

Nanotubular Communication in Development and Disease Symposium

October 11-13, 2026 | Houston, USA

PROGRAM DETAILS

NANOTUBULAR COMMUNICATION IN DEVELOPMENT & DISEASE SYMPOSIUM

Connecting Cells. Sharing Ideas. Shaping the Future.

HOUSTON, TEXAS
OCTOBER 11-13, 2026

www.nanotubemeeting.org

ABOUT

This symposium brings together investigators from around the world who are studying tunneling nanotubes (TNTs) and related intercellular connections in development and disease. Join leading scientists to exchange ideas, foster collaborations, and help shape the future of this rapidly growing research community. With over 25 invited investigators from around the world and talks by leading experts in the TNT field, there are outstanding opportunities to network, collaborate, and build the future of nanotubular communication.

Key Scientific Topics:

- Fundamental Mechanisms of TNT Formation and Function
- Cytonemes and Specialized Cellular Protrusions in Development and Tissue Organization
- Intercellular Transfer of Organelles, RNAs, and Molecular Cargo
- TNT Communication in Development, Regeneration, and Tissue Homeostasis
- TNT Communication in the Nervous System
- TNT Communication in Infection, Immunity, Cancer, and Human Disease

Explore Houston:

Nearby attractions include Space Center Houston, the official visitor center of NASA Johnson Space Center; The Galleria, a major shopping and entertainment complex; the Museum District, a cultural hub with 19 museums; and world-class and diverse dining options.

ORGANIZING COMMITTEE



Dr. Mingfu Wu
University of Houston



Dr. HyungBae Kwon
Johns Hopkins University



Dr. Srinivasa (Srini) Subramaniam
Florida Atlantic University

KEYNOTE SPEAKERS



Dr. Thomas B. Kornberg

University of California, San Francisco

Talk: Cytonemes and the Attributes of Contact-Dependent Cell-Cell Signaling

Dr. Thomas B. Kornberg is a Professor in the Cardiovascular Research Institute and Department of Biochemistry and Biophysics at the University of California, San Francisco. Dr. Kornberg's lab discovered and characterized cytonemes, or specialized signalizing filopodia that mediate direct cell-to-cell transport of morphogens during tissue development. This work has reshaped concepts of long-range signaling and has had a profound impact on research into tunneling nanotubes and other membrane-based communication systems.



Dr. Chiara Zurzolo

Institut Pasteur, Paris, France

Talk: From Molecular Mechanisms to Organismal Function in Health and Disease

Dr. Chiara Zurzolo is Director of Research at the Institut Pasteur in Paris, where she leads the Membrane Traffic and Pathogenesis Unit. Her laboratory has been instrumental in revealing how TNTs form, mediate organelle and protein transfer, and contribute to intercellular communication in development, infection, neurodegeneration, and cancer. By combining cell biology, advanced imaging, and structural approaches, her work has helped shape the current understanding of TNT biology, from molecular mechanisms to organismal function.

KEY INFORMATION

For All In-Person Attendees:

Sunday, October 11: Check-in begins at 3:00 PM at the University of Houston Student Center.

Monday, October 12: Check-in begins at 7:30 AM at the MD Anderson Library.

Please review the attached campus map before arriving, particularly because of the current construction along University Drive. Paid parking is available at the Hilton University of Houston and the nearby Welcome Center.

Meals and refreshments during the symposium will be provided for registered attendees.

For In-Person Speakers:

Please bring your final presentation file in a format that can be easily transferred to the meeting computer.

Please transfer your PowerPoint or PDF presentation to the designated presentation computer during breakfast or lunch, well before your session.

Because the designated computer will be connected to the camera and Zoom system, please do not plan to present directly from your own laptop.

For Virtual Speakers and Registered Virtual Attendees:

The Zoom link and instructions will be sent separately before the meeting.

