

56th Annual *Drosophila* Research Conference

The 56th Annual *Drosophila* Research Conference was held on 4-8 March 2015 at the Sheraton Chicago Hotel & Towers, Chicago, IL. The 2015 Organizing Committee was Greg Beitel (Northwestern University, Evanston, IL), Michael Eisen (University of California, Berkeley), Marc Freeman (University of Massachusetts Medical School, Worcester, MA), and Ilaria Rebay (University of Chicago, IL). The conference was sponsored by The *Drosophila* Board in association with the Genetics Society of America, 9650 Rockville Pike, Bethesda, MD 20814-3998. The Program and Abstracts Volume lists two Plenary sessions, 157 platform session talks, 934 posters, and 14 workshops.

Keynote Address Speaker

Allan Spradling (HHMI and Carnegie Institution for Science, Baltimore, MD). *Drosophila*: Assuming the mantle in leadership in biological research.

Plenary Lectures (in presentation order)

Yohanns Bellaïche (Genetics and Developmental Biology Department, Institut Curie, Paris, France). Cell division and epithelial tissue morphogenesis.

Harmit Malik (Department of Basic Science and HHMI, Fred Hutchinson CA Research Center, Seattle, WA). Genetic conflicts during meiosis drive innovation in centromeric proteins.

Angela Stathopoulos (Division of Biology and Bioengineering, Caltech, Pasadena, CA). Coordinate migration of mesoderm cells in the *Drosophila* embryo.

Stanislav Shvartsman (Lewis-Sigler Institute for Integrative Genomics, Princeton University, NJ). Signaling kinetics in the early embryo.

Maria Dominguez (Neuroscience Institute of Alicante, UMH-CSIC, San Juan de Alicante, Spain). Addressing complexity of Notch in cancer: When less is more.

Juergen Knoblich (IMBA – Institute of Molecular Biotechnology, Vienna, Austria). Using *Drosophila* neuroblasts as a model for stem cell biology and tumorigenesis.

C. Rushlow (Department of Biology, New York University, NY). How *Zelda* promotes enhancer activity during zygotic genome activation.

Yukiko Yamashita (Center for Stem Cell Biology, University of Michigan, Ann Arbor; HHMI). Asymmetric stem cell division in *Drosophila* testes.

Phillip Zamore (RNA Therapeutics Institute, University of Massachusetts Medical School, Worcester, MA). Mechanisms and functions of RNA silencing pathways.

Heinrich Jasper (Buck Institute for Research on Aging, Novato, CA). Control of proliferative and immune homeostasis in the aging intestine.

Matthew Gibson (Stowers Institute for Medical Research, Kansas City, MO). Decapentaplegic and the control of growth in the *Drosophila* wing imaginal disc.

Ulrike Heberlein (HHMI/Janelia Farm Research Campus, Ashburn, VA). Flies and alcohol: Interplay of nature and nurture.

Workshops (in presentation order)

Ecdysone Workshop

Organizers: Laurie von Kalm (University of Central Florida) and Nick Sokal (Indiana University)

Plenary Session and Workshop for Undergraduate Researchers

Organizers: Alexis Nagengast (Widener University, Chester, PA) and Beth Ruedi (Genetics Society of America, Bethesda, MD)

Communicating Your *Drosophila* Research to Scientific and Non-scientific Audiences

Organizers: Joyce Fernandez (Miami University), Raeka Aiyar (Genetics Society of America, Bethesda, MD), and Andreas Prokop (The University of Manchester, UK).

Feeding Behavior, Nutrition, and Metabolism

Organizers: Tania Reis (University of Colorado School of Medicine, Denver) and William W. Ja (The Scripps Research Institute, La Jolla, CA).

