CONFERENCE PROGRAM • MORNING

Next-Generation Bioimaging Conference

Wednesday, November 11, 2026 | Rice Bioscience Research Collaborative

Time	Program	Speaker / Affiliation / Location
8:00–8:55 AM	**Breakfast**	BRC Conference Lobby
8:55–9:05 AM	**Opening Remarks**	Luay Nakhleh (Rice) & Eugene Civillico (ARPA-H)
Clinical Imaging | 9:05–10:30 AM | Chair: Robert "Carson" Sibley		
9:05–9:30 AM	Keynote — Eleftherios Mylonakis Visualizing Disease and Discovery: From Experimental Imaging and AI Modeling to Clinical Research	Houston Methodist
9:30–9:45 AM	Keynote — Maxim Itkin Challenging Task of Imaging of the Lymphatic Subsystems	University of Pennsylvania
9:45–10:00 AM	Invited — Pablo Valdes From Bench to Bedside: Intraoperative Optical Imaging Technologies for Precision Brain Tumor Surgery	University of Texas Medical Branch (UTMB)
10:00–10:15 AM	Invited — Farshid Alambeigi Toward Intelligent GI Tract Diagnosis Through Visuotactile Sensing, Generative Models, and Robotic Autonomy	Rice University / Houston Methodist Bookout Center
10:15–10:30 AM	Invited — Zaid Siddiqui Precision Image-Guided Adaption for Radiotherapy Targeting and Response Assessment	Baylor College of Medicine
10:30–10:45 AM	**Coffee Break**	BRC Conference Lobby
Emerging Imaging Technology | 10:45 AM–12:10 PM | Session Chair: Lei S. Li		
10:45–11:05 AM	Keynote — Roland Vulders BioSubstrate, a Novel, Cell Friendly Material	Philips | Senior Scientist, Intellectual Property & Standards
11:10–11:25 AM	Invited — Nicolas Pégard Optical Interrogation of Brain Functions	University of North Carolina at Chapel Hill / Carolina Instruments
11:25–11:40 AM	Invited — Shawn (Liangzhong) Xiang Radiacoustic and Ultrasound Imaging for Adaptive Radiotherapy	University of California, Irvine
11:40–11:55 AM	Invited — Bryan Clingman Insights from Optoacoustic Imaging in Clinical Studies and the Breast Clinic	Seno Medical
11:55 AM–12:10 PM	Invited — Shiqi Hu Automated Breast Cancer Tumor and Thermal Lesion Formation Segmentation and Monitoring Using Harmonic Motion Imaging	Columbia University / Konofagou Lab
12:10–1:00 PM	**Lunch**	BRC Event/Exhibition Hall

Schedule updated November 9, 2026. Times are Central. All morning talk slots include Q&A; pending titles will be added as received.