For Poster Presenters:

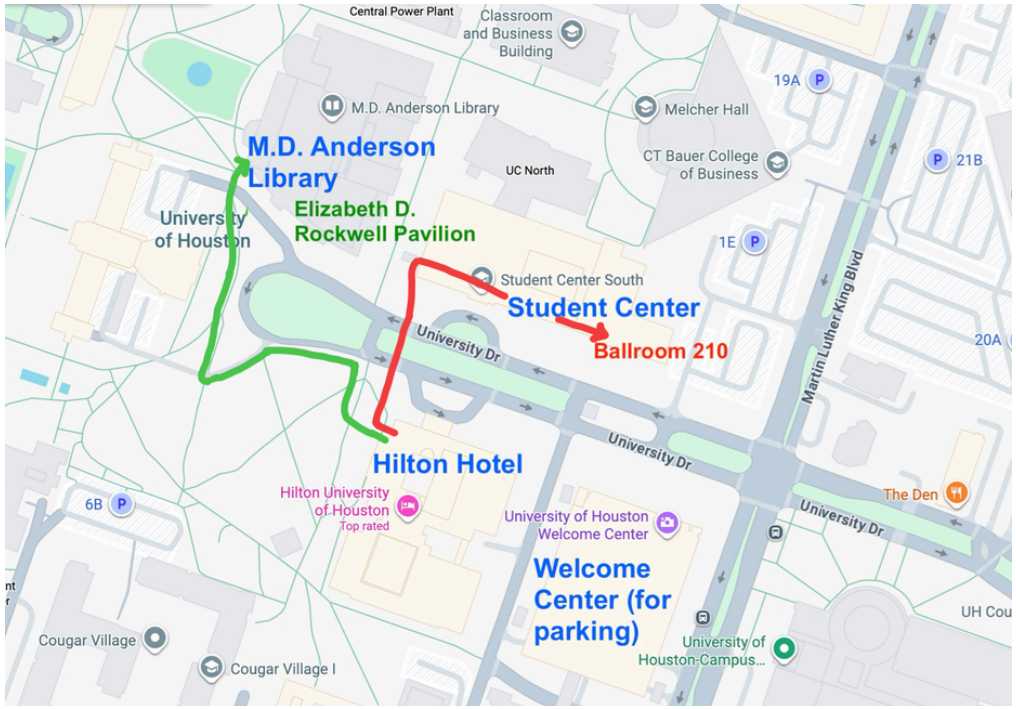
Posters may be set up Monday afternoon at the MD Anderson Library. Our volunteers will provide instructions regarding the poster location and setup.

Meals:

We are pleased that meals and refreshments during the symposium will be provided for registered attendees, thanks to the generous support of the University of Houston and our sponsors. We hope you will take advantage of the meal and break periods not only to enjoy the food, but also to meet other attendees and continue scientific discussions in a relaxed setting.

TRAVEL LOGISTICS

Map of Important Locations:



Day 1 Sunday, October 11: Ballroom Room 210

Day 2 & 3 Monday and Tuesday, October 12–13: Elizabeth D. Rockwell Pavilion

Hotel Information:

For attendees staying at the symposium hotel:
Hilton University of Houston
4450 University Drive
Houston, TX 77204

The Hilton is located directly on the University of Houston campus and is very close to both symposium venues. It is across University Drive from the MD Anderson Library and near the Student Center. Because of the current University Drive construction, you may need to walk around the construction area rather than take the most direct route. However, the walking distance from the Hilton to either meeting location should still be less than five minutes.

TRAVEL LOGISTICS

Transportation from Houston Airports:

Houston is served by two major airports.

William P. Hobby Airport (HOU)
Hobby Airport is the closer airport and is approximately 8 miles from the Hilton University of Houston.

George Bush Intercontinental Airport (IAH)
IAH is approximately 23 miles from the Hilton University of Houston.

The Hilton Hotel University of Houston does not provide airport shuttle service from either airport. For most attendees, Uber or Lyft will be the simplest and most convenient option for traveling from either airport to the hotel or University of Houston campus. Both airports have designated Ride App pickup areas; please follow the airport signs for “Ground Transportation” or “Ride App” after collecting your luggage.

Taxis and rental cars are also available at both airports.

