



# BIOL 440: Formatting Guidelines for Presentation Summary

*Due 1 week prior to seminar presentation date.*

## **Document Formatting:**

Use 1" margins

Times New Roman font, size 12pt

Single space text

Compose in 3rd person, using a concise scientific style

Word limit of 1000

## **Introduction:** (write in paragraph form)

Give background and introductory information to clearly relate how your data is relevant and biologically interesting in the context of a broader biological concept or theory.

Define specialized terms and acronyms to be used during the seminar.

State the [scientific] question to be addressed by your presentation.

## **Seminar Rationale:** (present as a bulleted outline)

Use a series of phrases to relate the sequential order in which you will present arguments and supporting/refuting data to address your question. Hypothetical examples are given below. Obviously, you will use only one set of phrases that will be unique to your seminar presentation.

### Example 1: Cell and Molecular Oriented Seminar

- evidence of mutant phenotype when gene is knocked-out
- evidence of rescued phenotype when protein is exogenously reintroduced
- evidence that a single site mutation generates same mutation as knock-out
- co-localization of protein with binding factor
- demonstrate that binding factor is a transcription activator
- monitor expression level of reporter gene with and without presence of protein

## Example 2: Organismal and Ecologically Oriented Seminar

- increased rate of occurrence of leg mutations in frogs of specific locale
- increased level of specific parasite in same locale
- detection of parasite in frogs with extra limbs
- absence of parasite in wildtype frogs
- increased incidence of extra legs in tadpoles grown in presence of parasite vs. control
- *in situ* detection of parasite larvae at limb bud in tadpole cross sections
- induction of extra legs with exposure to a protein/chemical isolated from parasite

### **Research Studies:** (present as a bulleted outline)

This section should be a summary of the experiment and generated data you will present. Address each referenced article separately. Include all articles referenced during your seminar. List the articles in the sequential order in which you will address them during your presentation.

Provide the minimal info needed to relate the design of the experiment to be discussed.

- What species, organ, tissue, cell line was utilized?
- What methodology was used to generate/collect the data presented?
- What treatment did cells or animals undergo prior data collection?

Include the specific data you will utilize from each journal article referenced during your seminar. Actually include the data (table, graph, image, etc.) in your document. Include descriptive comments for each piece of data to adequately explain the figure (table, etc.) so that it can stand alone from the article. A good size for graphs and figs is 3" x 3".

### An hypothetical example:

Article 1: Author, year

- Wildtype mouse fibroblasts, embryonic stem cells (ES) and mutant embryonic fibroblasts (MEF) were treated with mutagen-X then assayed for accumulated DNA mutations at specific loci.
- ES had a 2 fold less mutation frequency than MEF, which are deficient in a vital DNA repair mechanism.
- ES have 3 fold greater mutation frequency than wildtype somatic cells (\*) perhaps due to their lacking a G<sub>1</sub> check which is point important for mutation repair.
- ES undergo DNA repair but mutations are likely to accumulate with cell age.

