

# PROGRAM BOO



IGO www.glyco26.org



Fusing the traditional Chinese character for Glyco, 醣, within the 6-membered ring chemical structure of saccharide to render an enticing appearance of the oriental window lattice. It stands as an open invitation to experience for yourselves the vibrant scientific and cultural prosperity of Taiwan.

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# Foreword

From the Glyco26 Organizing Committee Co-chairs





The biennial International Symposium on Glycoconjugates (ISG), focusing on the structures and functions of a diverse range of glycoconjugates, is historically the most significant international event for the glycobiology community. Since the second Symposium in 1973, it has been organized by and held at different member countries of the International Glycoconjugate Organization (IGO) every two years without interruption until 2021. The 26th Symposium (Glyco26) was initially scheduled for August 2021 in Taipei, Taiwan, and was duly announced at the Glyco25 meeting in Milan in August 2019. No one could have foreseen how the COVID-19 pandemic would then inflict the world over the next three years. By early 2021, it was clear that the Symposium could not possibly be held as planned. With full support from the board of IGO, a difficult decision was made to defer it to 2023, in favor of an in-person format instead of a virtual meeting. Glyco26 is therefore more than four years in preparation, during which the world witnesses not only the pandemic but also escalating geopolitical tensions and a war in Ukraine that is still ongoing. But here we are now in Taipei, finally, to celebrate glycoscience at its best, and friendship.

On behalf of the local organizing committee, we would like to thank you for attending Glyco26, particularly those who need to travel far in this challenging time. Glyco26 would not have been possible without the enthusiastic support from eminent glycoscientists worldwide. In total, we have more than 60 invited speakers from over 20 countries in Asia, Australia, Europe, North America and South America. In selecting speakers, we have worked hard to balance subject topic coverage with the career stage, gender, and geographical representation of the individual scientists invited. Glyco26 aims to uphold the tradition and spirit of the ISG while infusing new thinking and promoting new blood. In addition to three IGO Award lectures, eight Plenary Lectures and 20 scientific sessions that include a Society for Glycobiology (SFG) guest session and two Asian Community of Glycoscience and Glycotechnology (ACGG) sessions, Glyco26 is further complemented by workshops focusing on glycoinformatics and glycoproteomics, pre-symposium advanced courses on selected topics of glycobiology, and two satellite meetings, all without charging an additional fee for interested attendees.

We sincerely hope that many years later, when we look back, Glyco26 will stand out as memorable as any past ISG meetings, if not more so. It shall mark the years we fought and prevailed over the COVID-19 pandemic, which incidentally has brought more public attention to glycans as the colorful coat that shields every reconstructed 3D image of the CoV spike proteins so often popping out in media and academic journals. Understanding the biology of glycoconjugates is the key to unlocking many intricacies of infection and immunity, microbiome and host interactions, cancer and immunotherapy, and much more, from developmental biology to neurosciences. We have plenty to learn from each other and to contribute collectively.

Welcome and do enjoy a full week of quality glyco time here at Glyco26 in Taipei!

July In

**Kay-Hooi Khoo and Fu-Tong Liu** Co-Chairs, Glyco26 Local Organizing Committee

August 2023.

# About IGO

History Aims Officers National Representatives





History

Up to 1989, a Steering Committees of 10-15 participants was responsible for the organization of the biennial International Symposium on Glycoconjugates. In 1987 Hans Vliegenthart, who was then the contact person with the International Union of Biochemistry (IUB, now IUB-MB) proposed that a formal organization be established. At the Steering Committee meeting in Jerusalem (1989), chaired by Nathan Sharon, it was agreed that the International Glycoconjugate Organization should be created and Alan Chester was elected as Secretary. Hans Vliegenthart, Bengt Lindberg and Alan Chester prepared the Constitution, which was accepted in 1991 at the Toronto meeting.

# Aims

Beyond overseeing the proper arrangement of the biennial International Glycoconjugate Symposia, IGO is charged with the responsibility to select recipients of the IGO Award and the IGO Young Glycoscientist Award, and to administer the Award fund. Above all, IGO is to promote international collaboration for the study of glycoconjugates.

# Officers

President: Sandro Sonnino (National Representative of the 2019 host country, Italy).
President-Elect: Albert M. Wu (National Representative of the 2023 host country, Taiwan).
Immediate Past President: Jin Won Cho (National Representative of the 2017 host country, Korea).
Secretary: Celso Reis
Treasurer: Thierry Hennet

# National Representatives

- (1) Pedro Bonay (Spain)
- (2) Nicolai Bovin (Russia)
- (3) Henrik Clausen (Denmark)
- (4) Philippe Delannoy (France)
- (5) Anne Dell (UK)
- (6) Jukka Finne (Finland)

(7) Thierry Hennet (Switzerland)

- (8) Rüdiger Horstkorte (Germany)
- (9) Koichi Kato (Japan)
- (10) Jaroslav Katrlík (Slovak Republic)
- (11) Ute Krengel (Norway)
- (12) Gordan Lauc (Croatia)
- (13) Hakon Leffler (Sweden)
- (14) Haojie Lu (China)
- (15) Matthew Macauley (Canada)
- (16) Stacy Malaker (USA)
- (17) Karina Mariño (Argentina)
- (18) Mauro Pavão (Brasil)
- (19) Andrei Petrescu (Romania)
- (20) Alessandro Prinetti (Italy)
- (21) Celso Reis (Portugal)
- (22) Avadhesha Surolia (India)
- (23) Morten Thaysen-Andersen (Australia)
- (24) Maciej Ugorski (Poland)
- (25) Els Van Damme (Belgium)
- (26) Hans Vliegenthart (The Netherlands)
- (27) Iain Wilson (Austria)
- (28) Michaela Wimmerová (Czech Republic)
- (29) Albert Wu (Taiwan)
- (30) Won Ho Yang (South Korea)
- (31) Yehiel Zick (Israel)





# Symposium Committees

Local Organizing Committees Scientific Program Advisory Board Secretariat





# **Local Organizing Committees**

Fu-Tong Liu and Kay-Hooi Khoo, Academia Sinica (Co-Chairs) Takashi Angata, Academia Sinica Chuan-Fa Chang, National Cheng Kung University Yijuang Chern, Academia Sinica Ivan Dzhagalov, National Yang Ming Chiao Tung University Shie-Liang Hsieh, Academia Sinica Chun-Cheng Lin, National Tsing Hua University Chun-Hung Lin, Academia Sinica Kuo-I Lin, Academia Sinica Todd Lowary, Academia Sinica Huey-Kang Sytwu, National Health Research Institutes Cheng-Chung Wang, Academia Sinica Ruey-Bing Yang, Academia Sinica Alice Lin-Tsing Yu, Chang Gung University

# Scientific Program Advisory Board

Kiyoko F. Aoki-Kinoshita, Japan Henrik Clausen, Denmark Anne Dell, UK Rita Gerardy-Schahn, Germany Robert Haltiwanger, USA Vlad Panin, USA James C. Paulson, USA Tadashi Suzuki, Japan Morten Thaysen-Andersen, Austrlia

# Secretariat

Tsui-Ling Hsu, Academia Sinica Hung-Lin Chen, Academia Sinica Grace Chen, Academia Sinica Elite Professional Conference Organizer Contact: glyco26.org@gmail.com

# IGO AWARDS

2021 IGO Hakomori Award 2023 IGO Hakomori Award 2023 IGO Hakomori Young Glycoscientist Award



# 2021 IGO Hakomori Award 2021 International Glycoconjugate Organization (IGO) Hakomori Award



# Els JM van Damme

Full Professor Department of Biotechnology, Ghent University, Belgium

Professor Els J.M. Van Damme received her Ph.D. in Plant Sciences (1991) from the Catholic University of Leuven, Belgium. She is a full professor at Ghent University in the Department of Biotechnology, Faculty of Bioscience Engineering. She has over 35 years of expertise in plant lectins and plant glycobiology. She started her research with the purification and biochemical characterization of novel plant lectins. Afterwards, her interest shifted to molecular cloning of plant lectins and the exploitation of the defense properties of lectins. Her research facilitates the use of lectins for agricultural and biomedical applications.

The current research of her laboratory focuses on (1) the study of the importance of protein-carbohydrate interactions for plant growth and development; (2) the characterization and biological functions of cytoplasmic plant lectins; (3) the use of lectins as carrier molecules for the delivery of RNA.

Professor Van Damme has authored the Handbook of Plant Lectins: Properties and Biomedical Applications (John Wiley & Sons, Chichester, UK), published >350 peer review articles, and >50 book chapters. Professor Els Van Damme has trained about 40 Ph.D. students, supervised more than 150 Master and Bachelor students with their thesis work, and trained many postdoctoral fellows and visiting scientists.



# 2023 IGO Hakomori Award

2023 International Glycoconjugate Organization (IGO) Hakomori Award



# Tadashi Suzuki

**Chief Scientist** Glycometabolic Biochemistry Laboratory RIKEN Cluster of Pioneering Research, Japan

Tadashi Suzuki received his B. S. (1992), M. S. (1994) and D. Sci. (1997) from Department of Biochemistry and Biophysics at University of Tokyo, Japan (advisor; Prof. Yasuo Inoue (1991-1995) and Assoc. Prof. Yasufumi Emori (1995-1997)). During this period, he demonstrated the activity of the cytoplasmic peptide:N-glycanase (PNGase/ Ngly1) in mammalian cells and characterized its enzymatic properties. He also proposed that this enzyme may be involved in the guality control of newly synthesized glycoproteins. He then became a postdoctoral fellow at Department of Biochemistry and Cell Biology, State University of New York at Stony Brook (1997-2000) in Prof. William J. Lennarz's laboratory, and in 2000 he became a Research Assistant Professor in the same Department. Then he came back to Japan in 2001 as an independent researcher, PRESTO (Precursory Research for Embryonic Science and Technology; Japan Science and Technology Agency) and became an Assistant Professor at the University of Tokyo (2002-2004) and a Visiting Associate Professor at Osaka University Graduate School of Medicine (2004-2007). During this period, he identified the gene encoding two cytoplasmic glycosidases, endobeta-N-acetylglucosaminidase (ENGase) and alpha-mannosidase (Man2C1), involved in the catabolism of free glycans in the cytosol. He was a Team Leader at Glycometabolome Team, Systems Glycobiology Research Group, RIKEN (2007-2018). He currently serves as a Chief Scientist at Glycometabolic Biochemistry Laboratory, RIKEN Cluster for Pioneering Research (2018-) and also holds a position as a Visiting Professor, Graduate School of Science and Engineering, Saitama University (2010-) and a Principal Investigator, NGLY1 Deficiency Project, T-CiRA Program (2017-).

His current research interests are (1) clarification of the novel catabolic pathway for glycans on glycoproteins; (2) characterization of biological functions of cytoplasmic peptide:N-glycanase (Ngly1) as well as the non-lysosomal catabolic pathway of N-glycans; (3) development of new analytical methods for glycans; and (4) development of therapeutics for NGLY1 deficiency.

He received Genzyme Award for the best Ph. D. thesis in Glycobiology (1997), and Glycobiology Significant Achievement Award (2016) from Society for Glycobiology; Young Investigator Award from the Japanese Biochemical Society (2005) and the Japanese Society for Carbohydrate Research (2008). He serves as an Editorial Board Member (2004-) and Executive Editor (2016-), Biochimica et Biophysica Acta – General Subjects, as well as an Associate Editor, the Journal of Biochemistry (2022-).



# 2023 **IGO** Hakomori Young Glycoscientist Award

2023 International Glycoconjugate Organization (IGO) Hakomori Young Glycoscientist Award



## Ana Sofia Luís

#### Researcher

Mucin Biology Groups, Department of Medical Biochemistry and Cell Biology University of Gothenburg, Sweden

Ana Luis obtained her Ph.D. at Newcastle University, UK. During this time, she studied the mechanisms of pectin degradation by the human gut microbiota. At the end of her Ph.D., she was awarded a Marie-Currie fellowship to develop her postdoctoral research at University of Michigan, USA, and University of Gothenburg, Sweden. During this time her research interests shift to mucin O-glycan active enzymes.

Since 2022, she is an independent researcher at the Mucin Biology Groups, Department of Medical Biochemistry and Cell Biology at the University of Gothenburg, Sweden. Her research group is focused on the functional and structural characterization of enzymes and carbohydrate-binding modules in order to understand w the mechanisms of mucin utilization by gut bacteria and the role of bacterial binding proteins in gut colonization. The goal of her research is to understand the basic mechanisms of microbiota-host mucins interactions.



# Invited Speakers

- Plenary Lectures
- Keynote Lectures
- Glycoinformatics Workshop
- Glycoproteomics Workshop
- Advanced Courses

# Plenary Lectures



### Inka Brockhausen

Queen's University, Canada Title: Mucins and bacteria: Functional relationships



### Gunnar C Hansson

University of Gothenburg, Sweden Title: The gel-forming mucins protecting our intestinal and respiratory tracts are densely glycosylated polymeric proteins



#### **Nathalie Juge** Quadram Institute, UK Title: Sialic acid metabolism in the gut microbiota

### Hiroshi Kitagawa

Kobe Pharmaceutical University, Japan Title: Sulfated glycosaminoglycans - Studies in diversity



### Heinz Läubli

Laboratory for Cancer Immunotherapy, Switzerland Title: Targeting cancer-associated sialylation for cancer immunotherapy



### Lara Mahal

University of Alberta, Canada Title: Rethinking the paradigm: New roles for non-coding RNA in controlling the cancer glycome.



### Matthew Pratt

University of Southern California, USA

Title: Build it to understand it: O-GlcNAc modification plays multiple protective roles against protein amyloid aggregation and pathogenesis



### Alice Yu

Chang Gung Memorial Hospital and University, Taiwan Title: Cancer immunotherapy targeting glycosphingolipids



### Hans Bakker

Hannover Medical School, Germany Title: C-mannosylation of proteins: Specificity and function



### Daniel Bojar

University of Gothenburg, Sweden Title: An interface is worth a thousand pictures: An integrated systems approach to glycobiology



### Harry Brumer

University of British Columbia, Canada Title: The human gut microbiota-plant cell wall nexus



### **Xing Chen** Peking University, China Title: Labeling, imaging and proteomics of brain glycans



### Cristina De Castro

University of Naples Federico II, Italy Title: Giant viruses and their unusual glycans



### Matthew DeLisa

Cornell University, USA Title: Making weak antigens strong: exploiting bacterial outer membrane vesicles for delivering glycans to the immune system



### Vojo Deretic

University of New Mexico School of Medicine, USA Title: Galectins, Atg8ylation, and stress granules in autophagy and membrane stress response



### Kurt Drickamer

Imperial College London, UK Title: Mammalian lectin arrays for characterizing host-pathogen interactions



### Mario Feldman

Washington University School of Medicine, USA Title: Human gut bacteria tailor extracellular vesicle cargo for the breakdown of diet- and host-derived glycans



### Yann Guerardel

Université de Lille, France

Title: Regulation of the biosynthesis of glycopeptidolipids in Mycobacterium abscessus



### Adnan Halim

### University of Copenhagen, Denmark

Title: Complex regulation of domain-specific O-mannosylation by three non-redundant enzyme families



### Linda Hsieh-Wilson

California Institute of Technology, USA Title: Decoding glycosaminoglycan-protein interactions



### Shang-Te Danny Hsu

Academia Sinica, Taiwan

Title: Quantitative descriptions of structure-function relationships of glycoSHIELD of coronavirus spike proteins



### Shang-Cheng Hung

#### Academia Sinica, Taiwan

Title: Probing specific interactions of synthetic heparan sulfate saccharides and disease-related proteins



### Mary Jackson

Colorado State University, USA

Title: Molecular signals controlling the biosynthesis and biological activities of cell envelope (lipo)polysaccharides in Mycobacterium tuberculosis



### Hamed Jafar-Nejad

Baylor College of Medicine, USA Title: Targeting POGLUT1 to promote biliary development in mouse models of Alagille Syndrome



### Ludger Johannes

Institut Curie, France Title: Desialylation glycoswitch to acutely control endocytosis



### Kenji Kadomatsu

Nagoya University, Japan

Title: Crosstalk of glycosaminoglycans and cell surface receptors in neural wiring/rewiring



### Yasuhiro Kajihara

Osaka University, Japan Title: N-glycans on proteins



### Yasuhiko Kizuka

Gifu University, Japan Title: Regulation and protein selectivity of N-glycan branching enzymes



### **Ute Krengel**

University of Oslo, Norway Title: Protein-carbohydrate interactions in infection and cancer biology



### Jessica Kwok

University of Leeds, UK

Title: A sugar coat on neuronal surface: The supramolecular assembly of glycosaminoglycans and glycoproteins in regulating neuroplasticity



### Xuechen Li

University of Hong Kong, Hong Kong Title: Chemical glycobiology studies on bacterial pseudaminic acid



