



## THURSDAY, APRIL 7

Chair: Philip Gordts *UC San Diego*

### SESSION 1

#### NextGen Moderator: Jan Lumibao

8:30 – 8:40 AM	<b>Philip Gordts</b> <i>UC San Diego</i> Opening Remarks
8:40 – 9:05 AM	<b>Jeffrey Esko</b> <i>UC San Diego</i> Glycosaminoglycans at a Glance
9:05 – 9:30 AM	<b>Kamil Godula</b> <i>UC San Diego</i> Chemical methods for tailoring of glycocalyx interactions and functions
9:30 – 9:55 AM	<b>James Paulson</b> <i>Scripps Research Institute</i> Conjugation of Siglec ligands to anti-receptor antibodies to suppress immune responses
9:55 – 10:20 AM	<b>Danielle Engle</b> <i>Salk Institute</i> Interception of the aberrant glycan CA19-9 in Pancreatic Disease
10:20 – 10:30 AM	<b>Break</b>

### SESSION 2

#### NextGen Moderators: Charlotte Spliid & Hector Cuello

10:30 – 10:35 AM	<b>Sponsor, Biosynth Carbosynth</b> <i>Bruce Rogers</i>
10:35 – 10:40 AM	<b>Sponsor, Vector Laboratories</b> <i>Erika Leonard</i>
10:40 – 10:55 AM	<b>Julia Callender</b> <i>UC San Diego</i> Manipulating PrP glycans to understand toxic signaling pathways driving prion-induced neurodegeneration
10:55 – 11:10 AM	<b>Michael Russelle Alvarez</b> <i>UC Davis</i> Anticancer compounds from <i>Annona muricata</i> against lung cancer target protein glycosylation processes, revealed using LC-MS/MS glycomics, proteomics, and glycoproteomics
11:10 – 11:25 AM	<b>William Moore</b> <i>UC San Diego</i> Reprogramming host sphingolipid glycosylation is imperative for plant-microbial symbiosis
11:25 – 11:50 AM	<b>Rommie Amaro</b> <i>UC San Diego</i> A Cell Surface-Inspired Universal Sensor for Betacoronaviruses
11:50 – 11:55 AM	<b>Sponsor, TEGA Therapeutics</b> <i>Charlie Glass</i>
11:55 AM – 12:00 PM	<b>Sponsor, InterVenn Biosciences</b> <i>Klaus Lindpaintner</i>
12:00 – 12:05 pm	<b>Sponsor, NatGlycan</b> <i>Xuezheng Song</i>
12:05 – 12:25 pm	<b>Break</b>



## THURSDAY, APRIL 7

Chair: **Gulcin Pekkurnaz** *UC San Diego*

### SESSION 3

**NextGen Moderator: Richard Sanchez**

**12:25 – 12:50 PM**

**Fotis Asimakopoulos** *UC San Diego*

Stromal proteoglycan remodeling controls dendritic cells and T-cell inflammation in tumors

**12:50 – 1:15 PM**

**Yu Yamaguchi** *Sanford Burnham Prebys*

The emerging role of TMEM2 as a key hyaluronidase in local and systemic hyaluronan catabolism

**1:15 – 1:40 PM**

**Matthew Pratt** *University of Southern California*

O-GlcNAc activates small heat shock proteins to prevent amyloid aggregation

**1:40 – 2:05 PM**

**Gulcin Pekkurnaz** *UC San Diego*

O-GlcNAcylation: Mitochondria's Sweet Tooth for Metabolic Plasticity in Neurons

**2:05 – 2:35 PM**

**Gerald Hart** *University of Georgia*

Nutrient Regulation of Cell Physiology by O-GlcNAc: Tools to Target OGT & A Model of Human Alzheimer's Disease (sAD)

**2:35 – 2:40 PM**

**Gulcin Pekkurnaz** *UC San Diego*

Closing remarks

**2:40 – 3:00 PM**

**Break**

**3:00 – 4:00 PM**

**Virtual Poster Session**

SDGS is organized by the Glycobiology Research and Training Center at the University of California, San Diego.  
All talks are off-the-record. [grtc.ucsd.edu](http://grtc.ucsd.edu)



## FRIDAY, APRIL 8

Chair: **Gulcin Pekkurnaz** *UC San Diego*

### SESSION 1

#### NextGen Moderator: Julia Callender

<b>8:30 – 8:40 AM</b>	<b>Gulcin Pekkurnaz</b> <i>UC San Diego</i> Opening Remarks
<b>8:40 – 9:10 AM</b>	<b>Anne Dell</b> <i>Imperial College of London</i> High sensitivity glycomics is providing insights into the causes of pre-term birth
<b>9:10 – 9:35 AM</b>	<b>Marianna Alperin</b> <i>UC San Diego</i> Impact of pregnancy and delivery on the extracellular matrix of the rat pelvic floor muscles
<b>9:35 – 10:00 AM</b>	<b>Hudson Freeze</b> <i>Sanford Burnham Prebys</i> Probing Saul Wilson Syndrome
<b>10:00 – 10:25 AM</b>	<b>Philip Gordts</b> <i>UC San Diego</i> Leveraging Glycans in Metabolic Disease
<b>10:25 – 10:35 am</b>	<b>Break</b>

### SESSION 2

#### NextGen Moderator: Sridevi Krishnan

<b>10:35 – 10:50 AM</b>	<b>Thomas Mandel-Clausen</b> <i>UC San Diego</i> 3-O-sulfation of heparan sulfate recruits antithrombin and suppresses growth and metastasis in pancreatic cancer
<b>10:50 – 11:05 AM</b>	<b>Libo Zhang</b> <i>UC Davis</i> Development of neoglycoprotein-immobilized bead-based multiplex glycan array and its applications
<b>11:05 – 11:20 AM</b>	<b>Rising Star Awardee, Kavita Agarwal</b> <i>UC San Diego</i> Glycobiology of communal living in a dysbiotic vaginal microbiome
<b>11:20 – 11:45 AM</b>	<b>Nathan Lewis</b> <i>UC San Diego</i> Elucidating the determinants of and importance of glycan structures through systems biology and machine learning
<b>11:45 AM – 12:05 PM</b>	<b>Break</b>



## FRIDAY, APRIL 8

Chair: Philip Gordts *UC San Diego*

### SESSION 3

#### NextGen Moderator: Kavita Agarwal

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| <b>12:05 – 12:30 PM</b> | <b>Mia Huang</b> <i>Scripps Research Institute</i><br>Precision chemical tools to probe glycoconjugate structure and interactions    |
| <b>12:30 – 12:55 PM</b> | <b>Peng Wu</b> <i>Scripps Research Institute</i><br>Engineer immune cell glycans for cancer immunotherapy                            |
| <b>12:55 – 1:20 PM</b>  | <b>Christina Sigurdson</b> <i>UC San Diego</i><br>Manipulating heparan sulfate to enhance protein aggregate clearance from the brain |
| <b>1:20 – 1:45 PM</b>   | <b>Ajit Varki</b> <i>UC San Diego</i><br>Adventures in Anthropogeny and Sialobiology   |
| <b>1:45 – 2:10 PM</b>   | <b>Amanda Lewis</b> <i>UC San Diego</i><br>Standing on the Shoulders of Giants   |
| <b>2:10 – 2:15 PM</b>   | <b>Philip Gordts</b> <i>UC San Diego</i><br>Closing remarks  |
| <b>5:00 – 8:00 PM</b>   | <b>Cocktail Reception</b><br>(RSVP required)   |

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