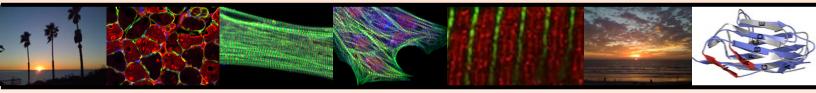
ANC | Alternative Muscle Club Meeting San Diego - June 28. 2013

Alternative Muscle **Club** Meeting 2013

University of California, San Diego



Medical Education and Telemedicine (MET) Building Learning Center Room 143

Friday, June 28, 2013









Society for l biology The science of life, the life of science We are grateful to the following organizations and people, who helped to make this meeting happen...



The AMERICAN SOCIETY FOR CELL BIOLOGY special thanks to Thea Clarke



The SAN DIEGO SKELETAL MUSCLE RESEARCH CENTER

Dr. Richard Lieber Dr. Mark Mercola Dr. Pier Lorenzo Dr. Alessandra Sacco Dr. Velia Fowler



Life Technologies special thanks to Heidi Brunell

The Scientific and Organizational Advisors

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Index

| Meeting Outline | 4 |
|---------------------------------------|----|
| Scientific Program | 5 |
| Scientific Poster Session | 9 |
| Career development / meeting benefits | |
| Venues | |
| Parking and Directions | |
| Public Transport | |
| Lodging | |
| Contact | |
| Organizing Committee | |
| Participants | |
| Abstracts | 20 |

Dear Alternative Muscle Club (AMC) 2013 participants:

Thank you for registering to participate in the first AMC meeting to be held in the United States. The AMC meeting is aimed at scientists early in their research career (PhD students, postdocs, junior faculty) to present their work in a relaxed environment. Thanks to everyone who registered and submitted abstracts! With over 50 presentations covering a wide range of topics centered around the muscle biology field, we hope that the AMC will be an exciting, illuminating (and fun!) experience for all.

Meeting Outline

| Time | Торіс | Where |
|---------------|---|------------------|
| 8am-8:50am | Registration, Breakfast, Poster hanging | MET courtyard |
| 8:50am-9am | Welcome Address | MET LC143 |
| 9am-10:15am | Session 1 - Muscle & Vascular Development followed by 15 min. Coffee break | MET LC143 |
| 10:30am-12pm | Session 2 - Muscle Structure and Function | MET LC143 |
| 12pm-1:30pm | POSTER Session and Lunch break odd numbered posters: 12:30-1pm even numbered posters: 1-1:30pm | MET courtyard |
| 1:30pm-2:45pm | Session 3 - Muscle Regeneration followed by 15 min. Coffee break | MET LC143 |
| 3pm-4:40pm | Session 4 - Biomechanics of Muscle Poster Award Ceremony | MET LC143 |
| 5pm-7pm | Social Mixer at the LOFT@UCSD | THE LOFT |

Scientific Program

REGISTRATION – MET COURTYARD

8am-8:50am Registration / Coffee / Social Poster presenters: Please hang up your posters!

SESSION 1: MUSCLE & VASCULAR DEVELOPMENT – MET ROOM LC143 Stephan Lange, moderator

| 8:50am-9am | Welcome to AMC |
|---------------|--|
| 9am-9:15am | Fabian Zanella, UCSD Human induced pluripotent stem cell models of arrhythmogenic cardiomyopathy |
| 9:15am-9:30am | Shirin Doroudgar, SDSU Heart growth is regulated by the ER-transmembrane E3 ubiquitin ligase, Hrd1 |
| 9:30am-9:45am | Sonia Albini, Sanford-Burnham Medical Research Institute Direct conversion of hESC into skeletal muscle cells and formation of myospheres by defined factors |
| 9:45am-10am | Ludovic Vincent, UCSD Building micromuscle in vitro from patterned extracellular matrix stiffness and adipose derived stem cells |
| 10am-10:15am | Zhen Chen, UCSD Hypoxic regulation of microRNA machinery |

15 MIN BREAK

SESSION 2: MUSCLE STRUCTURE AND FUNCTION – MET ROOM LC143 David Gokhin, moderator

| 10:30-10:45am | Emily Pfeiffer, UCSD Conduction mechanosensitivity in micropatterned cardiomyocytes |
|---------------|---|
| 10:45am-11am | John Konhilas, University of Arizona Sexually dimorphic myofilament function and cardiac troponin I phosphospecies distribution in hypertrophic cardiomyopathy mice |
| 11am-11:15am | Mirko Volkers, SDSU mTORC1 vs. mTORC2 in the heart |
| 11:15-11:30am | Andrea Domenighetti, UCSD Myofibrillar and intermyofibrillar myopathy in mice lacking FHL1 |
| 11:30-11:45am | Girish Melkani, SDSU Huntington's disease induced skeletal muscle defects are reversed by modulating TOR pathway in the Drosophila model |
| 11:45am-12pm | Brian McMorran, UCLA Discrete and specific changes in cell surface glycosylation following differentiation of murine myotubes. |