### Matthew Macauley

University of Alberta, Canada Title: New insights about the glycan ligands of Siglecs and their ability to control immune cells



### Karina V. Mariño

Institute of Biology and Experimental Medicine, Argentina Title: Exploring glycosylation-dependent pathways as modulators of intestinal inflammation



### Debra Mohnen

#### University of Georgia, USA

Title: Pectic glycoconjugates in plant cell walls: Working toward understanding their structure, synthesis and function



### Anja Münster-Kühnel

Hannover Medical School, Germany Title: Novel functions of polysialic in kidney development



### Laurence Mulard

Institut Pasteur, France

Title: Synthetic glycan-based vaccines to combat bacterial diseases: From concept to first-in-human data and beyond



# Siva Kumar Nadimpalli

University of Hyderabad, India Title: Glycosyl hydrolases from the seeds of cucurbitaceae



### Yoshiki Narimatsu

University of Copenhagen, Denmark

Title: Cell-based mucin array for discovery and characterization of mucinase and glycan-binding modules



### Sriram Neelamegham

State University of New York at Buffalo, USA

Title: Systems level studies of viral infection: Roles for site-specific glycosylation, biochemical pathways and intracellular lectins



### Vered Padler-Karavani

Tel Aviv University, Israel Title: Glycans in immune recognition and response



### Katharina Paschinger

Universität für Bodenkultur, Austria Title: Glycans in host-pathogen interactions



### James Paulson

The Scripps Research Institute, USA Title: Adaptation of influenza virus to human airway receptors



### Salomé Pinho

University of Porto, Portugal Title: Glycans at the frontiers of inflammation, autoimmunity and cancer: Mechanisms and clinical implications



### Avery Posey, Jr.

University of Pennsylvania, USA

Title: Leveraging tumor-associated alterations in O-glycosylation for cancer immunotherapy



### Katharina Ribbeck

Massachusetts Institute of Technology, USA Title: Mucin glycans in the regulation of microbial virulence



#### **Atit Silsirivanit** Khon Kaen University, Thailand Title: Glycan: A target for diagnosis and treatment of brain tumors



### Morten Thaysen-Andersen

Macquarie University, Australia Title: Glycomics-guided glycoproteomics uncovers new players in the innate immune system



### Ryan Weiss

### University of Georgia, USA Title: Genome-wide analysis of heparan sulfate assembly



### **Chi-Huey Wong**

The Scripps Research Institute, USA, and Academia Sinica, Taiwan Title: Targeting human viruses with broadly protective low-sugar vaccines



### Manfred Wuhrer

Leiden University, Netherlands Title: Fingerprinting disease by mass spectrometry



### Won Ho Yang

Yonsei University, South Korea Title: A functional study of O-GlcNAcylation on RNA binding protein RBM14

# Glycoinformatics Workshop



**Kiyoko Aoki-Kinoshita** Soka University, Japan



**Daniel Bojar** University of Gothenburg, Sweden



**Akihiro Fujita** Soka University, Japan



**Morihisa Fujita** Gifu University, Japan



**Masae Hosoda** Soka University, Japan



**Daniel Kolarich** Griffith University, Australia



**Atsushi Kuno** National Institute of Advanced Industrial Science and Technology, Japan







**Sriram Neelamegham** State University of New York at Buffalo, USA



**Shujiro Okuda** Niigata University, Japan



Yushi Takahashi Soka University, Japan



Michael Tiemeyer University of Georgia, USA



**Issaku Yamada** The Noguchi Institute, Japan

# Glycoproteomics Workshop



**Stacy Malaker** Yale University, USA



**Giuseppe Palmisano** Macquarie University, Australia



**Shisheng Sun** Northwest University, China



Morten Thaysen-Andersen Macquarie University, Australia



Wen-Feng Zeng Max Planck Institute, Germany



Mingliang Ye Chinese Academy of Sciences, China

# Advanced Courses



Kurt Drickamer

Imperial College London, UK Title: How structure leads to functions of the C-type lectins



Matthew Macauley University of Alberta, Canada Title: Siglecs



# Maureen Taylor

Imperial College London, UK Title: Multiple families of animal lectins



### Henrik Clausen

Copenhagen Center for Glycomics, Denmark Title: The most common types of protein O-glycosylation – O-GalNAc (mucin-type) and O-Man



### **Robert Haltiwanger**

University of Georgia, USA Title: O-glycosylation of cysteine-rich domains with O-Fuc, O-Glc, O-Xyl, or O-GlcNAc



Anne Dell Imperial College London, UK Title: Reflections on the history and current status of systems glycomics



# Daniel Kolarich

Griffith University, Australia Title: The Hitchhiker's guide to glycoproteomics



### Manfred Wuhrer

Leiden University, Netherlands Title: Intact proteins, high-throughput, and spatial glycomics

# General Information

- Basic Information
- Social Program
- Instructions for Chairs/Invited Speakers/
- Oral & Poster Presenters

# **Basic Information**

#### Date

Aug 27 - Sep 1, 2023

#### Venue

Humanities and Social Sciences Building, Academia Sinica

### **Official Language**

The official language of the Glyco26 is English.

#### **Internet Access**

Free Wi-Fi is available throughout the Symposium period in symposium venue. Please check the back of your badge for your exclusive personal Wi-Fi password.

#### Lost and Found

The lost and found items should be returned/claimed at the registration desk.

### **Registration & Information Desk**

Venue: Lobby, 3F

### Service Hours:

Aug 26 (Sat) (Adv Course)	08:30-18:20
Aug 27 (Sun) (Adv Course)	08:30-11:00
Aug 27 (Sun)	12:00-19:00
Aug 28 (Mon)	08:30-18:20
Aug 29 (Tue)	08:30-18:00
Aug 30 (Wed)	08:30-16:00
Aug 31 (Thu)	08:30-18:00
Sep 1 (Fri)	08:30-11:30

### **Badge Information**

The badge will be provided on site to each registered attendee together with all the necessary coupons upon checking in.

All participants are required to wear the badge all the time for recognition.

STATUS	ENTITLEMENT
DELEGATE	<ul> <li>Admission to all scientific sessions and industrial exhibition</li> <li>Participation in the Welcome Reception and Closing Ceremony</li> <li>Symposium kit (Symposium Bag, Badge and Program Book Included)</li> <li>Free lunches and coffee-breaks</li> </ul>
ACCOMPANYING PERSON	<ul><li>Admission to industrial exhibition</li><li>Participation in the Welcome Reception and Closing Ceremony</li></ul>
EXHIBITOR	<ul><li>Admission to industrial exhibition</li><li>Free lunches</li></ul>

\* Please contact the staff if any assistance is needed

\* Security personnel will allow only persons with badges to enter the meeting rooms.

\* Badges are not transferable and cannot be lent to anyone for any purpose during the symposium.

### **Lunch (Coupon Required)** Lunch will be provided on Aug 28-31.

#### Venue:

Luncheon Seminar	Recreation Hall, 4F
Lunch Area	Communal Area, 3F

### **Coffee Break**

Refreshments will be served during the coffee break time on Aug 28-31 in the 4th floor Lobby, and different Taiwanese desserts will be provided each day in limited quantities. (Each person is limited to one with the coupon each day).

#### Exhibition

Venue: Corridor, 3F

#### **Operating Hours:**

Aug 27 (Sun)	12:00-19:00
Aug 28 (Mon)	08:30-18:20
Aug 29 (Tue)	08:30-18:00
Aug 30 (Wed)	08:30-16:00
Aug 31 (Thu)	08:30-18:00
Sep 1 (Fri)	08:30-11:30

#### **Preview Room**

#### Venue: Reception Room, 3F

#### **Operating Hours:**

Aug 26 (Sat) (Adv Course)	08:30-18:20
Aug 27 (Sun)	08:30-19:00
Aug 28 (Mon)	08:30-18:20
Aug 29 (Tue)	08:30-18:00
Aug 30 (Wed)	08:30-16:00
Aug 31 (Thu)	08:30-18:00
Sep 1 (Fri)	08:30-11:30

### **Social Program**

#### Welcome Reception

**Date:** Aug 27 (Sun), 2023 **Time:** 19:00-20:30 **Location:** Lobby, 4F

#### Gala Dinner (Additional Purchase)

Date: Aug 31 (Thu), 2023 Time: 19:00-21:00 Location: 6F, Peng's Gourmet & Banquet \*Coupon is required. \*Shuttle bus will be provided at 18:00.

#### Speakers & Invited Guests' Group Outing and Dinner

**Date:** Aug 29 (Tue) (By invitation only)

#### City Tour (Additional Purchase) Date:

Aug 30 (Wed), 2023 & Sep 1 (Fri), 2023 12:30 Assemble at the Main Entrance of Humanities and Social Sciences Building. \*Coupon is required.

- Taipei National Palace Museum (visit)
- Zhongshan Station Area (pass by & optional to get off the bus)
- Yongkang Street (pass by & optional to get off the bus)
- Taipei 101
   (pass by & optional to get off the bus)
- Nangang MRT Station (End)

## Instructions for Chairs/Invited Speakers/

### **Oral & Poster Presenters**

### For Chairs

- 1. Please be in your session room at least 15 minutes prior to the start of the session.
- 2. A set of hardcopies of the session details with the invited speakers' details will be prepared for you.
- 3. Please help to control the time. The timekeeper in each session room will notify you of the time left.

#### For Invited Speakers/Oral Presenters

- 1. Please prepare your backup copy in a USB drive. Kindly upload the final version of your slides on the laptop provided in each session room AT LEAST 30 MINUTES PRIOR to your session.
- 2. If you are using a MacBook and prepared your slides on a Mac, please save your PowerPoint file onto a flash drive and review your slides in the Preview Room AT LEAST 1 HOUR PRIOR to your session, in case you need to make any necessary adjustments due to format compatibility issues.
- 3. For invited speakers only: If you prefer to use your own MacBook (or any other laptop) for the presentation, please bring your own HDMI adaptor (such as HDMI-type C) and test out the connection in your session room prior to the start of your session. This is only allowed for Invited speakers.
- 4. There will be a ring from the time countdown recorder when there are 3 minutes left for your presentation, and another ring when the presentation should be done.

#### For Poster Presenters

- 1. Please set-up before Aug 27 12:00-16:20, and remove after Aug 31 18:00, before Sep 1 11:20.
- 2. There will be two Poster sessions on Tuesday (Aug 29) and Thursday (Aug 31) afternoon, 16:00-18:00. You are requested to man the Poster on Tuesday if your assigned Abstract number is odd number (A001, A003, ...), or on Thursday, if your assigned Abstract number is even number (A002, A004, ...).
- 3. Posters not removed will be disposed directly without permission.
- 4. Adhesive tape will be provided onsite. No paste, glue, thumbtacks or staples are permitted.
- 5. Listing of Poster Number can be found on Whova App, and also in this Program Book, from page 64.




# Scientific Program

- Scientific Sessions
- Program at a Glance
- Daily Program
- Workshops
- Advanced Courses

# Scientific Sessions

Glyco26 will feature 18 scientific sessions in 2–3 parallel tracks over its five-day regular schedule (see Program At A Glance). This includes two Asian Community of Glycoscience and Glycotechnology (ACGG) sessions and one Society for Glycobiology (SFG) Guest Session. The speakers for ACGG sessions are drawn from member countries and organized based on its founding aim to promote collaborations among scientists from Asian countries toward further advancement of glycoscience. The SFG Guest Session is a collaborative effort of the SFG and IGO to have reciprocal guest sessions in their respective meetings to encourage more participation between scientists in the two organizations. The corresponding IGO Guest session "Diversity of Pathways and Structures" was held at the annual meeting of SFG, Nov 14-18, 2022. The SFG Guest Session at Glyco26 will focus on "Mucin and Microbiome".

Other than the two ACGG sessions, all the following scientific sessions feature two Keynote Speakers and several oral presentations selected from abstract submissions.

- GBP in Immunoregulation & Cell Homeostasis
- Cancer Glycobiology & Immunotherapy
- Glycosylation in ER/Golgi and Biosynthetic Regulation
- Glyco-Metabolism & Autophago-lysosomal Pathways
- Mucin & Microbiome (SFG session)
- Structural Aspects of GBP in Cancer & Host-Microbe Interactions
- Glycoconjugate Diversity from Non-mammal
- Glyco Analytics & Glycomics
- Chemical Glycobiology
- Special Open Session on Chemistry and Synthesis for Glycobiology
- Glycans in Cancer, Immunity and Infection
- GAGs & Proteoglycans
- Glyco Neurobiology
- Plant Cell Wall and Glycosylation
- Systems Glycobiology
- Engineering Cellular Glycosylation & Synthetic Glycobiology
- Developmental Glycobiology

In addition, a pre-symposium public session on the Glycobiology of Viruses with four invited Keynote Speakers is held just before the Glyco26 opening ceremony and Award Lectures. This session serves to call public attention to the impact of glycosciences not only on our combating SARS-CoV2 over the last three pandemic years but also in addressing a broader range of viruses. To highlight the importance of glycochemistry-enabled investigations in solving glycobiology problems, another public session on Chemistry and Synthesis for Glycobiology is held on Wednesday afternoon, outside the normal IGO meeting schedule. This session will feature presentations by international and local speakers, including postdocs and students.






# Aug 27 Sunday

### Day1

@International Conference Hall, 3F

- 14:00-16:00 **Special Open Session** on **Glycobiology of Viruses** Chairs : Chi-Huey Wong, Shie-Liang Hsieh
  - 14:00 **Keynote 1**: **Chi-Huey Wong**, Scripps Research Institute, USA and Academia Sinica, Taiwan Targeting human viruses with broadly protective low-sugar vaccines (D012)
  - 14:30 **Keynote 2**: James Paulson, Scripps Research Institute, USA Adaptation of influenza virus to human airway receptors (D013)
  - 15:00 **Keynote 3**: **Cristina de Castro**, Univ. of Naples Federico II, Italy *Giant viruses and their unusual glycans (D014)*
  - 15:30 **Keynote 4: Danny Hsu, Academia Sinica, Taiwan** Quantitative descriptions of structure-function relationships of glycoSHIELD of coronavirus spike proteins (D015)

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- 16:20-16:40 Opening Ceremony & Welcoming Addresses
- 16:40-17:20 **IGO Hakomori Award (2021) : Els JM van Damme**, Ghent Univ., Belgium Plant lectin research: A journey from basic science to applications in agriculture and medicine (D001) Chaired by Sandro Sonnino
- 17:30-18:10 IGO Hakomori Award : Tadashi Suzuki, RIKEN, Japan NGLY1: the beauty of curiosity-driven science (D002) Chaired by Naoyuki Taniguchi
- **18:20-19:00 IGO Young Glycoscientist Award: Ana Sofia Luís,** Univ. of Gothenburg, Sweden Mucin O-glycans degradation by gut Bacteroides requires multiple key enzymes (D003) Chaired by Gunnar Hansson

19:00-21:00 Welcome Reception @Lobby, 4F

## Aug 28 Monday



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09:00-11:00	<b>Session 1A1: GBP in Immunoregulation &amp; Cell Homeostasis</b> Chairs: Maureen Taylor, Kuo-I Lin	
09:00	<b>Keynote 1: Matthew Macauley</b> , Univ. of Alberta, Canada New insights about the glycan ligands of Siglecs and their ability to (D016)	control immune cells
09:30	<b>Keynote 2: Karina V Mariño, CONICET, Argentina</b> Exploring glycosylation-dependent pathways as modulators of intesti (D017)	nal inflammation
10:00	<b>Takeshi Tsubata, Nihon Univ., Japan</b> Role of endogenous glycan ligands of CD22 (Siglec-2) in immunity (	(A068)
10:15	Alba Silipo, Univ. of Naples Federico II, Italy Siglecs interaction with glycans: A molecular view (A042)	
10:30	<b>Huei-Syuan Jiang, Academia Sinica, Taiwan</b> Comprehensive study of Siglec-15 ligands on osteoclast precursors I knockout screening (A029)	by genome-wide
10:45	<b>ThuyLinh DangCao Linda</b> , Univ. of Tsukuba, Japan Cancer specific sialylation of glycoprotein nonmetastatic melanoma tumor associated macrophage in triple-negative breast carcinoma v	protein B Interact with ia Siglec-9 (A105)
11:00-11:20	Coffee Break	@Lobby, 4F
11:20	Plenary 1: Alice Yu. Chang Gung Memorial Hospital and Univ.	
	Cancer Immunotherapy targeting glycosphingolipids (D004) Chaired by: Jin-Ichi Inokuchi	Taiwan
12:00-13:20 or	Cancer Immunotherapy targeting glycosphingolipids (D004) Chaired by: Jin-Ichi Inokuchi Lunch Luncheon Seminar 1: GlycoNex Inc. Chaired by: Caroline-Setyo Suwardi Yen-Ying Chen Accelerating the journey from concept to clinic with innovative glyco approaches in oncology	Taiwan @Communal area, 3F @Recreation Hall, 4F
12:00-13:20 or 13:20	Cancer Immunotherapy targeting glycosphingolipids (D004) Chaired by: Jin-Ichi Inokuchi Luncheon Seminar 1: GlycoNex Inc. Chaired by: Caroline-Setyo Suwardi Yen-Ying Chen Accelerating the journey from concept to clinic with innovative glyca approaches in oncology Plenary 2: Heinz Läubli, Univ. of Basel, Switzerland Targeting cancer-associated sialylation for cancer immunotherapy (I Chaired by: Takashi Angata	Taiwan @Communal area, 3F @Recreation Hall, 4F In-targeted drug
12:00-13:20 or 13:20 14:00-16:00	Cancer Immunotherapy targeting glycosphingolipids (D004) Chaired by: Jin-Ichi Inokuchi Lunch Luncheon Seminar 1: GlycoNex Inc. Chaired by: Caroline-Setyo Suwardi Yen-Ying Chen Accelerating the journey from concept to clinic with innovative glyca approaches in oncology Plenary 2: Heinz Läubli, Univ. of Basel, Switzerland Targeting cancer-associated sialylation for cancer immunotherapy (I Chaired by: Takashi Angata Session 1A2: Cancer Glycobiology & Immunotherapy Chairs: Heinz Läubli, Chia-Wei Li	Taiwan @Communal area, 3F @Recreation Hall, 4F m-targeted drug