When using Uber, Lyft, taxi, or GPS navigation, entering “Hilton University of Houston, 4450 University Drive, Houston, TX 77204” should bring you directly to the hotel and the center of the symposium area on campus.

Parking:

Paid parking is available at the Hilton University of Houston. Attendees may also use the paid parking facility at the Welcome Center, located next to the Hilton Hotel.

Welcome to Houston!

The weather in Houston is expected to be warm and generally pleasant during the meeting. We hope you will enjoy your visit to Houston and the University of Houston campus.

PROGRAM DAY 1
SUNDAY, OCTOBER 11

LOCATION: UH Student Center, South Ballroom (Room 210)

4:00–4:10 PM | Opening Remarks
Welcome and introduction to the meeting by Mingfu Wu, PhD

4:10–5:10 PM | Session 1 — Opening Keynote Lecture
– Introduced by Srinivasa (Srini) Subramaniam, PhD
Chiara Zurzolo, PhD — Institut Pasteur
From Molecular Mechanisms to Organismal Function in Health and Disease (Zoom)

5:10–6:55 PM | Session 2 — TNT Formation, Structure, and Molecular Mechanisms
– Session Chairs: Hyung-Bae Kwon, PhD, and Tahmid Faisal, PhD
5:10–5:35 PM | Kanae Ando, PhD — Tokyo Metropolitan University
CCT4 Drives the Formation of Microtubule-Containing TNTs (Zoom)
5:35-6:00 PM | Short Break
5:40–6:05 PM | Karine Gousset, PhD — California State University, Fresno
From LCM to Multi-Omics: A Multidimensional Pipeline for High-Confidence Mapping of the Filopodia Proteome
6:05–6:30 PM | Anna Pepe, PhD — Institut Pasteur
Tunneling Nanotubes: From Ultrastructure and Actin Organization to Intercellular Transfer (Zoom)
6:30–6:55 PM | Daniel G. Isom, PhD — University of Miami Miller School of Medicine
TM184C Is a GPCR-Like Regulator of Intercellular Exchange

7:00 PM | Welcome Dinner Reception — UH Student Center, South Ballroom (Room 210)

PROGRAM DAY 2
MONDAY, OCTOBER 12

LOCATION: Rockwell Pavilion, MD Anderson Library

7:30–8:30 AM | Breakfast (Coffee/Tea/Pastries) — Rockwell Pavilion

8:30–9:30 AM | Session 3 — Keynote Lecture
– Introduced by Mingfu Wu, PhD
Thomas B. Kornberg, PhD — University of California, San Francisco (UCSF)
Cytonemes and the Attributes of Contact-Dependent Cell–Cell Signaling

9:30–9:50 AM | Coffee Break

9:50 AM–12:00 PM | Session 4 — Cytonemes, Airinemes, and Specialized Cellular Protrusions
– Session Chairs: Dae Seok Eom, PhD, and Anuradha Kesharwani, PhD
9:50–10:15 AM | Dae Seok Eom, PhD — University of California, Irvine
The Biology of Airinemes as a Macrophage-Dependent Mode of Intercellular Communication
10:15–10:40 AM | Sougata Roy, PhD — University of Maryland
Emerging Principles of Cytoneme Guidance: Lessons from Drosophila FGF Signaling
10:40–11:05 AM | Stacey Ogden, PhD — St. Jude Children's Research Hospital
Mechanisms of Cytoneme Elongation and Stabilization for Sonic Hedgehog Transport
11:05–11:10 AM | Short Break
11:10–11:35 AM | Han Xiao, PhD — Peking University Third Hospital, Beijing, China
Nanotube-Mediated Intercellular Communication in Cardiac Injury and Repair (Zoom)
11:35–11:55 AM | Ying S. Hu, PhD — University of Illinois Chicago
Membrane Labeling Strategies for Visualizing Dynamic Transport Within Tunneling Nanotubes by Fluorescence Super-Resolution Microscopy
11:55 AM–12:00 PM | Group Photo

