

# ***C. elegans* Aging, Stress, Pathogenesis, and Heterochrony Conference Program**

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## **Sunday, August 3rd**

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<b>12 noon – 7:30 pm</b>	<b>Registration Check-In</b>	<b>Annex Room</b>
<b>12 noon – 9:00 pm</b>	<b>Poster Set-up</b>	<b>Great Hall</b>
<b>5:00 pm – 7:30 pm</b>	<b>Opening Reception</b>	<b>Tripp Commons</b>
<b>7:30 pm – 10:25 pm</b>	<b>Oral Session #1</b> <b>Opening Nite Plenary Talks</b> <i>Chairs: Todd Lamitina and Pamela Padilla</i>	<b>Union Theater</b>
<b>7:30 pm</b>	<b>Opening Comments &amp; Introductions – Organizers</b>	
<b>7:40 pm</b>	<b>Keynote Speaker: Donald L Riddle</b> The Dauer Pathway	
<b>8:25 pm</b>	<b>Hiroaki Iwasa</b> RNAi screens for novel candidate insulin receptor-like proteins reveal a potent but unexpected role for EGF signaling in healthy aging	<b>(Lab: Driscoll)</b>
<b>8:45 pm – 9:05 pm</b>	<b>Refreshment Break</b>	<b>Union Theater Lobby</b>
<b>9:05 pm</b>	<b>Ralf Baumeister</b> Parkinson's Disease associated factors LRK-I and PINK-I interact to regulate axon guidance and cell migration in <i>C.elegans</i>	<b>(Lab: Baumeister)</b>
<b>9:25 pm</b>	<b>Meghann E Mabon</b> A Whole-genome RNAi Screen for Genes Promoting Hypoxic Sensitivity	<b>(Lab: Crowder)</b>
<b>9:45 pm</b>	<b>Erik Andersen</b> Natural Variation in Pathogen Resistance Due to Polymorphism in the <i>npr-1</i> Gene	<b>(Lab: Kim)</b>
<b>10:05 pm</b>	<b>Marc van Gilst</b> An Adult Reproductive Diapause in <i>C. elegans</i>	<b>(Lab: van Gilst)</b>

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## **Monday, August 4th**

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<b>7:00 am – 7:30 pm</b>	<b>Registration Continues</b>	<b>Annex Room</b>
<b>7:30 am – 9:00 am</b>	<b>Breakfast Buffet</b>	<b>Tripp Commons</b>
<b>9:00 am – 12:20 pm</b>	<b>Oral Session #2</b> <b>Age-related diseases and Aging</b> <i>Chairs: Jim Lund and Malene Hansen</i>	<b>Union Theater</b>
<b>9:00 am</b>	<b>Keynote Speaker: Richard I Morimoto</b> The Stress of Misfolded Proteins: A Systems Approach to Heat Shock and Proteostasis in Disease and Aging	

