**KEYWORDS**

**01 Cell Biology and Cytoskeleton**

a. cytoskeleton

b. cell polarity

c. intracellular transport

d. secretion

e. endocytosis

f. migration

g. extracellular matrix

h. cell adhesion

i. live imaging

j. other

**02 Cell Biology & Signal Transduction**

a. hedgehog

b. wingless

c. TGFbeta

d. Notch

e. receptor tyrosine

kinase/phosphatase

f. JAK/STAT

g. other signaling

h. Rho GTPases

i. live imaging

j. networks

k. feedback

l. computational modeling

m. morphogens

n. canalization/robustness

o. other

**03 Cell Cycle and Cell death**

a. checkpoint

b. kinase/phosphatase/cyclin

c. developmental modulation

d. DNA repair

e. DNA replication

f. APC

g. endocycle

h. gene amplification

i. caspases

j. death mutants/genes

k. inhibitors of apoptosis (iaps)

l. transcriptional regulation

m. autophagy

n. physiological apoptosis

o. other

**04 Cell Division and Growth Control**

a. mitosis

b. meiosis

c. centrosome

d. kinetochores and cohesion

e. spindles and motors

f. cytokinesis

g. cell growth

h. tissue growth

i. tumor suppressors and

oncogenes

j. cell competition

k. insulin signaling pathway

l. TOR

m. regeneration

n. other

**05 Physiology, Organismal Growth, and Aging**

a. stress response

b. metabolism

c. nutrition

d. nutrient sensing

e. endocrine function

f. dietary restriction

g. oxidative damage

h. physiology of adult organs

i. cell competition

j. insulin signaling

k. regeneration

l. other

**06 Gametogenesis and Organogenesis**

a. spermatogenesis

b. oogenesis

c. pre-gametogenic germ cell

development

d. sex determination

e. sex-specific traits and molecules

f. cell differentiation

g. somatic cell differentiation

h. endodermal derivatives

i. mesodermal derivatives

j. ectodermal derivatives

k. imaginal disc morphogenesis

l. cell migration

m. live imaging

n. other

**07 Stem Cells**

a. follicle stem cell

b. germline stem cell

c. niche and other local signaling

d. intrinsic factors

e. systemic factors

f. oriented cell division

g. neural stem cells

h. gut stem cells

i. blood stem cells

j. other

**08 Immunity and Pathogenesis**

a. cellular immunity

b. humoral immunity

c. innate immunity

d. transcriptional regulation

e. stem cells

f. host/pathogen interaction

g. Wolbachia

h. other

**09 Neural Development**

a. axon guidance

b. dendrites

c. synaptogenesis

d. neuronal specification

e. neuronal morphogenesis

f. glia

g. hormonal control

h. CNS

i. PNS

j. sensory cell development

k. other

**10 Neurophysiology and Behavior**

a. neurotransmitters

b. neuropeptides

c. homones

d. ion channels

e. synaptic function

f. learning/memory

g. courtship and mating

h. circadian rhythms

i. aggression

j. hormones

k. grooming behavior

l. feeding behavior

m. locomotion/flight

n. mechanosensation

o. chemosensation

p. olfaction

q. gustation

r. circuits

s. other

**11 Drosophila Models of Human Diseases**

a. addiction

b. cancer

c. cardiovascular disease

d. diabetes

e. neural degeneration

f. obesity

g. developmental disorders

h. drug discovery

i. small RNAs

j. metabolism

k. other

**12 Evolution and Quantitative Genetics**

a. genome evolution

b. population variation

c. chromosome structural

variation

d. evolution and development

e. quantitative traits

f. speciation

g. phylogenetics

h. fitness

i. selection

j. canalization/robustness

k. genotype-by-environment

interaction

l. epistasis

m. systems biology

n. genome-wide association

o. other

**13 Pattern Formation**

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. non-Drosophila patterning

k. networks

l. computation

m. predictive modelling

n. canalization/robustness

o. other

**14 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. other

**15 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. dosage compensation

i. pairing/transvection

j. nuclear organization

k. other

**16 RNA Biology**

a. miRNA

b. piRNA

c. siRNA/RNAi

d. long non-coding RNAs

e. RNA binding proteins

f. RNA localization

g. stability/turnover

h. splicing and its regulation

i. translation and its regulation

j. other

**17 Techniques and Resources**

a. microscopy

b. RNAi

c. mutational screens

d. gene disruption and targeting

e. small compounds

f. microarrays

g. next-generation sequencing

h. high-throughput phenotyping

i. computational algorithms

j. webtools

k. databases

l. recombination systems

m. molecular interactions

n. proteomics

o. other

**18 Educational Initiatives**

a. k-12 curriculum

b. college/university curriculum

c. genome projects

d. ELSI