**PRACTICAL APPROACHES TO STUDYING PROTEIN FUNCTION**

**CBMM5002Q**

**Course Directors: Maha Abdellatif / Danish Sayed**

Class Hours: 2:00 – 4:00pm Wednesday

**Description –** This course is designed for graduate students with advanced molecular biology background and fellows who want to pursue a career as a biomedical researcher. The course covers experimental methodologies (standard and latest advances) that are designed to investigate protein function in general and during disease conditions. Various instructors with different expertise and areas of interest will present and discuss these topics. Using examples from their current research or peer-reviewed published articles, novel approaches from *in silico* analysis to general laboratory techniques and animal models to study proteins’ function will be presented, discussed, and analyzed.

Prerequisites – The students are expected to know a strong background of the genome and protein structures and functions, including gene transcription and translation. These subjects will be briefed to refresh, and will not be covered in detail. It is the student’s responsibility to revise these topics, as they may be part of assignments and exams.

**Objective –**

* The objective of this course is to advance our current knowledge of methods used to study protein function, especially, during disease conditions.
* The students will be introduced to latest techniques that are being used in research laboratories.
* By the end of the course the student will be able to design experiments to study protein of interest or novel proteins using various *in vitro* and *in vivo* models