# nanoDDS2025

## 23rd International Nanomedicine and Drug Delivery Symposium

**Co-sponsored by The George and Angelina Kostas Research Center for Cardiovascular Nanomedicine**

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11

# NanoDDS 2025 Chairs Welcome

Dear Guests,

We are thrilled to extend our warmest welcome to each and every one of you attending the Nano Drug Delivery Systems (NanoDDS) 2025 Conference in person and virtually. It is our honor to host this year's NanoDDS conference at the Houston Methodist Research Institute located in the heart of the Texas Medical Center. It's exciting to have such a diverse and passionate group of professionals from academia and industry gathered to explore the cutting edge of nanomedicine and drug delivery technologies.

Over the next few days, you will hear from leading experts, dive into innovative research, and connect with peers who share your enthusiasm for advancing healthcare through nanotechnology. Throughout the event, you will have the opportunity to engage with thought-provoking keynote and invited presentations, innovative poster sessions, and interactive panel discussions that highlight both emerging technologies and real-world applications.

Whether you are here to present, learn or collaborate, we are confident that the insights gained and connections made during this conference will inspire new ideas and accelerate progress in the field. We have a wonderful social program, including The Nano-Night in the Museum reception in The Health Museum, where you will enjoy dinner, exhibits (including Body Worlds 101: The Core of Life) and karaoke!

Let's push the boundaries, ask questions, make connections and enjoy the event!

Thank you once again for joining us. We look forward to a stimulating and rewarding experience together.

Biana, Francesca, and Alessandro

# CONFERENCE CHAIRS

**Biana Godin, MScPharm, PhD**
Associate Professor
Nanomedicine
Center for RNA Therapeutics
Dr. Mary and Ron Neal Cancer Center
Houston Methodist

**Francesca Taraballi, PhD**
Director, Center for Musculoskeletal Regeneration
Associate Professor, Orthopedic Surgery
Houston Methodist

**Alessandro Grattoni, PhD**
Frank J. and Jean Raymond Centennial Chair, Houston Methodist
Chair, Department of Nanomedicine
Immunobiology & Transplant Science Center
Professor, Nanomedicine
J.C. Walter Jr. Transplant Center
Dr. Mary and Ron Neal Cancer Center
Department of Surgery
Houston Methodist

Scan the QR code to view speaker and poster abstracts.

# ORGANIZING COMMITTEE

**Gang Pao, PhD**
Foyt Family Professor of Bioengineering
CPRIT Scholar in Cancer Research
Professor, Chemistry and Materials Science & NanoEngineering
Rice University

**Sunil Krishnan, MD, FACP, FASTRO, FAIMBE, FRSC, FInstP**
Professor and John P. and Katherine McGovern Distinguished Chair
Professor, Center for Translational Research
The Brown Foundation Institute of Molecular Medicine
UTHealth Houston

**Ananth V. Annapragada, PhD**
Vice Chair, Research
Director of Basic Research in the Edward B. Singleton
Department of Pediatric Radiology
Professor, Radiology and Obstetrics & Gynecology
Texas Children's Hospital

**Marites Pasuelo Melancon, PhD**
Professor, Department of Interventional Radiology,
Division of Diagnostic Imaging, Division of Diagnostic Imaging
The University of Texas MD Anderson Cancer Center
Associate Professor, Department of Graduate School of Biomedical Science
The University of Texas Health Science Center

**Akhilesh Gaharwar, PhD**
Tim and Amy Leach Professor, Biomedical Engineering
Professor, Biomedical Engineering
Texas A&M University

**Omid Veiseh, PhD**
CPRIT Scholar in Cancer Research
Director, Rice Biotechnology Launch Pad
Professor, Bioengineering
Rice University

**Ghanashyam S. Acharya, PhD**
Associate Professor, Surgery
Division of Trauma, Bariatric and Acute Care Surgery
Associate Professor
Department of Ophthalmology
Baylor College of Medicine

