C. elegans* **Travis Kyani-Rogers**

1103B *daf-42* is an Essential Gene for development into diapause stage in *Caenorhabditis elegans* **Daisy Lim**

1104C An excitatory GABA receptor, EXP-1 switches odor preference and regulates metabolic plasticity in *C. elegans* **Pratima Pandey**

1105A Disruption of mitochondrial factor SDHA-2 affects sperm motility and male fertility **Alyson Ashe**

1106B Determining the Effects of 1-Hydroxyphenazine Exposure on UGT Mutants in *Caenorhabditis elegans* **Muhammad Zaka Asif**

1107C Lipid-Metabolic Genes that Coordinate Innate Immunity and Fertility **Laura Bahr**

1108A Unravelling the identity of phosphorylcholine-transferring enzymes in *C. elegans* **Myrna Bunte**

1109B Selective Control of Parasitic Nematodes with Bioactivated Nematicides **Andrew Burns**

1110C Developing *C. elegans* models for SRD5A3-CDG and Cori rare congenital diseases **Hiba Daghar**

1111A UFD-2 modulates the E4 activity of the chaperone-assisted E3 ligase CHN-1/CHIP to regulate organismal proteostasis and lipid metabolism. **Aniruddha Das**

1112B A Genetic Titration of Membrane Composition Reveals its Importance for Multiple Cellular and Physiological Traits **Ranjan Devkota**

1113C Cancellled/Unprogrammed

1114A Loss of adaptor protein complexes bypasses *mrp-5* deficiency and restores heme deficit in *Caenorhabditis elegans* **Sohini Dutt**

1115B Characterizing the roles of ETS-4 transcription factor in fat metabolism **Aneta Dyczkowska**

1116C A fat-promoting botanical extract from *Artemisia scoparia* acts as longevity modifier in *C. elegans* **Bhaswati Ghosh**

1117A Synthesis and trafficking of mitochondrial phospholipids determines survival under hypoxia **Ilias Gkikas**

1118B The role of O-GlcNAc in fertility of *C. elegans* males **Daniel Konzman**

1119C Investigating the mechanism of the cell-nonautonomous roles of the nuclear hormone receptor NHR-49 in the nervous system of *Caenorhabditis elegans* **Saebom Kwon**

1120A LPIN-1/Lipin 1 moderates the lifespan-shortening effects of dietary glucose by maintaining ω-6 polyunsaturated fatty acids **Sujeong Kwon**

1121B The Search for Novel Anthelmintic Targets: Characterizing Alternative Metabolic Pathways in Caenorhabditis elegans **Margot Lautens**

1122C Characterization of a third SHC adaptor protein in *Caenorhabditis elegans* **Victoria León-Guerrero**

1123A The role of ceramide metabolism enzymes, *hyl-2*/ceramide synthase and *asm-3/*acid sphingomyelinase, on lipid metabolism **Grace McIntyre**

1124B Rescue of Complex I mutants by hypoxia and intra-Complex I mutation **Joshua Meisel**

1125C Global profiling of distinct cysteine redox forms reveals wide-ranging redox regulation in *C. elegans* **Jin Meng**

1126A Oleic acid modulates reproductive plasticity via DAF-12 in postdauer adults **Alexandra Nichitean**

1127B Mitochondrial complex I redox signaling mediates hypoxic responses in *C. elegans*. **John Onukwufor**

1128C Bacterial D-alanine metabolism affects *C. elegans* lifespan under high glucose conditions **Tian (Autumn) Qiu**

1129A Role of branched chain amino acid metabolism in ubiquitin-dependent proteolysis **Sonia Ravanelli**

1130B *N. parisii* compensates for genomic loss of dihydroceramide desaturase through reliance on *C. elegans* sphingolipid biosynthesis **Aaron Reinke**

1131C Downregulation of SEMO-1, a novel hydrogen sulfide-generating *C. elegans* enzyme, enhances lifespan: role of AAK-1/-2 **Verena Alexia Ridolfi**