14:30 Keynote 2: Salomé Pinho, Univ. of Porto, Portugal Glycans at the frontiers of inflammation, autoimmunity and cancer: Mechanisms and clinical implications (D019)
15:00 Jianguo Gu, Tohoku Medical and Pharmaceutical Univ., Japan Alteration in N-glycans in cancer drug resistance: A new function of GnT-III (A082)
15:15 Hiroto Kawashima, Chiba Univ., Japan Development of a novel anti-sulfated glycan antibody that blocks lymphocyte homing to nasal associated-lymphoid tissues and allergic rhinitis in mice (A062)
15:30 Alice ST Wong, Univ. of Hong Kong, Hong Kong ST3GAL4 promotes the first critical step of ovarian cancer metastasis (A102)
15:45 Travel Award: Seigo Tateo, Kagoshima Univ., Japan Development of sugar chain binding chimeric antigen receptor expressed natural killer cells for immunotherapy against adult T cell leukemia (ATL) (A111)
16:00-16:20 Coffee Break

#### 16:20-18:20 Glyco-Informatics Workshop

Coordinators: Kiyoko Aoki-Kinoshita, Issaku Yamada Speakers and Panelists: Kiyoko Aoki-Kinoshita, Soka Univ.; Issaku Yamada, Nogochi Institute; Daniel Bojar, Univ. Gothenburg; Akihiro Fujita, Soka Univ.; Morihisa Fujita, Gifu Univ.; Masae Hosoda, Soka Univ.; Daniel Kolarich, Griffith Univ.; Atsushi Kuno, National Institute of Advanced Industrial Science and Technology; Thomas Masding, Soka Univ.; Sriram Neelamegham, State Univ. of New York at Buffalo; Shujiro Okuda, Niigata Univ.; Yushi Takahashi, Soka Univ.; Michael Tiemeyer, Univ. of Georgia

Track B @2nd Conference Room, 3F

- 09:00-11:00 Session 1B1: Glycosylation in ER/Golgi and Biosynthetic Regulation Chairs: Koichi Kato, Ruey-Bing Yang
  - 09:00 Keynote 1: Adnan Halim, Univ. of Copenhagen, Denmark

Complex regulation of domain-specific O-mannosylation by three non-redundant enzyme families (D020)

- 09:30 **Keynote 2**: **Hans Bakker**, Hannover Medical School, Germany *C*-mannosylation of proteins: specificity and function (D021)
- 10:00 **Tetsuya Okajima, Nagoya Univ., Japan** The structure and function of "extracellular" O-GlcNAc modification in mammals (A010)
- 10:15 Satoshi Ninagawa, Kobe Univ., Japan EDEM2-S-S-TXNDC11 complex trims N-glycan from M9 to M8B in the endoplasmic reticulum (A003)
- 10:30 Kiichiro Totani, Seikei Univ., Japan Endomannosidase contributes to degradation of misfolded glycoproteins in the endoplasmic reticulum (A009)

#### 10:45 Vladimir Lupashin, Univ. of Arkansas, USA

Understanding the essential role of COG and GARP vesicle tethering complexes and SNAREs in regulating protein glycosylation in human cells (A001)

#### 14:00-16:00 Session 1B2: Glyco-Metabolism & Autophago-lysosomal pathways Chairs: Fu-Tong Liu, Guang-Chao Chen 14:00 Keynote 1: Vojo Deretic, Univ. of New Mexico School of Medicine, USA Galectins, Atg8ylation, and stress granules in autophagy and membrane stress response (D022) **EMBO** 14:30 The EMBO Keynote Lecture: Ludger Johannes, Institut Curie, France Desialylation glycoswitch to acutely control endocytosis (D023) 15:00 Alexey Pshezhetsky, Univ. of Montreal, Canada Protein sialylation as a defining factor for hematopoiesis, adult myogenesis and kidney function (A021) 15:20 Ching-Yuan Cheng, National Taiwan Univ., Taiwan Intracellular Galectin-1 involves in erythropoiesis via regulating STATs, ERK, and Smad2/3 signaling (A018) 15:40 Chia-Lin Hsu, National Yang Ming Chiao Tung Univ., Taiwan The intracellular nucleoside transporter, ENT3, regulates lysosome-mediated activities in *immune cells (A020)* 16:20-18:05 Session 1B3: Travel Award & Young Scientists Chairs: Ching-Ching Yu, Chian-Hui Lai 16:20 Travel Award: Jeff Hsiao, Massachusetts Institute of Technology, USA Mucin O-glycans are host-derived immunomodulators of neutrophil Inflammatory activity (A052) 16:35 Travel Award: Inês Alves, Univ. of Porto, Portugal Abnormal alycosignature of host tissue triggers pathogenic recognition through $v\delta T$ cells/ IL-17a axis in autoimmunity (A109) 16:50 Travel Award: Nohelly Derosiers, Univ. of Pennsylvania, USA Investigating the efficacy of Siglec-15 based CAR T-cells (A085) 17:05 Travel Award: The Huong Chau, Macquaire Univ., Australia Glycomics-assisted alycoproteomics enables insights into the complex alycoproteome of resting and activated platelets (CO21) 17:20 Chia Yen Liew, Academia Sinica, Taiwan LODES/MSn for structural determination of high mannose N-glycan isomers in multicellular eukaryotic cells (CO45) 17:35 Yi-Hsuan Chang, Academia Sinica, Taiwan Protein O-GlcNAcylation regulates the homeostasis of innate B lymphocytes (A022) 17:50 Shwee Khuan Leong, Academia Sinica, Taiwan Site-specific multiple fluorescent metabolic glycan labelling and glycoproteomic profiling in live cells (B010)

# Aug 29 Tuesday



	Track A @International Conference Hall, 3F
09:00-11:00	Session 2A1: Mucin & Microbiome (SFG session) Chairs: Stacy Malaker, Michael Tiemeyer
09:00	<b>Keynote 1</b> : <b>Katharina Ribbeck</b> , Massachusetts Institute of Technology, USA Mucin glycans in the regulation of microbial virulence (D024)
09:30	<b>Keynote 2: Mario Feldman, Washington Univ., USA</b> Human gut bacteria tailor extracellular vesicle cargo for the breakdown of diet- and host- derived glycans (D025)
10:00	<b>Qiaochu Liang</b> , Univ. of British Columbia, Canada The role of mucin O-glycans in the interactions between enteric pathogens and the intestinal mucus (A046)
10:20	<b>Toshihiko Katoh, Kyoto Univ., Japan</b> Bifidobacterium bifidum degrades sulfated mucin O-Glycans via a sulfatase-independent pathway (A050)
10:40	<b>Ching-Ching Yu, National Tsing Hua Univ., Taiwan</b> Analyzing the substrate specificity of fucosidases from Bifidobacterium longum by supercritical fluid chromatography (C075)
11:00-11:20	Coffee Break @Lobby, 4F
11:20	<b>Plenary 3: Gunnar C Hansson,</b> Univ. of Gothenburg, Sweden The gel-forming mucins protecting our intestinal and respiratory tracts are densely glycosylated polymeric proteins (D006) Chaired by: Henrik Clausen
12:00-13:20 or	Lunch @Communal area, 3F Luncheon Seminar 2: E. SUN FHC & Rock Biomedical, Inc. Chaired by: Jeng-Shin Lee Alex Che Ma, Szu-Wen Wang, Chung-Yi Wu Development of low sugar universal vaccine
13:20	<b>Plenary 4: Nathalie Juge, Quadram Institute, UK</b> Sialic acid metabolism in the gut microbiota (D007) Chaired by: Anne Dell
14:00-16:00	<b>Session 2A2: Structural Aspects of GBP in Cancer &amp; Host-Microbe Interactions</b> Chairs: Yehiel Zick, Chun-Hung Lin
14:00	<b>Keynote 1: Kurt Drickamer, Imperial College London, UK</b> Mammalian lectin arrays for characterizing host-pathogen interactions (D026)
14:30	<b>Keynote 2</b> : <b>Ute Krengel</b> , Univ. of Oslo, Norway Protein-carbohydrate interactions in infection and cancer biology (D027)
15:00	<b>Shang-Chuen Wu, Harvard Medical School, USA</b> Blood group A enhances SARS-CoV-2 infection (A071)

- 15:15 Yoshiki Yamaguchi, Tohoku Medical and Pharmaceutical Univ., Japan Glycan dynamics and glycan-protein interactions analyzed by experimental NMR methods, AlphaFold-assisted molecular dynamics and docking simulations (C074)
- 15:30 Sheng-Kai Wang, National Tsing Hua Univ., Taiwan Manipulating carbohydrate interactions by polyproline-based nanoscaffolds (C073)
- 15:45 Travel Award: Cristina Di Carluccio, Univ. of Naples Federico II, Italy Molecular details of α2–3-sialylated O-GalNAc glycan recognition by Siglec-like SLBR-N (SLBRUB10712) of Streptococcus gordonii (A038)

Track B @2nd Conference Room, 3F

- 09:00-11:00 Session 2B1: Glycoconjugate Diversity from Non-mammal Chairs: Shi Yan, Yves Hsieh
  - 09:00 **Keynote 1: Katharina Paschinger**, Univ. of Natural Resources and Life Sciences (BOKU), Austria

Glycans in host-pathogen interactions (D028)

- **09:30 Keynote 2: Yann Guerardel**, Lille Univ., France Regulation of the biosynthesis of glycopeptidolipids in Mycobacterium abscessus (D029)
- 10:00 Shinya Fushinobu, Univ. of Tokyo, Japan Structural basis of endo/exo-α- and exo-β-D-arabinofuranosidases for the degradation of mycobacterial lipoarabinomannan (B054)
- **10:20** Josef Voglmeir, Nanjing Agricultural Univ. China Novel insights in the sialic acid biosynthesis in vertebrates and invertebrates (A148)
- 10:40 Noriko Suzuki, Nagoya City Univ., Japan Gain and loss of α4-galactosyltransferase-like genes in the course of vertebrate evolution (A146)

#### 14:00-16:00 Session 2B2: Glyco Analytics & Glycomics Chairs: Daniel Kolarich, Jaroslav Katrlik

- 14:00 **Keynote 1**: **Manfred Wuhrer**, Leiden Univ., Netherlands Fingerprinting disease by mass spectrometry (D030)
- 14:30 Keynote 2: Morten Thaysen-Andersen, Macquarie Univ., Australia Glycomics-guided glycoproteomics uncovers new players in the innate immune system (D031)
- 15:00 Yanlong Ji, Max Planck Institute, Germany Integrated proteomic and glycoproteomic characterization of diffuse large B cell lymphoma cell lines (C026)
- 15:15 **Travel Award: Abarna Vidya Mohana Murugan, Griffith Univ., Australia** Phyloglycomics: Understanding species-specific evolution of the serum glycome – a step towards filling the knowledge gap in host-pathogen co-evolution (C042)

15:30	Lucia Pažitná, Slovak Academy of Sciences, Slorakia
	Glycoprofiling of selected glycoproteins and blood components in gestational diabetes
	mellitus by lectin-based glycoprotein microarray method (C053)

#### 15:45 Atsushi Kuno, National Institute of Advanced Industrial Science and Technology, Japan Lectin dotcoding: A new output method improving the effectiveness of automatic glycan profiling with 15-Lectin tip (C064)

Track C @1st Conference Room, 3F

#### 09:00-11:00 Session 2C1: ACGG I Chairs: Chuan-Fa Chang, Siva Kumar Nadimpalli

- **09:00 Keynote 1: Siva Kumar Nadimpalli**, Univ. of Hyderabad, India Glycosyl hydrolases from the seeds of Cucurbitaceae (D032)
- 09:30 Keynote 2: Xuechen Li, Univ. of Hong Kong, Hong Kong Chemical glycobiology studies on bacterial pseudaminic acid (D033)

#### **10:00 Keynote 3: Won Ho Yang, Yonsei Univ., Korea** A functional study of O-GlcNAcylation on RNA binding protein RBM14 (D034)

#### 10:30 Hirokazu Yagi, Nagoya City Univ., Japan

PCYT2-mediated glycerol phosphate modification of α-Dystroglycan disrupts matriglycan elongation and thereby enhances colorectal cancer metastasis (A087)

10:45 Yung-Kuo Lee, Kaohsiung Armed Forces General Hospital, Taiwan Long-term DEHP/MEHP exposure promotes colorectal cancer stemness associated with glycosylation (A104)

#### 14:00-16:00 Session 2C2: ACGG II

Chairs: Atit Silsirivanit, Yasuhiko Kizuka

- 14:00 **Keynote 1**: **Yasuhiko Kizuka**, Gifu Univ., Japan Regulation and protein selectivity of N-glycan branching enzymes (D035)
- 14:30 **Keynote 2**: Atit Silsirivanit, Khon Kaen Univ., Thailand Glycan: A target for diagnosis and treatment of brain tumors (D036)
- 15:00 **Kei-ichiro Inamori, Tohoku Medical and Pharmaceutical Univ., Japan** Altered expression of glycosphingolipids and its possible significance in ulcerative colitis (A114)
- **15:20 Kazuchika Nishitsuji**, Wakayama Medical Univ., Japan Glycan-mediated prion-like behavior of mutant p53 aggregates and their possible role in cancer pathogenesis (A089)
- 15:40 **Pei-Shan Sung, Academia Sinica, Taiwan** Inhibition of SARS-CoV-2-mediated thromboinflammation by CLEC2.Fc (A075)

@3rd & 4th Floor Hallway

#### 16:00-18:00 Poster Session I (with Coffee served)

# Aug 30 Wednesday Day4

Track A @International Conference Hall 3F

09:00-11:00	Session 3A1: Chemical Glycobiology Chairs: Matthew Pratt, Chun-Cheng Lin	
09:00	<b>Keynote 1: Laurence Mulard, Pasteur Institute, France</b> Synthetic glycan-based vaccines to combat bacterial diseases: from concept to first-in- human data and beyond (D037)	
09:30	<ul> <li>Keynote 2: Xing Chen, Peking Univ., China (online presentation) Labeling, imaging and proteomics of brain glycans (D038)</li> </ul>	
10:00	<b>David Kwan, Concordia Univ., Canada</b> Controlling cellular sugar-coating to combat cancer (B006)	
10:15	<b>Yu Liu, Imperial College, UK</b> Glycosyltransferase engineering to dissect N-linked protein glycosylation (B008)	
10:30	<b>Thomas Haselhorst, Griffith Univ., Australia</b> Discovery of new antifungals in the fight against invasive fungal infections (A154)	
10:45	<b>Cheng-I Yao, Academia Sinica, Taiwan</b> Structural analysis of the lipid A from Parabacteroides goldsteinii (A079)	
11:00-11:20	Coffee Break @Lobby, 4F	
11:20	<b>Plenary 5: Matthew R Pratt,</b> Univ. of Southern California, USA Chaired by: Todd Lowary Build it to understand it: O-GlcNAc modification plays multiple protective roles against protein amyloid aggregation and pathogenesis (D008)	
12:00-13:30	Lunch @Communal area, 3F	
or	Luncheon Seminar 3: Thermo Fisher Scientific@Recreation Hall, 4FWeijing LiuRecent developments in the analysis of glycoproteins on orbitrap platforms	
13:30-16:00	Session 3A2: Special Open Session on Chemistry and Synthesis for Glycobiology Chairs: Cheng-Chung Wang, Jiun-Jie Shie	
13:30	<b>Keynote 1</b> : <b>Yasuhiro Kajihara, O</b> saka Univ., Japan N-glycans on proteins (D039)	
14:00	<b>Keynote 2: Shang-Cheng Hung, Academia Sinica, Taiwan</b> Probing specific interactions of synthetic heparan sulfate saccharides and disease-related proteins (D040)	
14:30	<b>Carolin Neu, Martin-Luther Univ. Halle-Wittenberg, Germany</b> Ac3ManNAc-6-phosphoramidate prodrugs as potential new treatment for GNE myopathy (A113)	

