Tucson 2026 Myofilament Meeting

What's Hot in Myofilament Structure, Elasticity, and Regulatory Networks in Muscle Function and Disease

When: May 23-26, 2026

Where: Harvill Auditorium, University of Arizona Campus, Tucson

Hotel: Tucson Marriott University Park

Organizing committee: Elisabetta Brunello, Brandon Biesiadecki, Tony Cammarato, Brett Colson (local committee representative), Henk Granzier (Chair), Johnathan Kirk, Katia Kontrogianni-Kanstantopolous, Mike Regnier, Jolanda van der Velden, Dave Warshaw.

ECI Committee: Kathleen Woulfe and David Barefield. (2028 ECI organizers, Matt Childers and Alison Vander Roest). ECI committee will organize the ECI symposium on Saturday May 23.

Local Committee: Brett Colson (chair), Sam Harris, Jil Tardiff, Carter Ralphe (former chair of UW/Madison committee), Sakthi Sadayappan, Tae-Jeong Song.

Conference Coordinator: Becca Van Sickler Email: beccav@arizona.edu
Scientific Program: Henk Granzier Email granzier@arizona.edu

The meeting consists of:

- ECI Symposium
- Six oral sessions. Talks will be 20 minutes (includes discussion).
- Five plenary lectures, 30 minutes each.
- Two days of poster sessions.
- A closing session that includes ECIs awards, and a discussion on the present and future of the field.
- Workshops

Schedule Overview

Saturday May 23	**Sunday May 24**	**Monday May 25**	**Tuesday May 26**

• ECI Symposium
  ○ 18 talks (10 min) selected from abstracts
  ○ Senior PI Plenary Presentation: Jil Tardiff, MD, PhD
• Welcome Reception
	• Oral session I
	• Plenary lecture I
	• Oral session II
	• Plenary lecture II
	• Poster session I
	• Networking event at Gentle Ben's Brewpub
		• Oral session III
		• Oral session IV
		• Plenary lecture III
		• Oral session V
		• Plenary lecture IV
		• Poster session 2
		• Conference dinner at Tanque Verde Ranch
			• Oral session VI
			• Plenary lecture V
			• Closing session
			  ○ Awards
			  ○ Present and future of the field
			  ○ Closing remarks
			• Optional Workshops

Myofilament Meeting Schedule

Saturday, May 23, 2026

9:30 am – 5:00 pm *Health Sciences Innovation Building Forum*	**Early Career Investigator Symposium** • 18 talks (10 min) selected from abstracts • Senior PI Plenary Presentation: Jil Tardiff, University of Arizona *Additional details provided later (check back in)*
6:00 pm – 8:00 pm *Tucson Marriott University Park Terrace*	**Welcome Reception**

Sunday, May 24, 2026

7:30 am – 8:00 am *Harvill Patio*	**Coffee Conversational** (Optional) (light refreshments)
8:00 am – 8:10 am *Harvill Auditorium*	**Welcome**
8:15 am – 10:00 am *Harvill Auditorium*	**Oral Session I - High resolution filament structure** *Moderator: Pradeep Luther/ECI (selected from ECI abstracts)* • **Roberto Dominguez** (University of Pennsylvania): *Thin filament length regulation: a structural-functional perspective* (20 min) • **Kristina Djinović-Carugo** (EMBL Grenoble): O*rder from disorder: towards the molecular architecture of the Sarcomeric Z-disc* (20 min) • **Vitold Galkin** (East Virginia University): *Allosteric coupling within the thin filament: a mechanism for adaptive activation during cardiac contraction* (20 min) • **Marco Linari** (University of Florence): *Dual filament regulation of cardiac contraction* (20 min) • **Steven Schwarz** (University of Arizona): *How mutations transmit their effects across 100's of angstroms and across multiple proteins through allostery in the sarcomere* (15 min) • **Olga Karpicheva** (Boston University): *Quantifying the structural basis of thin filament cooperativity: the effect of single myosin-heads on the position of tropomyosin on actin* (10 min)

