

PUTTING THE NUMBERS BACK INTO THE BIOLOGY SYSTEMS

Bioinformatics has been a very useful tool in the research of biological/biomedical sciences. For any player in this area and using the tool, it should be always kept in mind that bioinformatics is a cutting-edge tool across statistics, informatics and biology. This highlights a fundamental principle that the study design and data interpretation of bioinformatic approaches should be always rooted into the biology system. In this class, we will use our own research in liver disease as an example to further elaborate this principle. This example demonstrated the thought flow how statistical analyses can be combined with biological questions to address an important biomedical mechanism in a systems-based manner.