CONFERENCE PROGRAM • AFTERNOON

ARPA-H LIGHT Sessions and Reception

Wednesday, November 11, 2026 | BRC Auditorium and Event/Exhibition Hall

Time	Program	Speaker / Affiliation / Location
ARPA-H LIGHT Session 1 | 1:10–2:50 PM | Chair: Han Xiao		
1:10–2:00 PM	**Leadership Panel: From Breakthrough Research to Patient Impact: A Texas–Federal Partnership for Biomedical Innovation**	Moderator: Ashu Sabharwal (Rice). Panelists: Thomas A. Blackwell (UTMB); Eugene Civillico (ARPA-H); Kristen Doyle (CPRIT); Daniela Matei (Houston Methodist); Luay Nakhleh (Rice).
2:00–2:05 PM	Stage transition	
2:05–2:20 PM	Invited — J. Brandon Dixon Physics-Informed Quantification of Lymphatic Function Using Near-Infrared Imaging In Vivo	Georgia Institute of Technology
2:20–2:35 PM	Invited — Robert “Carson” Sibley Developing a Lymphatic Imaging Program: Navigating Challenges and Realizing Successes	UT Southwestern
2:35–2:50 PM	Invited — Lei S. Li Bringing Photoacoustic Tomography to Patients	Rice University
2:50–3:05 PM	**Coffee Break**	
ARPA-H LIGHT Session 2 | 3:05–5:00 PM | Chair: Ionela Iacobas		
3:05–3:45 PM	Commercialization and Regulatory Panel Medical Devices and Contrast Agents: Evidence, Regulatory Pathways, and Clinical Adoption	Moderator: Eugene Civillico (ARPA-H). Panelists: Bryan Clingman (Seno); Terry Matsunaga (U Arizona); Pabel Miah; Carson Sibley (UTSW); Roland Vulders (Philips); Shawn Xiang (UC Irvine).
3:45–4:05 PM	Featured Talk — Kimberley Steele From Invisible to Actionable: ARPA-H’s Vision for Lighting the Path from Lymphatic Imaging to Patient Impact	ARPA-H
4:05–4:20 PM	Invited — Heather Ferguson The Power and Importance of the Patient Voice	Lymphedema Advocacy Group
4:20–4:30 PM	Invited — Casey Sapp TBA	Industry
4:30–4:45 PM	Invited — Pabel Miah Surgical Techniques for Lymphedema Prevention in Patients with Locally Advanced Breast Cancer	Baylor College of Medicine
4:45–5:00 PM	Invited — Carrie Shawber Bed to Bench Approach to Understand Primary Lymphatic Anomaly Pathogenesis and Therapeutic Response	Columbia University
5:00–6:00 PM	**Poster Session**	BRC Event/Exhibition Hall | Refreshments provided
5:00–5:20 PM	**BRC Laboratory Tour (Parallel with Poster Session)**	ARPA-H Team & Invited Visitors
6:00–8:00 PM	**Reception**	Location TBD

All talk slots include Q&A and handoffs. Kim: 20 minutes; Casey: 10 minutes; other talks: 15 minutes. Regulatory panel: 40 minutes. Revised times require confirmation.

SPEAKER ABSTRACTS AND BIOGRAPHIES

Eleftherios Mylonakis



Houston Methodist

9:05–9:30 AM Central

Visualizing Disease and Discovery: From Experimental Imaging and AI Modeling to Clinical Research

Talk overview I plan to draw on examples from our research programs, including imaging of host-pathogen interactions in C. elegans, AI-driven modeling and therapeutic discovery, and visualization of geographic neighborhoods and clinical trial performance to improve clinical research and patient care.

Biography Eleftherios Mylonakis chairs the Charles W. Duncan Jr. Department of Medicine at Houston Methodist and holds the Charles and Anne Duncan Presidential Distinguished Chair. A physician-scientist in infectious diseases, he studies host–pathogen interactions and therapeutic discovery while leading clinical and translational research. He previously led the infectious diseases division at Brown University and trained at Massachusetts General Hospital and Harvard Medical School. His work connects experimental models, computational approaches, and patient care.

Talk overview supplied by speaker. Biography · Photo

Maxim Itkin



University of Pennsylvania

9:30–9:45 AM Central

Challenging task of imaging of the lymphatic subsystems

Biography Maxim Itkin is a professor of radiology at the University of Pennsylvania and directs Penn’s Center for Lymphatic Disorders. An interventional radiologist, he specializes in imaging and treating disorders of the lymphatic circulation. His clinical work includes lymphangiography and minimally invasive lymphatic interventions. He completed medical training in Moscow, a radiology residency at Beilinson Medical Center, and fellowship training at Children’s Hospital of Philadelphia and the University of Pennsylvania.

