BIOL671 (Immunology Lab) Division of Biology, Kansas State University Spring Semester

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Laboratory Class Schedule:

January

- 18 Introduction, aseptic technique, pipetting, tissue culture (1) and designing an ELISA (9)
- 25 Dilutions and cell counting (2)

February

- 1 Hybridoma and cell work and cell proliferation (3) **REQUIRES Thurs and Fri**.
- 8 Flow cytometry (4)
- 15 Immunoanatomy, cell isolation and cytospin preparation (5); Lab notebooks due- labs (1-4)
- 22 Differentials/cell identification (5); begin affinity chromatography (6) REQUIRES Thurs and Fri

March

- 1 Affinity chromatography to purify antibody (6)
- 8 Antigen preparation and protein assays (6); Midterm Exam
- 15 Immunoblot and hybridoma screening (6); prepare PAGE gels **REQUIRES calculations prior to class**
- 22 Spring Break
- 29 Gel electrophoresis and staining (8)

April

- 5 Western blot (8) **REQUIRES coming in late Tues or early Wed.**
- 12 Superoxide production by neutrophils (7)
- 19 Enzyme-linked immunosorbent assay (9)
- 26 Enzyme-linked immunosorbent assay (9)

May

3 Final Exam; laboratory notebooks due.

Grading (approximate distribution):

Pre-class quizzes/attendance	10%
Midterm	15%
Laboratory write-ups (1-4)	16%
Laboratory write-ups (5-8)	16%
Laboratory write-up (9)	8%
Final Exam	35%

Grades: 90%, A; 80%, B; 70%, C; 60%, D; <60%, F.

The objective of this course is to introduce you to a variety of immunological techniques that are used in the field of cellular and humoral immunology. The techniques are applicable to the fields of cell biology and biochemistry as well as other disciplines. This class will provide students the opportunity to experience working as a team (groups will be assigned), maintaining cells and planning experiments.