

genomics admittance test_17-18
25.09.2017

- (1) Microvesicles, exosomes: their role in physiology and pathology.
- (2) Do all proteins aggregate? Why and why not
- (3) Gene expression and regulation in health and disease
- (4) How would you search for a reliable biomarker
- (5) Drug discovery and genomics
- (6) Do all the cells in an individual have exactly the same genome sequence?
- (7) How would you search for somatic variations in paired-end reads from whole-genome sequencing of 2 samples from 2 different tissues of the same individual?
- (8) Bioinformatics approaches for comparative genomics
- (9) How genomes and genes mediate adaptation to the environment
- (10) Transposable elements and somatic variations in the human brain
- (11) How the ENCODE project redefined the human genome
- (12) Studying mRNA expression: goals and methods
- (13) Gene control of CNS histogenesis: choose a cell type if your interest and provide a synthesis of molecular control of its development
- (14) Engineered endonucleases and genomic editing in mammals
- (15) Establishing and elaborating positional information within the developing vertebrate CNS: illustrate general principles and provide examples
- (16) MicroRNA regulation of gene expression
- (17) Long non coding RNAs: structure and functions
- (18) Viral vectors for gene therapy: goals and choices
- (19) Gene therapy vs "small molecules"-based therapy of genetic disorders: pros and cons.
- (20) Trans-generational heritability of somatically acquired traits: examples and mechanistic hypotheses.