Biography · Photo

SPEAKER ABSTRACTS AND BIOGRAPHIES

Pablo Valdes



University of Texas Medical Branch

9:45–10:00 AM Central

Biography Pablo Valdes, MD, PhD, FAANS, is an Assistant Professor of Neurosurgery at UTMB, Director of Neurosurgical Oncology and the Brain Tumor Program, and the Jennie Sealy Distinguished Endowed Chair in Neuroscience. He earned his MD and PhD at Dartmouth, completed neurosurgical residency at Harvard, and trained in neurosurgical oncology and functional brain mapping in Montpellier. His laboratory develops optical, fluorescence, hyperspectral, and photoacoustic imaging and image-guided technologies for brain tumor treatment. His clinical practice focuses on complex brain and skull base tumors.

Biography and photo from speaker materials.

Farshid Alambeigi



Rice University and Houston Methodist Bookout Center

10:00–10:15 AM Central

Toward Intelligent GI Tract Diagnosis Through Visuotactile Sensing, Generative Models, and Robotic Autonomy

Abstract Gastrointestinal (GI) diseases, including colorectal cancer and Crohn's disease, pose significant challenges for early detection and accurate diagnosis. Conventional endoscopy relies primarily on visual feedback, which may be insufficient to detect abnormalities associated with changes in tissue stiffness and other nonvisual characteristics. To holistically address these challenges, we have developed a novel visuotactile sensing balloon to augment existing visual feedback with tactile information, alongside a modular robotic platform for endoscopic procedures. We further integrate generative AI models to address data limitations and advance robotic autonomy toward intelligent navigation, sensing, and decision-making. Together, these technologies aim to enable more comprehensive GI diagnosis and pave the way toward Level 4 and Level 5 autonomous endoscopy.

Biography Farshid Alambeigi is an associate professor of mechanical engineering at Rice University and directs robotics, imaging, and autonomous surgery research at Houston Methodist's Bookout Center. His research combines medical robotics, sensing, imaging, and autonomy to improve diagnosis and minimally invasive treatment. He leads the Advanced Robotics for Translational Solutions laboratory and earned his PhD at Johns Hopkins University in 2019. His awards include NIH Trailblazer and Director's New Innovator support.

Abstract supplied by speaker. Biography · Photo

SPEAKER ABSTRACTS AND BIOGRAPHIES

Zaid Siddiqui



Baylor College of Medicine

10:15–10:30 AM Central

Precision image-guided adaption for radiotherapy targeting and response assessment

Biography Zaid Siddiqui is an assistant professor of radiation oncology at Baylor College of Medicine. His research uses computational methods and medical imaging to improve radiotherapy targeting and assessment of treatment response. His laboratory develops mechanistic and statistical image-analysis approaches, including methods for MRI-based tumor characterization, image-guided adaptive therapy, and evaluation of artificial intelligence in clinical imaging.

Biography · Photo

Roland Vulders



Philips Intellectual Property and Standards

10:45–11:05 AM Central

BioSubstrate, a novel, cell friendly material

Abstract Roland will discuss the development of a new material which can be used for injection molding resulting in the manufacturing of different microfluidic devices. The properties of the material will be discussed such as optical transparency, lack of autofluorescence and still possessing the capability of cellular adhesion and proliferation. In addition, results in collaboration with external clinical partners will be shown. An outlook will be provided upon the culmination of the different projects.

Biography Roland Vulders is a Senior Scientist at Philips with more than 20 years of experience designing and conducting experiments in medical technology. His work focuses on cell-based diagnostics and therapies, particularly in oncology and diabetes, and on using light, mechanical, and chemical stimuli to influence cellular behavior. He collaborates with multidisciplinary teams and clinical partners to translate research into products. He is also a certified internal and lead auditor for ISO 13485:2016 and FDA standards and holds a bachelor’s degree from Fontys University of Applied Sciences.

Abstract supplied by speaker. Biography and photo from speaker materials.

