Course Coordinator:

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Course Description

• The primary goal of this course is to expose to the newest and most exciting research related to molecular biology and toxicology. In this one-hour journal club, papers will be presented on a diverse set of topics related to our fields of interests.

• The students should always keep an eye open for newer progresses and discoveries.

• Choosing topics and papers and constructing a presentation are important parts of this educational program. A theme for each presentation is selected based upon the participating faculty’s expertise and student interest.
Course Requirements

• Each student will be required to present one paper of their choosing per semester.

• Each student should discuss the selection of a paper with their adviser or in case they don’t have one with Dr. Koldamova.

• The selection should be done at the beginning of the semester (first 2 weeks) and selected paper sent to Dr. Koldamova in order to make the schedule for the semester.
Course Requirements

• All students are required to attend every presentation session.
• The journal club should be interactive.
• Everyone should be prepared to discuss the paper and ask questions.
• Students are expected to have no more than two unexcused absences per term.
In case of the an unexcused absence

• Students will be required to turn in a 1-2 page summary and review of the paper that was discussed on the day of their absence. This paper should include 1 paragraph describing the objective of the work and how it is important to the current knowledge in the field.

• 2-3 paragraphs summarizing the results of the paper, include a critique of the presented data and any additional studies the student feels should have been included.

• Lastly, the submission should include any additional questions regarding the paper and an overall summary and conclusion of the significance and strengths and weaknesses of the work.

• The intent of the critical review would be to produce a general review similar to what would be submitted to an editor if you were reviewing the manuscript for publication.
Meeting Place

• The group will meet **Thursdays from 11:00 to 12:00 pm in the 3rd floor conference room of the Thermo Fisher building.**

• I have included a schedule of presenters. If you have a conflict please contact me. I will try to accommodate you, if possible;

• If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and Disability Resources and Services, 216 William Pitt Union (412.648.7890 or TTY 412.383.7355), as early as possible in the term. DRS will verify your disability and determine reasonable accommodations for this course. A comprehensive description of the services of that office can be obtained at [www.drs.pitt.edu](http://www.drs.pitt.edu)
Grading

- The class is credit/no credit.
- You will get credit:
  1) if you present a paper and;
  2) if you are an active participant. That is, read the papers that will be provided on the Departmental Website beforehand and come prepared to discuss the material and ask questions.
  3) It is a good practice for you and the speakers to field questions in front of a friendly audience.
ARTICLE SELECTION:

- Several resources are available to help you select important and timely research: All issues of Nature, Science and Cell magazines, PNAS, JCI; as well as the most respected journals in your topic of interest. Look at the Impact factor or h-index.
- The paper should be published in the last 2 years; preferable in the last year.
- With the help of your mentors and colleagues, you can use these criteria and the rating scale as informal guidelines to ensure that your chosen article merits presentation.
ARTICLE PRESENTATION:

Study Background:
This section provides your audience with the necessary information and context for a thoughtful and critical evaluation of the article's significance.

- The goals are:
  I. To describe the **hypothesis/rationale** for this research;
  II. What is **the significance for public health**;
  III. To highlight the experimental and clinical research that led to the current study.
  IV. Review the papers referenced in the study's “Introduction" section as well as previous work by the study's authors.
Study Methodology:

- Clearly describe the study population: cells/experimental animals/human.
- Explain the statistical methods.
ARTICLE PRESENTATION:

Study Results:

- Present **only relevant data that supports the hypothesis** and present that data thoroughly.
- You **do not need to present every experiment** in a paper.
- Once again, the **majority of the experiments are controls**; you need to know how to identify the controls and present them as data that support the relevant data.
- **Eliminate any obviously redundant** or irrelevant experiments.
  - Take this opportunity to **verbally and graphically highlight key results** from the study, with plans to expand on their significance later in your presentation.
Author's Discussion

- Present the authors' conclusions and their perspective on the study results, including explanations of inconsistent or unexpected results.
- Consider whether the conclusions drawn are supported by the data presented.
General presentation tips

- Never assume the audience understands the technique – always explain how each experiment is done and the limitations of the technique;
- Never assume the audience is thinking – always explain what question the experiment is going to answer, explain the conclusion of each experiment, the limits of interpretation and if the experiment answers the question;
- At the end of your presentation, again present the problem or question, the minimum relevant pieces of data that answered the question, the conclusion and if the data supports the conclusion.
For those who are presenting for the first time

• When you are confronted with critical comments about the paper, don’t take it personally. It is not your work – you are merely presenting it.

• An active discussion including criticisms about the results and conclusions means that the audience is engaged and you are doing your job.

• You could defend the authors but you are not obliged to.