1132A Deciphering endogenous formaldehyde-induced cytotoxicity mechanisms in *C. elegans* **Matthias Rieckher**

1133B Interaction of BMP and Insulin Signaling in *C. elegans* Lipid Metabolism **Cathy Savage-Dunn**

1134C *Caenorhabditis elegans* Fluorescent Mutants: Tryptophan Kynurenine Pathway **Shahid Siddiqui**

1135A Neuronal control of lipid metabolism by STR-2 G protein-coupled receptor promotes longevity in *C. elegans* **Varsha Singh**

1136B Identification of mitochondrial dysfunction as a key modifier in Myotonic Dystrophy Type 1 **Joana Teixeira**

1137C Influences on fat content, fat density and lipid droplets in *C. elegans* liquid culture **Tra My Tran**

1138A Decline of ribosomal proteins levels during L1 arrest **Joel Tuomaala**

1139B The impact of perceived and internal metabolic states on behavior and hypoxic responses in *C. elegans* **Anezka Vodickova**

1140C Modular metabolites that connect bacterial growth-phase-dependent lipogenesis with *C. elegans'* peroxisomal β-oxidation and *N*-acyl ethanolamine metabolism **Stephan von Reuss**

1141A Modular metabolite assembly in *Caenorhabditis elegans* depedns on carboxylesterases and formation of lysosome-related organelles **Chester Wrobel**

1142B *Pediococcus acidilactici* CECT9879 reduces fat accumulation in *C. elegans* by affecting the insulin signaling pathway **Deyan Yavorov**

1143C A multi-modal biosensor for monitoring proteostasis in stress and aging **Laura Bott**

1144A Force sensitive upconverting nanoparticles as a direct, noninvasive assay for force generation by muscles **Jason Casar**

1145B N-NOSE is an innovative, non-invasive and highly sensitive cancer screening method based on the chemotaxis of *C. elegans* **Eric di Luccio**

1146C Applying the Q system in *Caenorhabditis elegans*: observed issues and challenges **Brecht Driesschaert**

1147A Rethinking the worm pick: Alternative materials and sterilization methods **Anthony Fouad**

1148B The OpenWorm Project: progress update, available resources and future plans **Padraig Gleeson**

1149C Developing a high content, whole organism behavioral screening platform for specialized metabolites synthesized by plants **Sujay Guha**

1150A Immobilization of C. elegans by thermoelectric cooling for high-throughput microscopy **Erik Jaklitsch**

1151B Optogenetic manipulation of individual or whole population *Caenorhabditis elegans* worms with an under hundred-dollar tool: the OptoArm **Leen Janssen**

1152C Burrrowing chip: A microfluidic platform to visualize and quantitate the burrowing behavior of *C. elegans* **Leila Lesanpezeshki**

1153A Microfluidic-based platform for automated *C. elegans* culturing and phenotyping **Laurent Mouchiroud**

1154B The auxin-inducible degron 2 (AID2) system provides sharp degradation control with low ligand concentrations and works at all developmental stages of *C. elegans* **Takefumi Negishi**

1155C easyXpress: an R package for processing high-throughput, image-based *C. elegans* phenotype data **Joy Nyaanga**

1156A Testing the use of liposomes for drug delivery in *C. elegans* **Aihan Zhang**

1157B Simulated Microgravity Impairs *C. elegans* Gut Immunity **Alfredo Jr. Alcantara**

1158C Effects of a new bacterial pathogen, *Bordetella atroposiae*, on the genetic fitness of *Oschieus tipulae* **Munira Ali**

1159A Innate Immunity Promotes Sleep through Epidermal Antimicrobial Peptides **Henrik Bringmann**

1160B The lipid biosynthesis master regulator *sbp-1* is critical for Orsay virus infection in *C. elegans* **Luis Casorla-Perez**