SPEAKER ABSTRACTS AND BIOGRAPHIES

Nicolas Pégard



University of North Carolina at Chapel Hill and Carolina Instruments

11:10–11:25 AM Central

Optical interrogation of brain functions

Biography Nicolas Pégard is a faculty member in applied physical sciences at the University of North Carolina at Chapel Hill and a co-founder of Carolina Instruments. His laboratory develops optical tools for observing and manipulating neural activity, combining microscopy, computational imaging, and neurotechnology. He received his PhD in electrical engineering from Princeton University in 2014 and completed postdoctoral work at the University of California, Berkeley. His honors include Beckman Young Investigator and Sloan Research Fellowship awards.

Biography · Photo

Shawn (Liangzhong) Xiang



University of California Irvine

11:25–11:40 AM Central

Radiacoustic and Ultrasound Imaging for Adaptive Radiotherapy

Biography Shawn Xiang is a Professor of Radiological Sciences and Biomedical Engineering at the University of California, Irvine, where he directs the TRUE Lab. His research develops imaging technologies that reveal therapeutic energy delivery in real time. He pioneered radiacoustic imaging and has advanced it through preclinical validation and clinical translation in proton therapy. His laboratory also develops electroacoustic tomography for monitoring pulsed field ablation. He is Co-Founder and Chief Scientific Officer of SoundDose and Founder and President of PulseSonix. His honors include an NIH MERIT Award and an American Cancer Society Research Scholar Award.

Biography and photo from speaker materials.

SPEAKER ABSTRACTS AND BIOGRAPHIES

Bryan Clingman



Seno Medical

11:40–11:55 AM Central

Insights from Optoacoustic Imaging in Clinical Studies and the Breast Clinic

Abstract Seno's FDA approved Imagio Optoacoustic (photoacoustic) imaging system has produced a large set of relevant clinical cases for analysis. This talk will share some insights from those studies including distinctions between types of benign and malignant lesions, biomarkers, treatment monitoring, and clinical integration. The longstanding promise of optoacoustic imaging is being brought to day-to-day use in the clinic, and we will discuss how this can bring about changes in the standard of care for breast imaging.

Biography Bryan Clingman is Chief Technology Officer and Vice President of Engineering at Seno Medical. He leads development of optoacoustic breast-imaging technology, bringing together system design, image processing, hardware, and software. His experience spans engineering development, clinical studies, and the regulatory work needed to bring an imaging platform into clinical use. At Seno, his work supports the Imagio system and translation of optoacoustic imaging into breast care.

Abstract supplied by speaker. Biography · Photo

SPEAKER ABSTRACTS AND BIOGRAPHIES

Shiqi Hu



Columbia University

11:55 AM–12:10 PM Central

Automated breast cancer tumor and thermal lesion formation segmentation and monitoring using Harmonic Motion Imaging

Shiqi Hu[1] and Elisa E. Konofagou[1,2,3]

[1] Biomedical Engineering, Columbia University; [2] Radiology and [3] Neurological Surgery, Columbia University Irving Medical Center

Abstract Focused ultrasound (FUS) offers a noninvasive, non-ionizing approach to treat breast cancer, yet accurately monitoring tissue response during ablation treatment remains challenging. In Harmonic Motion Imaging-guided Focused Ultrasound (HMIgFUS), we addressed this by leveraging amplitude-modulated acoustic radiation force to induce localized tissue oscillations, enabling simultaneous thermal ablation and displacement monitoring. As thermal ablation alters tissue mechanical properties, HMI can characterize treatment-induced tissue changes in real-time. We have demonstrated the clinical feasibility of HMIgFUS in a clinical trial (NCT05219695) involving sixteen patients at New York-Presbyterian Hospital. To improve the reliability and accuracy of FUS monitoring, we developed HMINet, a multimodality deep learning framework integrating HMI and B-mode ultrasound for breast tumor and clinical FUS lesion delineation. HMINet supports real time clinical lesion segmentation at 2Hz, and achieved a Dice similarity score of 0.8 in a clinical breast tumor dataset (N = 20). Furthermore, we investigated quantitative HMI biomarkers, including focal displacement, phase, attenuation, spatial tissue motion coherence, to finely characterize breast tissue viscoelastic changes. By combining multimodal segmentation with spatiotemporal HMI amplitude and phase analysis, this framework performs dynamic tracking of the treated region and provides complementary insights into the treatment-induced tissue changes during FUS ablation. Together, these advances establish a foundation for an integrated HMIgFUS platform combining image-guided therapy, quantitative tissue characterization, and real-time treatment assessment.

