



Visiting Professor Program Academic Year 2024/2025

TEACHING COMMITMENT: 16 hours

COURSE TITLE

Genetic Models of Human Pathology

TEACHING PERIOD

2nd term

SCIENTIFIC AREA

Applied Biology

LANGUAGE USED TO TEACH

English

COURSE SUMMARY

The course, titled "Mouse Models in Biomedical Research: Focus on Inflammatory Diseases," provides a comprehensive exploration of advanced techniques for generating mouse models. Emphasizing classical transgenesis, gene targeting, and CRISPR/Cas9 technologies, the course aims to elucidate the molecular mechanisms underlying various human diseases. With a primary focus on inflammatory diseases, participants will gain valuable insights into the practical application of animal models in biomedical research.

LEARNING OBJECTIVES

Upon completion of this course, participants will:

- 1) Understand the fundamental techniques for generating mouse models, including classical transgenesis, gene targeting, and CRISPR/Cas9 technology.

Appreciate the role of animal models in studying the pathogenesis of human diseases and testing new therapeutic approaches.

- 2) Gain in-depth knowledge of inflammatory processes and their significance in various diseases.
- 3) Explore specific diseases within the field of inflammatory disease, with a special focus on Treg involvement in human pathology.
- 4) Develop skills in experimental design, data analysis, and result interpretation related to inflammatory diseases.
- 5) Stay informed about cutting-edge research and emerging trends in the field of mouse modeling for inflammatory diseases.

With specific project close to his expertise, the VP will help supporting experimental work of thesis students with particular attention to:

- 1) Experimental Design: Guided exercises to develop experimental protocols for studying inflammatory diseases.
- 2) Data Analysis: Training on analyzing data derived from mouse models, interpreting results, and drawing meaningful conclusions.
- 3) Model Utilization: Practical application of mouse models to simulate and study inflammatory responses.

OTHER ACTIVITIES BESIDES THE COURSE

Additional Activities Beyond the Course:

1) Seminars and Conferences for PhD Students and Research Fellows:

- Target Audience: PhD students and research fellows in the field of biomedical research but also open to a broader audience including researchers, clinicians, and industry professionals.
- Objectives: Facilitate knowledge exchange, networking, and exposure to cutting-edge research in the broader field.
- Topics: Diverse topics ranging from recent advancements in molecular biology to emerging trends in inflammation research. Special attention is expected to be given to thematic Conferences on Inflammation and Metabolic Regulation as well as Models for Sepsis Research.

VISITING PROFESSOR PROFILE

The ideal Visiting Professor candidate for this course should have:

1. Scientific Background:

- Proven expertise in using animal models for studying physiological and pathological conditions.
- High-impact scientific publications, international meeting participation, and project coordination.

2. Teaching Experience:

- Demonstrated experience in teaching at the graduate or postgraduate level.
- Effective teaching methods, emphasizing practical applications and hands-on learning.

CONTACT REFERENT

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