MASS SPECTROMETRY OF GLYCOPROTEINS

October 15-16, 2018

Note : A 30-minute session each day is available to discuss participants' respective research with Dr. Parastoo Azadi. You may make an appointment with her or you can visit her office concerning this matter (during the coffee break, lunch time, or after the lab exercise) .

Monday, October 15, 2018

9:00 a.m. – 9:05 a.m.
Introduction **Dr. Parastoo Azadi**

9:05 a.m. – 11:00 a.m.
Lecture: **"Release and Analysis of N and O-Linked Glycans from Glycoproteins"**
Dr. Parastoo Azadi

11:00 a.m. – 12:00 p.m.
Lecture: **"Glycopeptide Analysis by Permethylation"**
Dr. Asif Shajahan

12:00 p.m. - 1:00 p.m. **- LUNCH**

1:00 p.m. – 3:00 p.m. **Mass Spectrometry Lab Demo**

3:00 p.m. – 3:15 p.m. **BREAK**

3:15 p.m. – 5:00 p.m.
Lecture: "Quantification of Glycans" **Dr. Ron Orlando**

Tuesday, October 16, 2018

9:00 a.m. – 12:00 a.m.
Lecture: "Glycoproteomics" **Dr. Lance Wells**

12:00 p.m. - 1:00 p.m. **– LUNCH**

1:00 p.m. - 3:00 p.m. **Glycan Analysis by Waters System**

3:00 p.m. – 3:10 p.m. **- BREAK**

3:10 p.m. – 5:00 p.m.
Mass Spec Demo
Dr. Stephanie Archer-Hartmann

TOOLS FOR DATA INTERPRETATION IN GLYCOMICS AND GLYCOPROTEOMICS

October 17-19, 2018

Wednesday, October 17, 2018

9:00 a.m. – 9:05 a.m.
Introduction
Dr. Parastoo Azadi

9:05 a.m. – 10:00 a.m.
Lecture: **"Release & Analysis of N & O-Linked Glycans"**
Dr. Parastoo Azadi

10:00 a.m. – 10:10 a.m. **BREAK**

10:10 a.m. – 11:15 a.m.
Lecture: "**Release & Analysis of N & O-Linked Glycans" Continued**
Dr. Parastoo Azadi

11:15 a.m. – 12:15 p.m.
Lecture: **"Glycomics and Glycoproteomics Databases"**
Dr. Rene Ranzinger

12:15 p.m. – 1:45 p.m. **- LUNCH and CCRC tour**

1:45 p.m. – 2:45 p.m.
Overview: Software tools for interpretation of MS data
Dr. Rene Ranzinger

2:45 p.m. – 3:00 p.m. **BREAK**

3:00 p.m. – 5:00 p.m.
Manual annotation of Glycomics MS data
Dr. Stephanie Archer-Hartmann

Thursday, October 18, 2018

9:00 a.m. – 10:00 a.m.
Glyco Workbench: Glycomics data processing I
Dr. Rene Ranzinger

10:00 a.m. – 10:15 a.m. **- BREAK**

10:15 a.m. – 11:15 a.m.
Glyco Workbench: Glycomics data processing II
Dr. Rene Ranzinger

11:15 a.m. – 12:15 p.m.
GRITS Toolbox: Glycomics data processing I
Dr. Rene Ranzinger

12:15 p.m. – 1:15 p.m. - **LUNCH**

1:15 p.m. – 2:45 p.m.
GRITS Toolbox: Glycomics data processing II
Dr. Rene Ranzinger

2:45 p.m. – 3:00 p.m. - **BREAK**

3:00 p.m. – 4:00 p.m.
GRITS Toolbox: MIRAGE and Meta data reporting support **Dr. Rene Ranzinger**

4:00 p.m. – 5:00 p.m.
Manual annotation of glycopeptide MS data
Dr. Stephanie Archer-Hartmann

Friday, October 19, 2018

9:00 a.m. – 10:00 a.m.
Introduction in Byonic/Proteindiscoverer and method setup
Dr. Brent Weatherly

10:00 a.m. – 10:15 a.m. - **BREAK**

10:15 a.m. – 12:15 p.m.
Data analysis with bionic/Proteindiscoverer
Dr. Osman Shekh

12:15 p.m. – 1:15 p.m. **LUNCH**

1:15 p.m. – 2:15 p.m.
Running own data using Byonic or GRITS
Dr. Rene Ranzinger,
Dr. Brent Weatherly, Dr. Osman Shekh

2:15 p.m. – 3:00 p.m.
Course summary, Course evaluation, Final Questions & Answers

3:00 p.m. – 4:00 p.m.
Free time to meet with instructors