PROGRAM DAY 2
MONDAY, OCTOBER 12

LOCATION: Rockwell Pavilion, MD Anderson Library

12:00–1:00 PM | Lunch — Rockwell Pavilion

1:00–2:40 PM | Session 5 — Intercellular Cargo Transfer, Development, and Tissue Homeostasis

– Session Chairs: Hua Zhu, PhD, and Andrew Lopez, PhD

1:00–1:25 PM | Jeffrey Gerst, PhD — Weizmann Institute of Science

Genetic Complementation via TNT-Mediated Intercellular mRNA Exchange (Zoom)

1:25–1:50 PM | Mingfu Wu, PhD — University of Houston

Tunneling Nanotube-Mediated Long-Distance Cell–Cell Communication in Heart Formation

1:50–2:15 PM | Francesco Pisani, PhD — University of Bari Aldo Moro

Tunneling Nanotubes Orchestrate the Spatiotemporal Regulation of Human Neural Stem Cell Fate (Zoom)

2:15–2:40 PM | Hua Zhu, PhD — The Ohio State University

Mitochondrial Transfer in Skeletal Muscle Cells of Friedreich's Ataxia

2:40–3:10 PM | Coffee Break

3:10–5:20 PM | Session 6 — Nanotubular Communication in the Nervous System and Neurodegenerative Disease

– Session Chairs: Jin Ye, PhD, and Zihan Zheng, MS

3:10–3:35 PM | Dimitri Budinger, PhD — University of Luxembourg

Patient-Derived iPS Cells to Study TNT-Mediated Interaction Between Microglia and Neurons

3:35–4:00 PM | Hyung-Bae Kwon, PhD — Johns Hopkins University

Brain Communication by Dendritic Nanotube Network

4:00–4:25 PM | Sangeeta Nath, PhD — Manipal Institute of Regenerative Medicine

Tunneling Nanotubes Support Mechanical Resilience in Astroglia (Zoom)

PROGRAM DAY 2
MONDAY, OCTOBER 12

LOCATION: Rockwell Pavilion, MD Anderson Library

3:10–5:20 PM | Session 6 — Nanotubular Communication in the Nervous System and Neurodegenerative Disease contd.

4:25–4:50 PM | Srinivasa (Srini) Subramaniam, PhD — Florida Atlantic University

Rhes Pathway for Nanotube Formation and Huntingtin Protein Spread

4:50–4:55 PM | Short Break

4:55–5:07 PM | Francesca Luchetti, BS — University of Urbino Carlo Bo

Melatonin Modulates Microglia Inflammation and Mitochondrial Transfer to Neurons via Tunneling Nanotubes during Ischemic Stress (Zoom)

5:07–5:20 PM | Jose Ricardo Ramirez, BS — The University of Texas Medical Branch

Tunneling Nanotubes Facilitate the Spread of HIV Through Myosin Motor Proteins

5:20–7:00 PM | Poster Session and Dinner — Rockwell Pavilion

PROGRAM DAY 3
TUESDAY, OCTOBER 13

LOCATION: Rockwell Pavilion, MD Anderson Library

8:00–8:30 AM | Breakfast (Coffee/Tea/Pastries) — Rockwell Pavilion

8:30–10:10 AM | Session 7 — TNTs in Infection, Cell Death, and Disease Progression

– Session Chair: Olena Shtanko, Ph, and Rafael Tomoya Michita, PhD

8:30–8:55 AM | Rafael Tomoya Michita, PhD — Penn State
Tunneling Nanotubes as a Mechanism for Viral Spread at the Placental Barrier

8:55–9:20 AM | Olena Shtanko, PhD — UTSA
Ebola Virus Replication Transforms Migratory Properties of Macrophages to Promote Virus Replication and Spread Through Tunneling Nanotubes

9:20–9:45 AM | Jin Ye, PhD — UT Southwestern Medical Center
The Deadly Network: How TNTs Drive Ferroptosis Progression

9:45–10:10 AM | Karine Gousset, PhD — California State University, Fresno
Myosin-X Acts Upstream of L-Plastin to Drive Stress-Induced Tunneling Nanotubes

10:10–10:40 AM | Coffee Break

10:40–12:20 AM | Session 8 — Nanotubular Communication in Cancer and the Tumor Microenvironment

– Session Chairs: Dionysios C. Watson, MD, PhD, and Luqi Zhao, MD

10:40–11:05 AM | Dionysios C. Watson, MD, PhD — University of Miami
Glioblastoma Takes Control of Astrocyte Biology via Microtube-Dependent Mitochondria Transfer

11:05–11:30 AM | Tanmoy Saha, PhD — Harvard Medical School / Brigham and Women's Hospital
Nanotubular Communication in the Cancer Immune Context

11:30–11:55 AM | Francesco Di Palma, PhD — University of Bari Aldo Moro
Tunneling Nanotube-Mediated Transmitophagy Promotes Apoptosis Resistance in Multiple Myeloma

PROGRAM DAY 3
TUESDAY, OCTOBER 13

LOCATION: Rockwell Pavilion, MD Anderson Library

10:40–12:20 AM | Session 8 — Nanotubular Communication in Cancer and the Tumor Microenvironment contd.

11:55–12:20 AM | Inés Sáenz de Santa María, PhD — CIBERONC / Prince Felipe Research Center (CIPF), Valencia, Spain
Tunneling Nanotubes Mediate Mitochondrial Homeostasis in Cancer (Zoom)

12:20–12:30 PM | Closing Remarks

Meeting summary, acknowledgments, and future directions by Srinivasa (Srini) Subramaniam, PhD, and Hyung-Bae Kwon, PhD.

12:30 PM | Grab-and-Go Boxed Lunch — Rockwell Pavilion

POSTER PRESENTATIONS

POSTER TITLE	PRESENTER	INSTITUTION
Tunneling Nanotubes Mediate the Transfer of Cargoes During Heart Development	Tahmid Faisal	University of Houston, USA
Membrane Labeling Strategies for Visualizing Dynamic Transport Within Tunneling Nanotubes by Fluorescence Super-Resolution Microscopy	Ying S. Hu	University of Illinois, Chicago, USA
Modeling Intercellular Communication During Postpartum Mammary Remodeling and Breast Cancer Susceptibility Using a 3D Organoid Platform	Samaneh Karami	University of Houston, USA
Melatonin Modulates Microglia Inflammation and Mitochondrial Transfer to Neurons via Tunneling Nanotubes During Ischemic Stress	Francesca Luchetti	University of Urbino Carlo Bo, Italy
Tunneling Nanotubes as a Therapeutic Target in Glioblastoma	Sambhavi Pattnaik	Indian Institute of Technology, Madras, India
Tunneling Nanotubes Facilitates the Spread of HIV Through Myosin Motor Proteins	Jose Ricardo Ramirez	The University of Texas Medical Branch, USA
Investigating the Roles of Talin in Cytoneme-Mediated FGF Signaling	Stephen Stanio	University of Maryland, USA
Tunneling Nanotube Mediated Intercellular Organelle Transfer Regulates Autophagic Defects in Cardiomyocytes	Luqi Zhao	University of Houston, USA

SPONSORS

The Symposium Committee is incredibly grateful for our supporters who make this meeting possible.