LUNCH & POSTER SESSION - MET COURTYARD

12pm Lunch

12pm-1:30pm Poster Session

odd numbered posters: 12:30pm-1pm even numbered posters: 1pm-1:30pm

SESSION 3: MUSCLE REGENERATION – ROOM LC143 Gretchen Meyer, moderator

| 1:30pm-1:45pm | Barbora Malecova, Sanford-Burnham Medical Research Institute Functional switch in composition of Baf60c-containing SWI/SNF chromatin remodeling complex during skeletal myogenesis |
|---------------|--|
| 1:45pm-2pm | Tufan Aydogdu, Sanford-Burnham Medical Research Institute STAT3 regulation of skeletal muscle stem cells |
| 2pm-2:15pm | Lily Chao, Children's Hospital Los Angeles NR4A1 – a novel regulator of muscle mass |
| 2:15pm-2:30pm | Lorenzo Giordani, Sanford-Burnham Medical Research Institute HDAC inhibitors mediate epigenetic reprogramming in dystrophic muscle. |
| 2:30pm-2:45pm | Paula Coutinho, Sanford-Burnham Medical Research Institute Distinct and overlapping roles of Brg1 and Brm in skeletal myogenesis |

15 MIN BREAK

SESSION 4: BIOMECHANICS OF MUSCLE – ROOM LC143 Indroneal Banerjee, moderator

| 3pm-3:15pm | Emily Abbott, UC Irvine The timing of muscle recruitment alters series elastic function during lengthening contractions |
|---------------|---|
| 3:15pm-3:30pm | Nicole Danos, UC Irvine Passive properties of anuran hind limb muscles |
| 3:30pm-3:45pm | George Tsianos, L-3 Applied Technologies, Inc. Validated predictions of metabolic energy consumption for submaximal effort movement |
| 3:45pm-4pm | Margie Mathewson, UCSD Stretched sarcomeres contribute to equinus contractures in patients with cerebral palsy |
| 4pm-4:15pm | Sukriti Dewan, UCSD Altered cross-bridge cycling kinetics and phospho-proteome in guinea pig heart failure |
| 4:15pm-4:30pm | Gaurav Kaushik, UCSD Vinculin-mediated remodeling of the intercalated disc increases myocardial stiffness but preserves contractile function with age |
| 4:30pm-4:40pm | AMC Life Technologies Poster Award Ceremony |

Please remember to take down your posters!

RECEPTION – The Loft @ UCSD

5pm-7pm Social event at The Loft @ UCSD (Price Center, 2nd floor)

Scientific Poster Session

Posters should be mounted on the poster boards in the MET Building Courtyard before 8:45am. There will be an informal poster session during lunchtime, from 12pm-1:30pm, although AMC attendees are welcome to browse and discuss posters whenever they wish. Posters must be taken down by 6pm. We will not save any posters that remain hung up after that time.



AMC Life Technologies Poster Awards

We will select the **best ten poster presentations** during our poster session for the "AMC Life Technologies Poster Award". The winners will be announced during the social event in the LOFT@UCSD. We are grateful for Life Technologies to sponsor the prizes.

1st Prize: Backpack with USB flashdrive, pen and notebook

2nd Prize: Insulated bag with beach towel and reusable water bottle

3rd-10th Prize: a Cafe Au Lait coffee mug.

Presenters of **odd numbered posters** should be at their poster from **12:30-1pm**. Presenters of **even numbered posters** should be at their poster from **1pm-1:30pm**.