10:00 am – 10:30 am *Harvill Patio*	**Coffee Break** (light refreshments)
10:30 am – 11:00 am *Harvill Auditorium*	**Plenary Lecture I** **Stefan Raunser** (Max Planck, Dortmund): *What can we learn from the structure of myofilaments?*
11:10 am – 12:50 pm *Tucson Marriott University Park Ballroom*	**Lunch** **Poster Session I**
1:00 pm – 2:40 pm *Harvill Auditorium*	**Oral Session II – Regulation of contraction** *Moderator: Tom Irving/ECI (selected from ECI abstracts)* • **Kenneth Campbell** (University of Kentucky): *Regulation of diastolic function in human hearts* (20 min) • **Theresia Kraft** (Hannover Medical School): *Myosin and troponin in thin filament activation and hypertrophic cardiomyopathy* (20 min) • **E Michael Ostap** (University of Pennsylvania): *Mutation-driven mechanochemical changes in β-cardiac myosin* (20 min) • **Chiara Tesi** (University of Florence): *Probing myosin states by myosin motor modulators and SHG microscopy* (20 min) • **Sakthivel Sadayappan** (University of Arizona): *Defining Novel Roles of Linker and Loop Regions of cMyBP-C in Cardiac Function In Vivo* (15 min) • **Shane Nelson** (University of Vermont): *Seeing is believing at the single molecule level: Are myosin's IHM and SRX states inextricably linked?* (10 min)
2:45 pm – 3:15 pm *Harvill Auditorium*	**Plenary Lecture II** **James Spudich** (Stanford University): *Myosin: an exquisite nanomachine and the power of basic research in drug discovery*
3:30 pm – 6:00 pm *Tucson Marriott University Park Ballroom*	**Poster Session II** (light refreshments)
6:00 pm – 8:00 pm Gentle Ben's Brewery	**Networking Event** (heavy appetizers)

Monday, May 25, 2026

7:30 am – 8:00 am *Harvill Patio*	**Coffee Conversational** (Optional) (light refreshments)
8:00 am – 9:30 am *Harvill Auditorium*	**Oral Session III – Smooth muscles and non-muscle myosins!** *Moderators: Samantha Harris and Frank Brozovich* • Introduction by **Samantha Harris** (University of Arizona) (5 min) • **Marion Siegman** (Thomas Jefferson University): *The economy of force maintenance in smooth muscle: lessons learned from a mussel muscle* (20 min) • **Jordan Beach** (Loyola University): *Optogenetic control of myosin 2 in cells* (20 min) • **Sarah Heissler** (Ohio State University): *Structure and regulation of nonmuscle myosins* (20 min) • **Jim Sellers** (NHLBI): *Nonmuscle myosin 2 filaments: short, slow and stubborn…kind of like me* (20 min)
9:30 am – 10:00 am *Harvill Patio*	**Coffee Break** (light refreshments)
10:00 am – 11:20 am *Harvill Auditorium*	**Oral Session IV – PTMs associated with myofilament structure and function** *Moderator: (TBA)/ECI (selected from ECI abstracts)* • **Michael Previs** (University of Vermont): *Mechanisms of myosin incorporation in cardiac muscle* (20 mins) • **Joseph Metzger** (University of Minnesota): *Primed state of sarcomere activation establishes mechanism of force summation in skeletal muscle* (20 mins) • **Mark Miller** (University of Massachusetts, Amherst): *Distinct skeletal muscle fiber-type contractile responses to regulatory light chain phosphorylation and fatigue at 37°C in older adults* (20 mins) • **Sıla Algül** (University of Amsterdam): *Phosphoproteomics of hypertrophic cardiomyopathy patient myocardium and novel hiPSC-CM model reveal protein kinase A as a modulator of microtubule repolymerization* (20 mins)
11:30 am – 12:00 pm *Harvill Auditorium*	**Plenary Lecture III** **Jennifer Van Eyk** (Cedars-Sinai Medical Center): New tools to quantify the impact of Sarcomeric mutations on myofilament structure and the cellular proteome
12:15 pm – 2:05 pm *Tucson Marriott University Park Ballroom*	**Lunch** **Poster Session II**

2:15 pm – 3:55 pm *Harvill Auditorium*	**Oral Session V – Mechanosensing** *Moderator: Siegfried Labeit/ECI (selected from ECI abstracts)* • **Jie Yan** (National University of Singapore): *Force-Activated Binding in Titin: Hidden Structural Switches in the N2B-us and N2A Regions* (20 mins) • **Jose Pinto** (Florida State University): *From sarcomere to nucleus: how TNNT2 variants remodel nucleus mechanics in cardiomyocytes* (20 mins) • **Wolfgang Linke** (University of Münster): *Titin springs as orchestrators of cardiac structure and function: lessons from an in vivo cleavage model* (20 mins) • **Elisabetta Brunello** (King's College, London): *Molecular basis of length-dependent activation in cardiac muscle* (20 mins) • **Jorge Alegre-Cebollada** (CINIC/Spain): *Studying mechanosensing by cleaving proteins: the example of titin* (20 mins)
4:00 pm 4:30 pm *Harvill Auditorium*	**Plenary Lecture IV** **David Kass** (Johns Hopkins University): *What happens to the sarcomere when severe obesity collides with heart failure?*
4:40 pm – 6:00 pm *Tucson Marriott University Park Ballroom*	**Poster Session II** (light refreshments)
6:00 pm – 6:10 pm Marriott Entrance	**Board bus to conference dinner – bus leaves at 6:15 pm**
7:00 pm – 8:30 pm *Tanque Verde Guest Ranch*	**Cowboy Cookout** (conference dinner)
8:30 pm – 8:45 pm *Tanque Verde Guest Ranch Entrance*	**Board bus to return to Marriott – bus leaves at 9:00 pm**