#### 15:00 Mei-Ting Lin, National Tsing Hua Univ., Taiwan

Gram-scale chemoenzymatic synthesis of human milk oligosaccharides using crude cell lysate (B019)

#### 15:15 Hsin-Kai Tseng, National Tsing Hua Univ., Taiwan

Substrates promiscuities of bacterial glycosyltransferases enable acceptor-mediated regioselective enzyme-catalyzed glycosylation (B046)

#### 15:30 Mohammad Anwar, Academia Sinica, Taiwan Chemoenzymatic synthesis of fluorophore-labelled K. pneumoniae O2a O-PS probes (B035)

#### 15:45 Huang-Yi Li, Academia Sinica, Taiwan

Insights into dibasic iminosugars as pH-selective pharmacological chaperones to stabilize human α-galactosidase (B016)

#### Track B @2nd Conference Room, 3F

#### 09:00-11:00 **Session 3B1: Glycans in Cancer, Immunity and Infection** *Chairs: Nathalie Juge, Yung-Chi Chang*

- 09:00 Keynote 1: Vered Padler-Karavani, Tel Aviv Univ., Israel Glycans in immune recognition and response (D041)
- 09:30 **Keynote 2: Mary Jackson, Colorado State Univ., USA** Molecular signals controlling the biosynthesis and biological activities of cell envelope (lipo)polysaccharides in Mycobacterium tuberculosis (D042)
- 10:00 Celso A Reis, Univ. of Porto, Portugal Altered glycosylation in cancer affects cellular receptor tyrosine kinases and regulates cancer cell sensitivity to therapeutic drugs (A112)

#### 10:20 Freda Jen, Griffith Univ., Australia

Targeting the glyco-achilles heel of Neisseria gonorrhoeae: A new strategy for vaccines to prevent Gonorrhea (A063)

#### 10:40 Elisa Fadda, Maynooth Univ., Ireland

Changing the coat: Evolution of the SARS-CoV-2 S glycan shield and its role in modulating viral infection (A066)

#### 13:30-15:30 Human Glycoproteomics Initiative Workshop

Coordinators: Morten Thaysen-Andersen, Daniel Kolarich, Kay-Hooi Khoo Speakers and Panelists: Morten Thaysen-Andersen, Macquarie Univ.; Stacy Malaker, Yale Univ.; Giuseppe Palmisano, Macquarie Univ. Online presentation: Shisheng Sun, Northwest Univ.; Mingliang Ye, Chinese Academy of Sciences, Dalian; Wen-Feng Zeng, Max Planck Institute

# Aug 31 Thursday

Track A @International Conference Hall, 3F



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09:00-11:00	Session 4A1: GAGs & Proteoglycans Chairs: Hiroshi Kitagawa, Ivan Dzhagalov
09:00	<b>Keynote 1: Ryan Weiss, Univ. of Georgia, USA</b> Genome-wide analysis of heparin sulfate assembly (D043)
09:30	<b>Keynote 2</b> : Linda Hsieh-Wilson, California Institute of Technology, USA Decoding glycosaminoglycan-protein interactions (D044)
10:00	<b>Fredrik Noborn, Univ. of Gothenburg, Sweden</b> The glycosaminoglycan glycoproteome – How many proteoglycans are out there? (A128)
10:20	<b>Hsuan-Po Hsu, National Yang-Ming Chiao Tong Univ., Taiwan</b> Heparan sulfate Is essential for thymus growth during development (A124)
10:40	<b>Shuhei Yamada, Meijo Univ., Japan</b> Hereditary bone disorders caused by reduced activity of xylosyltransferases involved in glycosaminoglycan biosynthesis (A118)
11:00-11:20	Coffee Break @Lobby, 4F
11:20	<b>Plenary 6</b> : <b>Hiroshi Kitagawa</b> , Kobe Pharmaceutical Univ., Japan Chaired by: James Paulson Sulfated glycosaminoglycans - Studies in diversity (D009)
12:00-13:20 or	Lunch@Communal area, 3FLuncheon Seminar 4: SCIEX@Recreation Hall, 4FPei Chen LinA novel fragmentation technology allows for in-depth glycopeptide characterization in glycoproteins
13:20	<b>Plenary 7</b> : Lara Mahal, Univ. of Alberta, Canada Chaired by: Celso Reis Rethinking the paradigm: New roles for non-coding RNA in controlling the cancer glycome (D010)
14:00-16:00	Session 4A2: Glyco Neurobiology Chairs: Rita Gerardy-Schahn, Yijuang Chern
14:00	<b>Keynote 1: Kenji Kadomatsu, Nagoya Univ., Japan</b> Cross-talk of glycosaminoglycans and cell surface receptors in neural wiring/rewiring (D045)
14:30	<b>Keynote 2</b> : Jessica CF Kwok, Univ. of Leeds, UK A sugar coat on neuronal surface: the supramolecular assembly of glycosaminoglycans and glycoproteins in regulating neuroplasticity (D046)

#### 15:00 Lianchun Wang, Univ. of South Florida, USA

Vascular heparan sulfate and amyloid-β Immunopositivity increases in Alzheimer's disease patients with cerebral amyloid angiopathy (A116)

15:15 **Debapriya Kundu**, Academia Sinica, Taiwan

Deciphering the mechanistic link between O-GlcNAcylation and Tau proteinopathy in Alzheimer's disease (A134)

#### 15:30 John Monyror, Univ. of Alberta, Canada

Gangliosides modulate the secretion of extracellular vesicles and their misfolded protein cargo (A130)

#### 15:45 Travel Award: Giulia Lunghi, Univ. of Milano, Italy

*Glucosylceramide lysosomal accumulation leads to metabolic alterations underlying neuronal degeneration in GCase-related pathologies (A015)* 

Track B @2nd Conference Room, 3F

#### 09:00-11:00 **Session 4B1: Plant Cell Wall and Glycosylation** *Chairs: Els van Damme, Lay-Sun Ma*

#### 09:00 Keynote 1: Debra Mohnen, Univ. of Georgia, USA

Pectic glycoconjugates in plant cell walls: Working toward understanding their structure, synthesis and function (D047)

09:30 **Keynote 2**: **Harry Brumer**, Univ. of British Columbia, Canada The human gut microbiota-plant cell wall nexus (D048)

#### 10:00 Chibbhi KB, Academia Sinica, Taiwan

Ustilago maydis N-glycosylation dependent virulent effector ALE1 targets maize ZmTaxi to counteract its attack on UmXylanase11A (A142)

#### 10:20 Leela Siva Ranjani Vutharadhi, Univ. of Hyderabad, India

A novel alpha-galactosidase from Momordica charantia (bitter gourd) seeds – Lectinaffinity purification, biochemical characterization and possible physiological functions (A140)

#### 10:40 Els JM van Damme, Ghent Univ., Belgium

Cell-wall associated glycosyl hydrolase 27 with α-D-galactosidase/β-L-arabinopyranosidase activity from rice (A143)

#### 14:00-16:00 Session 4B2: Systems Glycobiology Chairs: Kiyoko Aoki-Kinoshita, Yuh-San Jou

- 14:00 **Keynote 1: Sriram Neelamegham**, State Univ. of New York at Buffalo, USA Systems level studies of viral infection: Roles for site-specific glycosylation, biochemical pathways and intracellular lectins (D049)
- 14:30 **Keynote 2**: Daniel Bojar, Univ. of Gothenburg, Sweden An interface is worth a thousand pictures: An integrated systems approach to glycobiology (D050)
- 15:00 **Ratmir Derda**, Univ. of Alberta, Canada Genetically-encoded liquid glycan arrays explore protein-glycan interactions in vivo (C001)

- **Taiki Saito**, National Institutes of Natural Sciences, Japan Molecular networks involving glycosyltransferases characterized by proximity labeling (A013)
- 15:40 **Hiroaki Tateno**, National Institute of Advanced Industrial Science and Technology, Japan Droplet-based glycan and RNA Sequencing for profiling the distinct cellular glyco-states in single cells (C018)

@3rd & 4th Floor Hallway

16:00-18:00 Poster Session II (with Coffee served)

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#### 19:00-21:00 Gala Dinner

Peng's Gourmet & Banquet, 6F

### Sep 01 Friday

@Lobby, 4F

Track A @International Conference Hall, 3F

09:00-11:00 Session 5A1: Engineering Cellular Glycosylation & Synthetic Glycobiology Chairs: John Yu, Alice Yu

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- 09:00 Keynote 1: Matthew DeLisa, Cornell Univ., USA Making weak antigens strong: exploiting bacterial outer membrane vesicles for delivering glycans to the immune system (D051)
- 09:30 Keynote 2: Yoshiki Narimatsu, Univ. of Copenhagen, Denmark Cell-based mucin array for discovery and characterization of mucinase and glycanbinding modules (D052)
- 10:00 **Christian Büll**, Radbound Univ. Nijmegen, Netherlands Unraveling of the human sialylation network (A007)
- 10:15 Thomas Rexer, Max Planck Institute, Germany Chemoenzymatic glycosylation of polypeptides using eukaryotic oligosaccharyltransferase and synthetic lipid-linked glycans (B005)
- 10:30 **Travel Award**: **Thapakorn Jaroentomeechai**, Univ. Copenhagen, Denmark A cell-based production pipeline for mammalian glycopeptides and glycans (B001)
- 10:45 **Travel Award**: **Jaesoo Jung**, Univ. of Alberta, Canada Elucidating the sulfated glycan ligands for Siglec-3 and -8 expressed on microglia (A028)

#### 11:00-11:20 **Coffee Break**

11:20 **Plenary 8**: **Inka Brockhausen**, Queen's Univ., Canada (online presentation) Chaired by: Philippe Delannoy Mucins and bacteria: Functional relationships (D011)

#### 12:00-12:30 Closing Ceremony

Including Travel and Poster Award Ceremony, and Presentation for Glyco27

Track B @2nd Conference Room, 3F

- 09:00-11:00 Session 5B1: Developmental Glycobiology Chairs: Alexey Pshezhetsky, Tadashi Suzuki
  - 09:00 Keynote 1: Hamed Jafar-Nejad, Baylor College of Medicine, USA Targeting POGLUT1 to promote biliary development in mouse models of Alagille Syndrome (D053)
  - 09:30 Keynote 2: Anja Münster-Kühnel, Hannover Medical School, Germany Novel functions of polysialic in kidney development (D054)
  - 10:00 Ken Kitajima, Nagoya Univ., Japan Discovery, distribution, and biological significance of the sialic acid-specific sulfotransferases in vertebrates (A135)
  - 10:20 Kenjiroo Matsumoto, Gifu Univ., Japan Distinct roles of O-fucose on Notch trafficking in humans and Drosophila (A137)
  - 10:40 **Shoko Nishihara**, Soka Univ., Japan O-GlcNAcylation regulates stem cell pluripotency through P-body formation (A139)

# Workshop

Aug 28

#### **Glycoinformatics Workshop @Glyco26**

Date: Monday, August 28, 2023
Time: 16:20-18:20
Structure: Invited talks and Panel Discussions,
+ Hands-on sessions for participants to bring their data for analysis (during Poster sessions)

#### **Coordinated by:**

Kiyoko F. Aoki-Kinoshita, Soka Univ., Japan Issaku Yamada, Noguchi Institute, Japan

#### **Workshop Description:**

The Glycoinformatics workshop will be held in an interactive manner, after some short presentations by software and database developers. The content will cover basic glycan drawing tools/software, glycan format converters, followed by more in-depth analytical tools including GlycoMaple. Subsequently, during the two Poster sessions, Glycoinformatics Desks will be set up for users to bring their own data, such as from mass spectrometry analysis, to test the latest updates to GlycoWorkbench, as well as to set up their upload to GlycoPOST, UniCarb-DR, and other repositories.

#### Benefits of the Workshop to Glyco26 Symposium attendees:

This Workshop will benefit researchers who would like to either (a) find information or references to glycan-related genes, proteins, lipids, lectins, pathways, diseases, etc. or (b) perform their own analysis on their data using the latest tools developed by the speakers, including machine-learning tools and Web tools for analyzing glycans and pathways, etc. After a set of invited talks by the developers of these databases and tools, the speakers can be directly asked questions regarding their data or tool during panel discussion. This will also be an opportunity for attendees to make requests for more data or tools that would be useful for their research; opportunities for new collaborations are possible.

#### **Speakers:**

Kiyoko Aoki-Kinoshita, Soka Univ., Japan (GALAXY, GlycomeAtlas, GlyCosmos) Daniel Bojar, Univ. of Gothenburg, Sweden (GlycoWork) Akihiro Fujita, Soka Univ., Japan (GlyTouCan) Morihisa Fujita, Gifu Univ., Japan (GlycoMaple) Masae Hosoda, Soka Univ., Japan (MCAW) Daniel Kolarich, Griffith Univ., Australia (GlycoWorkBench) Atsushi Kuno, AIST, Japan (LM-GlycomeAtlas) Thomas Masding, Soka Univ., Japan (GlyTouCan) Sriram Neelamegham, State Univ. of New York at Buffalo, USA (GlycoPAT) Shujiro Okuda, Niigata Univ., Japan (GlycoPOST) Yushi Takahashi, Soka Univ., Japan (GlyComb, UniCarb-DR) Mike Tiemeyer, CCRC, USA (GlyGen) Isaaku Yamada, Noguchi Institute, Japan (Drawing Tools, GlycoNAVI)

#### Intended audience:

Users of glycan-related databases; data generators (mass spectrometrists, etc.) who (wish to) use GlyTouCan and GlycoPOST to register their glycans/glycoproteins and/or mass spectrometry data and annotations; those interested in the latest bioinformatics databases and software tools for glycan research.

#### **Full Program:**

I. Introduction (K Aoki-Kinoshita) (10 min)
• Standards: MIRAGE, SNFG
II. Web Resources and Repositories (50 min)
<ul> <li>GlySpace: GlyCosmos and glycomics@Expasy (K Aoki-Kinoshita),15 min.</li> <li>GlyGen (M Tiemeyer), 10 min.</li> <li>GlyTouCan (A Fujita), 10 min.</li> <li>Archetypes (T Masding)</li> <li>GlyComb (Y Takahashi), 5 min.</li> <li>GlycoPOST/UniCarb-DR (S Okuda, Y Takahashi), 10 min.</li> </ul>
Break (10 min)
III. Tools (90 min; 10 min. each)
<ul> <li>Gene-related <ol> <li>GlycoMaple (M Fujita)</li> <li>GlycoSim (K Aoki-Kinoshita)</li> </ol> </li> <li>Structure-related <ol> <li>Drawing Tools (I Yamada)</li> <li>ClycoWork (D Bojar)</li> <li>GlycoWorkbench (D Kolarich)</li> <li>GlycoPAT (S Neelamegham)</li> <li>GALAXY, GlycomeAtlas, GlycoBase/GlycoStore (K Aoki-Kinoshita)</li> </ol> </li> <li>Lectin/GBP-related <ul> <li>MCAW (M Hosoda)</li> <li>LM-GlycomeAtlas (A Kuno)</li> </ul> </li> </ul>
Closing (I Yamada)
* Demos will be available at poster session booths

# Workshop

### Aug 30

#### Human Glycoproteomics Initiative Workshop @Glyco26

Date: Aug 30, 2023 Time: 13:30 - 15:30 Structure: Invited talks and Panel Discussions.

#### **Coordinated by:**

Morten Thaysen-Andersen, Macquarie Univ., Sydney, Australia Daniel Kolarich, Griffith Univ., Gold Coast, Australia KH Khoo, Academia Sinica, Taipei, Taiwan



HUMAN GLYCOPROTEOMICS INITIATIVE

#### Workshop Description:

This Workshop, organized by the Human Proteome Organization (HUPO) Human Glycoproteomics Initiative (HGI) (https://www.hupo.org/Human-Glycoproteomics-Initiative/), will focus on introducing the current state-of-the-art computational tools available to analyse LC-MS/MS datasets of glycopeptide mixtures. It will introduce challenges and opportunities in the field and highlight lessons learned from a recently completed community evaluation of glycoproteomics informatics solutions conducted through the HGI. The scope, aims and emphasis of a second HGI community study will also be introduced. This will be extended to cover several key software and applications thereof. Participants are encouraged to share their user experiences, preferences, and expectations.

