

4th North American Planarian Meeting
October 20-22, 2017 | Woods Hole, Massachusetts

Friday, October 20th:

- 3:00 - 5:00 pm Registration, check-in (Swope Center)
5:00 - 6:30 pm Dinner (Swope Center)
6:30 - 6:45 pm Opening Remarks: Peter Reddien (Lillie Auditorium)
- 6:45 - 8:00 pm Session I (Lillie Auditorium). **Patterning: homeostasis and regeneration I**. Moderator: Carrie Adler
- 6:45 - 7:00 pm Acoel regeneration mechanisms indicate ancient and widespread role for muscle in regenerative patterning
Amelie Raz, Mansi Srivastava, Peter Reddien
- 7:00 - 7:15 pm Multiple secretory roles for planarian muscle cells
Lauren E Cote, