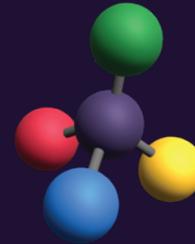


[umurl.us/pathways](https://umurl.us/pathways)



# PATHWAYS 2026

Accelerating Discoveries | Fostering Discoverers

## Vote for your favorite posters

During the poster sessions, use the link above to vote for your top three posters in each session. Four winners will receive \$500 travel awards, presented at 4:00 p.m. (Must be present to win.)  
11:10 - 12:15 p.m. / 2:35 - 3:45 p.m.



[umsystem.edu/NextGen](https://umsystem.edu/NextGen)

**March 12**

Innovation Lab, Main Lobby  
650 Tim Bradley Way

**March 13**

Havener Center, St. Pats Ballroom  
1346 North Bishop Ave.

Missouri University of Science and Technology

# Thursday, March 12

- 4:00 - 4:45      Lab-To-Market Workshop  
**Sunjeev Phull**      NextGen Precision Health Fellow
- 5:00 - 5:05      Welcoming remarks  
**Dave Arnold**      Exec. Director, NextGen Precision Health Initiative
- 5:05 - 5:20      Missouri S&T's Biomedical Innovation Ecosystem Vision  
**Mo Deghani**      Chancellor, Missouri S&T
- 5:20 - 5:35      Missouri S&T's Research Enterprise  
**Kamal Khayat**      Vice Chancellor for Research and Innovation, Missouri S&T
- 5:35 - 6:00      Biomedical Research Synergies at S&T  
**David Borrok**      Vice Provost & Dean, College of Engineering and Computing, Missouri S&T  
**Mehrzaad Boroujerdi**      Vice Provost & Dean, College of Arts, Sciences, and Education, Missouri S&T  
**Jim Sterling**      Vice Provost & Founding Dean, Kummer College of Innovation, Entrepreneurship, and Economic Development, Missouri S&T
- 6:15 - 7:30      Evening Reception



# Friday, March 13

- 7:30-8:30      Registration and Poster Set Up
- 8:30-8:45      Welcome and Housekeeping
- 8:45-9:45      Keynote  
**Sandra Magnus**      Former Executive Director, American Institute of Aeronautics and Astronautics
- 9:50 - 11:10      Faculty Theme Talks – Session A  
**Sunjeev Phull**      NextGen Fellow  
**Anthony Convertine**      Missouri S&T  
**Jill Delston**      UMSL  
**Scott Rector**      Mizzou  
**Karl Kador**      UMKC  
**Tareq Nabhan**      UMSL
- 11:10- 12:15      Break/Poster Session A
- 12:15 - 1:15      Lunch/Networking
- 1:15 - 2:35      Faculty Theme Talks – Session B  
**Sandy Saunders**      NextGen Fellow  
**Gina Yosten**      Missouri S&T  
**Bret Ulery**      Mizzou  
**Badri Adhikari**      UMSL  
**Hillary McGraw**      UMKC  
**Ryan Gilbert**      Missouri S&T
- 2:35-3:45      Break/Poster Session B
- 3:45-4:00      Break
- 4:00      Poster Presentation Awards and Closing



## NextGen Precision Health | PATHWAYS 2026

NextGen Precision Health's PATHWAYS symposium draws on path-breaking work from across the University of Missouri System to celebrate research collaborations with the potential to impact global health.

The agenda promotes a dual mission: accelerating discoveries and fostering discoverers. That means providing networking opportunities for experts across our four universities and giving young researchers a pragmatic approach for connecting to other fields and the translation process. By making each of our contributions accessible and relevant across domains, we can leverage our strengths and ultimately impact quality of life around the world.



PATHWAYS 2025 took place at the University of Missouri-Kansas City in Kansas City, with over 200 researchers from across the University of Missouri System in attendance.

On average in the U.S., it takes **14 years** for a new treatment to make it from the discovery phase to a clinical patient. We believe we can accelerate that time frame if all segments of the translational science pipeline are engaged from the beginning. At the PATHWAYS symposium, research faculty, postdoctoral researchers, and graduate students from a broad range of disciplines will build understanding to lower research barriers and jump start new projects.



### KEYNOTE

#### Sandra Magnus, PhD

Former NASA Astronaut  
Former Executive Director,  
American Institute of Aeronautics  
and Astronautics  
Professor of the Practice,  
Georgia Institute of Technology

Sandra "Sandy" Magnus is a former NASA astronaut who was selected to the NASA Astronaut Corps in 1996 shortly after earning her PhD in materials science and engineering from the Georgia Institute of Technology. Originally from Belleville, Il., Magnus earned her BS in physics in 1986 and MS in electrical engineering in 1990 from the Missouri University of Science and Technology.

Magnus began her engineering career working on the propulsion system for the A-12 Avenger II stealth aircraft at McDonnell Douglas before joining NASA and flying on her first shuttle mission in 2002. From 2012 to 2018, she served as executive director of the American Institute of Aeronautics and Astronautics (AIAA).

She has since served as a principal at AstroPlanetView, deputy director for Engineering for the U.S. Under Secretary of Defense for Research and Engineering, and a Space Advisory Board member for Virgin Galactic. In 2022, she was elected to the National Academy of Engineering (NAE).



### MASTER OF CEREMONIES

#### David M. Fulk

Director of Philanthropic Giving  
KCUR, Kansas City's NPR Affiliate

David Fulk became an active volunteer with KCUR in 2005 and was named their Volunteer of the Year in 2010. He joined the KCUR staff in 2014 to build a major giving program and serves on the station's Leadership Team. David has been a fundraising professional for more than 30 years with decade-plus stints at KCUR, Truman Medical Center (now University Health) Charitable Foundation and William Jewell College, where he received his undergraduate degree in history. David served as co-interim leader of the UMKC Charitable Foundation in 2022 and helped design and lead the \$120m fundraising effort for UMKC's Healthcare Delivery and Innovation Building.

He has been a longtime community volunteer in Liberty, Mo., where he resides, serving on the boards of the Liberty Symphony, Liberty Parks and Recreation, Liberty Parks Foundation, and Liberty Arts Foundation. Since 2009, David has been the concert host of the Liberty Summer Band and is the elected City Clerk of Liberty. In Kansas City, he's served on the board of the Association of Fundraising Professionals (AFPKC) and currently serves as board secretary of Te Deum. He was recognized in 2024 by the Kansas City Royals as a Buck O'Neil Legacy Seat honoree.

# Session A Talks

9:50 a.m. - 11:10 a.m.



## Sunjeev Phull, PhD

NextGen Precision Health Fellow  
Missouri S&T Chemical and Biochemical Engineering

**“Glass-Based Cements for the Treatment of Metastatic Bone Cancer”**



## Anthony Convertine, PhD

Roberta and G. Robert Couch Assistant Professor, Missouri S&T  
Materials Science and Engineering

**“PISA Printing: A New Platform for Programmable Biomaterials and Precision Tissue Models”**



## Jill Delston, PhD

Assistant Professor and Director of Graduate Studies, Philosophy,  
UMSL College of Arts and Sciences

**“Precision Health Ethics”**  
Boroujerdi



## Scott Rector, PhD

Curators' Distinguished Professor, Nutrition and Exercise Physiology,  
Gastroenterology and Hepatology, Mizzou School of Medicine

**“Bioenergetic Failure in Liver Disease: Rebooting the Mitochondrial Engine”**



## Karl Kador, PhD

Assistant Professor, Biomedical Sciences and Ophthalmology,  
UMKC School of Medicine

**“Using Tissue Engineering and 3D Bioprinting to Direct Retinal Growth”**



## Tareq Nabhan, OD

Assistant Clinical Professor, UMSL College of Optometry

**“Scalable Emerging Eyecare Solutions (SEES)”**

# Session B Talks

1:15 p.m. - 2:35 p.m.



## Sandy Saunders, PhD

NextGen Precision Health Fellow  
Mizzou Pathobiology and Integrative Biomedical Sciences

**“Stress Promotes Bezold Jarisch Reflex Plasticity in Sudden Unexpected Death in Epilepsy”**



## Gina Yosten, PhD

Professor and Kummer Endowed Chair of Biological Sciences,  
Missouri S&T College of Arts, Sciences, and Education

**“Spatial Molecular Imaging of the Human Pancreas: Implications for Understanding the Etiology of Diabetes”**



## Bret Ulery, PhD

Associate Professor, Chemical and Biomedical Engineering,  
Mizzou College of Engineering

**“Biomodulatory Materials”**



## Badri Adhikari, PhD

Associate Professor, Computer Science, UMSL College of Arts and  
Sciences

**“Explainable AI Across Scales of Health: From Proteins to Patients”**



## Hillary McGraw, PhD

Associate Professor, Biological and Biomedical Systems, UMKC  
School of Science and Engineering

**“Zebrafish as a Model to Study Cellular Development and Regeneration”**



## Ryan Gilbert, PhD

Professor and Linda and Bipin Doshi Endowed Chair, Chemical  
and Biochemical Engineering, Missouri S&T College of  
Engineering and Computing

**“Polymerized Curcumin for the Treatment of Neurological Injury”**

# Sponsors

Gold Level



National Swine  
Testing Center  
University of Missouri



Mehrzad Boroujerdi

Bronze Level



National Swine  
Resource &  
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**Dave Arnold, MD**