Integration of Computational Approaches and Big Data to Tackle Systems-Biology Problems in *Drosophila* and Other Model Systems

Organizers: Marc S. Halfon (University at Buffalo-SUNY), Molly Duman-Scheel (Indiana University School of Medicine, South Bend, IN, and the University of Notre Dame, Notre Dame, IN), Alexander Fletcher (Oxford University, UK), Greg Reeves (North Carolina State University), Jeremiah Zartman (University of Notre Dame)

Tools for Functional Genomics Analyses

Organizers: Stephanie Mohr (Harvard Medical School, Boston, MA), Norbert Perrimon (Harvard Medical School), and Elizabeth Perkins (Harvard Medical School)

Harnessing Community Resources for *Drosophila* Neuroscience

Organizers: Cahir O’Kane (University of Cambridge, UK) and David Osumi-Sutherland (European Bioinformatics Institute, Cambridge, UK)

Diverse Applications of CRISPR-Xas9 Genome Engineering

Organizers: Jill Wildonger (University of Wisconsin, Madison), Kate O’Connor-Giles (University of Wisconsin), and Melissa Harrison (University of Wisconsin)

***Drosophila* Research and Pedagogy at Primarily Undergraduate Institutions (PUI)**

Organizers: Josefa Steinhauer (Yeshiva University, New York, NY), David Roberts (Franklin and Marshall College, Lancaster, PA), Eric Stoffregen (Lewis-Clark State College, Lewiston, ID), and Rebeccah Kurzhals (Southeast Missouri State University)

Everything You Always Wanted to Know About Sex

Organizers: Michelle Arbeitman (Florida State University), Mark Siegal (New York University), Artyom Kopp (University of California, Davis), and Mark VanDoren (Johns Hopkins University, Baltimore, MD)

Cracking the Cis Regulatory Code: New Computational and Physical Approaches

Organizers: David Arnosti (Michigan State University), Saurabh Sinha (University of Illinois, Urbana-Champaign), and Hernan Garcia (University of California, Berkeley).

Homologous Recombination Mechanisms and Metrics

Organizers: Mitch McVey (Tufts University), Jeff Sekelsky (University of North Carolina), and Jan LaRocque (Georgetown University)

Developmental Mechanics

Organizers: Rodrigo Fernandez-Gonzalez (University of Toronto) and Guy Tanentzapf (University of British Columbia)

New Tools and Approaches for Behavioral Phenotyping in *Drosophila*

Organizers: Pavel M. Itskov (Champalimaud Centre for Unknown, Lisbon, Portugal), Giorgio F. Gillestro (Imperial College London, UK), and Carlos Ribeiro (Champalimaud Centre for the Unknown)

The North American *Drosophila* Board

The Board's duties include: overseeing community resource centers and addressing other research and resource issues that affect the entire *Drosophila* research community. The Board also administers the finances for the annual North America *Drosophila* Research Conference and its associated awards, and it chooses the organizers and the site of the annual meeting. The Board consists of nine regional representatives and four international representatives, who serve 3-year terms. The three elected officers are President, President-Elect, and Treasurer. In addition, the Board has *ex officio* members who represent *Drosophila* community resources or centers. For more information about the Board and the summaries of the annual Board meetings, see: Fly Board under the News menu at the FlyBase web site: flybase.bio.indiana.edu.

***Drosophila* Board Membership as of 56th Annual *Drosophila* Research Conference March 2015**

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President-Elect (2016): Laura Johnston (Columbia University, New York, NY)

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Europe: Daniel St. Johnston (University of Cambridge, UK)
Latin America: Mariana Melani (Fundacion Instituto Leloir-CONICET, Buenos Aires, Argentina)

Primary Undergraduate Institution Representative: Alexis Nagengast (Widener University, Chester, PA)

Ex Officio – Representing Drosophila Resources:

Bill Gelbart (FlyBase; Harvard University)
Susan Celniker (BDGP; Lawrence Berkeley National Laboratory, Berkeley)
Thom Kaufman (Bloomington Stock Center & FlyBase; Indiana University)
Kathy Matthews (Bloomington Stock Center & FlyBase; Indiana University)
Kevin Cook (Bloomington Stock Center & Nomenclature Committee; Indiana University)
Teri Markow (UCSD Drosophila Species Stock Center; University of California, San Diego)
Maxi Richmond (UCSD Drosophila Species Stock Center; University of California, San Diego)
Jim Thompson (Drosophila Information Service; University of Oklahoma)
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