**Assaf Zinger, PhD**
**Technion (Israel)**
Adjunct Assistant Professor
Cardiovascular Sciences
Neurosurgery
Houston Methodist

# SCHEDULE AT A GLANCE

## OCTOBER 26, 2025

| | |
|---|---|
| **7 – 9 p.m.** | NanoDDS 2025 Dinner & Social Hour (Faculty and Sponsors) by Invitation<br>*Sponsored by Helix Biotech* |

## OCTOBER 27, 2025 | DAY ONE

| | |
|---|---|
| **8 – 9 a.m.** | **Registration, Breakfast, Poster Set Up (Session I) & Viewing** |
| **9 – 9:10 a.m.** | **Opening Remarks** |
| **9:10 – 9:50 a.m.** | **Plenary Lecture**<br>**"A Hitchhiker's and Backpacker's Guide to Drug Delivery"**<br>**Samir Mitragotri, PhD** |
| **9:50 – 10:55 a.m.** | **Session 1: Nano-Immunotherapeutics** |
| **10:55 – 11:10 a.m.** | **Coffee Break** |
| **11:10 a.m. – 12:40 p.m.** | **Session 2: Bio-inspired Drug Delivery Systems** |
| **12:40 – 2 p.m.** | **Lunch & Poster Session**<br>*Sponsored by Lipoid* |
| **2 – 3:05 p.m.** | **Session 3: Nanomedicines for Organ Targeting** |
| **3:05 – 3:20 p.m.** | **Coffee Break** |
| **3:20 – 5 p.m.** | **Session 4: Embracing Nanomedicine Clinical Translation** including<br>**Panel Discussion: "Current challenges in Clinical Translation of Nanotherapeutics"** |
| **6:30 – 8:30 p.m.** | Nano-Night in the Museum Reception, The Health Museum |

## OCTOBER 28, 2025 | DAY TWO

| | |
|---|---|
| **8 – 9 a.m.** | **Breakfast & Poster Set Up (Session II) & Viewing** |
| **9 – 9:40 a.m.** | **Plenary Lecture**<br>**"Polyoxazolines for Micelles and Beyond"**<br>**Alexander Kabanov, PhD, DrSci** |
| **9:40 – 10:55 a.m.** | **Session 5: Advances in Polymeric Nanocarriers for Drug Delivery** |
| **10:50 – 11:05 a.m.** | **Coffee Break** |
| **11:05 a.m. – 12:20 p.m.** | **Session 6: Gene Therapies** |
| **12:10 – 1:10 p.m.** | **Lunch & Poster Session**<br>*Sponsored by Cytiva* |
| **1:10 – 2:35 p.m.** | **Session 7: Imaging and Nanotheranostics** |
| **2:35 – 2:45 p.m.** | **Coffee Break** |
| **2:45 – 4:15 p.m.** | **Session 8: Organelles and Cell-based Nanotherapies** |
| **4:15 – 4:40 p.m.** | **Best Abstract Lightning Talks (4x5min) & Awards** |
| **4:40 – 4:50 p.m.** | **Closing Remarks** |