Biography Shiqi Hu is a biomedical engineering PhD student at Columbia University in Elisa Konofagou's Ultrasound Elasticity Imaging Laboratory. Her research combines harmonic motion imaging, deep learning, and focused ultrasound for breast tumor characterization and monitoring of thermal ablation. She began her doctoral studies in 2023 after earning a master's degree at Columbia. She previously studied physics at the University of Manchester and Beijing Normal University and is a recipient of Columbia's Mow Fellowship.

Abstract supplied by speaker. Biography · Photo

SPEAKER ABSTRACTS AND BIOGRAPHIES

J. Brandon Dixon



Georgia Institute of Technology

2:05–2:20 PM Central

Physics-Informed Quantification of Lymphatic Function Using Near-Infrared Imaging In Vivo

Abstract The lymphatic system plays a critical role in tissue fluid homeostasis, immune trafficking, and lipid transport, yet quantitative assessment of lymphatic function in vivo remains challenging. Near-infrared (NIR) fluorescence imaging provides a powerful means to visualize superficial lymphatic vessels and transport in real time, but extracting physiologically meaningful measures of lymphatic function from these images requires moving beyond qualitative visualization. In this talk, I will describe technologies we have developed that combine NIR lymphatic imaging with physics-informed computational approaches to quantify lymphatic transport and pumping in vivo. By integrating image-derived measurements with principles of fluid mechanics, mass transport, and lymphatic physiology, these methods enable quantitative characterization of parameters that correlate with stroke volume, contractile propagation speed, and pressure generation capacity. I will highlight how these approaches provide new tools for interrogating lymphatic physiology, identifying functional changes associated with lymphatic disease, and evaluating responses to therapeutic interventions. Ultimately, this work seeks to transform NIR lymphatic imaging from a primarily visualization-based technique into a quantitative platform for measuring lymphatic function in vivo.

Biography J. Brandon Dixon is a professor at the Georgia Institute of Technology whose research applies engineering methods to lymphatic biology and disease. He directs the Laboratory of Lymphatic Biology and Bioengineering, developing imaging, experimental, and computational approaches to measure lymphatic function. His group studies lymphatic pumping and transport and develops technologies for assessing disease and treatment response. He is also a co-founder of LymphaTech, which develops measurement tools for lymphedema care.

Abstract supplied by speaker. Biography · Photo

SPEAKER ABSTRACTS AND BIOGRAPHIES

Robert “Carson” Sibley



UT Southwestern Medical Center

2:20–2:35 PM Central

Developing a Lymphatic Imaging Program: Navigating Challenges and Realizing Successes

Abstract Lymphatic imaging is increasingly central to the diagnosis and treatment of lymphatic disorders, yet establishing a sustainable clinical service line remains challenging. This talk examines our experience building such a program with a focus on lymphoscintigraphy and magnetic resonance lymphangiography (MRL). We address three key barriers: limited resources, the need for optimized lymphatic-specific contrast agents, and communicating clinical value to institutional stakeholders. Representative patient cases illustrate how these modalities improve diagnostic accuracy and guide therapeutic intervention. We conclude with future opportunities and collaborative initiatives aimed at driving further innovation in the field.

Biography Robert “Carson” Sibley is an assistant professor of radiology at UT Southwestern Medical Center with expertise in nuclear medicine and lymphatic imaging. He completed radiology and nuclear medicine training at UT Southwestern and additional fellowship training at Stanford. His clinical and research work focuses on developing imaging approaches for lymphatic disorders and translating them into patient care, including magnetic resonance lymphangiography and lymphoscintigraphy.

