



**Warren Workshop VII Program  
Charles River Campus  
Boston University, Boston, MA USA  
August 15 – 18, 2018**

***Wednesday, August 15***

**10 Buick Street, 1<sup>st</sup> Floor Lobby**

4 – 5<sup>30</sup> PM

*Registration*

**10 Buick Street, 18<sup>th</sup> floor**

6<sup>30</sup> – 7<sup>30</sup> PM

*Registration and Reception*

7<sup>30</sup> – 7<sup>45</sup> PM

*Welcome and Introductions:* Catherine E Costello &  
Joseph Zaia, Boston University School of Medicine,  
Boston, MA USA

7<sup>45</sup> – 8 PM

*Remembering Charles Warren*

Vernon N Reinhold, University of New Hampshire,  
Durham, NH USA

8 – 8<sup>30</sup> PM

*Integrated Cancer Research and International Data  
Sharing: NCI, CPTAC, and Cancer Moonshot  
Proteogenomics Initiatives.*

Henry Rodriguez, National Institutes of Health,  
Bethesda, MD USA

**Thursday, August 16**  
**The Metcalf Trustee Center, 1 Silber Way, 9<sup>th</sup> floor**

**8<sup>30</sup>-10 AM**

**Session 1. 2-D Glycan analysis**

8<sup>30</sup> AM

Lecture 1.1. *Glycans and Glycopeptide Targets for Antibodies and Lectins*

Richard D Cummings, Harvard Medical School,  
Boston, MA USA

9<sup>00</sup> AM

Lecture 1.2. *Beam search: A Targeted Versatile Approach to Glycan Ligand Discovery in Natural Microenvironments.*

Ten Feizi, Imperial College, London, UK

9<sup>30</sup> AM

Lecture 1.3. *Moving Two Dimensional N-glycan Mapping by MALDI Imaging Mass Spectrometry to Clinical Assays, Three Dimensions and Other Glycan Classes*

Richard R Drake, Medical Univ. of South Carolina,  
Charleston, NC USA

**10 – 11 AM**

**Posters and Coffee**

**11 AM-12<sup>30</sup> PM**

**Session 2. Glycan Profiling**

11<sup>00</sup> AM

Lecture 2.1. *Applications of New Software to Improve the Speed and Quality of Multi-attribute Data Analysis for Glycopeptide and Released Glycan Separations.*

Pauline Rudd, NIBRT, Dublin and A\*STAR, Singapore

- 11<sup>30</sup> AM      Lecture 2.2. *So We Can Analyse (Many!) Glycan Structures, What Now?*  
Nicki Packer, Macquarie University, Sydney, Australia
- 12<sup>00</sup> N      Lecture 2.3. *A miRNA-based Approach Towards Understanding the Glycocode*  
Lara Mahal, New York University, New York, NY USA
- 12<sup>30</sup> PM      Lecture 2.4. *Towards Automated, High-throughput Workflows for Glycomic and Glycoproteomic Analysis by Mass Spectrometry*  
Noortje de Haan, Leiden University Medical Centre, Leiden, The Netherlands
- 1 – 2 PM      Lunch**
- 2 - 3 PM      Session 3: Co-evolution, Remodelling & Ion Spectroscopy**  
2<sup>00</sup> PM
- 2<sup>30</sup> PM      Lecture 3.1. *Co-evolution of N-glycosylation Sites and Remodeling in an Amino Acid Transporter, SLC3A2*  
James Dennis, Mt. Sinai Hospital and University of Toronto, Toronto, ONT Canada
- 2<sup>30</sup> PM      Lecture 3.2. *IR Spectroscopy of Carbohydrate Ions and Their MS/MS Fragments: Fundamental Questions and Application to Glycomics*  
Isabelle Compagnon, University of Lyon, Lyon, France
- 3 – 3<sup>30</sup> PM      Lightning Talks 1-6**

3<sup>30</sup> – 4<sup>30</sup> PM

**Posters and Ice**

4<sup>30</sup>-6 PM

**Session 4: Life Within the Cell**

4<sup>30</sup> PM

Lecture 4.1. Nutrient Regulation of Signaling and  
Transcription by O-GlcNAc

Gerald W Hart, Johns Hopkins University, Baltimore,  
MD USA

5<sup>00</sup> PM

Lecture 4.2. *Comprehensive Carbohydrate Sequencing  
with Spectral Documentation*