- 1. Francesca Boscolo Sesillo, Sanford Burnham Medical Research Institute Role of p53 in skeletal muscle stem cell senescence in a dystrophic mouse model
- 2. Chinedu Nworu, University of Arizona Leiomodin 3 (Lmod3) and Tropomodulin 4 (Tmod4) are critical for skeletal muscle thin filament assembly and have overlapping functions during Xenopus laevis development
- 3. Anastasia Gromova, Sanford Burnham Medical Research Institute The role of E3 ligase Fbxw7 in muscle stem cell quiescence
- 4. Sole Gatto, Sanford Burnham Medical Research Institute Single cell gene expression profiling of fibro-adipogenic progenitors as a new prognostic tool in Duchenne Muscular Dystrophy

| 5. | Mark Chapman, UCSD Knockout of nesprin 1 and desmin causes aberrant nuclear mechanics and fibrosis in skeletal muscle |
|-----|--|
| 6. | Fujita Naonobu, UCSD Mechanisms of T-tubule formation/remodeling in Drosophila |
| 7. | Federica Michielin, University of Padova Cyclic mechanical microscale-stimulation affects cellular membrane integrity in a human muscle dystrophy in vitro model |
| 8. | Ana Maria Manso, UCSD Talin2 is essential for the structural integrity of costameres and membrane stability of cardiomyocytes |
| 9. | Sharon Israeli, UCSD Caveolin Mediates Integrin Regulation in the Cardiomyocyte |
| 10. | Olga Tapia, The Scripps Research Institute Lemd2 in muscle differentiation and signaling |
| 11. | Stefanie Novak, University of Arizona Role of Fragile X proteins in the heart |
| 12. | Christine Henderson, University of Arizona A novel mechanism for the remodeling associated with dilated cardiomyopathy |
| 13. | Alessandra Dall'Agnese, Sanford Burnham Medical Research Institute Molecular control of BAF60C locus in skeletal muscle homeostasis and disease |
| 14. | Tzu Pen Shentu, UCSD Shear stress activation of contraction: the role of cytoskeleton/eNOS activity |
| 15. | Adarsh Krishnamurthy, UCSD Multi-scale microstructure-based constitutive model of active myocardial mechanics |
| 16. | Weiguo Xue, UCSD Acupuncture and Chinese massage |
| 17. | Jianlin Zhang, UCSD Disruption of both nesprin 1 and desmin results in dystrophy-like myopathy |
| 18. | Michael Hicks, Arizona State University Fibroblasts regulate the skeletal muscle acetylcholine receptor through biomechanical stretch |

| 19. | Andrea Domenighetti, UCSD Loss of FHL1 induces an age-dependent skeletal muscle myopathy associated with myofibrillar and intermyofibrillar disorganization in mice. | |
|-----|---|--|
| 20. | Hermes Taylor-Weiner, UCSD Defined extracellular matrix components are necessary for definitive endoderm induction | |
| 21. | Ramon Diaz Trelles, Sanford-Burnham Medical Research Institute Notch-independent function on mouse adult cardiomyocytes: regulation of cardiac vasculature | |
| 22. | Sudarshan Dayanidhi, UCSD Reduced number of satellite cells in children with cerebral palsy | |
| 23. | Matt Stroud, UCSD GAS2-like proteins mediate communication between microtubules and actin through their interaction with end-binding proteins | |
| 24. | Matt Klos, UCSD Genetic modification of cardiac motor proteins in normal and failing myocytes | |
| 25. | Yoshitake Cho, The Scripps Research Institute PGC-1 and ERR-induced regulator in muscle 1 (PERM1) is a tissue-specific regulator of oxidative capacity in skeletal muscle cells | |
| 26. | Matthew Tierney, Sanford-Burnham Medical Research Institute Microenvironmental regulation of muscle stem cell function during development and regeneration | |
| 27. | Peter Kekenes-Huskey, UCSD Modeling of calcium diffusion at molecular and cellular scales: applications to the cardiomyocyte | |
| 28. | Stephan Lange, UCSD (not a candidate for the poster award) Obscure links and cullin(g) ends | |
| 29. | Stephan Lange, UCSD (not a candidate for the poster award) CARP1/Ankrd1 is essential for dilated cardiomyopathy development in MLP knockout mice | |

Career development / meeting benefits

Never has it been more challenging to develop an academic career in science than today.

The Alternative Muscle Club Meeting is aimed at researchers who are in the early stages of their scientific careers (e.g. PhD students, postdocs and junior faculty) and interested in all facets of muscle cell biology.

One of the goals of this meeting is to give you a head-start into the career as a scientist in academia or industry.

To help you boost your career, *every Postdoc and PhD student will receive the "ASCB Career Advice for Life Scientists" book.* This book presents a true treasure trove of information about career development,

advice on writing and publishing, career

transition, postdoc issues and general problems in the lab. We are extremely grateful for the support this meeting receives from the American Society for Cell Biology (ASCB) by providing this valuable book! We will give out more information on the ASCB and their upcoming conference at our meeting.

In addition, presenting your work in a talk or poster presentation will add another line to your *CV or resumé*. Especially if your poster presentation receives one of the *"AMC Life Technologies Poster Awards"*!