# MONDAY, OCT. 27

| | |
|---|---|
| **8 – 9 a.m.** | **Registration, Breakfast, Poster Set Up (Session I) Viewing** |
| **9 – 9:10 a.m.** | **Opening Remarks**<br>**Biana Godin, MPharm, PhD**<br>Chair, NanoDDS 2025 |
| **9:10 – 9:50 a.m.** | **Plenary Lecture**<br>**"A Hitchhiker's and Backpacker's Guide to Drug Delivery"**<br>**Samir Mitragotri, PhD**<br>Hiller Professor of Bioengineering<br>Hansjörg Wyss Professor of Biologically Inspired Engineering<br>Harvard John A. Paulson School of Engineering and Applied Sciences<br>Wyss Institute<br>Harvard University<br>Introduction: Alessandro Grattoni, PhD |
| **9:50 – 10:55 a.m.** | **Session 1: Nano-Immunotherapeutics**<br>**Chairs:** Francesca Taraballi, PhD and Twan Lammers, PhD |
| **9:50 – 10:20 a.m.** | **Keynote**<br>**"Supercharging Immunotherapy Through Nanotechnology: Chemical Structure Matters"**<br>**Natalie Artzi, PhD**<br>Hansjörg Wyss Associate Professor of Biologically Inspired Engineering<br>Harvard Medical School<br>Head, Structural Nanomedicine<br>Mass General Brigham's Gene and Cell Therapy Institute<br>Associate Institute Director<br>Wyss Institute for Biologically Inspired Engineering<br>Harvard University |
| **10:20 –10:40 a.m.** | **"Friends or Foes? Targeting Macrophages for Cancer Immunotherapy and Drug Delivery"**<br>**Wen Jiang, MD, PhD**<br>Assistant Professor, Radiation Oncology<br>The University of Texas MD Anderson Cancer Center |
| **10:40 –10:55 a.m.** | **"Intratumoral Delivery of a Synergistic Five-Drug Immunotherapy Cocktail via a Biodegradable Nanoplatform Eradicates Cancer"**<br>**Corrine Ying Xuan Chua, PhD**<br>Assistant Professor, Nanomedicine<br>Houston Methodist |
| **10:55 –11:10 a.m.** | **Coffee Break** |
| **11:10 am. - 12:40 p.m.** | **Session 2: Bio-Inspired Drug Delivery Systems**<br>**Chairs:** Devika Soundara Manickam, PhD and Wen Jian, MD, PhD |
| **11:10 – 11:40 a.m.** | **Keynote**<br>**"Engineering Cellular Nanoparticles for Multivalent Antigen Delivery"**<br>**Liangfang Zhang, PhD**<br>Joan and Irwin Jacobs, Chancellor Professor and Chair<br>Aiiso Yufeng Li Family Department of Chemical and Nano Engineering<br>University of California San Diego |
| **11:40 a.m. – 12:10 p.m.** | **Bioengineering Cell Based Therapeutics from Bench to Bedside**<br>**Omid Veiseh, PhD**<br>Professor, Bioengineering<br>CPRIT Scholar in Cancer Research<br>Director<br>Rice Biotechnology Launch Pad<br>Rice University |

# MONDAY, OCT. 27

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|---|---|
| **12:10 – 12:25 p.m.** | **"Nanotechnology for Therapeutic Biocatalysis"**<br>**Devleena Samanta, PhD**<br>William H. Tonn Endowed Professorial Fellow<br>Assistant Professor, Chemistry<br>The University of Texas at Austin |
| **12:25 – 12:40 p.m.** | **"Modulating the Prenatal Environment with Extracellular Vesicles: A Promising Strategy for Congenital Malformations"**<br>**Bruna Coradetti, PhD**<br>Assistant Professor, Center for Precision Environmental Health<br>Baylor College of Medicine |
| **12:40 – 2 p.m.** | **Lunch & Poster Session**<br>*Sponsored by Lipoid* |
| **2 – 3:05 p.m.** | **Session 3: Nanomedicines for Organ Targeting**<br>**Chairs:** Ghanashyam Acharya, PhD and Michael Mitchell, PhD |
| **2 – 2:30 p.m.** | **Keynote**<br>**"In vivo Gene Editing for Treating Hematopoietic Disorders"**<br>**Gang Bao, PhD***<br>Foyt Family Professor of Bioengineering<br>Professor, Chemistry and Materials Science & NanoEngineering<br>Rice University |
| **2:30 – 2:50 p.m.** | **"Nanoparticle Design for Kidney Targeting: Implications in Cardiovascular Diseases"**<br>**Ryan Williams, PhD***<br>Assistant Professor, Biomedical Engineering<br>City College of New York |
| **2:50 - 3:05 p.m.** | **"Nanotechnology-Driven Therapies for Neurodegenerative Diseases"**<br>**Sonia Villapol, PhD**<br>Assistant Professor, Neurosurgery<br>Neurosurgery Center for Neuroregeneration<br>Houston Methodist |
| **3:05 – 3:20 p.m.** | **Coffee Break** |
| **3:20 – 5 p.m.** | **Session 4: Embracing Nanomedicine Clinical Translation**<br>**Chairs/Moderators:** John Cooke, MD, PhD and Ananth V. Annapragada, PhD |
| **3:20 – 3:50 p.m.** | **Keynote**<br>**"Promoting Cancer Nanomedicine Clinical Translation"**<br>**Twan Lammers, PhD**<br>Professor, Nanomedicine and Theranostic<br>Institute for Experimental Molecular Imaging<br>RWTH Aachen University Clinic<br>Center for Biohybrid Medical Systems, Aachen, Germany |
| **3:50 – 4 p.m.** | **"From Formulation to Clinic: Approaches to Scalable Nanomedicine Development"**<br>**Silvie Meeuwissen, PhD**<br>Director<br>Process Research & Development and Manufacturing Nanomedicines Ardena |
| **4 – 5 p.m.** | **Panel Discussion**<br>**"Current Challenges in Clinical Translation of Nanotherapeutics"**<br>**Panelists:**<br>• Sasha Kabanov (UNC)<br>• Twan Lammers (RWTH Aachen University)<br>• Omid Veiseh (Rice University)<br>• Lingyun Liu (Sanofi) |
| **6:30 – 8:30 p.m.** | **Nano-night in the Museum Reception**<br>**The Health Museum** |