#### Benefits of the Workshop to Glyco26 Symposium attendees:

We anticipate that this Workshop will benefit a considerable proportion of the Glyco26 attendees by offering a rare opportunity to learn from and engage with leading scientists within the glycoproteomics community. Attendees will obtain valuable insights into the latest informatics and technology developments in the emerging area of glycoproteomics. Attendees may identify avenues of using glycoproteomics within their own research portfolio possibly through collaborations with experts in the field. The focused discussions on technical and informatics challenges remaining to be solved will benefit attendees by painting a realistic picture of the current capabilities and pitfalls of glycoproteomics, useful for scientists both within and outside glycoproteome research community.

#### Speakers:

Morten Thaysen-Andersen, Macquarie Univ., Australia (Intro and lessons from 1st HGI study) Stacy Malaker, Yale Univ., USA (Update on 2nd HGI study) Shisheng Sun, Northwest Univ., China (StrucGP) Wen-Feng Zeng, Max Planck Institute, Germany (pGlyco3) Mingliang Ye, Chinese Academy of Sciences, Dalian, China (GlycoDecipher) Giuseppe Palmisano, Macquarie Univ., Australia (Glycoproteomics applications)

#### Intended audience:

Glycoproteomics software developers, glycoproteomics experimentalists/ practitioners and more broadly glycoscientists with an interest in moving into glycoproteomic research

#### **Full Program**

13:30	Intro and lessons from 1 <sup>st</sup> HGI study (Morten Thaysen-Andersen)
13:40	Update on 2nd HGI study (Stacy Malaker)
14:00	StrucGP (Shisheng Sun)
14:20	pGlyco3 (Wen-Feng Zeng)
14:40	GlycoDecipher (Mingliang Ye)
15:00	Glycoproteomics applications (Giuseppe Palmisano)
15:20	Additional Q&A time
15:30	Closing

### Advanced Courses Aug 26-27

#### Advanced Course I: Aug 26, 2023; 13:00-15:00

**Glycan Binding Proteins – Diversity, Structure, Recognition Principles and Biology** Lecturers: Kurt Drickamer, Matthew Macauley and Maureen Taylor

#### **OVERVIEW**

Glycan-binding receptors are found in all kingdoms of life, but this short course will be focused on mammalian examples, particularly in the immune system. The course is intended as an overview of mammalian glycan-binding receptors, also known as animal lectins. Areas to be covered will include biological functions in the context of cells and organisms as well as biochemical analysis of what sugars are recognized and how specificity is achieved. As galectins will be discussed extensively in a Satellite Meeting, the focus of this course will be on other groups of animal lectins, including the large groups of C-type lectins and siglecs, as well as additional protein families that have been described more recently.

13:00-13:05	Introduction
13:05-13:35	Maureen Taylor (Imperial College London, UK): Multiple families of animal lectins
13:35-13:45	Questions/Discussion
13:45-14:15	Matthew Macauley (University of Alberta, Canada): Siglecs
14:15-14:25	Questions/Discussion
14:25-14:50	Kurt Drickamer (Imperial College London, UK): How structure leads to functions of the C-type lectins
14:50-15:00	Questions/Discussion

#### **ABSTRACTS:**

#### Title: Multiple families of animal lectins

#### Maureen Taylor

Comparisons across different families of glycan-binding receptors reveals that analogous and often overlapping functions can be performed by proteins that have different types of carbohydrate-recognition domains and bind sugars in different ways. Knowledge of how different domains bind sugars, combined with genomic information, makes it possible to provide an increasingly complete catalog of animal lectins. Examples of C-type lectins as well as other lectin families will be presented. Current understanding of sugar-binding activity for endogenous mammalian glycans is better than binding of sugars on micro-organisms, such as bacteria, fungi, viruses and parasites, but recent progress in understanding such interactions will be discussed.

#### Title: Siglecs Matthew Macauley

Siglecs are transmembrane receptors that recognize sialic acid-containing glycoconjugates. Expressed predominantly on immune cells, the majority of Siglecs have signaling motifs on their cytoplasmic tails that can repress immune cell signal. This is in line with the hypothesis that Siglecs recognize sialoglycans as a form of 'self' recognition to limit autoimmunity. A combination of chemistry and genetics have accelerated our understanding of the precise biochemical nature of sialic acid ligands for Siglecs, with new findings demonstrating that Siglecs are specific for aspects of the glycan behind the linkage of the sialic acid to the underlying protein/lipid. For example, new studies point to the importance of the class of glycan, carbohydrate sulfation, and the specific protein(s) to which the glycan is appended. In parallel with advances in our understanding of their ligands, many new roles for Siglecs are being discovered in diseased states such as cancer, autoimmunity, and neurodegeneration.

#### Title: How structure leads to functions of the C-type lectins Kurt Drickamer

Structural information is now available for most, although not all, of the carbohydrate-recognition domains of the C-type lectins in complex with glycan ligands. Combined with glycan array analysis and analysis of naturally occurring variants and introduced mutations, selective targeting of both host and pathogen glycans can often be explained. It is less well understood how these binding events mediate downstream effects of sugar binding, such as intracellular signaling, endocytosis, cell adhesion and complement fixation. However, the available structural information provides useful insights into possible mechanisms, both explaining the natural functions of the receptors and potentially facilitating manipulation of receptor functions using synthetic ligands.

#### Advanced Course II: Aug 26, 2023; 15:20-18:20

**Protein O-glycosylation – Structural Diversity, Biosynthesis, Regulation and Functions** Focusing on O-GalNAc, O-Man, O-Fuc/O-Xyl/O-Glc Lectures: Henrik Clausen, Robert Haltiwanger

#### **OVERVIEW**

This course will provide insights into protein glycosylation in eukaryotes with particular emphasis on the many different types of protein O-glycosylation. Historical and up-to-date perspectives will be provided with highlights of the different approaches to identify and characterize the enzymes involved in O-glycosylation and the current state of understanding of the distinct O-glycosylation pathways in mammalian cells. State-of-the-art strategies to discover and dissect biological functions of O-glycosylation as well as an overview of the genes known to be involved in human diseases (congenital disorders of glycosylation) will be covered.

15:20-15:40	Introduction (Robert Haltiwanger/Henrik Clausen) Overview of protein glycosylation in eukaryotes Biosynthetic and genetic regulation of protein glycosylation Evolutionary perspectives (yeast to man)
15:40-16:30	Henrik Clausen (Copenhagen Center for Glycomics, Denmark): The most common types of protein O-glycosylation – O-GalNAc (mucin-type) and O-Man
16:30-16:50	Questions/Discussion
16:50-17:10	Refreshment break
17:10-18:00	Robert Haltiwanger (University of Georgia, USA): O-glycosylation of cysteine-rich domains with O-Fuc, O-Glc, O-Xyl, or O-GlcNAc
18:00-18:20	Questions/Discussion

#### **ABSTRACTS:**

### Title: The most common types of protein O-glycosylation – O-GalNAc (mucin-type) and O-Man Henrik Clausen

Glycosylation is arguably the most abundant and diverse type of posttranslational modification of proteins. The mucin-type (GalNAc-type) O-glycosylation stands out as being found widely on most secreted proteins without preference for classes of proteins or particular protein folds much like N-glycosylation. However, in contrast to N-glycosylation mucin-type O-glycosylation is not guided by clear peptide sequence motifs and the O-glycoproteome is therefore difficult to predict. Moreover, up to 20 isoenzymes (polypeptide GalNAc-transferases, GALNT1-20) orchestrate where O-glycans are attached on proteins providing opportunities for high degree of differential regulation of the O-glycoproteome in cells. This lecture will cover the historical developments in understanding the biosynthesis and genetic regulation of mucin-type glycosylation and the current state of the O-glycoproteome as well as highlight examples of specific biological functions of O-glycosylation such as proprotein processing and ectodomain shedding. The lecture will draw parallels to protein O-mannosylation that appear to serve equivalent functions in yeast, whereas O-mannosylation in higher eukaryotes has evolved into three distinct types each serving highly restricted proteins and protein folds. The lecture will highlight strategies (gene engineering, GlycoCRISPR, SimpleCells) and resources (cell-based glycan arrays, organotypic tissue models) currently used in studying O-glycosylation.

#### Title: O-glycosylation of cysteine-rich domains with O-Fuc, O-Glc, O-Xyl, or O-GlcNAc Robert Haltiwanger

This lecture will discuss the discovery, biosynthesis, and function of O-glycans on two cysteine-rich domains: Epidermal Growth factor-like (EGF) repeats and Thrombospondin Type 1 Repeats (TSRs). Both EGF repeats and TSRs have six conserved cysteines forming three disulfide bonds, but the disulfide bonding patterns are different. EGF repeats are typically 40-50 amino acids long and are found in hundreds of cell-surface and secreted proteins. EGF repeats can be modified with up to four O-glycans, each at specific consensus sites: O-Glc (at two sites), O-Fuc, and O-GlcNAc. Some of the

O-Glc sites can also be modified with O-Xyl. The presence of consensus sequences allows identifying proteins that are predicted to be modified. The enzymes that add these sugars to EGF repeats (POGLUT1/2/3, POFUT1, and EOGT) and those that elongate them (e.g. GXYLT1/2, XXYLT1, LFNG/MFNG/RFNG), have been identified. Mutations in these enzymes in humans, mice or flies cause defects in the Notch signaling pathway, indicating that the biological function of these modifications are mainly in regulation of Notch function. TSRs are somewhat larger than EGF repeats (50-70 amino acids) and occur in dozens of extracellular proteins. They also can be modified by O-Fuc at a specific consensus sequence, and the O-Fuc can be elongated to a Glcb1-3Fuc disaccharide. 49 proteins in the human genome have TSRs predicted to be modified with O-Fuc, and elimination of the enzyme adding the fucose (POFUT2) results in embryonic lethality in mice, while mutations in the enzyme adding the glucose (B3GLCT) cause a Congenital Disorder of Glycosylation, Peters Plus Syndrome. The lecture will conclude with proposed mechanisms for how these O-glycans affect the function of proteins containing modified EGF repeats and TSRs. Interestingly, much like N-glycans, they have both been shown to participate in protein-protein interactions in the extracellular spaces and in quality control in the endoplasmic reticulum.

#### Advanced Course III: Aug 27, 2023; 09:00-12:00

**Glycomics and Glycoproteomics of Biological Systems** Lecturers: Anne Dell, Daniel Kolarich, Manfred Wuhrer

#### **OVERVIEW**

This workshop will provide both historical perspectives and up-to-date insights into state-of-the-art methodologies for defining glycomes and glycoproteomes in biological systems. Topics will include choices of workflows, glycomic and glycoproteomic mapping, fragmentation pathways, imaging, highthroughput analyses, manual and automated data interpretation.

09:00-09:10	Introduction
09:10-09:50	Anne Dell (Imperial College London, UK): Reflections on the history and current status of systems glycomics
09:50-10:00	Questions/Discussion
10:00-10:40	Daniel Kolarich (Griffith University, Australia): The Hitchhiker's Guide to Glycoproteomics
10:40-10:50	Questions/Discussion
10:50-11:10	Refreshment break
11:10-11:50	Manfred Wuhrer (Leiden University, Netherlands): Intact proteins, high-throughput, and spatial glycomics
11:50-12:00	Questions/Discussion

#### **ABSTRACTS:**

#### Title: Reflections on the history and current status of systems glycomics Anne Dell

Much of glycobiology research seeks to understand how glycans on glycoproteins, glycolipids and lipopolysaccharides engage with glycan-binding proteins to mediate adhesive and signalling events. Such recognition is central to cell-cell communication including, for example, interactions between mammalian eggs and sperm, between pathogens, parasites and their hosts, between cells of the immune system, and between the microbiome and the gastro-intestinal and cervicovaginal tracts. In partnership with bioscience collaborators worldwide, my laboratory at Imperial College London specialises in the development and exploitation of high sensitivity mass spectrometry with the aim of establishing the roles that glycans play in health and disease. Drawing on case studies from over forty years of collaborative research, this lecture will provide both a historical perspective and an assessment of the current status of high sensitivity glycomic methodologies for defining N- and O-glycomes of cells, tissues, organs and biological fluids.

#### Title: The Hitchhiker's guide to glycoproteomics Daniel Kolarich

Glycoproteomics, the study of glycans and their carrier proteins in a system-wide context, is becoming a powerful tool in glycobiology that enables the functional analysis of protein glycosylation. This presentation will provide a concise overview on the approaches, methodologies, and technologies that are relevant within a glycoproteomics experiment, from the start to the data analysis and interpretation. We will discuss the challenges, limitations but also unique opportunities related to the common strategies employed to capture glycoprotein-specific and system- wide glycoproteome data from tissues, body fluids, or cells, and provide a perspective on how integration into multi-omics workflows translates into new knowledge in glycobiology and its role in health and disease.

#### Title: Intact protein, high-throughput, and spatial glycomics Manfred Wuhrer

Mass spectrometry imaging of N-glycans discloses cell-type and tissue-specific glycosylation in cancer and inflammatory conditions. Native mass spectrometry, in conjunction with affinity capillary electrophoresis and affinity chromatography is a powerful approach for exploring the role of glycosylation in modulation of protein interactions. Moreover, by analyzing glycosylation from hundreds to thousands of clinical samples the link of glycosylation to disease and genomic, metabolomic and immunological markers can be established.

### Travel Awards

### 2023 Glyco26 Travel Awards



### 2023 Glyco26 Travel Awards



#### Inês Alves

Institute for Research and Innovation in Health, Portugal Title: Abnormal glycosignature of host tissue triggers pathogenic recognition through γδT cells/IL-17a axis in autoimmunity



#### The Huong Chau

Macquarie University, Australia

Title: Glycomics-assisted glycoproteomics enables insights into the complex glycoproteome of resting and activated platelets



#### **Nohelly Derosiers**

University of Pennsylvania, USA Title: Investigating the efficacy of Siglec-15 based CAR T-cells



#### Cristina Di Carluccio

University of Naples Federico II, Italy Title: Molecular details of α2-3-sialylated O-GalNAc glycan recognition by Siglec-like SLBR-N (SLBRUB10712) of Streptococcus gordonii



#### Jeff Hsiao

Massachusetts Institute of Technology, USA

Title: Mucin O-glycans are host-derived immunomodulators of neutrophil inflammatory activity



# **Glyco26** Travel Awards



#### Thapakorn Jaroentomeechai

University of Copenhagen, Denmark

Title: A cell-based production pipeline for mammalian glycopeptides and glycans



#### Jaesoo Jung

#### University of Alberta, Canada

Title: Elucidating the sulfated glycan ligands for Siglec-3 and -8 expressed on microglia



#### Giulia Lunghi

University of Milan, Italy

Title: Glucosylceramide lysosomal accumulation leads to metabolic alterations underling neuronal degeneration in GCase-related pathologies

### Abarna Vidya Mohana Murugan

#### Griffith University, Australia

Title: Phyloglycomics: Understanding species-specific evolution of the serum glycome – a step towards filling the knowledge gap in hostpathogen co-evolution



#### **liechen Shen** (withdrawn, unable to attend)

Northwest University, China

Title: New StrucGP facilitate precise characterization of glycan modification on site-specific N-glycans

#### Seigo Tateo

#### Kagoshima University, Japan

Title: Development of sugar chain binding chimeric antigen receptor expressed natural killer cells for immunotherapy against adult T cell leukemia (ATL)



# Poster Session

Floor Map for Poster BoardsPoster Session

### Floor Map for Poster Boards



Poster Area B



Poster Area A

Poster Area C

### Poster Session

(Only the presenting author shown here, please refer to the Abstract Book for full listing of all co-authors)

NL	Name, Affiliation
NO	Title
A001	Vladimir Lupashin, Univ. of Arkansas for Medical Sciences, United States
	Understanding the Essential Role of COG and GARP Vesicle Tethering Complexes and SNAREs in Regulating Protein Glycosylation in Human Cells
A002	Naoyuki Taniguchi, Osaka International Cancer Institute, Japan
	Reduced Core Fucose of IgG in the Patients with Pulmonary Diseases Quantified by Monoclonal Antibody and Downregulated Fut8 by CCL2
A003	Satoshi Ninagawa, Kobe Univ., Japan
	EDEM2-S-S-TXNDC11 Complex Trims N-glycan from M9 to M8B in the Endoplasmic Reticulum
A004	Shi Yan, Univ. of Veterinary Medicine Vienna, Austria
	Chitobiose Core Trifucosylation of Nematode N-glycans Requires Golgi $\alpha$ -mannosidase III Activity
A005	Seita Tomida, Gifu Univ., Japan
	The Stem Region of Alpha1, 6-fucosyltransferase FUT8 Regulates the Multimer Formation and Stabilization of FUT8
A006	Reina Osuka, Gifu Univ., Japan
	Recognition of Glycoprotein Substrates by Glycosyltransferase GnT-V
A007	Christian Büll, Radboud Univ. Nijmegen, Netherlands
	Unraveling of the Human Sialylation Network
<b>A008</b>	Masaki Matsuo, Kobe Univ., Japan
	Proteomics-based Research for Endogenous Substrates of the Glycoprotein Quality Control Factor UGGTs
A009	Kiichiro Totani, Seikei Univ., Japan
	Endomannosidase Contributes to Degradation of Misfolded Glycoproteins in the Endoplasmic Reticulum
A010	Tetsuya Okajima, Nagoya Univ., Japan
	The Structure and Function of "Extracellular" O-GlcNAc Modification in Mammals.
*A011	Yicheng Wang, Institute of Process Engineering, Chinese Academy of Sciences, China
	Genome-wide CRISPR Screen Reveals CLPTM1L as a Lipid Scramblase Required for Efficient Glycosylphosphatidylinositol Biosynthesis
A012	Kaoru Takegawa, Kyushu Univ., Japan
	Substrate Specificities and Characterization of Alpha- and Beta-galactosyltransferases in the Fission Yeast Schizosaccharomyces Pombe
A013	Taiki Saito, National Institutes of Natural Sciences, Japan
	Molecular Networks Involving Glycosyltransferases Characterized by Proximity Labeling

