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-Bioinformaticts 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

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

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 – 02:35pm	GlycoDomainViewer
	Hiren Joshi
02:35pm – 02:45pm	Things everybody should know about and announcements
	Sriram Neelamegham, Kiyoko Aoki-Kinoshita and René Ranzinger

Session 3: Hands-on demo session (02:45pm – 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
Hiren Joshi	GlycoDomainViewer
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
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