January 7, 2015

To: Jr. Honors Students and Faculty

**From: William Kem (Seminar Coordinator)**

**Subject: Jr. Honors Pharmacology Seminar**

Welcome to the **2015 Jr. Honors Pharmacology Seminar** course. In this seminar you will become very familiar with pharmacology, the science which aims at understanding drug action. This course is **not** meant to be a comprehensive survey of modern therapeutics, which you will experience during your first two years of medical school. The present course will serve as a historical and scientific introduction to this important medical science. The seminar format allows you to participate as a teacher as well as student!

Every week there will be a reading assignment (usually from the textbook (Katzung, 8th edition, available in the HC book store and also online). It is expected that each student will have done this reading before the seminar in order to participate in the discussions and to follow the focused presentations. The format of the weekly seminar is arranged to maximize participation of all the students:

**1) Thirteen (or fourteen, depending on week) students, as assigned by the course coordinator, will be responsible for making short presentations (approx. 5 min.) pertaining to some basic question concerning the pharmacology of the drug group being considered.** The purpose of these presentations is to discuss some basic concepts relating to the major subject being considered. The questions will be provided to the students at least one week before each seminar. Each student will obtain information and ideas for answering their assigned question from either Katzung (the textbook) or Goodman and Gilman (Reference book). Both of these texts are available on line at UF Libraries. Occasionally your faculty mentor may suggest another source for obtaining the answers. Preparation for the short presentations will generally not require much if any faculty mentoring, although if you really need some assistance don’t hesitate to contact the mentor. These presentations will be oral and will not need to use Power Point slides (if you use PPP slides, please limit them to 1 or 2 per short question). Please deliver your short presentations in your own words rather than reading something directly from a text.

**2) Students making the major presentations will focus on some interesting facet of the subject that is chosen with the assistance of the mentor.. This presentation will be based on some other literature sources as well as information in the textbooks.** The intended duration of each focused presentation will be approximately 20 minutes. These focus presentations will use Power Point slides, which are to be emailed to Dr. Kem by 11AM the day of the seminar.

At the end of each focus presentation there will be a 5-10 min. discussion of the subject led by the presenting student, who will prepare two thought-provoking questions to serve as a basis for student discussion of the topic.  **Each studnt presenting a focused presentation is expected to prepare and electronically distribute (to fellow students and involved faculty) an outline of their presentation and the two discussion questions by Friday of the week before the presentation.**

**It is absolutely essential that the students scheduled for the “focus” presentations meet with their mentor(s) several weeks in advance (For the first one, this is not possible) of the presentation to plan its content, and then to meet again a few days before the presentation to discuss the presentation in more detail and make sure that appropriate and well-executed audiovisuals are to be presented. It will be the responsibility of the student to arrange these meetings with the mentor. Be sure and discuss with your mentor possible topics for your Focus.**

After the first or second focus presentation there will be a 10-15 minute (time permitting) intermission, before we take up the next topic and focus presentation.

**Since we meet only once a week, be prepared to participate in the seminar until 5 PM!**

As in the past, each student will write a paper (Max. length, 12 pages, double-spaced, excluding bibliography and figures) based on one of the two focused presentations he or she makes during the semester, which needs to be submitted to the course coordinator by the last seminar day (**April** **8**), unless the student is presenting a focus that day and wishes to use it for the paper; an extra week is available for preparing such papers.

Student grades for the course will be based upon the two focus presentations (40%), oral short presentations (20%), paper on one of the focus presentations (20%), AND participation in seminar discussions (20%).

***Year 2015 Junior Honors Pharmacology (MDU 4002) SCHEDULE***

University of Florida College of Medicine

**Course Coordinator: William Kem**

**Wednesdays, 2:00-5:00 PM**

**Room R5-231**

## Date Subject Faculty Coordinator Student

Jan. 7 Course Introduction and Scheduling of seminar presentations; students will meet with faculty

mentoring their first presentation at about 3 PM.

Jan 14 Drug-Receptor Interactions I (Nicotinic Acetylcholine Receptors) Dr. Kem Drug-Receptor Interactions II (Focus: EGT and other Kinase Receptors) Dr. Law Drug-Receptor Interactions III (Focus: Intracellular Receptors) Dr. Law

Jan 21 Drug Administration (Focus: Novel Methods of Administration) Dr. Kem

Drug Metabolism (Focus: Prodrugs) Dr. Kem

Drug Excretion (Focus: Renal and Biliary Excretion of Drugs) Dr. Kem

Jan 28 Pharmacokinetics I (Focus: Drug Bioavailability) Dr. Silverman Pharmacokinetics II (Focus: Blood-Brain Barrier) Dr. Silverman

Pharmacokinetics III (Focus: Binding to Plasma Proteins) Dr. Silverman

Feb. 4 Therapy of Infectious Disease I (Focus: Antibacterial drugs) Dr. Rowe Therapy of Infectious Disease II (Focus: Antiviral or Antifungal drugs) Dr. Rowe Therapy of Infectious Disease III (Focus: Drug resistance) Dr. Rowe

Feb. 12 (**Th**) Cancer Therapy I (Focus: Conventional cancer therapies ) Dr. Fletcher Cancer Therapy II (Focus: Recently developed therapies ) Dr. Fletcher

Cancer Therapy III (Focus: Breast and Prostate Cancer Therapies) Dr. Shiverick

Feb. 1 (**Th**) Autonomic Pharmacology (Focus: Ganglionic Drugs) Dr. Kem Autonomic Pharmacology (Focus: Muscarinic Receptor Therapeutics) Dr. Kem

Autonomic Pharmacology (Focus: Treatment of Hypertension) Dr.Tumer

Feb. 25 Local Anesthetics (Focus: Neuropathic Pain) Dr. Kem

General Anesthetics (Focus: Gases) Dr. Morey

General Anesthetics (Focus: IVs) Dr. Morey

**No Seminar on Mar. 4 due to Spring Break**

Mar. 11 Hepatic Mitochondrial Function Jae-Sung Kim

Hepatic Toxicity of Drugs Jae-Sung Kim

Mar. 19 (**Th**) Cardiovascular Pharmacology I: Lipid-Lowering Drugs Dr. Martens CV Pharmacology II: Anti-Arrhythmic Drugs Dr. Martens

Mar. 25 NSAID Analgesics (Focus: Mechanism of action of acetaminophen) Dr. Harrison Opioid Analgesics (Focus: Efficacy of opioids in chronic pain) Dr. Harrison

Opioid Dependence (Focus: Detoxification vs. opioid maintenance therapy) Dr. Harrison

April 1 CNS Stimulant Drugs (Focus: Caffeine Containing Beverages) Dr. Papke

CNS Depressant Drugs (Focus: Prescription Sleeping Aids) Dr. Papke

April 8 Chemotherapy of Parasitic Disease Dr. Kima Chemotherapy of Parasitic Disease Dr. Kima

### List of Faculty Participants

##### Faculty Office Phone Number E-Mail

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(Chairman)

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