Executive Director  
NextGen Precision Health Initiative



**Mo Deghani, PhD**

Chancellor, Missouri S&T



**Kamal Khayat, PhD**

Vice Chancellor for Research and  
Innovation, Missouri S&T



**David Borrok, PhD**

Dean, College of Engineering and  
Computing, Missouri S&T



**Mehrzad Boroujerdi, PhD**

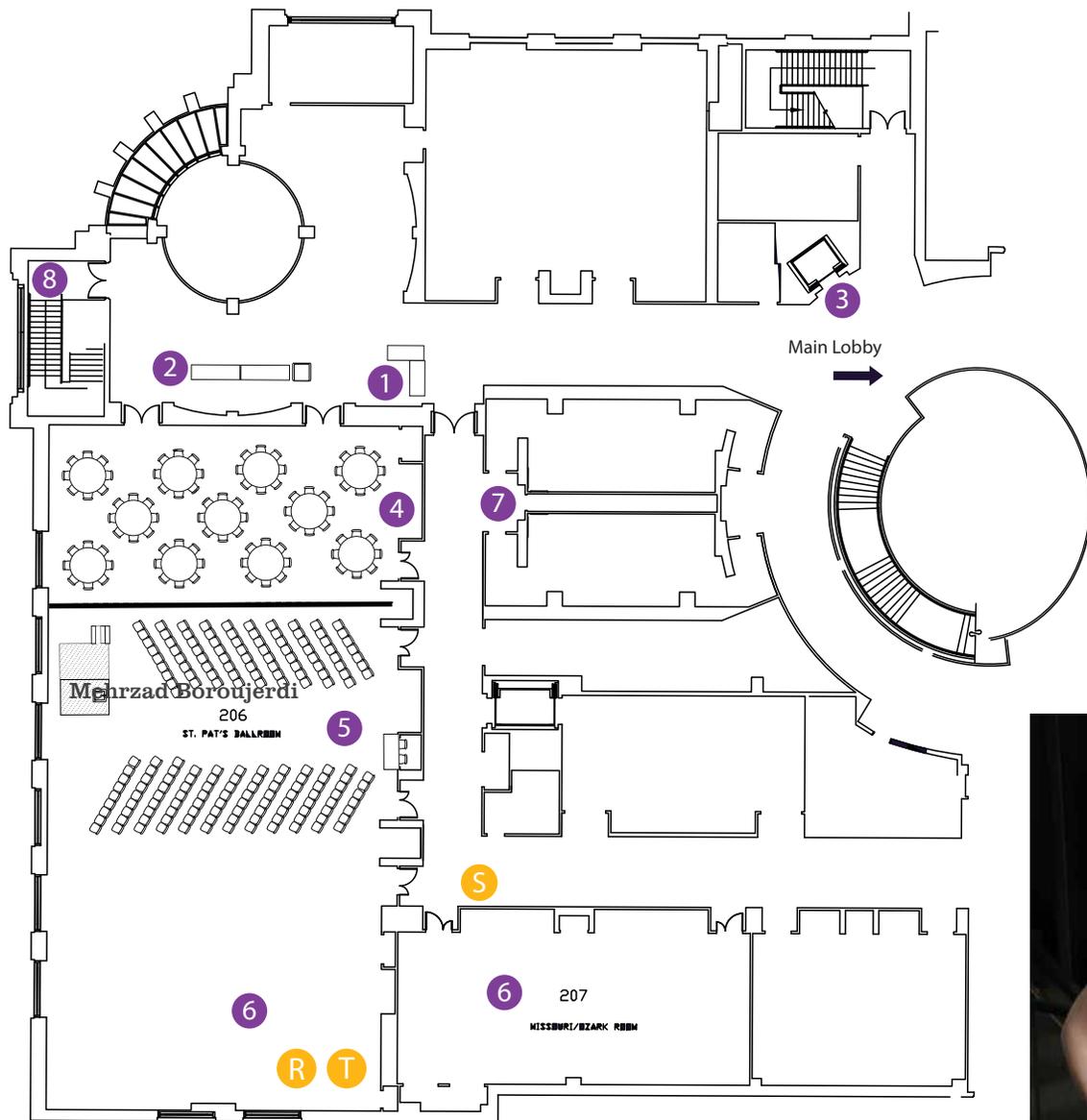
Dean, College of Arts, Sciences, and  
Education, Missouri S&T



**Jim Sterling, PhD**

Dean, Kummer College of Innovation,  
Entrepreneurship, and Economic  
Development, Missouri S&T





## Havener Center 2nd Floor

- 1 Check In
- 2 Lunch Buffet
- 3 Elevator
- 4 Dining Tables
- S Shimadzu
- T NSTC
- 5 Presentation
- 6 Posters
- 7 Restrooms
- 8 Stairs
- R NSRRC



## Take Home a Pathways T-Shirt!

- 1 Visit all the sponsors and ask them to stamp the postcard you received at check in.
- 2 Turn your card in to the check-in desk for a chance to win a shirt!