

# 2018 MYOFILAMENT MEETING



## Elastic Domains in Proteins of the Sarcomere: Stressors, Regulators or Rulers?

May 19 - 23, 2018

### SATURDAY – MAY 19, 2018

9:00 am – 1:00 pm	Conference Registration	Monona Convention Center, Counter 4
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### Early Career Investigator Symposium

11:00 am – 6:00 pm

Monona Convention Center, Meeting Rooms K,L,O & P

*Symposium Organizers:*

**Brett Colson**  
University of Arizona

**Bertrand Tanner**  
Washington State University

**Anthony Cammarato**  
Johns Hopkins University

**Brandon Biesiadecki**  
The Ohio State University

11:00 am	Welcome
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**Trainee Group 1: Cardiomyopathies and Heart Failure** -- 11:05 am – 12:30 pm  
(8 talks; presenters will speak for 8 minutes each with a 2 minute Q&A)

11:05	<b>Aditi Madan</b> , Johns Hopkins University
11:15	<b>Genaro Ramirez-Correa</b> , Johns Hopkins University
11:25	<b>Melissa Lynn</b> , University of Arizona
11:35	<b>Sunil Yadav</b> , University of Miami
11:45	<b>Lorenzo Sewanan</b> , Yale University
11:55 – 12:00	5 minute Break
12:00	<b>Wei Guo</b> , University of Wyoming
12:10	<b>D. Brian Foster</b> , Johns Hopkins University
12:20	<b>Maria Papadaki</b> , Loyola University Chicago
12:30 – 1:30 pm	<b>Lunch (Ballroom C)</b> – Gourmet Deli Buffet

1:30 – 2:15 pm	Senior PI Presentation: <b>Michael Geeves</b> , University of Kent “Lessons Learnt From a Life with Actin and Myosin”	
2:15 – 2:25 pm	10 minute Break	
2:25 – 3:00 pm	Senior PI and Junior PI Q&A Career Advice Session <b>Michael Geeves</b> , Professor, University of Kent <b>Samantha Harris</b> , Associate Professor, University of Arizona <b>Stuart Campbell</b> , Associate Professor, Yale University <b>Suman Nag</b> , Lead Scientist II, MyoKardia Inc.	
3:00 – 3:15 pm	15 minute Break (snacks available)	
<b>Trainee Group 2: Regulatory Proteins</b> -- 3:15 – 4:05 pm (5 talks; presenters will speak for 8 minutes each with a 2 minute Q&A)		
3:15	<b>Peter Hwang</b> , University of Alberta	
3:25	<b>Elizabeth Brundage</b> , The Ohio State University	
3:35	<b>Anthony Baldo</b> , University of Arizona	
3:45	<b>Steffen Lindert</b> , The Ohio State University	
3:55	<b>Peter Kekenos-Huskey</b> , University of Kentucky	
4:05 – 4:15 pm	10 minute Break	
<b>Trainee Group 3: Regulatory Proteins</b> -- 4:15 – 5:30 pm (7 talks; presenters will speak for 8 minutes each with a 2 minute Q&A)		
4:15	<b>Brett Colson</b> , University of Arizona	
4:25	<b>Darshan Trivedi</b> , Stanford University	
4:35	<b>Bert Tanner</b> , Washington State University	
4:45	<b>Brianna Schick</b> , Wayne State University	
4:55 – 5:00	5 minute Break	
5:00	<b>Frank Li</b> , University of Arizona	
5:10	<b>Kathleen Woulfe</b> , University of Colorado-Denver	
5:20	<b>Zachery Gregorich</b> , University of Wisconsin-Madison	
5:00 – 6:30 pm	Conference Registration	Monona Convention Center, Counter 4
6:30 – 8:00 pm	<b>Welcome Reception</b>	Monona Convention Center Rooms M,N,Q & R
8:00 – 8:30 pm	<b>Poster set up for Sunday Poster Session</b>	Rooms K – R