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Iftikhar Ahmad	King Abdulaziz University, Pakistan	Tahmid Faisal	University of Houston, USA
Kanae Ando	Tokyo Metropolitan University, Japan	Camila Figueiredo	Centre de Recherche du CHUM, Canada
Jennifer Arcuri	University of Miami, USA	Wei Gao	University of Houston, USA
Dennis Arruda	The University of Texas Medical Branch, USA	Karine Gousset	California State University, Fresno, USA
Xiaoyong Bao	The University of Texas Medical Branch, USA	Samantha Hack	St. Jude Children's Research Hospital. USA
Ashley Belinfante	The University of Texas Medical Branch, USA	Eric Hall	University of Manitoba, Canada
Paul Boyle	University of Houston, USA	Sami Hasnie	University of Houston, USA
Dimitri Budinger	University of Luxembourg, Luxembourg	Ruilin He	BrainVTA, USA
Silvia Carloni	University of Urbino Carlo Bo, Italy	Ying Hu	University of Illinois, Chicago, USA
Christina Daly	St Jude Children's Research Hospital, USA	Jenny Hu	University of Houston, USA
Radbod Darabi	University of Houston, USA	Yongxia Huo	MedChemExpress LLC, USA
Grey De La Torre	Texas Biomedical Research Institute	Daniel Isom	University of Miami Miller School of Medicine, USA
Xinxin Deng	University of Houston, USA	Dinakar Iyer	University of Houston, USA
Francesco Di Palma	University of Bari Aldo Moro, Italy	Aishwarya Jaiswal	University of Houston College of Pharmacy, USA
Christian Egly	University of Houston College of Pharmacy, USA	Rosepreet Kaur	University of Houston, USA
Dae Seok Eom	UC Irvine, USA	Kate Keller	Oregon Health & Science University, USA
Eliseo Eugenin	The University of Texas Medical Branch, USA	Anuradha Kesharwani	Florida Atlantic University, USA

ATTENDEE LIST

ATTENDEE	INSTITUTION	ATTENDEE	INSTITUTION
Marium Khan	University of Houston, USA	Rafael T. Michita	Penn State College of Medicine, USA
Sai Koka	University of Houston, USA	Alexandra Moura	University of Houston College of Pharmacy, USA
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Ashok Kumar	University of Houston, USA	Netra Neupane	University of Houston, USA
Hyungbae Kwon	Johns Hopkins University, USA	Ai-Hoc Nguyen	University of Houston, USA
Yulin Li	Houston Methodist Research Institute, USA	Nao Omi	University of Houston, USA
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Yuanhui Liu	Houston Methodist Research Institute, USA	Jose Ramirez	University of Texas Medical Branch at Galveston, USA
Muchen Liu	University of Houston, USA	Sougata Roy	University of Maryland, USA
Xinli Liu	University of Houston, USA	Anirban Roy	University of Houston, USA
Silin Liu	University of Houston, USA	Ines Saenz-de-Santa-Maria	CIBERONC/Principe Felipe Research Center (CIPF), Spain
Andrew Lopez	University of Houston, USA	Tanmoy Saha	Harvard Medical School/Brigham and Women's Hospital, USA
Francesca Luchetti	University of Urbino Carlo Bo, Italy	Olena Shtanko	Texas Biomedical Research Institute, USA
Yuan Ma	Rice University, USA	Stephen Stanio	University of Maryland, USA
Bradley McConnell	University of Houston, USA	Miriam Dillard Stroud	St. Jude Children's Research Hospital, USA

ATTENDEE LIST

ATTENDEE	INSTITUTION	ATTENDEE	INSTITUTION
Srinivasa Subramaniam	Florida Atlantic University, USA	Yang Zhang	University of Houston, USA
Meiricris Tomaz da Silva	University of Houston, USA	Luqi Zhao	University of Houston, USA
Alizha Trevino	University of Houston, USA	Guizhen Zhao	University of Houston, USA
Silvana Valdebenito-Silva	The University of Texas Medical Branch, USA	Zihan Zheng	University of Houston, USA
Sreekanth Vedagopuram	University of Houston College of Pharmacy, USA	Ming Zhou	Baylor College of Medicine, USA
Dan Wang	University of Houston, USA	Hua Zhu	The Ohio State University, USA
Christina Wang	University of Houston, USA	Xuexian Zhu	Peking University
Susannah Waxman	University of Montreal, Canada	Xuexian Zhu	Nanjing Medical University
Louis Williams	University of Houston College of Pharmacy, USA		
Mingfu Wu	University of Houston, USA		
Chia-Ling Wu	University of Houston College of Pharmacy, USA		
Han Xiao	Peking University Third Hospital, China		
Bowen Xu	University of Houston, USA		
Muxi Yan	University of Houston, USA		
Jin Ye	UT Southwestern, USA		
Yuan Yin	University of Houston, USA		
HongYu Zhang	Nantong University, China		