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# TUESDAY, OCT. 28

| | |
|---|---|
| **8 – 9 a.m.** | **Breakfast, Poster Set Up (Session II) & Viewing** |
| **9 – 9:40 a.m.** | **Plenary Lecture**<br>**"Polyoxazolines for Micelles and Beyond"**<br>**Aleksander (Sasha) Kabanov, PhD**<br>Mescal Swain Ferguson Distinguished Professor<br>Director, Center for Nanotechnology in Drug Delivery<br>UNC Eshelman School of Pharmacy<br>Co-Director, Carolina Institute for Nanomedicine<br>University of North Carolina at Chapel Hill<br>Introduction: Biana Godin, MPharm, PhD |
| **9:40 – 10:55 a.m.** | **Session 5: Advances in Polymeric Nanocarriers for Drug Delivery**<br>**Chairs:** Yongfeng Zhao, PhD and Elvin Blanco, PhD |
| **9:40 – 10:05 a.m.** | **Keynote**<br>**"Vascular-confined Particles for Thrombolysis"**<br>**Paolo Decuzzi, PhD***<br>Senior Scientist<br>Founding Director<br>Laboratory of Nanotechnology for Precision Medicine<br>Italian Institute of Technology, Genova, Italy |
| **10:05 – 10:30 a.m.** | **"Engineering Polymer Prodrugs for Infectious Disease and Immune Therapies"**<br>**Patrick Stayton, PhD**<br>Bioengineering Distinguished Term Professor<br>Director, Molecular Engineering and Sciences Institute<br>University of Washington |
| **10:30 – 10:50 a.m.** | **"Polymersomes Enable Delivery of Biologics Across the Blood Brain and Blood Nerve Barriers"**<br>**Jessica Larsen, PhD**<br>Chemical and Biomolecular Engineering Clemson University |
| **10:50 – 11:05 a.m.** | **Coffee Break** |
| **11:05 a.m. - 12:20 p.m.** | **Session 6: Gene Therapies**<br>**Chairs:** Jessica Larsen, PhD and Dan Kiss, PhD |
| **11:05 – 11:35 a.m.** | **Keynote**<br>**"Lipid Nanoparticles for Overcoming Biological Barriers to Cardiovascular mRNA Delivery"**<br>**Michael Mitchell, PhD***<br>Director, Lipid Nanoparticle Synthesis Core<br>Penn Institute for RNA Innovation<br>Associate Professor, Bioengineering<br>University of Pennsylvania |
| **11:35 – 11:55 a.m.** | **"Liver Genome Editing for Cardiovascular Disease"**<br>**William Lagor, PhD***<br>Kyle and Josephine Morrow Endowed Professor<br>Integrative Physiology<br>Baylor College of Medicine |
| **11:55 a.m. – 12:10 p.m.** | **"Telomerase mRNA Nanotherapy for Protection from Radiation Induced DNA Damage in the Skin"**<br>**Anahita Mojiri, PhD***<br>Assistant Research Professor<br>Cardiovascular Sciences<br>Houston Methodist |
| **12:10 – 1:10 p.m.** | **Lunch & Poster Session II**<br>*Sponsored by Cytiva* |
| **1:10 – 2:35 p.m.** | **Session 7: Imaging and Nanotheranostics**<br>**Chairs:** Paolo Decuzzi, PhD and Moonsoo Jim, PhD |

