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**Big Data in Biomedical Research**
August 2–6  9 AM–12 PM
Students will gain practical experience in RNA-seq and single cell RNA-seq analysis, including reads mapping, quantification, differential expression, cell clustering and marker gene identification, and acquire functional interpretation of results. Instruction led by Drs. Yu Shyr and Qi Liu.

**Introduction to Causal Inference**
August 2–6  1–4 PM
This course will introduce fundamentals of causal inference approaches, including an overview of commonly implemented causal inference methods, as well as methods for longitudinal data, followed by miscellaneous topics such as sensitivity analyses and causal inference with survival outcomes. Instruction led by Dr. Andrew Spieker.

**Regression and Modeling in R**
August 9–13  9 AM–12 PM
This course will cover advanced statistical topics frequently used in the biological and medical research fields. Emphasis will be placed on practical applications of these statistical methods and interpretation of results. Instruction led by Dr. Fei Ye.

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