9:00 a.m. Registration with breakfast and coffee

9:50 a.m. Welcome address by Brooke M. Emerling, Sanford Burnham Prebys

#### **Session I: New Techniques to Study Metabolism**

Fishman Auditorium | Moderator: Cosimo Commisso, Sanford Burnham Prebys

10:00 a.m. Xingxiu Pan, Scintillon Institute

A genetically encoded tool to increase cellular NADH/NAD+ ratio in living cells

10:15 a.m. Aleksandr Arzamasov, Sanford Burnham Prebys

Genomics-based reconstruction of carbohydrate metabolism in bifidobacteria:

insights for rational selection of probiotics

10:30 a.m. Michael Banki, Scripps Research

Proteomics of protein trafficking by in vivo tissue-specific labeling

10:45 a.m. Coffee break

#### Session II: Cancer Metabolism

Fishman Auditorium | Moderator: Christina Towers, Salk Institute

11:05 a.m. Rima Singh, University of California, Irvine

Deconvoluting the metastatic PDA tumor microenvironment

11:20 a.m. Gurpreet Kaur Arora, Sanford Burnham Prebys

PI5P4Ks are a novel target for pancreatic cancer

11:35 a.m. Blake Wilde, University of California, Los Angeles

FH variant pathogenicity promotes purine salvage pathway dependence in

kidney cancer

11:50 a.m. Lunch and networking

Chairman's Hall

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### Session III: Metabolism in Aging and Immune Responses

Fishman Auditorium | Moderator: Timothy O'Sullivan, University of California, Los Angeles

Grasiela Torres, University of California, Los Angeles 12:50 p.m.

The role of senescent macrophages as a driver of inflammaging and aging-

related diseases

1:05 p.m. Richard Watson, University of California, Los Angeles

The role of macrophage lipid metabolism in pulmonary fibrosis

1:20 p.m. Elijah Trefts, Salk Institute

Decoding the role of AMPK in aging-related mitochondrial stress

Coffee break 1:35 p.m.

### **Session IV: Nutrition and Signaling**

Fishman Auditorium | Moderator: Gina Lee, University of California, Irvine

Sunhee Jung, University of California, Irvine 1:55 p.m.

Postprandial metabolic exchanges across mammalian organs

Shaunak Deota, Salk Institute 2:10 p.m.

> Diurnal transcriptome landscape of a multitissue response to time-restricted feeding in mammals

2:25 p.m. Carolina Franco, University of California, Irvine

Wnt signaling exploits vitamin B6 through lyso-cytosolic shuttling during cell

growth

2:40 p.m. Coffee break











March 10, 2023 Sanford Burnham Prebys

# SoCal Metabolism **Symposium**

#### **Session V: Keynote Presentation**

Fishman Auditorium | Introduced by Peter Mullen, University of

Southern California

3:00 p.m. Janelle Ayres, Salk Institute

Metabolic adaptations and host defense strategies

Closing remarks by Cholsoon Jang, University of California Irvine 3:55 p.m.

4:00 p.m. Poster session and happy hour

Chairman's Hall

6:00 p.m. Depart













#### POSTER SESSION

- Poster 1 Won-Suk Song, University of California, Irvine Alcohol and fructose synergize to activate polyunsaturated fat synthesis in hepatocellular carcinoma
- Poster 2 Carolina Silva, Sanford Burnham Prebys Asparagine depletion as a therapeutic approach for solid tumors
- Poster 3 Ronida Cheko, University of California, Los Angeles Impact of loss of autophagy in the melanoma microenvironment
- Poster 4 Patrick Gelbach, University of Southern California Ensemble-based genome-scale modeling predicts metabolic differences between macrophage subtypes in colorectal cancer
- Poster 5 Cecily Anaraki, University of California, Irvine Differential stress responses drive asparagine exchange in pancreatic cancer
- Poster 6 David Scott, Sanford Burnham Prebys SBP Cancer Metabolism Core: targeted metabolite analysis
- Poster 7 Yasmine Alam, University of California, Irvine Evaluating gut microbial tamoxifen metabolism to predict and improve therapeutic efficacy in breast cancer patients
- Poster 8 Pedro Perez, Scripps Research Role for intestinal Neurokinin 2 receptors in regulating enterocyte lipid droplets











Poster 9	Suzanne Dufresne, Salk Institute
	Identifying mechanisms of resistance to autophagy inhibition in pancreatic ductal adenocarcinoma
Poster 10	Taolin Xie, University of Southern California

