27th NIH Tissue Chip Consortium Meeting + CIVM Qualification Framework Public Workshop Recap

C-Path's Predictive Safety Testing team presented this workshop at the 27th National Institute of Health (NIH) Tissue Chip Consortium Joint Meeting. The Complex In Vitro Model Workshop was held on March 5-6, 2026 at the National Cancer Institute in Rockville, Md. Over the past 13 years, the NIH has brought together members of the NIH Tissue Chip Consortium, including funded academic investigators, members of the pharmaceutical industry, and government agencies to accelerate the use, adoption, and ultimately dissemination of tissue chip technology across the United States.

This year, NIH has partnered with C-Path's Predictive Safety Testing Consortium, a recognized global leader in drug development, to put together a joint meeting at no registration cost focused on accelerating the employment of tissue chips within the drug development pipeline. Day 1 focused on Contexts of Use for Today and Tomorrow and Evidentiary Considerations for MPS, while Day 2 focused on Integration of In-Silico NAMs, including tissue chips.

27th NIH Tissue Chip Consortium Meeting + CIVM Qualification Framework Public Workshop: Day 1 March 5, 2026			
Topic	**Summary**	**Speakers**	**Links**
Welcome	Opening Remarks and Introductions	Nicholas King & Joni Rutter (NCATS Director)	Video Recording
TraCE-MPS-ISTAND and BoT Patch Program	The NIH Tissue Chip for Drug Screening Program	Passley Hargrove-Grimes (NIH/NCATS)	Slides Video Recording
	A Translational Center for Microphysiological Systems-Based Drug Development Tools for Pregnancy and Women's Health	Ivan Rusyn (Texas A&M University)	Slides Video Recording
	Liver Acinus Microphysiological System (LAMPS) for Determining Drug Candidate Dosing in Clinical Trials of Liver Disease	Mark Schurdak (U. Pittsburgh)	Slides Video Recording
	Updates on TraCe-bMPS LOIs for Juvenile Dermatomyositis and Neurotoxicity from T-cell Engaging Immunotherapies	James McGrath (U. Rochester)	Slides Video Recording

Update on LOI for the Human Kidney Chip for Assessment of Relative Nephrotoxicity	Johnathan Himmelfarb (Icahn School of Medicine at Mount Sinai)		
High-Throughput NMJ Assay for Botox Potency Screening	Nicholas Geisse (Curi Bio)	Slides Video Recording	
Human Neuromuscular Junction Platform to Evaluate Botulinum Toxin Potency	James Hickman (Hesperos)	Slides Video Recording	
Panel Discussion	Session Speakers + Nakissa Sadrieh (FDA/CDER) + Marc Ferrer (NIH/NCATS)	Video Recording	
Tissue Chips in Space 2.0	Welcome to the New Tissue Chips in Space 2.0 Cohort	Dmitriy Krepkiy (NIH/NCATS)	Slides Video Recording
	Introduction to the Tissue Chips in Space 2.0 Program on the International Space Station	Mike Roberts (ISS National Lab)	Slides Video Recording
	Assessing Effects of Microgravity on Cardiovascular Aging with AI and 3D Organoids	Joseph Wu (Stanford)	Slides Video Recording
	Brain-muscle microphysiological system enabled extracellular vesicle network for understanding aging in space	Mei He (U. Florida)	Video Recording
	Impact of Aging in Space on Neurodegenerative diseases	Krishna Bhat (U. Alabama at Birmingham)	
	Induced Pluripotent Stem Cell Derived Organ-Chips for In-Space Modeling of Human Physiology	Arun Sharma (Cedars-Sinai)	Video Recording
	An Organ-on-Chip Approach to Evaluation of Reproductive Health, Aging and Disease in Women	Dylan Gordon (CFD Research)	Slides Video Recording
	An Aging Alveolar Lung Model in Microgravity	Shrike Zhang (Harvard Medical School)	Slides Video Recording

Lunch Break			
Evidentiary Considerations	Industrializing Organ-on-a-Chip Technology: Considerations for designing High-Throughput	Kim Homan (Genentech, Virtual Presentation)	
	Evolution of Organ-on-a-Chip Technology: A Developer's Journey	Lorna Ewart (Emulate)	Slides Video Recording
	Translating NAM Innovation into Regulatory Practice: FDA Progress and Collaborative Opportunities	Ksenia Blinova (FDA/CDER)	Slides Video Recording
	Building Cross-Sector Consensus on the Credibility of Complex In Vitro Models	Courtney Sakolish (Texas A&M)	Slides Video Recording
Break			
Breakout Session Recaps	Dose Translation Breakout Session Recap	Sri Kidambi/Deidre Dalmas	Slides Video Recording
	Immune Component Breakout Session Recap	Rebecca Pompano	Slides Video Recording
	Disease Modeling Breakout Session Recap	Ramona Belfiore-Oshan/Tina Morrison	Slides Video Recording
Closing	Day 1 Summary	Nicholas King (C-Path)	

27th NIH Tissue Chip Consortium Meeting + CIVM Qualification Framework Public Workshop: Day 2
March 6, 2026

Topic	Summary	Speakers	Links
Keynotes	NAMs Regulatory Needs in Japan	Seiichi Ishida (NIHS)	Slides Video Recording
	The National Center to Accelerate Cures: A Joint Initiative between Blackbird Laboratories and Critical Path Institute	Matt Tremblay (Blackbird Labs)	Slides Video Recording
Integration of in silico NAMs	Disruptive Technologies: MPS & AI	Thomas Hartung (Johns Hopkins)	Slides Video Recording
	Regulatory Considerations for Use of New Approach Methodologies (NAMs) for Cardiovascular Drug Products	Jordan Pomeroy (FDA/CDER, Virtual Presentation)	Slides Video Recording

From Animal to Algorithm: in Silico NAMs at FDA/NCTR	Weida Tong (FDA/NCTR, Virtual Presentation)	Slides Video Recording	
Integration of AI with biology for drug safety prediction	Amir Bein (Quris AI)		
Panel Discussion	Session Chairs + Matt Tremblay (Blackbird Labs)	Video Recording	
Break			
Breakout Session Recaps	Summary of Breakout Sessions	Combinatorial NAM Breakout Session Recap	Slides Video Recording
	Data Harmonization Breakout Session Recap	Mark Schurdak/Klaus Romero/Jack Collins	Slides Video Recording
	Model Scalability Breakout Session Recap	Madhu Nag/Julie Frearson	Slides Video Recording
Public Workshop Closing	NIH Summary Perspective of the Workshop	Christine Happel (NIH/NCATS)	Video Recording
	FDA Summary Perspective of the Workshop	Ksenia Blinova (FDA/CDER)	Video Recording
	C-Path Summary of Conference	Klaus Romero (C-Path)	Video Recording