# TUESDAY, OCT. 28

| | |
|---|---|
| **1:10 – 1:40 p.m.** | **Keynote**<br>**"Enabling Light-Activated Therapies at Depth Using X-ray-triggered Nanoscintillator Luminescence"**<br>**Sunil Krishnan, MD**<br>Professor and John P. and Kathrine G. McGovern<br>Distinguished Chair Professor, Center for Translational Cancer Research<br>The Brown Foundation Institute of Molecular Medicine at UTHealth |
| **1:40 – 2:05 p.m.** | **"Nanoparticle enhanced Absorbable Medical Devices for Vascular Applications"**<br>**Marites Pasuelo Melancon, PhD***<br>Professor, Interventional Radiology<br>The University of Texas MD Anderson Cancer Center |
| **2:05 – 2:25 p.m.** | **"Developing Mass Spectrometry Imaging Guided Therapies and Drug Delivery Systems"**<br>**Katy Margulis, PhD**<br>Assistant Professor, The Faculty of Medicine-School of Pharmacy<br>Institute for Drug Research<br>The Hebrew University of Jerusalem, Israel |
| **2:25 - 2:35 p.m.** | **"Precision Imaging of Neurodegenerative Disease Biomarkers: A Decade of Molecular MRI Nanoparticle Probe Innovation for Intracranial Disease Targets"**<br>**Eric A. Tanifum, PhD**<br>Associate Professor, Edward B. Singleton Department of Radiology<br>Texas Children's Hospital<br>Department of Radiology<br>Baylor College of Medicine |
| **2:35 – 2:45 p.m.** | **Coffee Break** |
| **2:45 – 4:15 p.m.** | **Session 8: Organelles and Cell-Based Nanotherapies**<br>**Chairs:** Bruna Corradetti, PhD and Santosh Aryal, PhD |
| **2:45 – 3:10 p.m.** | **Keynote**<br>**Cellular Delivery of TRAIL to Metastatic Cells: A Brief History and Future Outlook**<br>**Michael King, PhD**<br>E.D. Butcher Professor of Bioengineering<br>Rice University |
| **3:10 -3:30 p.m.** | **Enhancing Synthetic Nanoparticle Tumor Targeting by Re-engineering with Extracellular Vesicles Derived from Cancer and Immune Cells**<br>**Santosh Aryal, PhD**<br>Associate Professor, Pharmaceutical Science and Health Outcomes<br>The University of Texas at Tyler |
| **3:30 – 3:50 p.m.** | **"Extracellular Vesicle Mediated Mitochondria Delivery for Ischemic Stroke Therapy"**<br>**Devika Soundara Manickam, PhD***<br>Associate Professor, Neurology<br>UTHealth Houston |
| **3:50 – 4:05 p.m.** | **"Mitochondrial Transfer and Replenishment: Biological Nanoparticles for Metabolic Remodeling in Disease"**<br>**Elvin Blanco, PhD***<br>Assistant Professor, Nanomedicine<br>Houston Methodist |
| **4:05 – 4:15 p.m.** | **"From Detection to Quantification: Measuring EV Markers and Cargo Using Nano Flow Cytometry"**<br>**James Fay, PhD**<br>NanoFCM |
| **4:15 – 4:40 p.m.** | **Best Abstract Lightning Talks: Top Scoring Posters**<br>(4×5 minute Talks + Awards) |
| **4:45 – 4:50 p.m.** | **CLOSING REMARKS** |

