

Program for Glyco-Bioinformatics satellite meeting

2018 Society for Glycobiology Annual Meeting

Monday, November 5th

Location: Hilton New Orleans Riverside Hotel, New Orleans, Louisiana, USA

Glycomics research has gained significant impact over the past decade due, in part, to technical advances that allow data to be generated with greater accuracy and throughput. However, computational methods for the analysis and interpretation of glycomics data have not kept pace with these advances in data generation. As a consequence, manual processing and interpretation of glycoanalytic data is still common practice, in spite of the recent development of many software programs and databases that provide tools and information that can significantly reduce data processing and interpretation time. The satellite meeting on Glyco-Bioinformatics brings software developers and database providers together with biological and biomedical scientists who can benefit from these informatics resources. The aim of the meeting is to provide these scientists with an overview of currently available tools and illustrate how these tools can benefit their research. The meeting consists of two parts: In the first part software developers and database providers will introduce their databases and software tools by a short presentation followed by a brief discussion. In the second part of the satellite a live demonstration session will allow attendees to get more insight into the presented software tool and have individual discussions with the developers.

Session 1: Databases and information standards

Session Chair: René Ranzinger

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| 09:00am – 09:05am | Welcome
<i>René Ranzinger</i> |
| 09:05am – 09:20am | GlyGen – Glycomics and Glycoproteomics data integration and presentation
<i>Will York, Raja Mazumder</i> |
| 09:20am – 09:35am | Release of the GlyCosmos Portal
<i>Kiyoko Aoki-Kinoshita</i> |
| 09:35am – 09:50am | UniCarbKB and GlyGen: From curation to data sharing
<i>Matthew Campbell</i> |
| 09:50am – 10:05am | Activities at the Noguchi Institute: Glycoinformatics Consortium (GLIC) and GlycoNAVI
<i>Issaku Yamada</i> |

10:05am – 10:20am MIRAGE – Minimum Information for A Glycomics Experiment
Will York

Morning Break (10:20am – 10:35am)

Session 2: Processing and annotating analytical data

Session Chair: Kiyoko Aoki-Kinoshita

10:35am – 10:50am GRITS Toolbox – An extensible software platform for the interpretation of glycomics MS data
René Ranzinger

10:50am – 11:05am SimGlycan: Speeding up LCMS data processing - molecular feature finding, precursor peak picking, and MS/MS spectra annotation - of multiplexed glycomics experiments using Orbitrap based mass spectrometers
Sanjib Meitei

11:05am – 11:20am DANGO: An MS data annotation software for Glycolipidomics
Masaaki Matsubara

11:20am – 11:35am Progress in the New Carbohydrate Microarray Analysis and Reporting Tool: CarbArrayART
Yukie Akune

11:35am – 11:50am A Feature Driven Approach To Identification of Glycopeptides From Complex Samples
Joe Zaia

Lunch Break (11:50am – 1:20pm)

Session 3: Tools

Session Chair: René Ranzinger

01:20pm – 01:35pm Tools to enable non-specialists to model glycoconjugates and glycan-protein interactions
Rob Woods

01:35pm – 01:50pm Enabling tools for systems level analysis of glycosylation
Sriram Neelamegham

- 01:50pm – 02:05pm Glycodata profiling across Glycomics@ExPASy resources
Julien Mariethoz
- 02:05pm – 02:20pm New developments in GlycanBuilder2 and a new GlycanFormatConverter
Shinichiro Tsuchiya
- 02:20pm – 02:30pm Things everybody should know about and announcements
Sriram Neelamegham, Kiyoko Aoki-Kinoshita and René Ranzinger

Session 3: Hands-on demo session (02:30pm – 04:00pm)

Software developers and presenters from session 1, 2 and 3 will give parallel live demonstrations to interested individuals.

Name	Software, Database
Akune Yukie	CarbArrayART
Issaku Yamada	GlycoNAVI
Joseph Zaia	TBA
Julien Mariethoz	Glycomics@ExPASy
Kiyoko Aoki-Kinoshita	GlyCosmos and RINGS
Masaaki Matsubara	GRITS Toolbox “Dango”
Matthew Campbell	GlycoStore
Raja Mazumder, Will York	GlyGen
Rene Ranzinger	GRITS Toolbox
Rob Woods	Computational Glycoscience Portal
Sanjib Meitei	SimGlycan®
Shinichiro Tsuchiya	GlycanBuilder, GlycanFormatConverter
Sriram Neelamegham	Tools at VirtualGlycome.org

Presenters

Name	Email	Affiliation
Kiyoko Aoki-Kinoshita	kkiyoko@soka.ac.jp	Soka University
Matthew Campbell	m.campbell2@griffith.edu.au	Griffith University
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