<b>9:30 am</b>	<b>Wendy Hanna-Rose</b> Functional Regulation of Nicotinamide Levels and NAD <sup>+</sup> Biosynthesis by a Secreted <i>C. elegans</i> Nicotinamidase	<b>(Lab: Hanna-Rose)</b>
<b>9:45 am</b>	<b>Yuan Luo</b> Heat Shock Treatment Reduces Beta Amyloid Toxicity <i>In Vivo</i> By Diminishing Oligomers	<b>(Lab: Luo)</b>
<b>10:00 am</b>	<b>Gregory A Skibinski</b> The Role of Ubiquitin-Conjugating Enzymes in Polyglutamine Protein Aggregation: Analysis by Real-Time <i>in vivo</i> Fluorescence Imaging	<b>(Lab: Boyd)</b>
<b>10:15 am</b>	<b>Jim Lund</b> Clk and caloric restriction regulated genes with aging phenotypes	<b>(Lab: Lund)</b>
<b>10:30 am</b>	<b>Brian Onken</b> A Pharmacological Approach to Studying Dietary Restriction in <i>C. elegans</i> Using Metformin, a Proposed DR Mimetic	<b>(Lab: Driscoll)</b>
<b>10:45 am – 11:05 am</b>	<b>Refreshment Break</b>	<b>Union Theater Lobby</b>
<b>11:05 am</b>	<b>Carissa L Perez</b> A Novel <sup>13</sup> C Isotope Labeling Strategy Identifies Insulin/IGF Receptor Mutations that Selectively Modulate de novo Fatty Acid Synthesis and Longevity	<b>(Lab: Van Gilst)</b>
<b>11:20 am</b>	<b>Chirag Pungaliya</b> Discovery of <i>C. elegans</i> signalling molecules that regulate development and behavior using Differential Analysis by 2D-NMR Spectroscopy	<b>(Lab: Schroeder)</b>
<b>11:35 am</b>	<b>Karyn L Sheaffer</b> The Target of Rapamycin (TOR) pathway antagonizes pha-4/FoxA to control development and aging	<b>(Lab: Mango)</b>
<b>11:50 am</b>	<b>Jennifer Watts</b> Dietary Nutrients Affect Lifespan, Fat Storage, and Feeding Behavior in <i>C. elegans</i>	<b>(Lab: Watts)</b>
<b>12:05 pm</b>	<b>David Weinkove</b> A spontaneous mutant of <i>E. coli</i> that increases <i>C. elegans</i> lifespan through changes in bacterial metabolism	<b>(Lab: Gems)</b>
<b>12:30 pm – 2:00 pm</b>	<b>Luncheon Buffet</b>	<b>Tripp Commons</b>
<b>2:00 pm – 5:20 pm</b>	<b>Oral Session #3</b> <b>Aging</b> <i>Chairs: Gordon Lithgow and Coleen Murphy</i>	<b>Union Theater</b>
<b>2:00 pm</b>	<b>Keynote Speaker: Cynthia Kenyon</b> The Deadly Sweet Tooth	
<b>2:30 pm</b>	<b>Hena Alam</b> EAK-7 is a novel regulator of nuclear DAF-16 activity	<b>(Lab: Hu)</b>
<b>2:45 pm</b>	<b>Francis RG Amrit</b> Evolution and Significance of DAF-16 signalling in the <i>Caenorhabditis</i> genus	<b>(Lab: May)</b>

3:00 pm	<b>Nathan J Bialas</b> The Parkin co-regulated gene encodes a protein, PCRG-I, localizes to sensory cilia and regulates lifespan	(Lab: Leroux)
3:15 pm	<b>Jeffrey A Butler</b> Long Lived Mitochondrial (Mit) Mutants Utilize a Novel Metabolism	(Lab: Rea)
3:30 pm	<b>Catherine F Clarke</b> Caenorhabditis elegans lifespan is profoundly modulated by its diet of E. coli: What are the roles of E. coli metabolism and coenzyme Q?	(Lab: Clarke)
3:45 pm – 4:05 pm	<b>Refreshment Break</b>	<b>Union Theater Lobby</b>
4:05 pm	<b>Fernando Gomez</b> Characterizing Two coq-3 Mutants in <i>Caenorhabditis elegans</i>	(Lab: Clarke)
4:20 pm	<b>Malene Hansen</b> Autophagy Genes Affect in the Extension of Lifespan by Dietary Restriction in <i>C. elegans</i>	(Lab: Hansen)
4:35 pm	<b>Sivan Korenblit</b> IRE-1 Promotes the Longevity of <i>C. elegans</i> Insulin/IGF-I-Receptor Mutants by Reducing the Levels of Insulin and ER Stress	(Lab: Kenyon)
4:50 pm	<b>Coleen T. Murphy</b> <i>C. Elegans</i> Learning and Memory as Measures of Age-Related Neuronal Decline	(Lab: Murphy)
5:05 pm	<b>Andreas H Ludewig</b> Ascaroside Signalling and Lifespan in <i>C. elegans</i>	(Lab: Schroeder)
5:30 pm – 7:00 pm	<b>Dinner Buffet</b>	<b>Tripp Commons</b>
7:00 pm – 8:00 pm	<b>Workshops</b> How to create Scientific images with subconscious appeal	<b>Reception Room</b>
8:00 pm – 10:30 pm	<b>Poster Session #1 &amp; Refreshments</b> (EVEN number posters present) Aging (62 – 91) Age-Related Disease (92 – 95) Environmental Stress (96 – 117) Pathogenesis (118 – 126) Heterochronic Genes (127 – 132) Dauer Development (133 – 136) Teaching (137 – 138)	<b>Great Hall</b>

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## Tuesday, August 5th

7:30 am – 9:00 am	<b>Breakfast Buffet</b>	<b>Tripp Commons</b>
9:00 am – 12:20 pm	<b>Oral Session #4</b> <b>Heterochrony, Dauer and Stress</b> Chairs: Patrick Hu and Weiqing Li	<b>Union Theater</b>
9:00 am	<b>Keynote Speaker: Ann E Rougvie</b> Heterochronic Genes and the Control of Dauer Formation	