Abstract supplied by speaker. Biography · Photo

Lei S. Li



Rice University

2:35–2:50 PM Central

Bringing Photoacoustic Tomography to Patients

Biography Lei Li is an assistant professor of Electrical and Computer Engineering and Bioengineering at Rice University. He earned his PhD in electrical engineering at the California Institute of Technology in 2019 and his MS at Washington University in St. Louis in 2016. His research develops medical imaging technologies for understanding brain function, diagnosing early-stage cancer, and wearable monitoring. His honors include the 2025 NSF CAREER Award, Caltech’s Charles and Ellen Wilts Prize, MIT Technology Review’s Innovators Under 35 recognition, and selection as a TED Fellow.

Biography and photo from speaker materials.

SPEAKER ABSTRACTS AND BIOGRAPHIES

Kimberley Steele



Advanced Research Projects Agency for Health

3:45–4:05 PM Central

From Invisible to Actionable: ARPA-H’s Vision for Lighting the Path from Lymphatic Imaging to Patient Impact

Abstract The lymphatic system plays a role in nearly every organ and in many major diseases, including cancer, heart failure, inflammatory bowel disease, obesity, aging, autoimmune and neurodegenerative disease. Yet it is still one of medicine's largest diagnostic blind spots. Lymphatic vessels are tiny, translucent and slow-flowing. Diagnosis still relies mostly on non-standardized physical exams. The best imaging is expensive and hard to access, so patients with lymphatic disease are often misdiagnosed or never diagnosed. ARPA-H's LIGHT (Lymphatic Imaging, Genomics, and pHenotyping Technologies) program is investing up to $135.7M over five years to change that. Its goal is a scalable, accessible, and accurate diagnostic toolkit that combines imaging, biomarkers, and genetics. This talk will cover three things: the unmet clinical needs LIGHT prioritizes, what meaningful success looks like for patients and families, and the evidence, standards and partnerships (clinical, industry, regulatory and payer) needed to move these technologies from the lab into routine care. LIGHT's Discovery Duo model pairs early-career investigators with patient and caregiver ambassadors, and the talk will show how that keeps lived experience at the center of development. It will also set up the patient perspectives and regulatory discussion that follow.

Biography Kimberley Steele is a Program Manager in ARPA-H’s Health Science Futures Mission Office. A surgeon-scientist, she previously served on the surgery faculty at Johns Hopkins University and has more than 14 years of surgical experience. Her research has explored obesity, bariatric surgery, and relationships between the gut and brain using neuroimaging and other methods. At ARPA-H, she leads efforts to advance the diagnosis and treatment of lymphatic disease through the LIGHT program.

Abstract supplied by speaker. Biography · Photo

SPEAKER ABSTRACTS AND BIOGRAPHIES

Heather Ferguson



Lymphedema Advocacy Group

4:05–4:20 PM Central

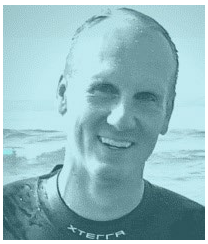
The Power and Importance of the Patient Voice

Abstract Ms. Ferguson will share the difficulty in getting a diagnosis for her son Dylan, who was born with unexplained swelling that progressively worsened, and how the subsequent challenges with insurance coverage for his treatment supplies led her to found the Lymphedema Advocacy Group. She will discuss her successful efforts to pass lymphedema-related legislation at the state and federal levels, and how the patient voice has played a pivotal role in improving coverage for millions of Americans with lymphedema.

Biography Heather Ferguson founded the Lymphedema Advocacy Group in 2010 and serves as its executive director. Her advocacy began after her son's diagnosis and difficulties obtaining insurance coverage for treatment supplies. She helped secure state legislation in North Carolina and led the national campaign for the Lymphedema Treatment Act. Her work centers on access to care, insurance coverage, and incorporating patient and caregiver perspectives into decisions about lymphedema treatment.