# SUNDAY, May 20, 2018

7:30 – 8:30 am	Conference Registration Continental Breakfast	Counter 4 Community Terrace
<b>Welcome</b>  8:45 am – 9:15 am Monona Convention Center Lecture Hall		
<b>Plenary Lecture</b>  <b>Malcolm Irving</b> King's College London <i>Regulation of contraction by the thick filaments in skeletal muscle and in the heart</i>  9:15 am – 10:00 am Monona Convention Center Lecture Hall		
<b><u>Oral Session I</u></b>  <b>Regulation by Accessory Proteins</b>  10:00 am – 12:30 pm Monona Convention Center, Lecture Hall  <b>J.-P. Jin</b> Wayne State University Moderator		
10:00 – 10:25 am (20 min presentation, 5 min Q&A)  10:30 – 10:55 am (20 min presentation, 5 min Q&A)  11:00 – 11:25 am (20 min presentation, 5 min Q&A)  11:30 – 11:55 am (20 min presentation, 5 min Q&A)  12:00 – 12:25 am	<b>Martina Krüger</b> Heinrich-Heine University Düsseldorf <i>Rapid and temporary modification of titin properties after myocardial ischemia/reperfusion</i>  <b>Richard Schulz</b> University of Alberta <i>Actions of matrix metalloproteinase-2 in targeting titin in oxidative-stress associated cardiomyopathies</i>  <b>J.-P. Jin</b> Wayne State University <i>Sensitive adaptation of Z disk proteins to diastolic dysfunction of the heart</i>  <b>Carl W. Tong</b> Texas A&M University <i>Cardiac myosin binding protein-C modulation of immune system: Diastolic dysfunction occurs independent of fibrosis</i>	

(20 min presentation, 5 min Q&A)	<p><b>Charles S. Chung</b> Wayne State University <i>Usual and unusual proteins that contribute to (visco)elasticity and their physiologic implications</i></p>	
12:30 – 1:30 pm	Lunch – Bucky’s Tailgate Buffet	Monona Convention Center Community Terrace
1:30 – 4:30 pm	<p><b>Sunday Poster Session</b></p> <ul style="list-style-type: none"> <li>❖ Length Dependent Force Development</li> <li>❖ Models of Contraction/Regulation</li> <li>❖ Thick/Thin Filament Regulation in Striated Muscle</li> <li>❖ Thick/Thin Filament Structure</li> </ul>	Monona Convention Center Rooms K - R
4:30 – 5:30 pm	Poster Session Happy Hour	Rooms K - R
6:30 – 8:30 pm	<p>Dinner</p> <p><i>(No additional cost to attendees; reservation required through registration process)</i></p>	<p><b>Tripp Commons</b> UW Memorial Union 800 Langdon Street</p>

# MONDAY, May 21, 2018

7:30 am – 8:30 am	Continental Breakfast	Monona Convention Center Community Terrace
<p><b>Plenary Lecture</b></p> <p><b><i>Aikaterini Kontrogianni-Konstantopoulos</i></b> University of Maryland <i>Myosin Binding Protein-C Slow in Health and Disease</i></p> <p>8:30 am – 9:15 am Monona Convention Center, Lecture Hall</p>		
<p><b><u>Oral Session II</u></b></p> <p><b>Thin Filament Regulation</b></p> <p>9:15 am – 11:45 am Monona Convention Center, Lecture Hall</p> <p><b><i>Corrado Poggesi</i></b> University of Florence Moderator</p>		
9:15 – 9:40 am (20 min presentation, 5 min Q&A)	<p><b><i>Timothy McKinsey</i></b> University of Colorado Denver <i>Targeting myofibrillar protein acetylation to treat diastolic dysfunction</i></p> <p><b><i>Jil Tardiff</i></b> University of Arizona <i>Incorporating flexibility and dynamics as triggers for cardiomyopathic remodeling in HCM</i></p> <p><b><i>Chris Ward</i></b> University of Maryland <i>Microtubule mechanotransducers in the sarcomere</i></p> <p><b><i>Paul Janssen</i></b> The Ohio State University <i>Contraction-relaxation coupling in health and disease</i></p> <p><b><i>Corrado Poggesi</i></b> University of Florence <i>Thin filament proteins and HCM mutations: sarcomeric effects of the mutations versus adverse cardiomyocyte remodeling</i></p>	
9:45 – 10:10 am (20 min presentation, 5 min Q&A)		
10:15 – 10:40 am (20 min presentation, 5 min Q&A)		
10:45 – 11:10 am (20 min presentation, 5 min Q&A)		
11:15 – 11:40 am (20 min presentation, 5 min Q&A)		

