Fundamentals in Glycobiology (340.709)

Course Curriculum



Goal:

Recently the NHLBI has funded a Glyoconjuagtes and Cardiovasuclar Disease Program of Excellence (PEG) at the Johns Hopkins University. One goal of the PEG is to train the next generation of glycoscientists. To accomplish this goal we have introduced three courses at the Johns Hopkins University: "Introduction to Glycobiology" every spring from 2012-2018, "Fundamentals in Glycobiology" in the fall of 2012, 2014, and 2016 and "Techniques in Glycobiology" in the fall of 2013, 2015, and 2017.

The Next Class Starts August 21, 2012 – Fundamentals in Glycobiology:

When and where is class?

Class will be held between 2-3.30pm in physiology 612

Class Schedule:

Day	Lecturer	Title
21-Aug	Gerald Hart	Overview of Mamalian Glycobiology
		Biosynthesis of Glycans/Sugar
23-Aug	Kevin Yarema	Metabolism
28-Aug	Hui Zhang	N-linked Glycans
30-Aug	Natasha Zachara	O-linked Glycans
4-Sep	Natasha Zachara	O-GICNAC
6-Sep	Gerald Hart	GPI Anchors
11-Sep	Gerald Hart	Proteoglycans/GPI Anchors
13-Sep	Gerald Hart	Glycosyltransferases
18-Sep	Kevin Yarema	Glycosidases
20-Sep	Everyone	Round Table Discussion:
25-Sep	Subroto Chatterjee	Glycoshingolipids
27-Sep	Subroto Chatterjee	Glycoshingolipids and Atherosclerosis
2-Oct	Everyone	Round Table Discussion:
4-Oct	Allen Bush	Glycoconjugates of Bacteria
9-Oct	Hui Zhang	Glycoconjugates of Plants
		Lectins and Carbohydrate binding
11-Oct	Hui Zhang	proteins
16-Oct	Everyone	Round Table Discussion:
18-Oct	Natasha Zachara	Glycobiology of infectious disease
23-Oct	Kevin Yarema	Glycans in Development and Cancer
25-Oct	Everyone	Round Table Discussion:

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Round table discussions: Students will be divided into four groups. They will be provided with a selection of recent literature on a topic, and will collectively present a journal club style presentation for ~45min. This presentation will anchor a longer discussion including the other students and faculty involved in the course.

Examination: Students will be asked to prepare a short grant (1 page specific aims, 6 pages research proposal, citations) focused on studying the roles of glycoconjugates in cardiovascular disease.

How to register:

- Please have your students and post-docs register for credit/audit
- ➤ **Note:** post-docs and others registering for credit/audit need to fill out a form at the registrar, and the course coordinator (Natasha Zachara, WBSB 408) has to sign the form.
- Other PEG personnel should email the course coordinator (Natasha Zachara, WBSB 408, nzachara@jhmi.edu) with their name, position, and the lab to which they belong.

Who to contact:

Natasha Zachara, WBSB 408, nzachara@jhmi.edu