Venues



The AMC meeting will be held at the **Medical Education and Telemedicine (MET) Building** on the University of California San Diego campus in La Jolla, CA on June 28, 2013.

MET room **LC143** will host the scientific sessions. The poster sessions will be held outdoors in the **courtyard** of the MET building.

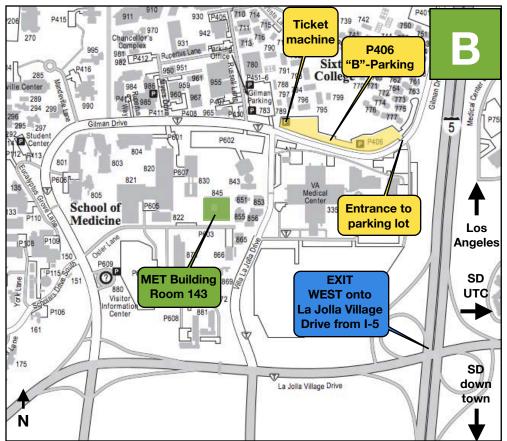
For the location of the MET Building on the UCSD campus map, please see the following link: http://maps.ucsd.edu/mapping/viewer/default.htm? mkey=1&lc=open&km=open&rc=closed&zoom=2&X=0.61&Y=0.53&layers=None&background =2&label=0&overlays=Bldg-848%251&selectedTab=1&openPin=848%251

A social hour will conclude the meeting. This event will be held at the <u>LOFT</u>. The LOFT is the art and performance lounge on the UC San Diego campus. The LOFT is renowned for its mix of art and culture.

Food will be provided by Zanzibar at the LOFT. Their delicious cheese plates, mediterranean platters, good selection of micro-brewed beer and wine are favorites that will be served at the end of the meeting. Wind down and enjoy a relaxing networking social hour after the meeting with us!



Parking and Directions



We recommend parking at lot **P406** (highlighted). Please *arrive early* and park in spots marked with a white "B" on green background. Use the available machine close to the Gilman Parking structure to **purchase a "Pay to Display" receipt to leave on your dashboard**. The cost for the daylong parking ticket in lot P406 is \$8. *The last thing we want is anyone getting a parking citation!*

Remember:

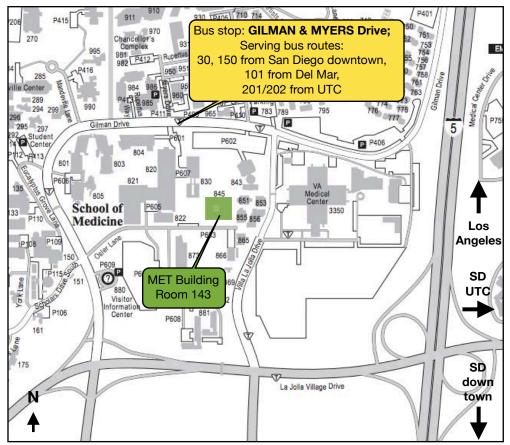
Park in **Lot P406**, use "**B**" spots. Pay and **Display** your ticket on the dashboard of your car. AVOID parking in the Gilman Parking structure, as it is more costly; DO NOT park in "A" parking spots.

Street address for GPS/Google Maps: 9500 Gilman Drive, San Diego, CA-92093

Please see the following link for location: <u>http://maps.ucsd.edu/mapping/viewer/default.htm?</u> <u>mkey=1&lc=open&km=open&rc=closed&zoom=5&X=0.64&Y=0.54&layers=None&background</u> <u>=2&label=0&overlays=Parking-71%252,Bldg-848%251&selectedTab=1</u>

Please also visit the following link for directions: <u>http://blink.ucsd.edu/facilities/transportation/visitor/directions.html</u>

Public Transport



Please visit the following link for information on how to get to the La Jolla campus using public transport: <u>http://blink.ucsd.edu/facilities/transportation/commuting/public.html</u>

You can also use the trip planner offered by the Metropolitan Transit Service (MTS) - the address for UCSD (destination) is: **9500 Gilman Drive** <u>http://www.sdmts.com/Tripplanner.asp</u>

Lodging

For those coming from out of town, please use the following link for a list of local hotels and lodging options: <u>http://amcsd-2013.ucsd.edu/lodging.html</u>

Contact

If you have questions about the meeting, you may contact us by email, phone or fax. Email address: <u>AMCSD.2013@gmail.com</u>

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Alternative Muscle Club Meeting 2013 - UC San Diego

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Abstracts

The abstracts will not be published online. Please check your email for the version of the Agenda containing the abstracts (*sent out* 06-26-2013).

