

# CELLULAR AND MOLECULAR BIOLOGY OF PHOTORECEPTORS IN HEALTH AND DISEASE

## Course Description

### I. RATIONALE BEHIND THE COURSE

- A. Photoreceptors have unique pathology and a peculiar susceptibility to injury. Photoreceptor degenerations are a very common cause of visual loss and blindness.
- B. There are many cellular and biochemical phenomena which are unique to photoreceptor cells. There has been substantial progress in their characterization using a variety of techniques, including molecular biology.
- C. In spite of this progress, the mechanisms that lead to photoreceptor degeneration remain essentially unknown.
- D. The goal of this course is to stimulate research in basic aspects of cell and molecular biology of the photoreceptor cells not only because of their intrinsic scientific value, but also because they are likely to generate new strategies for the prevention and/or treatment of blinding disorders.

### II. SOME ORGANIZATIONAL ASPECTS

- 1. A. Schedule: **lectures** will be on Tuesdays and Thursdays from 9-10:30 a.m. The **Round Tables** (a requirement only for participants taking the course for credit) will be on the second, fourth, sixth and eighth Thursdays, from 10:30 a.m.-12 Noon. All activities will be in the Maumenee 501 lecture room.

- B. Lecture format: A multi-speaker course has the advantage of offering a series of complementary approaches and perspectives. On the other hand, there is also more diversity in the format of the lectures, because each speaker has his/her own lecturing style. There is also going to be variability among the speakers regarding handouts and recommended reading material.

**Participants are encouraged to ask as many questions as possible, both during and at the end of the lectures.**

C. **Round Tables**

1. Round Table participation is a requirement for students taking the course for credit, who will receive before each Round Table one or more research articles. Students will be asked to summarize their content, identify their strengths and weaknesses, and discuss their implications.
2. Round Tables will also be open to a limited number of people auditing the course. Interested persons should inform the Course Director of their intention to participate in the Round Table.

- D. **Evaluation** of students taking the course for credit will be based on their participation in classes and Round Tables.