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# PLENARY & KEYNOTE SPEAKERS

## Plenary Speakers

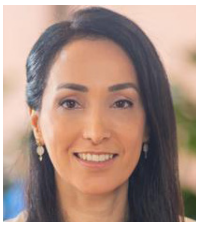
**Samir Mitragotri, PhD**
Hiller Professor of Bioengineering and Hansjörg Wyss Professor of Biologically Inspired Engineering
Harvard University

Author of more than 400 publications, he is an inventor on over 225 issued/pending patents and presented 500-plus invited lectures. Mitragotri is an elected member of the National Academy of Engineering, National Academy of Medicine, and National Academy of Inventors. His research has advanced fundamental understanding of biological barriers and led to the development of new materials as well as technologies for the treatment of various ailments including diabetes, cancer, skin diseases, multiple sclerosis, and infections, among others. Many of his inventions have advanced clinical technologies as well as research leading to a number of start-up companies. Also, the fundamental knowledge developed through his research has advanced the understanding of the biology of barriers in the human body, such as pioneering novel technologies using ultrasound and ionic liquids to enable transdermal delivery of proteins, peptides and siRNA. Mitragotri has invented systems that make use of synthetic carriers hitchhiking on natural cells including red blood cells, macrophages, neutrophils, T cells, and NK cells for targeted delivery of drugs and cells.

**Alexander (Sasha) Kabanov, PhD, DrSci**
Mescal Swaim Ferguson Distinguished Professor
Director, Center for Nanotechnology in Drug Delivery
Co-Director, Caroline Institute for Nanomedicine
Eshelman School of Pharmacy
The University of North Carolina-Chapel Hill

With significant contributions to nanomedicine, pioneering the use of polymeric micelles, polyelectrolyte complexes, nanogels, and exosomes for delivering small drugs, nucleic acids, and proteins therapeutically, Kabanov's work has resulted in the first clinical trial involving a polymeric micelle drug. As a highly cited researcher in pharmacology and toxicology, he has more than 340 scientific, 36 U.S patents, and is a co-founder of several pharmaceutical companies. He has mentored over 80 graduate students and postdocs, with a strong commitment to diversity. Kabanov also established symposium series in nanomedicine and drug delivery, chaired Gordon Research Conferences, and received numerous honors and awards, including the Lenin Komsomol Prize, NSF Career Award, George Gamow Award, and Controlled Release Society (CRS) Founders award. He is an elected member or fellow of prestigious academies and organizations, including Academia Europaea, Russian Academy of Sciences, National Academy of Inventors, American Association for the Advancement of Science, American Institute for Medical and Biological Engineering, and CRS.

## Keynote Speakers



**Natalie Artzi, PhD**
Hansjörg Wyss Associate Professor of Biologically Inspired Engineering Harvard Medical School
Head, Structural Nanomedicine
Mass General Brigham's Gene and Cell Therapy Institute
Associate Institute Director
Wyss Institute for Biologically Inspired Engineering
Harvard University

A biomedical scientist and engineer, Artzi's work in structural nanomedicine is reshaping therapeutic and diagnostic strategies. Her research centers on engineering nanostructures with precise molecular and cellular architectures, enabling targeted, responsive, and effective treatment delivery. She is the recipient of numerous honors, including the 2025 Dr. Alexander M. Cruickshank (AMC) Lecturer at the Gordon Research Conference on Cancer Nanotechnology, 2024 Rosemary Schnell Distinguished Lecture Award from the International Institute for Nanotechnology, 2024 Acta Biomaterialia Silver Medal, 2024 Clemson Award for Applied Research, and the Society for Biomaterials Mid-Career Award.

