Advanced Epigenetics and Gene Regulation

BCH 7412: Spring 2023

Tuesdays and Thursdays from 9:35 am to 11:30 am in Rooms:

Cancer Genetics Research Complex (CGRC) 491 (Tuesdays) and

451 (Thursdays)

Course Directors: Jörg Bungert, PhD (jbungert@ufl.edu).

Jianrong Lu, PhD (jrlu@ufl.edu).

February 14 Basal Transcription Complex Jörg Bungert

Discussion Paper:

Discussion Leader:

February 16 Mediator and other Co-regulators Jörg Bungert

Discussion Paper:

Discussion Leader:

February 21 Enhancers and Super-Enhancers Jörg Bungert

Discussion Paper:

Discussion Leader:

February 23 Chromatin: Nucleosome and Chromatin Remodeling Jianrong Lu

Discussion Paper:

Discussion Leader:

February 28 **Chromatin: Histone Modifications and Variants** Jianrong Lu **Discussion Paper: Discussion Leader:** March 02 **DNA Methylation** Jianrong Lu **Discussion Paper: Discussion Leader: Nuclear Transcription Domains** March 07 Jörg Bungert **Discussion Paper: Discussion Leader:** March 09 **Epigenetic and Transcriptional Regulation** during Differentiation Jörg Bungert **Discussion Paper: Discussion Leader:** March 21 **Noncoding RNA** Mingyi Xie **Discussion Paper: Discussion Leader:** March 23 **Cancer Epigenetics** Jianrong Lu **Discussion Paper: Discussion Leader:**

<u>Format</u>: This class consists of a series of lectures by experts in the field followed by student led discussions of current literature. The emphasis is on the discussion of the articles; every student is expected to read the articles and be prepared to present parts of the articles. One student will serve as the discussion leader and provides a short introduction in the beginning and summary at the end of the discussion. Towards the end of the course the students will prepare and submit a critique of one of the papers discussed in class. The critique should be one to two pages long and should provide a summary of the major findings and a discussion of the strengths and weaknesses of the article. The final grade will be based on the performance in class and the quality of the written critique. Attendance in person is required.