Tuesday, May 26, 2026

7:30 am – 8:00 am *Harvill Patio*	**Coffee Conversational** (Optional) (light refreshments)

8:00 am – 10:40 am *Harvill Auditorium*	**Oral Session VI – Myofilament-based diseases** *Moderator: Coen Ottenheijm/ECI (selected from ECI abstracts)* • **Vandana Gupta** (Harvard University): *Restoring muscle growth in nemaline myopathy: from sarcomere defects to therapeutic strategies* (20 mins) • **Mathias Gautel** (King's College, London): *Title TBD* (20 mins) • **David Mack** (University of Washington): *Using 3D engineered cardiac & skeletal muscle tissues for DMD disease modeling & drug discovery* (20 mins) • **Josine de Winter** (University of Amsterdam/Netherlands): *Improving energetics in NEM6, a hypercontractile myopathy* (20 mins) **9:20 am – 9:40 am** - Coffee Break on Harvill Patio • **J Travis Hinson** (The Jackson Laboratory in Farmington): *Precision genome editing of the cardiac myofilament* (20 mins) • **Sharlene Day** (University of Pennsylvania): *The therapeutic landscape of inherited cardiomyopathies* (20 mins) • **Hesham Sadek** (University of Arizona) *Structure and Phenotypic Correction of K210del Dilated Cardiomyopathy* (20 mins)
10:40 am – 11:00 am *Harvill Patio*	**Coffee Break** (light refreshments)
11:00 am – 11:30 am *Harvill Auditorium*	**Plenary Lecture V** **Alan Russell** (Edgewise Therapeutics): *Drug development strategies targeting myofilaments*
11:30 am – 12:50 pm *Harvill Auditorium*	**Closing Session** *Moderators: Kathleen Wolfe and David Barefield* • Poster awards and ECI awards (15 mins) • Present and future of the field (60 mins) • Closing remarks (5 min)
1:00 pm – 2:00 pm *Tucson Marriott University Park Ballroom*	**Lunch**
2:30 pm – 4:30 pm *Medical Research Building*	**Workshops** (Optional) • Mouse echocardiography (Carl Tong and Marloes van Den Berg) • Ionoptix workshop (cardiac slicer/ MyoClamp System) • Aurora Single fiber Mechanics workshop *Additional details provided later (check back in)*

Discover Tucson

A UNESCO City of Gastronomy that offers a unique blend of stunning Sonoran Desert landscapes, rich cultural heritage, top research institutions, and diverse outdoor and culinary experiences. https://www.visittucson.org/ https://www.marriott.com/en-us/hotels/tusmp-tucson-marriott-university-park/experiences/discover-tucson/

On the University of Arizona Campus

Alfie Norville Gem & Mineral Museum: A world-class collection of gems and minerals. www.norvillegem.org

Steward Observatory: A global leader in astronomy and telescope instrumentation. www.as.arizona.edu

Center for Creative Photography: One of the world's first academic art museums and study centers for the history of photography. https://ccp.arizona.edu/about/about-ccp/

Within greater Tucson

Arizona-Sonora Desert Museum: Outdoor museum/zoo showcasing Sonoran Desert life. www.desertmuseum.org

Sabino Canyon: Desert canyon with hiking and tram rides. https://sabinocanyonhikerun.com/

Saguaro National Park: Iconic saguaro cactus landscapes. www.nps.gov/sagu

Catalina State Park: Excellent hiking and wildlife viewing at the base of the mountains. https://azstateparks.com/catalina

Pima Air & Space Museum: Over 400 aircraft including historic planes. www.pimaair.org

4th Avenue & Downtown Tucson: Restaurants, shops, and nightlife.

UNESCO City of Gastronomy: Rich culinary heritage blending multiple traditions. https://www.visittucson.org/eat-drink/city-of-gastronomy/

Outside Tucson (easy Day Trips)

Kartchner Caverns: Spectacular cave system. https://azstateparks.com/Kartchner

Titan Missile Museum: Cold War missile silo tours. www.titanmissilemuseum.org

Mount Lemmon: Scenic drive to alpine forest. https://www.visittucson.org/things-to-do/outdoors/mountains/mount-lemmon/

San Xavier del Bac Mission: Historic 18th-century mission. www.sanxaviermission.org

Tubac: Historic arts village with galleries. https://www.tubacaz.com/

Kitt Peak National Observatory: Premier observatory with tours and night programs. https://kpno.noirlab.edu/

Biosphere 2: The world's largest earth science experiment. Explore a 3.14-acre living laboratory where cutting-edge research unfolds across diverse ecosystems--including a rainforest, ocean, mangrove, desert, and the Landscape Evolution Laboratory. http://biosphere2.org/