Abstract supplied by speaker. Biography · Photo

Casey Sapp



Technology entrepreneur

4:20–4:30 PM Central

Biography Casey Sapp is a technology entrepreneur whose work has included underwater imaging, immersive media, and remotely operated systems. He founded VRTUL and Blue Ring Imaging and has developed camera and visualization systems for applications spanning cinema, science, and teleoperation. His experience brings an industry perspective on developing imaging tools and translating technical concepts into usable products.

Biography · Photo · Company background

SPEAKER ABSTRACTS AND BIOGRAPHIES

Pabel Miah



Baylor College of Medicine

4:30–4:45 PM Central

Surgical Techniques for Lymphedema Prevention in Patients with Locally Advanced Breast Cancer

Abstract Axillary lymph node dissection (ALND) remains an important component of locoregional management for selected patients with locally advanced breast cancer. However, disruption of upper extremity lymphatic channels during axillary surgery, particularly when combined with radiation therapy, places patients at risk for breast cancer-related lymphedema. Traditional preventive strategies including compression therapy and manual lymphatic drainage focus on managing lymphedema, but do not directly restore the surgically disrupted lymphatic pathways. Immediate lymphatic reconstruction, also known as prophylactic lymphatic-venous bypass, is an innovative microsurgical technique performed at the time of ALND. By identifying transected lymphatic channels through axillary reverse mapping, immediate lymphatic reconstruction establishes pathways for lymphatic drainage and may reduce the incidence of postoperative lymphedema.

Biography Pabel Miah, DO, FACS, is an assistant professor of surgery at Baylor College of Medicine and a breast surgical oncologist. His clinical interests include oncoplastic breast surgery, lymphatic mapping and preservation, and techniques to reduce breast cancer-related lymphedema. He completed medical school at the Edward Via College of Osteopathic Medicine, surgical residency at Garnet Health, and breast surgical oncology fellowship training at New York University.

Abstract supplied by speaker. Biography · Photo

Carrie Shawber



Columbia University

4:45–5:00 PM Central

Bed to Bench Approach to Understand Primary Lymphatic Anomaly Pathogenesis and Therapeutic Response

Abstract Genomic studies of primary lymphatic anomalies have greatly improved the diagnosis and treatment of primary lymphatic anomalies. However, there have been challenges in understanding genotype/phenotype correlations and genotype/therapeutic responses due to current standard of care imaging limitations. The goal of the presentation is to provide an overview and real examples on how using a patient centric approach can begin to address these challenges.

Biography Carrie Shawber is an associate professor of reproductive sciences in obstetrics and gynecology and surgery at Columbia University. Her research examines vascular and lymphatic development and the molecular mechanisms of lymphatic anomalies. She combines patient-derived observations, genetic analysis, and experimental models to study disease biology and therapeutic response. She earned her undergraduate and doctoral degrees at UCLA and completed postdoctoral training at Cornell and Columbia.

Abstract supplied by speaker. Biography · Photo

LEADERSHIP PANELISTS AND SESSION CHAIRS

Eugene “Gene” Civillico



ARPA-H Health Science Futures Mission Office

Opening remarks and both afternoon panels

Gene Civillico directs ARPA-H’s Health Science Futures Mission Office. Before joining ARPA-H, he worked at the FDA’s Center for Devices and Radiological Health on regulatory science and the review of neuromodulation technologies. He earned a doctorate in neuroscience at the University of Pennsylvania and completed postdoctoral research at Princeton University on optical approaches to studying neural activity.

Biography · Photo

Luay Nakhleh



Rice University

Opening remarks and leadership panel

Luay Nakhleh is the William and Stephanie Sick Dean of Rice University’s George R. Brown School of Engineering and Computing and a professor of computer science and biosciences. His research develops computational approaches to evolutionary biology. He earned his PhD in computer science at the University of Texas at Austin and became dean in 2021.