\*Submission Withdrawn

No	Name, Affiliation
	Title
A014	Hung-Lin Chen, Academia Sinica, Taiwan
	Cytosolic Galectin-3 Mediates Suppression of EGFR Signaling Endosome
A015	Giulia Lunghi, Univ. of Milan, Italy
	Glucosylceramide Lysosomal Accumulation Leads to Metabolic Alterations Underling Neuronal Degeneration in GCase-related Pathologies
A016	Takahiro Nakagawa, Nagoya Univ., Japan
	Discovery and Characterization of Deaminoneuraminic Acid (Kdn)-Specific Aldolase from Sphingobacterium sp.
A017	Sakura Toda, Nagoya Univ., Japan
	Functional Significance of the C-Domain of the Fish CMP-Sialic Acid Synthetase (CSS)
A018	Ching-Yuan Cheng, National Taiwan Univ., Taiwan
	Intracellular Galectin-1 Involves in Erythropoiesis via Regulating STATs, ERK, and Smad2/3 Signaling
A019	Guang-Chao Chen, Academia Sinica, Taiwan
	Drosophila Galectin Regulates Intestinal Stem Cell Proliferation Through ECM Component Interaction
A020	Chia-Lin Hsu, National Yang Ming Chiao Tung Univ., Taiwan
	The Intracellular Nucleoside Transporter, ENT3, Regulates Lysosome-Mediated Activities in Immune Cells
A021	Alexey Pshezhetsky, Univ. of Montreal, Canada
	Protein Sialylation as a Defining Factor for Hematopoiesis, Adult Myogenesis and Kidney Function
A022	Yi-Hsuan Chang, Academia Sinica, Taiwan
	Protein O-GlcNAcylation Regulates the Homeostasis of Innate B Lymphocytes
A023	Yoshihiro Akimoto, Kyorin Univ. School of Medicine, Japan
	Localization of O-GlcNAcylated β-Actin in the Nucleus
A024	Hiroto Hirayama, RIKEN, Japan
	Establishment of a Method for Measuring the Endogenous Peptide:N-glycanase Activity Using a Novel FRET-based Probe
A025	Mannat Jain, Dr. D. Y. Patil Vidyapeeth, India
	Sensing the Binding of Blood Group B Antigen with Galectins in Silico
A026	Ho-Yang Tsai, Academia Sinica, Taiwan
	The $\alpha$ 2,8-disialyl Motif Modulates B-cell Receptor Signaling
A027	Hiroko Ideo, The Noguchi Institute, Japan
	Galectin-4 Plays a Vital Role in the Peritoneal Dissemination of Poorly Differentiated Gastric Cancer Cells
A028	Jaesoo Jung, Univ. of Alberta, Canada
	Elucidating the Sulfated Glycan Ligands for Siglec-3 and -8 Expressed on Microglia
A029	Huei-Syuan Jiang, Academia Sinica, Taiwan
	Comprehensive Study of Siglec-15 Ligands on Osteoclast Precursors by Genome-wide Knockout Screening

No	Name, Affiliation
	Title
A030	Yuki Fujii, Nagasaki International Univ., Japan
	Discovery of the First R-type Lectin from Mytilidae (Sea Mussels) and Its Cellular Function
A031	Ryuhei Hayashi, Yokohama City Univ., Japan
	Purification of Tumor-associating Glycan-binding Lectins from the Marine Sponges
A032	Feng-Jen Lin, National Taiwan Univ., Taiwan
	Galectin-12 Regulates Immune Responses in the Skin Through Sebaceous Glands
A033	Hakon Leffler, Lund Univ., Sweden
	Galectin-1: From Monomer to Dimer
A034	Kathleen Kay Buendia, Hiroshima Univ., Japan
	High-Mannose Specific Lectin from Edible Seaweed Meristotheca Papulosa Exhibits Anti- proteinase Activity
A035	Jun Iwaki, Tokyo Chemical Industry Co., Ltd., Japan
	Practical Use of Analytical Tools for Glycan Structures on Glycoproteins and Cells
A036	Ryan Rego, Biology Centre, Czechia
	Functional Characterization of the Sialic-acid Binding Innate Immune Proteins of the Soft Tick Ornithodoros Moubata
A037	Chihiro Sato, Nagoya Univ., Japan
	Regulation of Siglec-7 by a New Sialic Acid Binding Region Conserved Among CD33-like Siglecs
A038	Cristina Di Carluccio, Univ. of Naples Federico II, Italy
	Molecular Details of $\alpha$ 2–3-Sialylated O-GalNAc Glycan Recognition by Siglec-like SLBR-N (SLBRUB10712) of Streptococcus Gordonii
A039	Albert M. Wu, Chang-Gung Univ., Taiwan
	Roles of the Structural Units, Glycotopes / Mammalian N-glycans for Con A- Glycan Interactions, Their Codes, and Their Recognition Factors.
A040	Lourriel Macale, Academia Sinica, Taiwan
	Assessing the Potentials of Mycobacteriophage Receptor Binding Proteins as Promising Tool for Detection of Mycobacterium Species Through Glycan Microarray
A041	Hsien-Ya Lin, Academia Sinica, Taiwan
	Modifying Thiodigalactoside-based Inhibitors for Selective Galectins-1 and -3 Inhibition
A042	Alba Silipo, Univ. of Naples Federico II , Italy
	Siglecs Interaction with Glycans: A Molecular View
A043	Yu-Hao Lin, National Yang Ming Chiao Tung Univ., Taiwan
	Liquid-liquid Phase Separation in Regulating Galectin-3's Agglutination from Biophysical and Evolutionary Perspectives
A044	Li-An Tsai, Academia Sinica, Taiwan
	Mycobacteriophage Douge Isolated from the Soil Shows Mycobacterial Glycan Binding Specificity
A045	Kanako Doi, Graduate School of Bioresource and Bioenvironmental Sciences, Japan
	Analysis of the Utilization Mechanism of Complex Type N-glycan by Intestinal Bacteria Barnesiella

No	Name, Affiliation
	Title
A046	Qiaochu Liang, Univ. of British Columbia, Canada
	The Role of Mucin O-glycans in the Interactions Between Enteric Pathogens and the Intestinal Mucus
A047	Martin Strnad, Biology Centre ASCR, Czechia
	Defining a Role of Glycosaminoglycans in Barrier Transmigration of Borrelia Burgdorferi
A048	Hau-Ming Jan, Harvard Medical School, United States
	Advantages of Intact Microbe Microarrays in Studying Host-Microbe Interactions
A049	Rajendra Janapatla, Chang Gung Memorial Hospital, Taiwan
	Identification of Gut Bacteria Encoded Carbohydrate-Active Enzymes and Sulfatases that Target Dietary Polysaccharides by Proteomics
A050	Toshihiko Katoh, Kyoto Univ., Japan
	<i>Bifidobacterium Bifidum</i> Degrades Sulfated Mucin O-Glycans via a Sulfatase-independent Pathway
A051	Seonghun Kim, Korea Research Institute of Bioscience and Biotechnology, South Korea
	Detection of Glycan Epitopes in Gut Microbes Using Mushroom Lectins
A052	Jeff Hsiao, Massachusetts Institute of Technology, United States
	Mucin O-glycans Are Host-Derived Immunomodulators of Neutrophil Inflammatory Activity
A053	Chia-Chuan Chang, National Taiwan Univ., Taiwan
	Interaction of Carbohydrate Constituents of Cultivated Dendrobium Hybrids with Mice Gut Microbiota
A054	Ching-Yi Lu, National Taiwan Univ., Taiwan
	Chemical Characterization of Galactomannans from Traditional Chinese Medicine and Their Probiotic Effect on Carbohydrate-utilizing and Mucin-degrading Gut Microbiomes
A055	Kuo-Feng Hua, National Ilan Univ., Taiwan
	The Immunomodulatory Properties of Lipopolysaccharide Isolated from Marine Gram- negative Bacteria <i>Kangiella Japonica</i>
A056	Mou-Chieh Kao, National Tsing Hua Univ., Taiwan
	Helicobacter Pylori Employs a General Protein Glycosylation System for the Modification of Outer Membrane Adhesins
A057	Jin-Ichi Inokuchi, Osaka Univ., Japan
	Regulation of TLR4 Signaling and Pyroptosis by Ganglioside GM3 Molecular Species
A058	Beatriz Santos-Pereira, Univ. of Porto, Portugal
	The Regulatory Role of Glycosylation in $\gamma\delta T$ cell-mediated Immune Response in Autoimmunity
A059	Kanae Ohishi, Chiba Univ., Japan
	Sialyl Lewis X Defines an Activated and Functional Regulatory T Cell Subpopulation in Mice
A060	Yu-Hsien Hung, Academia Sinica, Taiwan
	Galectin-3 Regulates Helicobacter Pylori-induced Apoptosis in Gastric Epithelial Cells
A061	Shingo Maruyama, Meiji Univ., Japan
	Investigation of Ubiquitinated Protein of Chitin-Induced Defense Signaling Mediated by AtCERK1.

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A062	Hiroto Kawashima, Chiba Univ., Japan
	Development of a Novel Anti-sulfated Glycan Antibody that Blocks Lymphocyte Homing to Nasal Associated-lymphoid Tissues and Allergic Rhinitis in Mice
A063	Freda Jen, Griffith Univ., Australia
	Targeting the Glyco-Achilles Heel of Neisseria Gonorrhoeae: A New Strategy for Vaccines to Prevent Gonorrhea
A064	Cheng-Hsun Ho, I-Shou Univ., Taiwan
	Relevance of IgG-Fc N-glycosylation in Liver Fibrosis
A065	Cheng-Wen Hsiao, National Cheng-Kung Univ., Taiwan
	The Pathogenesis of Coxsackievirus B3 in Human Nucleolin Transgenic Mice
A066	Elisa Fadda, Maynooth Univ., Ireland
	Changing the Coat: Evolution of the SARS-CoV-2 S Glycan Shield and Its Role in Modulating Viral Infection
A067	Sayo Morishita, Nagoya Univ., Japan
	Interactions Between Acidic Polysaccharides and the Sialic Acid-specific Lectin Siglec-7
A068	Takeshi Tsubata, Nihon Univ. School of Dentistry, Japan
	Role of Endogenous Glycan Ligands of CD22 (Siglec-2) in Immunity
A069	Ting Han Chen, National Cheng Kung Univ., Taiwan
	Effect of Minocycline and Formoterol Fumarate in EV-A71 Infected Transgenic Mice
A070	Mayu Okuda, Keio Univ., Japan
	Glycan Profiling of Animal Cells by Saccharide Primer Method and Correlation Analysis with Influenza Virus Susceptibility
A071	Shang-Chuen Wu, Brigham and Women's Hospital/Harvard Medical School, United States
	Blood Group A Enhances SARS-CoV-2 Infection
A072	Ben Schulz, The Univ. of Queensland, Australia
	The Role of N-glycosylation in Spike Antigenicity for the SARS-CoV-2 Gamma Variant
A073	Yannick Rossez, Faculté des sciences et technologies de Lille, France
	The Role of Glycosylation in the Immune Response of Galleria Mellonella, a Model Host for Pathogenic Infections
A074	Chih Ming Tsai, Univ. of California, United States
	Non-protective Immune Imprint Underlies Failure of S. aureus IsdB Vaccine
A075	Pei-Shan Sung, Academia Sinica, Taiwan
	Inhibition of SARS-CoV-2-mediated Thromboinflammation by CLEC2.Fc
A076	Tzu-Lan Chang, Howard Univ., United States
	pH, Serum, and Calcium Influenced Viral-Aggregates vs. Dispersedly Similar Viruses with Complex N-Glycans on Their Envelop Proteins such as VSVg
A077	Ming-Wei Chien, National Health Research Institutes, Taiwan
	N-glycan Branching Shapes CD8 T Cell Pathogenicity Through an Mgat5-dependent Regulation on Proinflammatory Cytokine Signaling

No	Name, Affiliation
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A078	Yong-Sheng Wang, Academia Sinica, Taiwan
	The Novel Conformational Landscape of PEDV S Trimeric Glycoprotein
A079	Cheng-I Yao, Academia Sinica, Taiwan
	Structural Analysis of the Lipid A from Parabacteroides Goldsteinii
<b>A080</b>	Lih-Lih Ong, National Yang Ming Chiao Tung Univ., Taiwan
	Role of Cholesteryl -D-Glucopyranoside 6'-Acyltransferase in the Pathogenesis of Helicobacter Pylori: Insights and Opportunities for Antibacterial Therapy
A081	Rebecka Karmakar Saldivar, Taipei Medical Univ., Taiwan
	Gram-Positive Bacterium Romboutsia Ilealis Has a Polysaccharide Synthase Capable of Producing Mixed-linkage (1,3;1,4)-β-D-Glucans
A082	Jianguo Gu, Tohoku Medical and Pharmaceutical Univ., Japan
	Alteration in N-Glycans in Cancer Drug Resistance: A New Function of GnT-III
A083	Kento Mori, Keio Univ., Japan
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A084	Sheng-Hung Wang, Chang Gung Memorial Hospital at Linkou, Taiwan
	Conformational Alteration in Glycan Induces Phospholipase Cβ1 Activation and Angiogenesis
A085	Nohelly Derosiers, Univ. of Pennsylvania, United States
	Investigating the Efficacy of Siglec-15 based CAR T-cells.
A086	Eduarda Leite-Gomes, Universidade do Porto, Portugal
	Branched N-Glycans of Colonic Stromal Cells: Key Players in Colitis-Associated Colorectal Carcinogenesis
A087	Hirokazu Yagi, Nagoya City Univ., Japan
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<b>A088</b>	Herbert Hildebrandt, Hannover Medical School, Germany
	Proinflammatory Macrophage Activation by the Polysialic Acid-Siglec-16 Axis Is Linked to Increased Survival of Glioblastoma Patients
A089	Kazuchika Nishitsuji, Wakayama Medical Univ. School of Medicine, Japan
	Glycan-Mediated Prion-Like Behavior of Mutant p53 Aggregates and Their Possible Role in Cancer Pathogenesis
A090	Tzu-Hui Hsu, Academia Sinica, Taiwan
	B4GALT1-Dependent Galectin-8 Binding with TGF- $\beta$ Receptor Suppresses Colorectal Cancer Progression and Metastasis
A091	Tan-Chi Fan, Chang Gung Memorial Hospital, Taiwan
	The Role of ST3GAL1 in the Regulation of Cancer Cell Motility
A092	Mayuka Ohkawa, Yokohama City Univ., Japan
	Identification and Functional Characterization of Sugar-modified MicroRNAs in Cancer
A093	Hitomi Hoshino, Univ. of Fukui, Japan
	Expression of Low-Sulfated Keratan Sulfate in Non-Mucinous Ovarian Carcinoma

