University at Buffalo School of Pharmacy and Pharmaceutical Sciences Residency Program

<u>Course Title</u>: Preparing Pharmacy Residents for Scholarship

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Objective:

This course will provide pharmacy residents at the University at Buffalo School of Pharmacy and Pharmaceutical Sciences and affiliate programs with a crash course on research and scholarly writing basics in order to prepare them for their required residency project and scholastic pursuits. These topics have relevance and application to both literature evaluation and resident project development, and the series content will emphasize these applications. The seminar will incorporate didactic lectures, case studies, and open discussion techniques to cover the scheduled material.

Topics and Associated Goals:

Topic #1: Publishing successfully as a pharmacy resident

- Discuss the types of scholarly publication and peer-review process.
- Identify ways to publish as a resident.
- Understand how to critically review a manuscript and peer-review for biomedical journals.

Topic #2: The IRBs and tips for a successful IRB submission

- Explain what is meant by integrity in research and what an IRB is and why it exists
- Identify common errors in study development upon submission to the IRB
- Review components of a properly constructed protocol for a resident research project that is appropriate for submission to the IRB.

Topic #3: Introduction to clinical practice research/Medication Utilization Evaluation (MUE)

- Identify goals of the Medication MUE process
- Understand the scope of an MUE 'research project' as it pertains to the pharmacy residency outcomes
- Explain the steps of designing and executing an MUE; recognize the need for a systematic process

Topic #4: Research design and protocol development

- Explain the common study designs used in observation and interventional research and their application to specific research questions.
- Select an appropriate research design and discuss the strengths and weaknesses of that design for a specific research question.
- Develop a properly structured protocol for a resident research project that is appropriate for submission to the IRB.

Topic #5: Practical statistics and overview of statistical programs

- Explain different categories of data quality, and how that data type affects the appropriate choice of statistical tests or analysis.
- Understand the appropriate use of common descriptive and inferential statistical tests for different study designs and data sets.
- Apply an understanding of study design and statistical analysis knowledge to systematic evaluation of the biomedical literature.
- Describe the most common errors observed in published primary literature and how these errors may affect the internal and external validity of the conclusions.

Topic #6: Conducting research: Data collection and organization

• Understand the fundamentals of conducting a research project.

Topic #7: Presenting your research

- Describe effective methods for presenting and publishing research.
- Explain how to identify forums for presenting and publishing research.

2022-23 RESIDENT DIDACTIC RESEARCH CLASS

Time / Location:

Tuesday, July 12th and July 19th (evenings) via Zoom (meeting links posted on UB Learns)

Tuesday, 7/12		
5:00 – 6:00pm	Welcome Publishing successfully as a pharmacy resident	Maya Chilbert
6:00 – 7:00pm	The IRBs and tips for a successful IRB submission	Calvin Meaney
Tuesday, 7/19		
4:30 – 5:00pm	Clinical research: Practical applications for residents	Scott Monte
5:00 – 6:00pm	Practical statistics for the pharmacy resident	Collin Clark
6:00pm – 7:00pm	The Medication Utilization Evaluation (MUE) process	Patrick McGrath