- Immune activation inhibits CAD-mediated metabolic reprogramming through TBK1 and IKKB
- Poster 11 Alica Katrin Beutel, University of California, Irvine Targeting metabolic reprogramming to overcome gemcitabine resistance in pancreatic cancer
- Poster 12 Niki Tavakoli, University of Southern California Systems-level analysis of gene knockdowns in colorectal cancer cells
- Poster 13 Grigor Varuzhanyan, University of California, Los Angeles PGC1a-induced OXPHOS as a novel therapeutic target for pan small cell neuroendocrine cancer
- Poster 14 Wei Zhao, University of California, Irvine Single-cell and spatial RNA analysis of liver in aging and insulin resistance
- Poster 15 Anvita Komarla, Salk Institute Identifying unique pathway dependencies and novel autophagy-deficient cancer cells mechanisms of quality control in autophagy-deficient cancer cells
- Poster 16 Joey Li, University of California, Los Angeles MEF2C is a critical regulator of human NK cell metabolism













Joohwan Kim University of California Irvine

. 66.61	MAPK13 stabilization via m6A modification limits anti-cancer efficacy of rapamycin
Poster 18	<b>Xuanyi Shi</b> , University of Southern California  Methionine restriction as a potential antiviral strategy
Poster 19	<b>Danielle Schmitt</b> , University of California, Los Angeles Spatial regulation of AMPK signaling revealed by a sensitive kinase activity reporter
Poster 20	Cuauhtemoc Ramirez, University of California, Irvine Small intestinal metabolic fitness reduces hepatic steatosis vulnerability
Poster 21	<b>Ryan Loughran</b> , Sanford Burnham Prebys Connecting lysosomal cholesterol transport to p53-deficient cancer growth through PI5P4K signaling
Poster 22	Andréa Ball, University of California, Los Angeles Control of pro-inflammatory gene expression in macrophages by mitochondrial redox status
Poster 23	Payel Mondal, Salk Institute Rapid metabolic adaptations to autophagy blockade
Poster 24	Johnny Le, University of California, Irvine Brown adipocyte and skeletal muscle metabolic fluxes during thermogenesis
Poster 25	Naibedya Dutta, University of Southern California Utility of small molecule inhibitors of mitochondrial function in aging research



Poster 17









- Poster 26 Hosung Bae, University of California, Irvine Cystic fibrosis impairs renal, pulmonary, and hepatic metabolism in newborn pigs
- Poster 27 Celina Shen, Salk Institute Mitochondrial-derived vesicles in cancer cells
- Poster 28 Ivan Salladay-Perez, University of California, Los Angeles Exploring the role of metabolism in proinflammatory macrophage memory



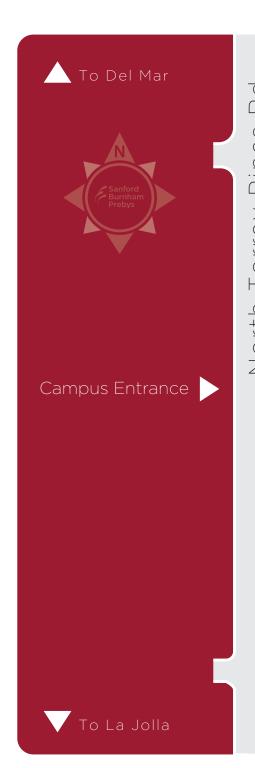


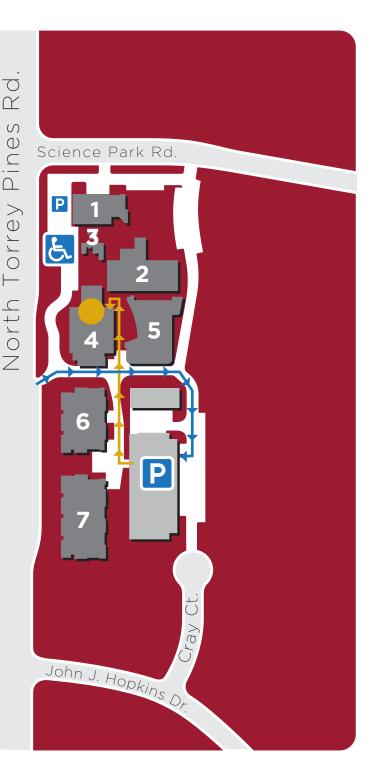














## Directions to Fishman Auditorium

(from I-5 North or South)

- **1.** Take the Genesee exit west, head west up the hill.
- **2.** Bear right onto North Torrey Pines Road at the top of the hill.
- **3.** After the second stop light, the Sanford Burnham Prebys campus will be on your right, with a designated right turn lane.
- **4.** Turn right at the sign, then head down the hill. At the bottom, turn right then make another right into the parking structure.
- **5.** Parking spaces will be reserved on the top level of the parking structure. There will be signs designating the reserved spaces.
- 6. Walking from the parking structure, turn right on the campus walkway. Follow the walkway between Buildings 4 and 5, up the stairs to Fishman Auditorium. An elevator is available through the doors to your right at the bottom of the stairs.

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