9:30 am	<b>David T Harris</b> The Heterochronic Gene <i>mab-10</i> Acts with <i>lin-29</i> to Regulate Terminal Differentiation in Hypodermal Lineages	(Lab: Horvitz)
9:45 am	<b>Bhaskar Vadla</b> The Roles of <i>lin-28</i> and <i>lin-46</i> in the Heterochronic Pathway	(Lab: Moss)
10:00 am	<b>Matthew Gill</b> Screens for Chemical Suppressors and Enhancers of Dauer Formation	(Lab: Gill)
10:15 am	<b>Victor L Jensen</b> A screen of putative DAF-16/FOXO target genes for novel SynDaf genes reveals a connection between dauer formation and innate immunity	(Lab: Riddle)
10:30 am	<b>Nicole Liachko</b> HLH-13, a novel DAF-16 regulatory target, suppresses recovery from dauer and L1 arrest	(Lab: Lee)
10:45 am – 11:05 am	<b>Refreshment Break</b>	<b>Union Theater Lobby</b>
11:05 am	<b>Andrew Burns</b> A Predictive Model for Small Molecule Accumulation and Bioactivity in <i>C. elegans</i>	(Lab: Roy)
11:20 am	<b>Xi Wang</b> The 3- $\beta$ -Hydroxysteroid Dehydrogenase (3 $\beta$ HSD) Family Member HSD-1/EAK-2 Acts in the Dafachronic Acid Biosynthetic Pathway to Inhibit Nuclear DAF-16/FoxO Activity	(Lab: Hu)
11:35 am	<b>Andres Z Mansisor</b> Investigation of endogenous RNAi processes affecting stress response in <i>C. elegans</i>	(Lab: Grishok)
11:50 am	<b>Precious Lim</b> Functional Characterization Of Ubiquilin And Erasin Proteins In <i>Caenorhabditis elegans</i> : Demonstration Of Their Role In Regulating ER Stress And Aging	(Lab: Monteiro)
12:05 pm	<b>C. Michael Crowder</b> Survival from Hypoxia by Inactivation of Aminoacyl-tRNA-Synthetases	(Lab: Crowder)
12:30 pm – 2:00 pm	<b>Luncheon Buffet</b>	<b>Tripp Commons</b>
2:00 pm – 5:20 pm	<b>Oral Session #5</b> <b>Environmental Stress</b> <i>Chairs: Jo Anne Powell-Coffman and Marc van Gilst</i>	<b>Union Theater</b>
2:00 pm	<b>Keynote Speaker: Keith Blackwell</b> SKN-1, Systemic Detoxification, and Aging in <i>C. elegans</i>	
2:30 pm	<b>Ryan Baugh</b> Nutritional Control of Gene Expression During L1 Growth and Arrest	(Lab: Sternberg)

2:45 pm	<b>Alexandre Benedetto</b> Manganese Uptake by <i>C. elegans</i> NRAMP2 Orthologues leads to Dopaminergic Neurodegeneration and Dopamine-dependant Toxicity	(Lab: Aschner)
3:00 pm	<b>Keith P Choe</b> WDR-23, a novel WD40 repeat protein, is a ubiquitin ligase substrate adaptor that regulates the stress tolerance and longevity factor SKN-1	(Lab: Strange)
3:15 pm	<b>Alexander R Mendenhall</b> Uncoupling Mechanisms Required for Oxygen Deprivation Survival and Longevity in <i>C. elegans</i>	(Lab: Padilla)
3:30 pm	<b>Anne-Katrin Rohlfing</b> <i>osm-8</i> encodes a mucin-like protein that negatively regulates osmotic stress responses via the transmembrane protein <i>ptr-23</i>	(Lab: Lamitina)
3:45 pm – 4:05 pm	<b>Refreshment Break</b>	<b>Union Theater Lobby</b>
4:05 pm	<b>Zhiyong Shao</b> Dual Functions of EGL-9: Defining the Molecular Mechanisms by which EGL-9 inhibits HIF-1 Transcriptional Activity	(Lab: Powell-Coffman)
4:20 pm	<b>Jiwon Shim</b> IRE-1 and HSP-4 Play Key Roles in Energy Homeostasis via Novel Fasting-induced Lipases in <i>C. elegans</i>	(Lab: Lee)
4:35 pm	<b>Stefan Taubert</b> The Mediator Subunit MDT-15 Integrates the Genomic Responses to Fasting, Xenobiotic Toxins, Heavy Metals, and Oxidative Stress	(Lab: Yamamoto)
4:50 pm	<b>Brooke E Tvermoes</b> <i>Caenorhabditis elegans</i> genes NUMR-1 and NUMR-2 confer increased resistance to cadmium toxicity and are essential for certain neuromuscular functions	(Lab: Freedman)
5:05 pm	<b>Olena K Vatamaniuk</b> Biochemical Interactions And Genetic Analyses Of ABC Transporters Required For Heavy Metal Detoxification	(Lab: Vatamaniuk)
5:30 pm – 7:00 pm	<b>Dinner Buffet</b>	<b>Tripp Commons</b>
7:00pm – 8:00 pm	<b>Workshops</b> How to create Scientific images with subconscious appeal	<b>Reception Room</b>
8:00 pm – 10:30 pm	<b>Poster Session #2 &amp; Refreshments</b> ( <b>ODD</b> number posters present) Aging (62 – 91) Age-Related Disease (92 – 95) Environmental Stress (96 – 117) Pathogenesis (118 – 126) Heterochronic Genes (127 – 132) Dauer Development (133 – 136) Teaching (137 – 138)	<b>Great Hall</b>
10:30 pm – 12:30 am	<b>Dance</b>	<b>Tripp Commons</b>

