Genetics Society of America

58th Annual Drosophila Research Conference Abstract topics and Keywords

01 Intracellular Dynamics: Cytoskeleton, Organelles & Trafficking

a. cytoskeleton
b. cell polarity
c. endocytosis
d. membrane dynamics
e. intracellular transport
f. secretion
g. autophagy
h. mitochondria
i. cellular organelles
j. endoplasmic reticulum
k. Golgi
l. endosomes
m. lysosomes
n. nucleus
o. nuclear pore complex
p. cellular remodeling
q. cell migration
r. extracellular matrix
s. cell junctions and adhesion
t. intracellular forces
u. live imaging
v. other

02 Cell Biology & Signal Transduction

a. Hedgehog
b. Wingless
c. TGFbeta
d. Notch
e. JAK/STAT
f. Insulin signaling
g. Hippo
h. NF-kB
i. receptor tyrosine kinase/phosphatase
j. other signaling pathways
k. small GTPases
l. lipids in signaling
m. morphogens
n. live imaging
o. computational models
p. networks
q. feedback regulation
r. canalization/robustness
s. other

03 Cell Division and Growth Control
a. mitosis
b. meiosis
c. organelle maintenance & replication
d. centrosome
e. kinetochores and cohesion
f. spindles and motors
g. cytokinesis
h. kinase/phosphatase/cyclin
i. DNA replication
j. DNA repair
k. cell cycle control
l. checkpoint
m. endocycle
n. compensatory proliferation
o. gene amplification
p. transcriptional regulation
q. developmental modulation
r. tumor suppressors and oncogenes
s. cell competition
t. regeneration
u. Insulin signaling
v. TOR
w. Hippo signaling
x. homeostasis
y. autophagy
z. cell growth
aa. tissue growth

04 Cell Death and Immunity
a. caspases
b. death mutants/genes
c. inhibitors of apoptosis (iaps)
d. apoptosis-induced proliferation
e. necrosis
f. autophagy
g. cellular immunity
h. humoral immunity
i. innate immunity
j. transcriptional regulation
k. anti-microbial peptides
l. JAK-STAT signaling
m. NF-kB signaling
n. hemocytes
o. stem cells
p. fat body
q. host/pathogen interactions
r. Wolbachia
s. microbiome
t. other

05 Physiology, Metabolism, and Aging
a. stress responses
b. metabolism
c. nutrition
d. nutrient sensing
e. endocrine function
f. dietary restriction/fasting
g. oxidative damage
h. mitochondria
i. lifespan
j. physiology of adult organs
k. circadian rhythms and sleep
l. Insulin signaling/ insulin-like peptides
m. TOR signaling
n. hormonal control
o. regeneration
p. post-embryonic tissue or organ remodeling
q. homeostasis
r. proteostasis
s. autophagy
t. other

06 Gametogenesis
a. spermatogenesis
b. oogenesis
c. pre-gametogenic germ cell development
d. sex determination
e. sex-specific traits and molecules
f. non-coding RNAs
g. RNA binding proteins
h. RNA transport and localization
i. cell differentiation
j. somatic cell differentiation
k. stem cells
l. tissue-specific transcription
m. cell migration
n. live imaging
o. other

07 Stem Cells
a. follicle stem cell
b. germline stem cell
c. neural stem cells
d. intestinal stem cells
e. hematopoietic stem cells
f. niche and other local signaling
g. asymmetric cell division
h. intrinsic factors
i. systemic factors
j. homeostasis
k. regeneration
l. computational modeling
m. live imaging
n. other

08 Neural Development and Physiology
a. axon guidance
b. dendrites
c. synaptogenesis
d. neuronal specification
e. neuronal morphogenesis
f. neuromuscular junction
g. neurotransmitters
h. neuropeptides
i. hormones
j. ion channels
k. glia
l. hormonal control
m. CNS
n. PNS
o. stem cells
p. RNA binding proteins
q. RNA transport and localization
r. sensory cell development
s. sex-specific traits
t. other