**Liangfang Zhang, PhD**
Joan and Irwin Jacobs Chancellor Endowed Chair In Innovations for Engineering in Medicine
Professor, Jacobs School of Engineering
University of California San Diego

Zhang is a Fellow of the American Institute for Medical and Biological Engineering, the American Association for the Advancement of Science and the National Academy of Inventors. He is a Principal Investigator of Zhang Research Group, Nanomaterial & Nanomedicine Laboratory.

# SPEAKERS

## Keynote Speakers

### Gang Bao, PhD

Foyt Family Chair Professor, Bioengineering
Rice University
Co-Director, Cancer Bioengineering Collaborative
Rice University/The University of Texas MD Anderson Cancer Center

Bao is a pioneer in nanomedicine, molecular imaging, and the emerging area of genome editing. He is a Fellow of the American Association of Advancement in Science, American Institute for Medical and Biological Engineering, Biomedical Engineering Society, American Society of Mechanical Engineers, American Physical Society, and the International Academy of Medical and Biological Engineers.

### Twan Lammers, PhD, DSc

Chair, Molecular Imaging
Professor, Medicine
Institute for Experimental
Molecular Imaging
RWTH Aachen University Clinic

Lammers and his team aim to individualize and improve the treatment of severe diseases by combining drug targeting with imaging, developing materials and methods to monitor tumor growth, angiogenesis, inflammation, fibrosis and metastasis. Lammers received multiple scholarships and awards, including six European Research Council grants), served as president of the Controlled Release Society, and currently is secretary of the European Society for Molecular Imaging. He serves as an associate editor for JCR, MIB and DDTR, and has been included in the Clarivate Analytics list of Highly Cited Researchers since 2019.

### Patrick S. Stayton, PhD

Director
Molecular Engineering and Sciences Institute
Distinguished Career Professor Bioengineering
University of Washington

Stayton's laboratory develops new biomaterials for immune therapy, infectious disease therapy, and regenerative medicine. As an elected Fellow of AIMBE, he was awarded the Clemson University award from the Society for Biomaterials and the CRS-Cygnus Recognition Award and served as co-chair of the Gordon Research Conference on Drug Carriers. Stayton is the recipient of the University Washington College of Engineering's Faculty Innovator Award, and the Bioengineering Distinguished Teacher and Mentor Award. He is most proud of the many graduate students and postdoctoral fellows trained in his lab who have impactful academic and industry careers.

### Paolo Decuzzi, PhD

Senior Scientist and Professor
Biomedical Engineering
Italian Institute of Technology

Decuzzi leads the Laboratory of Nanotechnology for Precision Medicine at the Italian Institute of Technology and serves as founder and CEO of Chiromesh Therapeutics, Inc. He is a visiting professor in the Division of Oncology at Stanford University School of Medicine. His previous academic appointments include University of Magna Graecia, Italy, UTHealth Houston and Houston Methodist. With a diverse academic and professional background, he is a Fellow of the Controlled Release Society and a board member of multiple scientific associations, research institutions, and EU review panels. He also advises Academic Biotech Accelerators, including SPARK Stanford, SPARK Europe, and TRAM Stanford. His laboratory focuses on the design, development, and validation of drug delivery systems for treatment and imaging in various diseases, integrating principles from engineering, pharmaceutical, and biomedical sciences. With more than 200 papers, he holds 10-plus patents and patent applications and has secured more than $15 million in extramural funding from federal/public and private entities in the U.S. and Europe.