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## Wednesday, August 6th

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7:30 am – 9:00 am	<b>Breakfast Buffet</b>	<b>Tripp Commons</b>
9:00 am – 12:30 pm	<b>Oral Session #6</b> <b>Pathogenesis</b> <i>Chairs: Dennis Kim and Raffi Aroian</i>	<b>Union Theater</b>
9:00 am	<b>Keynote Speaker: Jonathan Hodgkin</b> Bacterial pathogens, inflammation and disease resistance mechanisms in <i>C. elegans</i>	
9:30 am	<b>Scott Alper</b> Novel Innate Immunity Gene and Pathway Discovery Using Comparative Genomics	<b>(Lab: Freedman)</b>
9:45 am	<b>Akwasi Anyanful</b> Pre-exposure of <i>C. elegans</i> to enteropathogenic <i>E. coli</i> promotes increased survival through activation of longevity and innate immunity pathways	<b>(Lab: Kalman)</b>
10:00 am	<b>Raffi Aroian</b> Innate Cellular Defenses Against Pore-Forming Toxins	<b>(Lab: Aroian)</b>
10:15 am	<b>Hediye N Cinar</b> <i>Vibrio cholerae</i> hemolysin is Responsible for Lethal Infection in <i>Caenorhabditis elegans</i>	<b>(Lab: Cinar)</b>
10:30 am	<b>Trupti Kawli</b> <i>Pseudomonas aeruginosa</i> subversion of <i>Caenorhabditis elegans</i> immunity by neuronal INS-7-mediated activation of the DAF-2 insulin-like signaling pathway	<b>(Lab: Tan)</b>
10:45 am – 11:05 am	<b>Refreshment Break</b>	<b>Union Theater Lobby</b>
11:05 am	<b>Tristan Kooistra</b> Tissue-specific TIR-1/NSY-1/SEK-1-dependent MAPK Activation Confers Pathogen Resistance Through Neuroendocrine Signaling in <i>C. elegans</i>	<b>(Lab: Kim)</b>
11:20 am	<b>Léopold Kurz</b> Neuroimmune regulation of antimicrobial peptide expression via a non-canonical TGF- $\beta$ signalling pathway in <i>C. elegans</i>	<b>(Lab: Ewbank)</b>
11:35 am	<b>Michael A Lawton</b> Genetic Dissection of Pathogenic Interactions of <i>Lysobacter enzymogenes</i> with <i>C. elegans</i>	<b>(Lab: Lawton)</b>
11:50 am	<b>Jennifer R Powell</b> The G-protein Coupled Receptor FSHR-1 is Required for the <i>C. elegans</i> Innate Immune Response	<b>(Lab: Ausubel)</b>
12:05 pm	<b>Katja Ziegler</b> TPA-1 is Required for the Anti-fungal Response in the <i>C. elegans</i> Epidermis	<b>(Lab: Ewbank)</b>
12:20 pm	<b>Closing announcements</b>	
12:30 pm – 2:00 pm	<b>Luncheon Buffet</b>	<b>Tripp Commons</b>