1161C Characterization of a new model of Wilson disease to find innovative targets and pathways to attenuate Cu toxicity **Federico Catalano**

1162A Evaluating the effects of individual Orsay virus proteins on the *C. elegans* Intracellular Pathogen Response **Barbara Chen**

1163B Regulation of the Intracellular Pathogen Response by purine metabolism in *C. elegans* **Crystal Chhan**

1164C Determinants of Signaling Specificity for DBL-1/BMP in the Immune Response of the Nematode *Caenorhabditis elegans* **Emma Ciccarelli**

1165A *Commercial Citrus paradisi* and *Citrus reticulata* essential oils from Argentina rescue *Caenorhabditis elegans* from *Pseudomonas aeruginosa* infection **Romina D'Almeida**

1166B Exposure to human microbiota isolates during development impacts *Caenorhabditis elegans* susceptibility to *Pseudomonas aeruginosa* infection **Mercedes DiBernardo**

1167C Immunoglobulin light chain amyloidosis modelled in *C. elegans* **Luisa Diomede**

1168A Quantifying Pathogen Load of Geographical Isolates of *Caenorhabditis elegans.* **Nathan Do**

1169B A novel pair of receptor tyrosine kinases are required for oomycete pathogen recognition by *C. elegans* and resistance to infection **Florence Drury**

1170C *C. elegans* expressing human amyloidogenic proteins: a useful model for studying amyloidosis **Giulia Faravelli**

1171A Understanding Adenylosuccinate Lyase Deficiency locomotion deficit using *C. elegans* as a model **Latisha Franklin**

1172B Analysis of PALS-25 as an activator of the Intracellular Pathogen Response in *C. elegans* **Spencer Gang**

1173C Ubiquitin-related modifying enzymes in the regulation of HLH-30 signaling during *S. aureus* infection **Juan Garcia-Sanchez**

1174A Defining the microbiota host defense response in *C. elegans* **Xavier Gonzalez**

1175B Nuclear receptors downstream of HLH-30/TFEB modulate host defense responses. **Debanjan Goswamy**

1176C Neuronal C-type lectin receptors mediate recognition of oomycete pathogens in *C. elegans* **Manish Grover**

1177A Investigating organophosphate intoxication and mitigation using Pharyngeal Pumping: a novel bio-assay to probe poisoning **Johanna Haszczyn**

1178B Identification and characterization of *C. elegans* genes that *S. maltophilia* targets to evade host insulin-like DAF-2/16 pathway defenses **Sara Hopkins**

1179C The role of the gut microbiome in host adaptation to environmental xenobiotics **Dan Kim**

1180A A Survey of the Kinome Pharmacopeia Reveals Multiple Scaffolds and Targets for the Development of Novel Anthelmintics **Jessica Knox**

1181B Transcriptomic Profiling of *Caenorhabditis elegans* Wild Isolates Reveals Gene Expression Differences in Response to Microbial Infection **Patrick Lansdon**

1182C The role of the bZIP transcription factor ZIP-1 in the Intracellular Pathogen Response of *C. elegans* **Vladimir Lazetic**

1183A Oxidative stress is important for triggering avoidance of pathogenic *Pseudomonas aeruginosa* **San Luc**

1184B Looking for a possible treatment for type III galactosemia **Patricia A. Lucas-Rodríguez**

1185C DBL-1/TGF-β signaling pathway regulates pathogen-specific innate immune responses in *C. elegans* **Bhoomi Madhu**

1186A The kynurenine pathway is a major modulator of *E. faecalis* infection in *C. elegans* **Jack Martin**

1187B Dramatic and reversible developmental slowing of *C. elegans* by a bacterial pathogen **Zeynep Mirza**

1188C Isolating a non-culturable, microbiome bacterium that adheres to the intestinal lumen of *Caenorhabditis* nematodes **Emily Morgan**

