# TOXICOLOGY JOURNAL CLUB
# 16:963:508

Course Director: Dr. Raymond Rancourt
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Course Description: This 1-credit required course is classroom-based and serves as a companion to Systems Toxicology (16:963:502). Students are provided a scientific manuscript on a lecture topic introduced in the parent course. During weekly journal clubs, students and a faculty moderator discuss each research article. The course objective is to introduce analytical tools and methods used for *investigating organ toxicity*, while serving as a practice grounds to critically read and evaluate scientific papers. This course builds on prior courses in biostatistics and experimental design. Where appropriate, tours of core facilities within Rutgers EOHSI will be used to supplement classroom discussions.

Upon completion of this course, the learner is expected to:

- Apply knowledge on organ systems toxicology and pathology
- Demonstrate critical analysis of a toxicological study
- Present research data in a group setting
- Understand the use of biomarkers for predicting organ-specific toxicity
- Identify molecular or signature biomarkers that can be used experimentally to identify abnormal organ function
- Explain the advantages and disadvantages of different methodologies
- Assess the appropriateness of statistical analyses
- Develop a sound critique of a toxicology-focused journal article

## JOURNAL CLUB SCHEDULE

| Topics | Instructors |
|---|---|
| Hepatotoxicity | L. Aleksunes |
| Gastrointestinal Toxicity | R. Rancourt |
| Cardiovascular Toxicity | P. Stapleton |
| Immunotoxicity | L. Smith |
| Respiratory Toxicity | J. Jude |
| Mutagenesis | R. Rancourt |
| Nephrotoxicity | L. Aleksunes |
| Pulmonary Toxicity | A. Gow |
| Ocular Toxicity | Y. Chang |
| Dermal Toxicity | L. Joseph |
| Endocrine Toxicity | M. Fang |
| Pesticide Toxicity | B. Buckley |
| Vascular Toxicity (Metals) | R. Rancourt |