12:00 – 1:00 pm	Lunch – Mediterranean Buffet	Monona Convention Center Community Terrace
11:45 – 12:15 pm	Poster take down from Sunday Poster Session	Rooms K – R
12:30 – 1:00 pm	Poster set up for Monday Poster Session	Rooms K – R

### **Oral Session III**

#### **Thick Filament Regulation**

1:00 pm – 3:30 pm

Monona Convention Center, Lecture Hall

***Samantha Harris***

University of Arizona  
Moderator

<p>1:00 – 1:25 pm (20 min presentation, 5 min Q&amp;A)</p> <p>1:30 – 1:55 pm (20 min presentation, 5 min Q&amp;A)</p> <p>2:00 – 2:25 pm (20 min presentation, 5 min Q&amp;A)</p> <p>2:30 – 2:55 pm (20 min presentation, 5 min Q&amp;A)</p> <p>3:00 – 3:25 pm (20 min presentation, 5 min Q&amp;A)</p>	<p><b><i>Wenji Dong</i></b> Washington State University <i>Length-dependent effects of titin-based tension on troponin regulation and crossbridge kinetics</i></p> <p><b><i>Christine Cremo</i></b> University of Nevada Reno <i>Skeletal, cardiac, and smooth muscle myosin filaments moving on actin</i></p> <p><b><i>Samantha Harris</i></b> University of Arizona <i>Spying on cMyBP-C: A cut and paste approach for replacement of cMyBP-C N'-terminal domains in sarcomeres in situ</i></p> <p><b><i>Danuta Szczesna-Cordary</i></b> University of Miami <i>Myosin light chains and their heavy roles</i></p> <p><b><i>James W. McNamara</i></b> University of Cincinnati <i>Cardiac myosin binding protein-C modulates the super-relaxed state</i></p>
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3:30 – 6:30 pm	<p><b>Monday Poster Session</b></p> <ul style="list-style-type: none"> <li>❖ Determinants of Relaxation</li> <li>❖ Cardiomyopathies</li> <li>❖ Elastic Proteins of Muscle</li> <li>❖ Regulation &amp; Regulatory Signaling Networks</li> <li>❖ Myofilament Contribution to Human Diseases</li> </ul>	Monona Convention Center Rooms K - R
6:30 – 7:30 pm	Poster Session Happy Hour	Rooms K - R
7:30 pm	Dinner on your own	

