NEUROSCIENCE AREA OF CONCENTRATION

An Area of Concentration (AOC) is designed to augment the existing curriculum in order to provide students with an additional academic experience that will enhance their physician training. An Area of Concentration in the Neurosciences (AOC-N) will offer students a longitudinal educational experience centered on treating patients with neurological and behavioral disorders. Furthermore, it will make available an area of particular research interest to our students.

GOALS

Each student, under faculty supervision, will strive to engage in activities that broaden and deepen their understanding of brain and behavior, both clinical and research aspects. Students are all REQUIRED to pursue a scholarly project in neuroscience, consistent with the UPSOM's scholarly project goals, timelines, and expectations. Students are also required to attend quarterly meetings and meet with the AOC director annually to review their progress.

In addition, students are required to choose from a menu of other activities—clinical, humanistic, educational—that will expand their knowledge and skills in areas of their greatest interest. Students will have great flexibility in personalizing what they do and how they do it, under the assumption that this learner-centered approach will enhance participation and interest. Students will meet individually with the AOC Director to plan a personalized course of study to complete the program. As long as they did enough activities to demonstrate a commitment and interest, and did some activities each year in the program, then they would remain in good standing and be able to graduate with a certificate.

CREDIT

Students can choose activities from three primary domains—clinical, humanistic, and educational. However, they choose, students are expected to earn 300 credits to complete the program, earning at least some credits during each year within the program.

Activities would be weighted by time, so a full-day's clinical experience might count for 40 credits. Other activities could be considered for credit following discussion with the AOC Director, with the weight individualized.

PROGRAM COMPONENTS AND ACTIVITIES

The Neurosciences AOC will allow students to have a mixture of these experiences during their four-year attendance at UPSOM, providing a unique longitudinal exposure to the discipline. A faculty mentor and the AOC Director will individually design these experiences for each student; the Director will assist students to connect with mentors and preceptors. In addition to these individual experiences, there will be annual meetings for all students participating in the program, opportunities to attend conferences both locally and nationally, and opportunities for advising from residents and peers. Overall, this program will create a sense of "community" for our students interested in the neurosciences. This "community of scholars" will allow students to network with peers, faculty, and individuals here and at other institutions.

Here are the activity domains, with objectives and activities in more detail:

Research Experience: Students will choose a scholarly project based on their interest in neuroscience; a project of basic, translational or clinical research; one in which a specific hypothesis is tested in some way.

Understand the research methodologies used to produce the current state of knowledge in the neurosciences.

Students will demonstrate the ability to think creatively and analytically through completion of an independent, mentored, scholarly project of publication quality within the neurosciences.

Understand the role of collaboration when it comes to treatment and research undertakings within the neurosciences, especially as it relates to translational research themes. Students will collaborate with peers and mentors to form a collegial environment as they undertake activities in the neuroscience AOC.

Clinical Experience: Each student will have the opportunity to choose a clinical area of interest within following domains; psychiatric disorders, neurological disease, or addictive behaviors.
Understand and participate in the long-term clinical treatment as it would present in a variety of clinical neuroscience settings.

The student will be able to diagnose and treat common psychiatric, neurological, or addictive disorders, using both biological and psychosocial interventions.

To achieve the clinical experience learning objective, students can:

- Work at an ambulatory clinic, residential facility, or other community-based program and see a mix of patients each time, at least some of whom are expected to return for follow-ups with the student.
- Work in the operating room, emergency room, or inpatient unit seeing patients, then following this up with continuity visits (e.g., aftercare) on a regular basis.
- Engage in a more in-depth interaction with one or two patients and their families, involving a variety of experiences over the course of four years: outpatient visits; any hospitalizations, ER visits or procedures; home visits; community meetings/activities.
- In any clinical setting, we expect the student to take an active role in patient care, not simply shadowing, but conducting or assisting with patient interviews, exams, and/or procedures.
- During these times, the student would meet regularly with a faculty clinical preceptor to discuss and process the experience. The clinical setting could be related to a student's scholarly project, or different from it. Students would keep a log of their contact hours and activities.

Educational Experience: Each student will have the opportunity to attend a variety of educational events designed to broaden and deepen their knowledge and skills in neuroscience.

- Journal/Reading Club – Scholars and selected faculty will meet monthly to review journal articles, book chapters, or other articles that are relevant to developing an overall appreciation of the neurosciences.
- Neuroscience Seminars – These discussions will cover the "big topics" within the behavioral neurosciences. In addition, Scholars and Mentors will be able to present scholarly projects during the seminars.
- Community Social Gatherings – The program will have frequent informal social gatherings to allow Scholars to form relationships with other Scholars, Mentors, and invited guests.
- Meeting Visiting Faculty – Arrangements will be made for Scholars to have group discussions with visiting faculty in the neurosciences to further learn about the faculty member's research, career etc.
- Grand Rounds, Post Discussion Groups – Discussion groups following selected grand rounds will assist Scholars in their understanding of the topic and how it relates to their own interest and to the field as a whole.
- Workshops – Scholars will be exposed through workshops to essential skills such as research methodology, ethics topics, clinical disorders, and practical skill development. This information will assist Scholars as they pursue their scholarly project and clinical work.

- Regional and National Conferences – Scholars will have the opportunity to attend regional and national meetings to present their work, meet with faculty outside of our institution, and establish relationships with peers from other institutions. Mentors can arrange informal meetings between Scholars and prominent individuals at these events.

Humanistic Experience: To further expand the student's appreciation for the humanistic elements accompanying patients with these disorders, the student will undertake activities to help him/her gain appreciation for how these illnesses are viewed by family and society.

Understand the sociocultural and ethical aspects associated with mental illness and patients afflicted with neurological disease.

Appreciate how the doctor-patient relationship impacts care for neuropsychiatric disorders, and the challenges that could occur in the context of that relationship.

Understand what it is like for patients and families to live with a chronic neuropsychiatric illness

Students will have an in-depth understanding of patient and caregiver perspectives on mental illness or neurological disease, in terms of the meaning of the illness, the consequences, and management.

To achieve the learning objective, students can:

- Attend a patient/family group (advocacy, self-help, support)
- Write a two-page reflective essay on their experiences
- Keep a reflective journal throughout the program
- Do a home visit
- Spend a day at a community site
- Participate in a Balint Group
- Other activities permitted by the AOC director

STUDENT EVALUATION

The progress of the student/mentor team will be reviewed each year by the AOC Director and recommendations made; areas of concern will be addressed with members of the Steering Committee.

The student/mentor team will provide the AOC Director with a timeline of activities completed and those pending completion.

Certification will be awarded by the Steering Committee based on satisfactory completion of the goals of the AOC.

FACULTY AND PROGRAM EVALUATION

Scholars will complete a yearly evaluation form for the program that will be reviewed by the AOC Steering Committee and the Office of Medical Education.

AOC DIRECTORS

Cynthia Conklin, PhD
Melanie Grubisha, MD, PhD
Marta Pecina, MD, PhD
Susan Redding