

# 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**