Vernon N Reinhold, University of New Hampshire,  
Durham, NH USA

5<sup>30</sup> PM

Lecture 4.3. *The Importance of Horizontal Gene  
Transfer and Convergent Evolution in the Composition  
of the Cyst Wall of the Eye Pathogen Acanthamoeba  
castellanii*

John Samuelson, Boston University Goldman School  
of Dental Medicine, Boston, MA USA

**Friday, August 17**  
**The Metcalf Trustee Center, 1 Silber Way, 9<sup>th</sup> floor**

**8<sup>30</sup>-10 AM**

**Session 5: Life Outside the Cell**

8<sup>30</sup> AM

Lecture 5.1. *Comprehensive and Site-Specific Analysis of Immunoglobulin Heavy Chain N-Glycosylation using Glycopeptide Tandem Mass Spectrometry*

Kevin B Chandler, Boston University School of Medicine, Boston, MA USA

9<sup>00</sup> AM

Lecture 5.2. *From Purified Compound Method Development Towards a CE-MS/MS Platform for the Structural Analysis of Biologically Relevant Sulfated Glycosaminoglycan Carbohydrate Mixtures*

Franklin E Leach, University of Georgia, Athens, GA USA

9<sup>30</sup> AM

Lecture 5.3. *Characterization of Site-specific Glycosylation of Hyalectan Proteoglycans*

Joseph Zaia, Boston University School of Medicine, Boston, MA USA

**10 – 11 AM**

**Coffee and Posters**

**11 AM – 12<sup>30</sup> PM**

**Session 6: Whole Cells & Other Worlds**

11<sup>00</sup> AM

Lecture 6.1. *Sensitive Approaches to Whole Cell and Polarised Epithelial Surface Glycomes*

Jane Thomas-Oates, University of York, UK

- 11<sup>30</sup> AM      Lecture 6.2. *Non-glycosyl Substituents of Plant Polysaccharides: Structure, Function, and Biosynthesis*  
William S York, University of Georgia, Athens, GA USA
- 12 N      Lecture 6.3. *Glycans as Microbial IDs*  
Laura Kiessling, Massachusetts Institute of Technology, Cambridge, MA USA
- 12<sup>30</sup> - 1 PM      **Lightning Talks 7-12**
- 1 – 2 PM      **Lunch**
- 2 – 4 PM      **Session 7: Models & Glycotools**
- 2<sup>00</sup> PM      Lecture 7.1. *Computational and Biophysical Data provide New Insights into Carbohydrate Recognition*  
Robert A Woods, University of Georgia, Athens, GA USA
- 2<sup>30</sup> PM      Lecture 7.2. *Glycan Topology Reconstruction from Tandem Mass Spectra*  
Pengyu Hong, Brandeis University, Waltham, MA USA
- 3 – 4 PM      *Informatics Tag Team: Towards a Collaborative Global Glycoinformatics Community*
- 3 PM      *GlyCosmos*. Kiyoko F Aoki-Kinoshita, Soka University, Tokyo, Japan

3<sup>15</sup> PM *GlyConnect*. Frédérique Lisacek, Swiss Institute of  
Bioinformatics, Geneva, Switzerland

3<sup>30</sup> PM *GlyGen*. William S York, University of Georgia,  
Athens, GA USA

3<sup>45</sup> – 4 PM *Panel Discussion*

**4 - 5 PM Posters and Ice**

**7 - 10 PM Social Dinner**



**No Name Restaurant, 1<sup>st</sup> Floor**

**15 ½ Fish Pier, Boston, MA 02210**

**Saturday, August 18**  
**The Metcalf Trustee Center, 1 Silber Way, 9<sup>th</sup> floor**

- 9 - 10<sup>30</sup> AM**      **Session 8: Software Workshop**  
Organized by Rene Ranzinger, University of Georgia,  
Athens, GA USA  
Hands-on Discussions and Training with Developers
- 10<sup>30</sup> – 11 AM**      **Coffee**
- 11 AM - 12 N**      **Summaries**
- 12 N - 1 PM**      **Lunch & Planning**
- 1 PM**      **Closing**

**Bonus Event: Baseball Game**  
**Red Sox vs. Tampa Bay Rays**  
**Fenway Park, 7<sup>10</sup> PM**