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A094	Kei Kaneko, Chubu Univ., Japan
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A095	Mohammad Abul Hasnat, Chubu Univ. College of Life and Health Sciences, Japan
	Function Analysis of Glioma Cell-derived Exosomes in Malignant Properties of Gliomas
A096	Hau-Hsien Tsai, National Cheng Kung Univ., Taiwan
	The Effects of Immune Checkpoint Protein Sialylation in Colorectal Cancer Cell
A097	Masaya Hane, Nagoya Univ., Japan
	Wet and Dry Analysis of Sialoglycoconjugates in Cancer Cell Lines
A098	Ayano Tajima, Keio Univ., Japan
	Comparative Analysis of Glycans Involved in Migration and Tumorigenicity of Cancer Cells
A099	Laia Querol Cano, Radboudumc, Netherlands
	Galectin-Mediated Interactions Are Essential in Governing Dendritic Cell Anti-Melanoma Immunity
A100	Szu-Wen Wang, Rock BioMedical, Inc., Taiwan
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A101	Tzer-Min Kuo, OBI Pharma, Inc, Taiwan
	Interaction Between Globo-H and EGFR in Lung Cancer Cells
A102	Alice S. T. Wong, Univ. of Hong Kong, Hong Kong
	ST3GAL4 Promotes the First Critical Step of Ovarian Cancer Metastasis
A103	Maroš Krchňák, Institute of Chemistry, Slovak Academy of Sciences, Slovakia
	Changes in Plasma Proteins Glycosylation After Surgical Resection of Colorectal Tumors Investigated by MALDI-TOF MS
A104	Yung-Kuo Lee, Kaohsiung Armed Forces General Hospital , Taiwan
	Long-term DEHP/MEHP Exposure Promotes Colorectal Cancer Stemness Associated with Glycosylation
A105	ThuyLinh DangCao Linda, Univ. of Tsukuba, Japan
	Cancer Specific Sialylation of Glycoprotein Nonmetastatic Melanoma Protein B Interact with Tumor Associated Macrophage in Triple-Negative Breast Carcinoma via Siglec-9
A106	Sravya Mandava, Academia Sinica, Taiwan
	Investigating the Impact of Potential Sialylated Glycoprotein-Siglec Axis on Microglia- Mediated Immunity Against Brain Metastatic Melanoma
A107	Chun-Hua Hung, National Cheng Kung Univ., Taiwan
	N-Glycosylation-Defective IL6 Activates the SRC-YAP-SOX2 Signaling to Potentiate Metastasis and TKI Resistance in NSCLC
A108	Hui-Ming Chen, Academia Sinica, Taiwan
	The Impact of Sialylated Glycocalyx of Malignant Tumors on Brain Metastasis
A109	Inês Alves, i3S - Institute for Research and Innovation in Health, Portugal
	Abnormal Glycosignature of Host Tissue Triggers Pathogenic Recognition Through $\gamma\delta T$ cells/IL-17a Axis in Autoimmunity.
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A110	Yuka Kobayashi, Seikei Univ., Japan
	Development of the Fluorogenic Glycoprobe for Cancer Cell Surface Calreticulin
A111	Seigo Tateo, Kagoshima Univ., Japan
	Development of Sugar Chain Binding Chimeric Antigen Receptor Expressed Natural Killer Cells for Immunotherapy Against Adult T Cell Leukemia (ATL)
A112	Celso Reis, Univ. of Porto, Portugal
	Altered Glycosylation in Cancer Affects Cellular Receptor Tyrosine Kinases and Regulates Cancer Cell Sensitivity to Therapeutic Drugs.
A113	Carolin Neu, Martin-Luther-Univ. Halle-Wittenberg, Germany
	Ac3ManNAc-6-phosphoramidate Prodrugs as Potential New Treatment for GNE Myopathy
A114	Kei-Ichiro Inamori, Tohoku Medical and Pharmaceutical Univ., Japan
	Altered Expression of Glycosphingolipids and Its Possible Significance in Ulcerative Colitis
A115	Iwao Takahashi, Iwate Medical Univ., Japan
	Deficiency of Heparan Sulfate Proteoglycan Syndecan-4 Impairs Pancreatic $\beta$ -Cell Function in Mice
A116	Lianchun Wang, Univ. of South Florida, United States
	Vascular Heparan Sulfate and Amyloid-β Immunopositivity Increases in Alzheimer's Disease Patients with Cerebral Amyloid Angiopathy
A117	Satomi Nadanaka, Kobe Pharmaceutical Univ., Japan
	Chondroitin Sulfate Controls the Invasive Property of the Triple-Negative Breast Cancer Cell Lines, BT-549 and MDA-MB-231 Cells
A118	Shuhei Yamada, Meijo Univ., Japan
	Hereditary Bone Disorders Caused by Reduced Activity of Xylosyltransferases Involved in Glycosaminoglycan Biosynthesis
A119	Chiaki Asaoka, Meijo Univ., Japan
	Analysis of T Cell Differentiation in Mice Lacking Heparan Sulfate Biosynthetic Enzyme Extl3
A120	Asaka Takayasu, Meijo Univ., Japan
	Effect of Uridine Diphosphate on the Enzymatic Activities of Glycosaminoglycan Biosynthetic Enzymes, Xylosyl- and Glucuronyl Transferases
A121	Ivan Dzhagalov, National Yang Ming Chiao Tung Univ., Taiwan
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A122	Yeoujia Lee, Keio Univ., Japan
	Accelerated Transgene Expression in Nerve Cells by Chitosan/glycosaminoglycan Nanoparticles
A123	Shogo Nakamura, Keio Univ., Japan
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A124	Hsuan-Po Hsu, National Yang Ming Chiao Tung Univ., Taiwan
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A125	Yuji Suzuki, Nagoya Univ. Graduate School of Medicine, Japan
	Towards the Clarification of a Novel Molecular Mechanism Underlying Body Weight Regulation via a Receptor Tyrosine Kinase for Heparan Sulfate
A126	Libor Hejduk, Univ. of South Bohemia, Czechia
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A127	Toshihiko Toida, Chiba Univ., Japan
	Chondroitin Sulfate Proteoglycan from Salmon Nasal Cartilage: A New Functional Nutraceutical for Treatment of Multiple Disorder.
A128	Fredrik Noborn, Univ. of Gothenburg, Sweden
	The Glycosaminoglycan Glycoproteome – How Many Proteoglycans Are Out There?
A129	Keisuke Komatsuya, Tokyo Metropolitan Institute of Medical Science, Japan
	Signal Transduction of GPI-anchored NB-3 in Ganglioside GD1b Lipid Rafts of Cerebellar Granule Cells.
A130	John Monyror, Univ. of Alberta, Canada
	Gangliosides Modulate the Secretion of Extracellular Vesicles and Their Misfolded Protein Cargo
A131	Masaya Hane, Nagoya Univ., Japan
	Wet and Dry Analysis of Sialoglycoconjugates in Cancer Cell Lines
A132	Yan Hua Lee, Academia Sinica, Taiwan
	Siglecs Alteration in Huntington's Disease
A133	Jian Jing Siew, Academia Sinica, Taiwan
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A134	Debapriya Kundu, Doctoral degree student, Taiwan
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A135	Ken Kitajima, Nagoya Univ., Japan
	Discovery, Distribution, and Biological Significance of the Sialic Acid-specific Sulfotransferases in Vertebrates
A136	Lakshmi Surekha Krishnapati, Univ. of Hyderabad, India
	Purification and Characterization of $\alpha$ -L-Fucosidase from Hydra: Insights into Understanding the Functional Role in the Basal Metazoan
A137	Kenjiroo Matsumoto, Gifu Univ., Japan
	Distinct Roles of O-fucose on Notch Trafficking in Humans and Drosophila
A138	Di Wu, Nagoya Univ., Japan
	A Point-mutation in N-domain of the CMP-sialic Acid Synthetase Gene Caused Abnormal Apoptosis in Medaka
A139	Shoko Nishihara, Soka Univ., Japan
	O-GlcNAcylation Regulates Stem Cell Pluripotency Through P-body Formation

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	A Novel Glycan-Associated Fungal Effector Protein in the Virulence of Ustilago Maydis on Maize
A142	Chibbhi KB, Academia Sinica, Taiwan
	Ustilago Maydis N-glycosylation Dependent Virulent Effector ALE1 Targets Maize ZmTaxi to Counteract its Attack on UmXylanase11A
A143	Els J.M. Van Damme, Ghent Univ., Belgium
	Cell-Wall Associated Glycosyl Hydrolase 27 with $\alpha$ -D-Galactosidase/ $\beta$ -L-Arabinopyranosidase Activity from Rice
*A144	Heng Yin, Chinese Academy of Sciences, China
	Important Roles of Protein O-glycosylation in Arabidopsis Thaliana Immunity and Oligosaccharide Induced Resistance
A145	Jia-En Wang, Academia Sinica, Taiwan
	Functional Characterization of N-linked Glycan in a Novel Cellulolytic Enzyme from a Formosan White-rot Fungus
A146	Noriko Suzuki, Nagoya City Univ., Japan
	Gain and Loss of $\alpha$ 4-Galactosyltransferase-like Genes in the Course of Vertebrate Evolution
A147	Zuzana Dvorníková, Univ. of South Bohemia, Czechia
	Detection and Identification of Sialylated Glycoproteins in Tick Cells Lines and Tick Tissues
A148	Josef Voglmeir, Nanjing Agricultural Univ., China
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A149	Mario Gabričević, Univ. of Zagreb, Croatia
	Desialilation Effect of Alpha-1-Acid Glycoprotein on Drug Binding Affinity
A150	Dipak K. Banerjee, Univ. of Puerto Rico, United States
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*A151	Xiao-Dong Gao, Chinese Academy of Sciences, China
	Rare Sugar L-Sorbose Exerts Antitumor Activity by Impairing Glucose Metabolism and Alternative Splicing
A152	Cheng-Fen Tu, Academia Sinica, Taiwan
	Inhibition of Platelet FUT8 Prevents Thrombosis by Suppressing GPVI-Mediated Platelet Activation
A153	Eng-Yen Huang, National Sun Yat-sen Univ., Taiwan
	Correlation Between Expression of Galectin-1 and Tumor Response to Radiation Therapy in Urothelial Carcinoma
A154	Thomas Haselhorst, Griffith Univ., Australia
	Discovery of New Antifungals in the Fight Against Invasive Fungal Infections

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*B007 Ran Xie, Nanjing Univ., China	
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B018	Jhih-Yi Huang, Max Planck Institute of Colloids and Interfaces, Germany
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B019	Tsung-Han Ho, National Tsing Hua Univ., Taiwan
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B024	Masahiko Minoda, Kyoto Institute of Technology, Japan
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B025	Hsin-Jo Chang, National Taiwan Univ., Taiwan
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B026	Chian-Hui Lai, National Chung Hsing Univ., Taiwan
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B027	Akihiro Ishiwata, RIKEN, Japan
	Synthesis and Structural Analysis of D-Arabinan Fragment Probes as the Binding Motif for Mycobacterial Arabinan Degrading Enzymes
B028	Nam Ha Duong, Academia Sinica, Taiwan
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<b>B030</b>	Tse-Wei Hsu, Academia Sinica, Taiwan
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	Mycobacterial Lipoarabinomannan Revisited: Synthesis of Fragments for Biosynthetic and Microarray Studies
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	Synthesis of a Lactyl Ether-Substituted Arabinan Fragment to Probe Anti-Lipoarabinomannan Antibody Binding
B033	Mikel Jason Allas, Academia Sinica, Taiwan
	Synthesis of a Highly Immunogenic Hyper-branched Oligosaccharide Epitope from Glycoprotein GP72 of Trypanosoma Cruzi
B034	Sheng Yang, Academia Sinica, Taiwan
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B035	Mohammad Anwar, Academia Sinica, Taiwan
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B036	Victor Liao, Academia Sinica, Taiwan
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B037	Cheng-Ting Yang, National Taiwan Univ., Taiwan
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	Synthesis of Arabinan Probes of Mycobacterium Tuberculosis for Structure to Activity Relationship Studies
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<b>BO41</b>	Kameshwar Prasad, Indian Institute of Science Education and Research Pune, India
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B043	Kiyotaka Fujita, Kagoshima Univ., Japan
	A Novel exo-β-D-arabinofuranosidase for the Degradation of D-arabinan of Mycobacterial Lipoarabinomannan
B044	Mu-Rong Kao, Taipei Medical Univ., Taiwan
	Novel $\alpha$ -L-Fucosidase from Bacterium Prevotella Nigrescens
B045	Cheng-Huan Liu, National Tsing Hua Univ., Taiwan
	Exploring the Synthetic Application of Akkermansia Muciniphila a1,3-Fucosyltransferase AkkFT Toward the Synthesis Application of Fucosylated Human Milk Glycans
B046	Hsin-Kai Tseng, National Tsing Hua Univ., Taiwan
	Substrates Promiscuities of Bacterial Glycosyltransferases Enable Acceptor-Mediated Regioselective Enzyme-Catalyzed Glycosylation

Nie	Name, Affiliation
	Title
B047	Toma Kashima, Kyoto Univ., Japan
	Functional and Structural Analysis of a Novel Exo- $\alpha$ -D-Arabinofuranosidase that Degrades D-Arabinan Glycans in the Cell Walls of Mycobacteria
<b>B048</b>	Yuan-Ruei Deng, National Taiwan Univ., Taiwan
	Characterization of Mogroside V Bioconversion by Exo-β-1,3-glucanase from Dekkera Bruxellensis
<b>B049</b>	Chi-Fang Lin, National Taiwan Univ., Taiwan
	Effect of Glycosyl Hydrolase on Transglycosylation of Mogrosides
B050	Akito Taira, Seikei Univ., Japan
	Development of Hybrid-Binding Probe Towards Mechanistic Analysis of ER- Endomannosidase Activity Mediated by Ces1d
B051	Yu-Jen Wang, Academia Sinica, Taiwan
	An Exo-site of Long-chain Substrate Preferences and Glucan Specificities of $\alpha$ -Glucan Hydrolase Enzyme TreX from Mycobacterium Tuberculosis
B052	Naoya Tajima, Seikei Univ., Japan
	Evaluation of the Importance of Acetamide Groups in the Substrate Recognition of ENGase by Using Non-natural Core Trisaccharides.
B053	Nozomi Ishii, Gunma Univ., Japan
	Evaluating the Substrate Specificity of PNGases Using Synthetic Glycopeptides
B054	Shinya Fushinobu, The Univ. of Tokyo, Japan
	Structural Basis of endo/exo- $\alpha$ - and exo- $\beta$ -D-arabinofuranosidases for the Degradation of Mycobacterial Lipoarabinomannan
C001	Ratmir Derda, Univ. of Alberta, Canada
	Genetically-encoded Liquid Glycan Arrays Explore Protein-Glycan Interactions in Vivo
C002	Shih-Yi Hsiung, Taipei Medical Univ., Taiwan
	Monosaccharide Profiling of Wolfiporia extensa (Poria) Using Linear Regression, Logistic Regression, and Machine Learning for Tissue-Specific Classification
C003	Rina Hatanaka, Nagoya Univ., Japan
	A New Motif of Polysialyltransferases Predicted by in Silico Analysis
C004	Kiyoko Aoki-Kinoshita, Soka Univ., Japan
	GlycoSim Tool for Simulation of Glycan Biosynthesis and Signaling Pathways
C005	Morihisa Fujita, Gifu Univ., Japan
	Development of GlycoMaple, a Visualization Tool for Glycan Metabolic Pathways
C006	Thomas Masding, Soka Univ. Japan, Japan
	Archetype Glycans: A New Representation to Improve Organization and Analysis of Glycan Data
<b>C007</b>	Huan-Chuan Tseng, The Univ. of Tokyo, Japan
	An Automated Pipeline for Comprehensive Permethylated Glycan Analysis
C008	Akane Kon, Soka Univ., Japan
	Simulation Analysis of N-linked Glycan Biosynthesis and Estimation of Reaction Parameters

No –	Name, Affiliation
	Title
C009	Akihiro Fujita, Soka Univ., Japan
	Organizing the Glycans in GlyTouCan Using Subsumption to Better Analyze Glycan Structure Data
<b>C010</b>	Masae Hosoda, Soka Univ., Japan
	Improvement of the MCAW-DB Glycan Profile Database for Understanding Glycan Recognition Patterns of Glycan-Binding Proteins
C011	Sunmyoung Lee, Soka Univ., Japan
	Development of a New Glycan-related Pathway Repository: GlycoPathwayRepo
C012	Yushi Takahashi, Soka Univ., Japan
	GlyComb: A Novel Glycoconjugate Data Repository Towards an Infrastructure of Multi- omics Data Analyses
C013	Atsuto Uchino, Soka Univ. Japan, Japan
	Development of a Curation System "MicroGlycoCurator" for Microbial Glycan-related Information
C014	Michael Tiemeyer, Univ. of Georgia, United States
	Enhancing Glycoscience Knowledgebases by Optimizing Outreach to Primary Data Generators
C015	Yen-Hsieh Chen, Academia Sinica, Taiwan
	Personalized Cancer Treatment Through Machine Learning and Integrative Omics: Insights into Glycosylation and Tumors
C016	Issaku Yamada, The Noguchi Institute, Japan
	How to Use Glycan Structure Drawing Software
<b>C017</b>	Bayarmaa Enkhbayar, National Taiwan Univ., Taiwan
	Transcription Regulation of Human CD22 in B Cell Chronic Lymphocytic Leukemia
C018	Hiroaki Tateno, National Institute of Advanced Industrial Science and Technology, Japan
	Droplet-based Glycan and RNA Sequencing for Profiling the Distinct Cellular Glyco-states in Single Cells
C019	Julian Ugonotti, Macquarie Univ., Australia
	Neutrophils Exhibit Granule-Specific N-glycosylation and Profound Glycoproteome Remodelling During Granulopoiesis
C020	<b>Yuma Yamada,</b> Niigata Univ., Japan
	Search for Carrier Proteins of Vertebrate-Specific N-glycans in Zebrafish Embryos by Glycoproteomic Analysis
C021	The Huong Chau, Macquarie Univ., Australia
	Glycomics-assisted Glycoproteomics Enables Insights into the Complex Glycoproteome of Resting and Activated Platelets
C022	Wei-Chien Weng, National Tsing Hua Univ., Taiwan
	Structural Determination of Free Oligosaccharides Using New Mass Spectrometry Method
C023	Xiaotong Wang, The Affiliated Infectious Hospital of Soochow Univ., China
	Glycosylation Changes in Endoplasmic Reticulum Stress-related Inflammatory Bowel Disease and Colorectal Cancer