# Keynote Speakers

**Dr. Michael J. Mitchell, PhD**
Associate Professor, Bioengineering
Group Leader, Lipid Nanoparticle Delivery Systems
Penn Institute for RNA Innovation
University of Pennsylvania

The Mitchell Lab's research broadly lies at the interface of biomaterials science, drug delivery, and cellular and molecular bioengineering to fundamentally understand and therapeutically target biological barriers. Mitchell has received numerous awards, including the NIH Director's New Innovator Award, the Rising Star Award from the Biomedical Engineering Society, the Career Award at the Scientific Interface from the Burroughs Wellcome Fund, and the Research Scholar Award from the American Cancer Society. In 2023 he was named a Young Innovator in Cellular and Molecular Bioengineering. He was named a Top 1% Highly Cited Researcher by Clarivate Analytics and received the Kabiller Rising Star Award from Northwestern University in 2025. He is a co-founder and serves on Scientific Advisory Board of numerous biotechnology companies focused on developing non-viral delivery technologies for genetic medicines, including Liberate Bio and Capstan Therapeutics.

**Sunil Krishnan, MD**
Director and Professor , Radiation OIncology
McGovern Medical School - UTHealth Houston

After a radiation oncology residency at Mayo Clinic, Rochester, Krishnan held faculty appointments at The University of Texas MD Anderson Cancer and Mayo Clinic, Jacksonville. Krishnan treats gastrointestinal, brain and gynecologic cancer in the clinic. In the laboratory, he explores radioprotection with fullerenes, radiation dose enhancement and/or photothermal activation with gold nanoparticles, and strategies to improve pharmacokinetics and payload delivery via stimulus-responsiveness, bio-inspired molecular mimicry, Trojan-horse approaches, and phagocytosis evasion. Krishnan has co-authored more than 300 peer-reviewed manuscripts, with approximately 30,000 citations, and an h-index of 97.

**Omid Veiseh, PhD**
CPRIT Scholar in Cancer Research
Professor, Cancer Research
Bioengineering and Chemical and Biomolecular Engineering
Rice University

Veiseh serves as director of Rice University's Biotech Launch Pad, a new initiative with a mission to accelerate the translation of the University's discoveries and technologies into clinical practice to provide rapid patient access to leading-edge therapeutic products. He leads an interdisciplinary translational research program to engineer and commercialize next-generation cell-based therapeutics for various human diseases. Throughout his career, he has authored or co-authored more than 80 peer-reviewed publications, including those in Nature Biotechnology, Nature Materials, Nature Medicine, and Nature Biomedical Engineering. He is an inventor on more than 50 pending or awarded patents. Veiseh is also an entrepreneur who has co-founded multiple biotechnology companies, collectively attracting ~ $500M in private and public investment capital. He is a fellow of the Controlled Release Society and a member of the National Academy of Inventors.

**Michael R. King, MD**
E.D. Butcher Professor of Bioengineering
Department of Bioengineering
Rice University

Dr. Michael R. King is the E.D. Butcher Chair of Bioengineering at Rice University, Associate Vice President for Research, and Special Advisor to the Provost on Life Science Collaborations with the Texas Medical Center. He is also a Scholar of the Cancer Prevention and Research Institute of Texas (CPRIT). Previously, King was the J. Lawrence Wilson Professor and Department Chair of Biomedical Engineering at Vanderbilt University, and prior to, he was the Daljit S. and Elaine Sarkaria Professor at Cornell University. The author of textbooks on statistical methods and microchannel flows, he is the recipient of several awards including the NSF CAREER Award, Outstanding Research Awards from the American Society of Mechanical Engineers, the American Society of Clinical Chemistry, and the Christopher Jacobs Award for Excellence in Leadership. King is a Fellow of the American Institute of Medical and Biological Engineering (AIMBE), Biomedical Engineering Society (BMES), International Academy of Medical and Biological Engineering, American Association for the Advancement of Science (AAAS), and the National Academy of Inventors, and served as founding Vice President of the International Society of Bionic Engineering. He served as Editor-in-Chief of *Cellular and Molecular Bioengineering*, an official journal of the BMES. King also previously served as Chair of the BME Council of Chairs, and Chair of the AIMBE College of Fellows, and is currently the President-Elect of AIMBE.


# THANK YOU SPONSORS & EXHIBITORS

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