האוניברסיטה העברית בירושלים
THE HEBREW UNIVERSITY OF JERUSALEM

The Hebrew University of Jerusalem

Syllabus

SELECTED TOPICS IN STRUCTURE AND FUNCTION OF GPCR - 71136

Last update 15-06-2021

HU Credits: 2

Degree/Cycle: 2nd degree (Master)

Responsible Department: Biochemistry, Food Science and Nutrition

Academic year: 0

Semester: 2nd Semester

Teaching Languages: English

Campus: Rehovot

Course/Module Coordinator: Prof. Masha Niv
http://departments.agri.huji.ac.il/biochemfoodsci722/teachers/niv_masha/lab/

Coordinator Email: masha.niv@mail.huji.ac.il

Coordinator Office Hours: by email appointment

Teaching Staff:

Course/Module description:

The course will be given in English. The target audience is MSc and PHD students interested in GPCRs. Particular emphasis will be given to structural aspects and practicing critical reading and summarizing of scientific papers

Course/Module aims:

Practice writing scientific review (as in refereeing a paper for a journal)
Learn to visualize GPCR structures and be able to identify (in 3D) regions of interest (interactions, ligand binding etc.)

Learning outcomes - On successful completion of this module, students should be able to:

List the main milestones in GPCR structural discovery
Find, download and visualize the structure of GPCR of interest
Obtain and visualize a structure or a model of GPCR of interest
Contribute new information to a wiki page of receptor of interest

Attendance requirements(%):

mandatory

Teaching arrangement and method of instruction: Interactive and projects-based, on campus

Course/Module Content:

• Families A, B and C of GPCRs and main characteristics of GPCR structure, GPCRs in drug discovery
• Main aspects of GPCR structures
• Orthosteric vs allosteric binding sites, coupling to G-proteins, biased signaling
• Taste GPCRs
• Melanocortin receptors

Required Reading:
Papers will be available via moodle site of the course

Additional Reading Material:
Relevant podcasts, such as DrGPCR

Course/Module evaluation:
End of year written/oral examination 0 %
Presentation 0 %
Participation in Tutorials 0 %
Project work 0 %
Assignments 0 %
Reports 35 %
Research project 50 %
Quizzes 15 %
Other 0 %

Additional information:
Please email Prof. Niv if you are interested to join the course