1189A Identification of genes which regulate SMN-1 levels to identify putative treatment for Spinal Muscular Atrophy **Manuel Munoz**

1190B High-Throughput Drug Screen Reveals Novel Inhibitors of Microsporidia Infection in *C. elegans* **Brandon Murareanu**

1191C Toxicological Evaluation of AZT derivates-with organic chalcogens in C.elegans as SARs-CoV-2 therapy candidates **Gabriel Pedroso Viçozzi**

1192A Acid sphingomyelinase mutants show increased resistance to infections with *Staphylococcus aureus* and an accumulation of electron dense multilamellar bodies **Veronika Perschin**

1193B *C. elegans* natural microbiota-mediated protection against pathogens **Lena Peters**

1194C Sensory Neurons Regulate Innate Immune Responses in *Caenorhabditis elegans* **Siddharth R Venkatesh**

1195A Network analysis reveal novel genes involved in the *P. aeruginosa PA14* pathogen response during *C. elegans* infection. **Ayush Ranawade**

1196B Modeling Rare Genetic Diseases in *C. elegans*: Neuromuscular Junction Involvement in Multiple Mitochondrial Dysfunctions Syndrome 1 **Pippa Rogers**

1197C A *C. elegans* Motor-Centric Screening Pipeline Yields Novel and Selective Nematicidal Scaffolds **Peter Roy**

1198A Disruption of mitochondrial calcium homeostasis by loss of presenilin promotes mTORC1 signaling to drive neurodegeneration **Kerry Ryan**

1199B Innate immune responses of *Caenorhabditis elegans* to the emerging pathogen *Elizabethkingia anophelis* **Kristopher Schmidt**

1200C Investigation of the relationship between manganese exposure and the development of Huntington's like-disease in *Caenorhabditis elegans* **Ana Soares**

1201A T14E8.4 limits bacterial colonization but assists microsporidia invasion in *C. elegans* **Hala Tamim El Jarkass**

1202B An intracellular bacterial pathogen of *Oscheius tipulae* uses filamentation as a novel mechanism for cell-to-cell spreading **Tuan Tran**

1203C Toxicological evaluation of curcumin nanocapsules in *Caenorhabditis elegans* **Paula Trevisan**

1204A Impairment of *C. elegans* ribosome integrity by *Pseudomonas aeruginosa* **Alejandro Vasquez-Rifo**

1205B *C. elegans* offers a unique window into the early pathophysiology of Duchenne muscular dystrophy **Andres Vidal-Gadea**

1206C The neuropeptide receptor NMUR-1 regulates the specificity of *C. elegans* innate immunity against pathogen infection **Phillip Wibisono**

1207A Multi-species nematode screening uncovers a new broad-spectrum class of anthelmintic compounds targeting mitochondrial lipid metabolism **Hala Zahreddine Fahs**

1208B Solving host-microbe interactions and gut dysbiosis **Alejandra Zarate Potes**

Other

1209C Safaty evaluation of nanoparticles prepared with differents polymers in *Caenorhabditis elegans* **Danielle Araujo Agarrayua de Souza**

1210A Using genetic code expansion to develop a photo-activatable FLP recombinase. **Kieran Baxter**

1211B Thimerosal toxicity in the reproductive system in *C. elegans* **Matheus Bianchini**

1212C Developing *Steinernema hermaphroditum* as a model system to study symbiosis **Mengyi Cao**

1213A Local compression mechanosensing by DVA proprioceptors curbs body bends during locomotion **Frederic Català-Castro**

1214B Identification of Novel Uric Acid Gluconucleosides in *C. elegans* regulated by insulin signaling **Brian Curtis**

1215C Fe_3O_4@Ag nanoparticles synthesized by biogenic route cause reprotoxicity *in Caenorhabditis elegans* **Aline de Castro da Silva**

1216A Uncovering microbiome-mitochondrion interactions in the worm-bug model **Nathan Dennis**