No	Name, Affiliation
	Title
C024	Shuang (Jake) Yang, Soochow Univ., China
	Selective Enrichment and Identification of Linkage-specific Fucosylated Glycoproteins by a Solid-phase Based Chemoenzymatic Method
C025	Yanlong Ji, Max Planck Institute for Multidisciplinary Sciences, Germany
	Multi-omics Analysis Reveals The Regulatory Effects of Fucosylation In B-cell Receptor Signaling in Diffuse Large B-cell Lymphoma Cells
C026	Yanlong Ji, Max Planck Institute for Multidisciplinary Sciences, Germany
	Integrated Proteomic and Glycoproteomic Characterization of Diffuse Large B Cell Lymphoma Cell Lines
C027	Lukasz Sobala, Hirszfeld Institute of Immunology and Experimental Therapy, PAS, Poland
	N-glycomes at the Emergence of Animals – an Evolutionary Perspective
*C028	Xia Zou, Shanghai Jiao Tong Univ., China
	Characterization of Testicular O-glycoproteome During Spermiogenesis in Mice
C029	Pauline Dizon, Griffith Univ., Australia
	Utilising Extraction Conditions to Increase Depth of Coverage in (Glyco)proteomics Studies
C030	Mihir Anand, National Taiwan Univ., Taiwan
	Extracellular Glycoproteomic Analysis for Mass-limited Cell Samples (<10000) Using Integrated Microfluidics and Mass Spectrometry
*C031	Shifang Ren, Fudan Univ., China
	Serum Glycans Level Indicates Biological Age and Physical Condition
C032	Riku Chida, Toyo Univ., Japan
	Structural Analysis of Milk Oligosaccharides in Beluga (Delphinapterus Leucas) and Ginkgo- toothed Beaked Whale (Mesoplodon Ginkgodens)
C033	Stacy Malaker, Yale Univ., United States
	Glycoproteomic Landscape and Structural Dynamics of TIM Family Immune Checkpoints Enabled by Mucinase SmE
C034	Charlotte Harms, Univ. Medical Center Hamburg-Eppendorf, Germany
	Pregnancy-Specific Glycoprotein 1 (PSG1) N-Glycosylation and Its Interactome Networks in Health and Disease
*C035	Haojie Lu, Fudan Univ., China
	A Novel High-Throughput Targeted-MS Method for Quantitation of Site-Specific IgG N-Glycopeptide as Diagnostic Markers for Hepatic Disorders
C036	Filip Pančík, Slovak Academy of Sciences, Slovakia
	Mass Spectrometry Analyses and Cross-Ring Determination of Permethylated Sialyllactose Present in Urine Samples
C037	Tsai-Jung Wu, Chang Gung Memorial Hospital, Taiwan
	New Paradigms for Alveolar Structural Changes Mediated by Core Fucosylation of SPARC
C038	Filip Květoň, Slovak Academy of Sciences, Slovakia
	MALDI-TOF Analysis of N-Glycans Isolated from Serum Extracellular Vesicles

	No	Name, Affiliation
		Title
	C039	Weijing Liu, Thermo Fisher Scientific, United States
		Unravel Glycoprotein Complexity Under Native Condition Using Proton Transfer Charge Reduction and Direct Mass Technology Mode
	<b>C040</b>	Riko Makino, Niigata Univ., Japan
		Improved Preparation of Pyridylaminated N-Glycans Adaptable to Automated Analysis
	*C041	Zheng Fang, Chinese Academy of Sciences, China
		GP-Plotter: A Flexible Tool for Visualization and Evaluation of Glycopeptide Identification
	C042	Abarna Vidya Mohana Murugan, Griffith Univ., Australia
		Phyloglycomics: Understanding Species-specific Evolution of the Serum Glycome – a Step Towards Filling the Knowledge Gap in Host-Pathogen Co-Evolution
	C043	Yoshimi Haga, Japanese Foundation for Cancer Research, Japan
		Fast and Ultrasensitive Glycoform Profiling Technology by Supercritical Fluid Chromatography-Tandem Mass Spectrometry
	<b>C044</b>	Naoki Fujitani, Sapporo Medical Univ. School of Medicine, Japan
		Structural and Functional Insights into the Site-specific Glycosylation of Epidermal Growth Factor Receptor 2 (ErbB2)
	C045	Chia Yen Liew, Academia Sinica, Taiwan
		LODES/MSn for Structural Determination of High Mannose N-glycan Isomers in Multicellular Eukaryotic Cells
	*C046	Weiqian Cao, Fudan Univ., China
		Advanced and Universal Tools for Comprehensive and Precise Analysis of Glycome Across Diverse Samples
	C047	Hua-Chien Chang, National Taiwan Univ., Taiwan
		Identification and Mapping of Novel Sulfated Glycotopes Expressed on Mouse Brains and Isolated Neurons by Mass Spectrometry-based Sulfoglycomic Analysis
	C048	Yu-Chun Chien, Academia Sinica, Taiwan
		Site-specific N- and O-glycosylation Pattern and the Structural Dynamics of the Intrinsically Disordered Ectodomain of Receptor-type Protein Tyrosine Phosphatase Alpha
	C049	Shih-Yun Guu, Academia Sinica, Taiwan
		Discrimination and Relative Quantification of α2,3-/α2,6-sialyl Linkage at Glycomic Level by LC-MS2-product Dependent MS3 Analysis of Permethylated Glycans
	C050	<b>Patcharaporn Boottanun</b> , National Institute of Advanced Industrial Science and Technology, Japan
		Improved Tissue Glycome Mapping Technique Revealed Cardiac Fibrosis-related Glycosylation Alterations in Rats with Hypertensive Heart Failure
	C051	Ya-Ying Chen, National Taiwan Univ., Taiwan
		Sulfoglycomic Mapping of R10G-binding Antigen Isolated from Human Induced Pluripotent Stem Cells
	C052	Wakaba Morimura, Keio Univ., Japan
		Detection of Influenza Virus Using Silica Microparticles Modified with Glycans Obtained by Saccharide Primer Method

No	Name, Affiliation
	Title
C053	Lucia Pažitná, Institute of Chemistry, Slovak Academy of Sciences, Slovakia
	Glycoprofiling of Selected Glycoproteins and Blood Components in Gestational Diabetes Mellitus by Lectin-Based Glycoprotein Microarray Method
C054	Bryan Montalban, Hokkaido Univ., Japan
	Glycoblotting: A Complementary Workflow for Large-Scale MALDI-TOF/MS-based Sulfoglycomics
C055	Shogo Urakami, Hokkaido Univ., Japan
	Simple and Rapid O Antigen Typing of Bacteria by MALDI-MS
C056	Chuan-Chih Hsu, Academia Sinica, Taiwan
	An Integrated Tip-based Workflow for Simultaneous and High-Throughput Glycoproteomics and Phosphoproteomics Analyses
C057	<b>Ryo Jufuku,</b> Kagoshima Univ., Japan
	Development of an ELISA-based Analytical Method for the Interaction of Sugar-binding Proteins Using Sugar-immobilized Gold Nanoparticles
C058	Jian-Liang Chen, Academia Sinica, Taiwan
	Structural Determination of Fucosylated N-glycans Using Logically Derived Sequence Tandem Mass Spectrometry
C059	Chein-Hung Chen, Academia Sinica, Taiwan
	Intact Sialylated N-glycan Survive at Ultrahigh Temperature in Porous Graphitic Carbon Column for Enhancing Isomeric Separation
C060	Yufeng Zhou, Soochow Univ. college of Pharmaceutical Sciences, China
	On-Column Separation of Free Glycans and Protein Tryptic Digestion for Urine Glycosylation
C061	Noriyoshi Manabe, Tohoku Medical and Pharmaceutical Univ., Japan
	Ion Mobility Mass Spectrometry Analysis of 71 Pyridylaminated N-linked Oligosaccharides for Database Construction
C062	Kazuki Nakajima, Tokai National Higher Education and Research System, Japan
	Screening and Quantification of Low Abundance Nucleotide Sugars by HILIC-ESI-MS/MS to Trace Rare Sugar-driven Glycosylation
C063	Kristína Kianičková, Slovak Academy of Sciences, Slovakia
	Glycan Alterations in Sera of Children with Attention-Deficit/Hyperactivity Disorder
C064	Atsushi Kuno, National Institute of Advanced Industrial Science and Technology, Japan
	Lectin Dotcoding: A New Output Method Improving the Effectiveness of Automatic Glycan Profiling with 15-Lectin Tip
C065	Suet-Yine Woo, National Taiwan Univ., Taiwan
	Applications of Liquid-chromatography-orbitrap Tandem Mass Spectrometry for Xylooligosaccharides Detection and Endoxylanase Action Mode Study
C066	Hsu-Chen Hsu, Academia Sinica, Taiwan
	De Novo Structural Determination of Oligosaccharide Isomers Using Logically Derived Sequence Tandem Mass Spectrometry

No	Name, Affiliation
	Title
C067	Jun Kai Wong, National Cheng Kung Univ., Taiwan
	Identification of Novel Colorectal Cancer Biomarkers from Plasma Metabolites
C068	Giuseppe Palmisano, Macquarie Univ., Australia
	Deep Glycoproteome and Glycome Analysis of Trypanosoma Cruzi and Related Trypanosome Species
*C069	Mingliang Ye, Chinese Academy of Sciences, China
	Glyco-Decipher 2.0: Towards Comprehensive Interpretation of the Spectra of O-glyco and N-glycopeptides
C070	Kaito Hayakawa, Nagoya Univ., Japan
	Interactions Between Polysialic Acid and Dopamine-lead Compounds as Revealed by Biochemical and in Silico Docking Simulation Analyses
C071	Yoshiko Nagano, Tokyo Chemical Industry Co., Ltd., Japan
	Development of Detection Methods for Glycolipids on the Surface of Extracellular Vesicles by Antibodies
C072	Yi-Chang Liu, Glycogenetics, Inc., Taiwan
	Establishing a Recombinant Human Lectin Array for Human Glycoprofiling
C073	Sheng-Kai Wang, National Tsing Hua Univ., Taiwan
	Manipulating Carbohydrate Interactions by Polyproline-based Nanoscaffolds
<b>C074</b>	Yoshiki Yamaguchi, Tohoku Medical and Pharmaceutical Univ., Japan
	Glycan Dynamics and Glycan-Protein Interactions Analyzed by Experimental NMR Methods, AlphaFold-assisted Molecular Dynamics and Docking Simulations
C075	Ching-Ching Yu, National Tsing Hua Univ., Taiwan
	Analyzing the Substrate Specificity of Fucosidases from Bifidobacterium Longum by Supercritical Fluid Chromatography
C076	Jaroslav Katrlík, Slovak Academy of Sciences, Slovakia
	Protein Microarray Biochips: A Favorable Platform for High-Throughput Lectin-Based Glycotyping
C077	PeiKang Tsou, Academia Sinica, Taiwan
	A Neural Network Accelerated Search Scheme to Understand the Reactions of Di- saccharides
C078	Ikuko Yokota, Nagoya Univ., Japan
	Sialic Acid Linkage-Specific Alkylamidation of O-Linked Glycoproteins and in Combination with $\beta$ -Elimination in the Presence of Pyrazolone for O-Linked Glycomics
C080	Eun Jung Thak, Chung Ang Univ., South Korea
	Functional Characterization of Glycans Assembled on Surface Mannoproteins in the Human Fungal Pathogen Cryptococcus Neoformans
C081	PeiKang Tsou, Academia Sinica, Taiwan
	A Neural Network Accelerated Search Scheme to Understand the Reactions of Di-saccharides




# Floor Plan for Exhibition

# Floor Plan for Exhibition 3F



Main Entrance

No.	Company/Institution
1	Fushimi Pharmaceutical Co., Ltd.
2	Biocommander International Co., Ltd.
3	Agilent Technologies Taiwan Ltd.
4	Waters Asia Ltd, Taiwan Branch
5&6	E. SUN FHC/ Rock Biomedical, Inc.
7	Sussex Research Laboratories Inc.
8	GlycoGenetics, Inc.
9	Thermo Fisher Scientific
10	Tokyo Chemical Industry Co., Ltd.

# Symposium Venue

Academia Sinica Campus Map
 Humanities and social Sciences (HSS)
 Building Floor Map

## Academia Sinica Campus Map







1 Museum of the Institute of History & Philology



Lingnan Fine Arts Museum

2

4



3 Museum of the Institute of Ethnology



Eco Pavilion Mini-forest restoration Area U-bike Station Post Office Hi-Life 2 Convenience 2 Store

Bus from AS 205, 212, 270 276, 306, 645, 679

Bus to AS 205, 212, 270 276, 306, 645, 679

- Institute of Biomedical Sciences (IBMS) GlycoNeuro Symposium Venue
- 2 Institute of Biological Chemistry (IBC) Galectin Symposium Venue
- 3 Humanities and Social Sciences Building (HSSB)
- 4 Genomics Research Center (GRC)
- 5 Institute of Plant and Microbial Biology (IPMB)

# Humanities and Social Sciences (HSS) Building Floor Map 3F



# Humanities and Social Sciences (HSS) Building Floor Map 4F



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		Chemical release kits			HPLC buffers
		Post-release clean up kits			N-glycan standards
	Clean up	Post-labeling clean up kits			O-glycan standards
		Vacuum manifold system kits			Glycopeptide standards
				Standards	Sialic acid standards
	Labeling	N & O-glycan labeling kits		& Controls	Monosaccharide standards
		Glycopeptide labeling kits			Quantitative standards
		Sialic acid quantitation kits			Glycan library standards
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Glycan Labeling	Capture and Cleanup	Standards	Columns and Buffers

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- " R2 4.6x150mm HPLC column

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- " Oligosaccharide Profiling
- " Sialic Acid Characterization
- " NANA vs NGNA Quantification is Key

#### Glycoprofiling

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- " Glycan Capture and Cleanup
- " Glycan Labeling

- ' Labeling Cleanup
- HPLC Columns and Buffers
- " Standards

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# Shuttle Bus Timetable

	Academia Sinica			→ Hotels		
Date	Shuttle Bus A		Shuttle Bus B			
	CHECK inn SELECT Taipei Nangang	Courtyard by Marriott*	Green World Hotel Nangang	Forward Hotel Taipei Nangang	The Place Taipei	Academia Sinica
Aug 26 (Sat.)	08:00 12:00	08:15 12:15	08:25 12:25	08:15 12:15	08:20 12:20	18:30
Aug 27 (Sun.)	08:00 13:00	08:15 13:15	08:25 13:25	08:15 13:10	08:20 13:15	20:30
Aug 28 (Mon.)	08:00 08:10	08:05 08:15 08:25	08:15 08:25 08:35	08:15	08:20	18:30
Aug 29 (Tue.)	08:00 08:10	08:05 08:15 08:25	08:15 08:25 08:35	08:15	08:20	18:00
Aug 30 (Wed.)	08:00 08:10	08:15 08:25	08:25 08:35	08:15	08:20	16:10
Aug 31 (Thu.)	08:00 08:10	08:15 08:25	08:25 08:35	08:15	08:20	18:00
Sep 01 (Fri.)	08:10	08:25	08:35	08:15	08:20	13:00

\*If you take the MRT or other means of transportation to Nangang station from your hotels, please go to the Courtyard by Marriott for taking the shuttle bus.

#### The stop of the shuttle bus:

CHECK inn SELECT Taipei Nangang: the main entrance of the hotel

Courtyard by Marriott and Nangang Station: on Civic Blvd. in front of the hotel building

Green World Hotel Nangang: the main entrance of the hotel

Forward Hotel Taipei Nangang: the main entrance of the hotel

The Place Taipei: the main entrance of the hotel

Academia Sinica: the main entrance of Humanities and Social Sciences Building

#### Gala Dinner

To Peng's Gourmet & Banquet: 18:00 assemble at the main entrance of Humanities and Social Sciences Building

To Nangang MRT Station: 21:00 assemble at the main entrance of the banquet building



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