09 Neural Circuits and Behavior
a. neurotransmitters
b. neuropeptides
c. hormones
d. ion channels
e. synaptic function and organization
f. learning/memory
g. courtship and mating
h. circadian rhythms and sleep
i. aggression
j. grooming behavior
k. feeding behavior
l. locomotion/flight
m. mechanosensation
n. chemosensation
o. olfaction
p. gustation
q. vision
r. circuits
s. circadian rhythms
t. other

10 Models of Human Disease: Neurodegeneration and Neurological Disorders
a. neural degeneration
b. neural disorder
c. models of ASD
d. trinucleotide repeat expansion
e. epilepsy
f. drug discovery
g. regeneration
h. other

11 Models of Human Disease: Developmental and Physiological Disorders
a. tumorigenesis
b. metastasis
c. cardiovascular disease
d. developmental disorders
e. muscle disorders
f. sterility
g. diabetes
h. obesity
i. metabolic disorders
j. inflammation
k. stress
l. renal disease
m. circadian rhythms and sleep
n. drug discovery
o. cell biology of disease
p. genetic modifiers of disease
q. other

12 Evolution and Population Genetics
a. genome evolution
b. population variation
c. chromosome structural variation
d. evolution of gene expression
e. quantitative traits
f. speciation
g. phylogenetics
h. selection
i. canalization/robustness
n. computational models
o. genome-wide association studies

13 Evolution of development, other species
a. development
b. adaptation
c, genotype to phenotype
d. genotype-by-environment interaction
e. physiology
f. adaptation
g. systems biology
h. other organisms
i. other

14 Patterning, Morphogenesis and Organogenesis

a. axis specification
b. segmentation
c. homeotics
d. compartments and boundaries
e. commitment
f. eye disc
g. wing disc
h. leg disc
i. other imaginal discs
j. muscle
k. gut
l. gonads
m. epidermis
n. tissue specification
o. tissue growth and remodeling
p. cell migration
q. epithelial sheets
r. cell-cell interactions
s. endodermal derivatives
t. mesodermal derivatives
u. ectodermal derivatives
v. post-embryonic tissue or organ remodeling
w. biomechanical forces
x. computational models
y. live imaging
z. other

15 Regulation of Gene Expression

a. core promoters and general transcription factors
b. transcription initiation/elongation/termination
c. activators/coactivators
d. repressors/corepressors
e. enhancers
f. pattern formation
g. alternative splicing
h. translational regulation
i. nuclear pore complex
j. epigenetics
k. DNA methylation
l. non-coding RNAs
m. computational models
n. networks
o. canalization/robustness
p. cis-regulatory logic
q. other

16 Chromatin and Epigenetics
a. chromatin structure
b. chromatin assembly
c. remodeling complexes
d. histone variants and modifications
e. heterochromatin
f. insulators/boundary elements
g. Polycomb/trithorax complexes
h. nuclear pore complex
i. dosage compensation
j. pairing/transvection
k. nuclear organization
l. DNA replication
m. telomeres
n. other

17 RNA Biology
a. miRNA
b. piRNA
c. siRNA/RNAi
d. lncRNAs
e. RNA binding proteins
f. RNA transport and localization
g. stability/turnover
h. splicing regulation
i. translational regulation
j. other

18 Techniques and Technology
a. microscopy
b. live imaging
c. RNAi
d. mutational screens
e. gene targeting and modification
f. recombination systems
g. CRISPR/Cas9
h. high-throughput phenotyping
i. small compounds
j. microarrays
k. next-generation sequencing
l. computational algorithms
m. webtools and databases
n. proteomics
o. molecular interactions
p. other

19 Educational Initiatives
a. K-12 curriculum
b. college/university curriculum
c. genomics education partnerships
d. ethics
e. diversity
f. vision and change
g. other