

Foundations of Biomedical Research 2021

Week 1: How did we get here: A brief history of biomedical science - Mike Lorenz

| Time | Monday August 30 | Tuesday August 31 | Wednesday September 1 | Thursday September 2 | Friday September 3 |
|-------|--|--|---|---|---|
| 8:30 | Lecture: What is a gene: Introduction to Genetics and Heredity (Mike Lorenz) | Lecture: Molecular Biology from the double helix to CRISPR (Mike Lorenz) | Biostats Exercise: Introduction to Graphpad Prism (John Magnotti) | Lecture: Key concepts in Developmental and Cancer Biology (Swathi Arur) | Lecture: Key advances in immunology (Rick Wetsel) |
| 9:00 | | | | | |
| 9:30 | | | Break | | |
| | | Break | | | Break |
| 10:00 | Break | Breakout: Introduction to Phylogeny | Lecture: Neuroscience: Pioneers of Discovery (Jack Byrne) | Break | Breakout: Phylogenetic Trees |
| 10:30 | Fun and Games: Biology Trivia | | | Group Projects: Model Systems | |

Week 1 Learning Objectives

- To understand the history behind key advances in molecular biology, genetics, immunology, neurobiology, and developmental biology and the personalities and circumstances that led to these discoveries.
- To understand how phylogenetic relationships are determined and the strengths and limitations of phylogeny in cross-species comparisons of protein function.
- To explore online databases for model organisms as useful repositories of functional genetic information, expression analysis, Gene Ontology annotation, and links to primary literature.
- To initiate team-building with new colleagues through group activities, which will continue throughout the semester.