## TUESDAY, May 22, 2018

7:30 am – 8:30 am	Continental Breakfast	Monona Convention Center Community Terrace
<p style="text-align: center;"><b>Plenary Lecture</b></p> <p style="text-align: center;"><b><i>Kenneth Taylor</i></b> Florida State University</p> <p style="text-align: center;"><i>Is formation of the interacting heads motif coupled to the thick filament backbone structure?</i></p> <p style="text-align: center;">8:30 am – 9:15 am Monona Convention Center, Lecture Hall</p>		
<p style="text-align: center;"><b><u>Oral Session IV</u></b></p> <p style="text-align: center;"><b>Sarcomeric Proteins and their Effects</b></p> <p style="text-align: center;">9:15 am – 11:45 am Monona Convention Center, Lecture Hall</p> <p style="text-align: center;"><b><i>Carol Gregorio</i></b> University of Arizona Moderator</p>		
9:15 – 9:40 am (20 min presentation, 5 min Q&A)	<p style="text-align: center;"><b><i>Maegan Ackermann Borzok</i></b> The Ohio State University</p> <p style="text-align: center;"><i>Defining a novel mechanism of arrhythmogenic cardiomyopathy-linked variants of desmoplakin</i></p> <p style="text-align: center;"><b><i>Roberto Dominguez</i></b> University of Pennsylvania</p> <p style="text-align: center;"><i>What is going on at the pointed end of actin filaments in sarcomeres?</i></p> <p style="text-align: center;"><b><i>Balazs Kiss</i></b> University of Arizona</p> <p style="text-align: center;"><i>Experimentally varying the number of super-repeats in the NEB gene of the mouse: assessing the role of nebulin in thin filament length regulation</i></p> <p style="text-align: center;"><b><i>Thomas Iskratsch</i></b> King's College London</p> <p style="text-align: center;"><i>Cardiomyocytes sense matrix rigidity through a combination of muscle and non-muscle myosin contractions</i></p> <p style="text-align: center;"><b><i>Mert Colpan</i></b> University of Arizona</p> <p style="text-align: center;"><i>Regulation of actin dynamics at thin filament pointed ends in the heart</i></p>	
9:45 – 10:10 am (20 min presentation, 5 min Q&A)		
10:15 – 10:40 am (20 min presentation, 5 min Q&A)		
10:45 – 11:10 am (20 min presentation, 5 min Q&A)		
11:15 – 11:40 am (20 min presentation, 5 min Q&A)		



12:00 – 1:00 pm	Lunch – Heart of Italy Buffet	Monona Convention Center Community Terrace
11:45 – 1:30 pm	<b>Poster take down from Monday Poster Session</b>	Rooms K – R
<p><b><u>Oral Session V</u></b></p> <p><b>M-band Proteins</b></p> <p>1:30 pm – 4:00 pm</p> <p>Monona Convention Center, Lecture Hall</p> <p><b>Mathias Gautel</b> King's College London Moderator</p>		
<p>1:30 – 1:55 pm (20 min presentation, 5 min Q&amp;A)</p> <p>2:00 – 2:25 pm (20 min presentation, 5 min Q&amp;A)</p> <p>2:30 – 2:55 pm (20 min presentation, 5 min Q&amp;A)</p> <p>3:00 – 3:25 pm (20 min presentation, 5 min Q&amp;A)</p> <p>3:30 – 3:55 pm (20 min presentation, 5 min Q&amp;A)</p>	<p><b>Stephan Lange</b> University of California San Diego <i>Animal models of M-band protein interactions</i></p> <p><b>Guy Benian</b> Emory University <i>Nematode M-band proteins</i></p> <p><b>Matthias Wilmanns</b> European Molecular Biology Laboratory <i>Overall structure and evidence for molecular elasticity in the myomesin filament</i></p> <p><b>Roberto Steiner</b> King's College London <i>Structural biology of M-band protein complexes</i></p> <p><b>Mathias Gautel</b> King's College London <i>TBD</i></p>	
6:00 – 8:00 pm	<p><i>Night of Networking</i></p> <p><i>(No additional cost to attendees; reservation required through registration process)</i></p> <p>Early Career Investigator presentation awards and Top Poster awards will be presented!</p>	<p><b>Top of the Park</b> Park Hotel 22 S. Carroll Street</p>

## WEDNESDAY, May 23, 2018

8:00 am – 9:00 am	Continental Breakfast	Monona Convention Center Community Terrace
<p style="text-align: center;"><b>Plenary Lecture</b></p> <p style="text-align: center;"><b><i>Michael Geeves</i></b> University of Kent <i>Three states of the thin filament: Still relevant after 25 years?</i></p> <p style="text-align: center;">9:00 am – 9:45 am Monona Convention Center, Lecture Hall</p>		
<p style="text-align: center;">Presentations by <b><i>Early Career Investigator Awardees</i></b> and <b><i>Top Poster Awardees</i></b></p> <p style="text-align: center;">10:00 am – 11:45 am Monona Convention Center, Lecture Hall</p> <p style="text-align: center;">Each presenter has 5 minutes to present with 3 minutes Q&amp;A</p>		
12:00 – 1:00 pm	Lunch – Southwestern Buffet Wrap up	Monona Convention Center Community Terrace