1217B Insecticide resistance and toxicity mechanisms in malaria vectors and *C. elegans* **Persefoni Fragkiadaki**

1218C *C. elegans* as a model for studying *Cannabis sativa* extracts **Victoria Giorgi**

1219A Synergistic Neuroprotective Effects of Mix Extract from Biosearch Life Product Against AD-hallmarks and Cognitive Decline in *Caenorhabditis elegans* and SAMP8 Mice Model **Christian Griñán Ferré**

1220B Investigating the metabolic impact of inhibiting bacterial folate synthesis: A novel method to measure amino acids in agar beneath the bacterial lawn. **James Groombridge**

1221C Honey bee (*Apis mellifera*) venom toxicity in breast cancer cells and the nematode *Caenorhabditis elegans* **Priscila Gubert**

1222A Deciphering the molecular mechanisms underlying the anthelmintic effect of essential oils evaluated in *Caenorhabditis elegans* **Guillermina Hernando**

1223B Worm Developmental Dynamics Database 2 – an open database with visualization for biological dynamics of large-scale RNAi experiments on *C. elegans* embryos **Hiroya Itoga**

1224C UPS modulation and autophagy. **Sweta Jha**

1225A Histone demethylase AMX-1 provides sensitivity to interstrand crosslink DNA damage **Hyun-Min Kim**

1226B Using *C. elegans* in prognosis, diagnosis, and drug screens for splicing-related retinitis pigmentosa **Dmytro Kukhtar**

1227C A lysosomally-localized protease inhibitor is necessary for *C. elegans* molting **Max Levenson**

1228A Lutein rescues a *nlg-1*-mediated synaptic defect in a *C. elegans* mitochondrial complex I deficiency model **Silvia Maglioni**

1229B Evaluación del efecto del extracto etanólico de *Witheringia coccoloboides* sobre agregados de *α- sinucleína* en la cepa NL5901 de *Caenorhabditis elegans* **Alejandra Mantilla Galindo**

1230C Dichlorvos exposure aggravates behavioral toxicity in high glucose fed *C. elegans* **Sarita Mishra**

1231A Genotoxicity and *C. elegans* – using the worm for DNA damage and DNA repair/ damage response research **Merle Nicolai**

1232B Biophysical models of *C.elegans* neurons: the case of AWC^{ON} and RMD neurons. **Martina Nicoletti**

1233C Engineering photo-inducible GFP-binding nanobodies for *in vivo* applications using genetic-code expansion and computational alanine scanning **Jack O'Shea**

1234A Reprotoxicity induced by Acute exposure to Aqueous Root Extract of Peruvian Maca (*Lepidium meyenii*) in *Caenorhabditis elegans* **LUIZ EDUARDO PILISSÃO**

1235B Mutability of mononucleotide repeats explains the discrepancy between lab-accumulated mutations and the natural allele frequency spectrum of *C. elegans* **Moein Rajaei**

1236C The Mitochondria-targeted hydrogen sulfide delivery improves health and mitochondrial function in a C. elegans primary mitochondrial disease model **Luke Slade**

1237A *Ce*SnAP: Machine-learning based snapshot analysis platform toward high-throughput Caenorhabditis elegans behavioral screen of Parkinson's disease **salman sohrabi**

1238B Quantitative cell shape analysis in the *C. elegans* embryo **Wim Thiels**

1239C Combining engineering with machine learning to automatically and reliably measure the *C. elegans* brood size. **Matthieu Valet**

1240A Identification of novel ivermectin resistance and hypersensitivity associated genes in a primary *C. elegans* mutant screen **Natalie Wilson**

1241B Signals from the germline act systemically to regulate cytosolic protein oxidation in somatic cells in *C. elegans* **Yuyan Xu**

1245C MitoSegNet: Easy-to-use Deep Learning Segmentation for Analysing Mitochondrial Morphology **Christian Fischer**