Opportunities for the use of GenAI in Physiology & Pharmacology 3rd Year Labs

Generating Research Questions

- Provide references relevant to the topic, to introduce the students to the field.
- Have student brainstorm ideas on what prompts to use for GenAI as first-line queries.
- In small groups, prompt GenAI with brainstorm ideas and discuss output with Faculty expert
- **Opportunity here for faculty to discuss biases in GenAI responses and hallucinations in the data that GenAI engines were trained on**
- Refine prompts based on additional key words and context provided by faculty until saturation is reached.
- Confirm refined idea by finding corroborating literature using Google Scholar or Pubmed

Generating Methodology

- Brainstorm ideas on what validated methodologies are used to address similar questions.
- **Opportunity here for the faculty to introduce students to different methods used in the field of interest.**
- Discuss the limitations and logistics of the methods generated as a group under the guidance of the instructor.
- Prompt each group to research examples of how a particular methodology has been used in literature and report on their findings to the class.
- Have the students decide on a methodology that fits the criteria required to address their research questions, and still stays within their logistical limits.

Completing Analysis

- Direct students to the necessary course resources and data collected for analysis.
- Introduce students to the use of GenAI for generating R code for analysis.
- **Opportunity here for the faculty to dive deeper on the statistical analysis needed for their data.**

Report Discussion

- Discuss the limitations of GenAI to engaging with literature for developing a discussion.
- Address the issue of plagiarism and how that is relevant in the context of GenAI in your course or at the institution.
- **Opportunity here for the faculty to address the issue of referencing the use of GenAI in their final report.**

Key Questions to Address:

"When is it appropriate to use GenAI in the assignment?"

"How will you check for biases in the information provided?"

"How will you check for accuracy and hallucinations?"

"How will you reference the use of GenAI in your work?"