Biography · Photo

Kristen Doyle



Cancer Prevention and Research Institute of Texas

Leadership panel

Kristen Doyle has served as CPRIT’s Chief Executive Officer since July 2024. She joined the agency in 2009 and previously served as deputy executive officer and general counsel. Her work has shaped the agency’s legal, policy, and regulatory framework for supporting cancer research and prevention. She holds a law degree and a master’s in technology commercialization from the University of Texas at Austin.

Biography · Photo

LEADERSHIP PANELISTS AND SESSION CHAIRS

Daniela Matei



Houston Methodist

Leadership panel

Daniela Matei is the director of Houston Methodist's Neal Cancer Center and a medical oncologist whose clinical and research work focuses on ovarian cancer. She combines laboratory investigation with clinical translation to develop new therapeutic approaches. Before joining Houston Methodist, she held leadership roles at Northwestern University, including chief of reproductive science in medicine.

Biography · Photo

Thomas A. Blackwell



University of Texas Medical Branch

Leadership panel

Thomas A. Blackwell, MD, FACP, is Vice Dean of Graduate Medical Education and Clinical Affairs, Professor of General Internal Medicine, and Designated Institutional Official at UTMB. He oversees graduate medical education and has extensive experience in residency training and clinical leadership. He previously directed UTMB's internal medicine residency program for 19 years.

Biography and photo: UTMB faculty profile

Ashutosh "Ashu" Sabharwal



Rice University

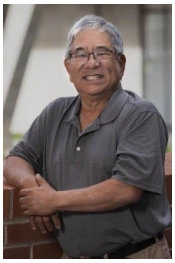
Leadership panel moderator

Ashutosh Sabharwal is Rice's Ernest D. Butcher Professor of Engineering, with appointments in electrical and computer engineering and computer science. He directs the Rice Digital Health Initiative and co-directs the Houston Methodist–Rice Digital Health Institute. His research spans wireless systems, biomedical sensing, and data science. He co-founded Cognita Labs and is a Fellow of IEEE, ACM, and the National Academy of Inventors.

Biography · Photo

LEADERSHIP PANELISTS AND SESSION CHAIRS

Terry Matsunaga



University of Arizona

Commercialization and regulatory panel

Terry Matsunaga is a professor of medical imaging and an adjunct professor of biomedical engineering at the University of Arizona. His research develops ultrasound contrast agents and methods for targeted delivery of drugs and genes. He was a primary developer of the Definity ultrasound contrast agent and is a Fellow of the National Academy of Inventors.

Biography · Photo

Han Xiao



Rice University

Chair of ARPA-H LIGHT Session 1

Han Xiao is a professor of chemistry, biosciences, and bioengineering at Rice and directs the SynthX Center. A CPRIT Scholar in Cancer Research, he develops chemical biology and bioengineering approaches for imaging and treatment. He trained at the University of Science and Technology of China, Scripps Research, and Stanford. His work includes molecular imaging and a multi-institutional ARPA-H effort focused on lymphatic diagnostics.

Biography · Photo

Ionela Iacobas



Baylor College of Medicine and Texas Children’s Hospital

Chair of ARPA-H LIGHT Session 2

Ionela Iacobas is the medical director of the Vascular Anomalies Center at Texas Children’s Hospital and a faculty member at Baylor College of Medicine. Her clinical and research work addresses complex vascular and lymphatic anomalies in children. She contributes to multidisciplinary approaches for diagnosis and management and leads patient participation in lymphatic imaging research supported by ARPA-H’s LIGHT program.

Biography · Photo

Biographies are abbreviated from speaker materials or the linked public profiles. Abstracts are reproduced from conference correspondence with minor typographical corrections. Original sources checked November 5, 2026; Thomas Blackwell’s profile updated November 9, 2026.