**CAMB/NGG 7130 Neuroepigenetics**

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| TIME:  LOCATION: | Thursdays 1:45pm-3:45pm  CRB 302 | 9/4/25 – 12/11/25 (no class on 10/9 and 11/27) | |
| COURSE DIRECTORS: | | | |
| Zhaolan (Joe) Zhou | | 215.746.5025 | [zhaolan@pennmedicine.upenn.edu](mailto:zhaolan@pennmedicine.upenn.edu) |
| Erica Korb | | 215.573.5705 | [ekorb@pennmedicine.upenn.edu](mailto:ekorb@pennmedicine.upenn.edu) |
| Hao Wu | | 215.573.9360 | [haowu2@pennmedicine.upenn.edu](mailto:haowu2@pennmedicine.upenn.edu) |

GOALS: This is a course intended to bring students up to date concerning our understanding of neuropigenetics. It is based on 1) lectures on basic concepts of epigenetics and related methods by course directors, and 2) assigned literature readings covering a variety of experimental systems and concepts in the field, formal presentations by individual students, critical evaluation of primary data, and in-depth discussion of potential issues and future directions,

The goals of each seminar style session are:

1. Review basic concepts of epigenetics in the context of neuroscience
2. Learn to critically evaluate a topic (not a single paper) and rigor of prior research
3. Improve experimental design and enhance rigor and reproducibility
4. Catch up with the most recent development in neuroepigenetics
5. Develop professional presentation skills - be a storyteller

FORMAT: The first 3 sessions will be lectures presented by each of the course directions to ensure everyone is familiar with the basic concepts that are critical to understand the subsequent discussions and paper presentations. Following these sessions, each week will focus on a specific topic of neuroepigenetics via a “seminar” style presentation by a class member on an assigned paper with the following expectations:

Consultation with faculty preceptor prior to presentation

Introduction (~10 min): Context of topic in the field

Historic perspectives of the topic Current understandings

Primary data (~30 min): Questions of interest

Design of experiments Interpretation of data

Discussion (~20 min): Issues/challenges

Proposed future experiments Future directions in a big picture

Engage class for discussion and participation, and manage the presentation in ~1 hour

One or more course directors and a guest preceptor will be present each week to facilitate discussions. NOTE: Most classes will end by 2:45. However, for occasional classes we have 2 presenters which will require the full 2 hours.

EVALUATION:

1. Knowledge of assigned paper and broadly relevant background/developments
2. Consultation with faculty preceptor
3. Peer evaluation and faculty evaluation
4. Enforcement – grading policy: **50% class participation, 50% paper presentation**

COURSE UNIT VALUE: 1 unit ENROLLMENT LIMITS: 12 (maximum)

PREREQUISITES: BIOM555 or permission by course directors

**List of Faculty Preceptors**

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| **Date** | **Preceptor** | **Topic** |
| **9/4** | Course Directors – Erica Korb | Organizational Meeting  Histone modifications and variants Lecture |
| **9/11** | Course Directors – Hao Wu | 3D Genome/lncRNA/neuro-omics Lecture |
| **9/18** | Course Directors – Zhaolan (Joe) Zhou | DNA modification Lecture |
| **9/25** | Zhaolan (Joe) Zhou | Student Presentation |
| **10/3** | Erica Korb | Student Presentation |
| **10/9** | **BGS 40-year** celebration | No class |
| **10/16** | Dana Silverbush | Student Presentation |
| **10/23** | Hongjun Song | Student Presentation |
| **10/30** | Shelley Berger | Student Presentation |
| **11/6** | Kahlilia Blanco | Student Presentation |
| **11/13** | Yijing Su | Student Presentation |
| **11/20** | Liz Heller | Student Presentation |
| **11/27** | **Thanksgiving** | No class |
| **12/4** | Ana Cristancho | Student Presentation |
| **12/11** | Naiara Akizu | Student Presentation |

STUDENT SIGNUPS:A link for presentation signups will be sent out following the organizational meeting by email. When you receive it, please select a date (first come first serve). You should meet with your faculty Host/Mentor to discuss your respective paper assignment and/or to prepare your presentation if possible. (In some cases it is not feasible to schedule a meeting so this is not a requirement of the course but highly recommended when possilbe.) Faculty members are very busy – so schedule your meetings with the faculty mentors at least *2 WEEKS IN ADVANCE*. Please come to these meetings having fully read the paper and its methods, put together your presentation to the best of your ability, and have a list of specific topics/questions to discuss with your mentor.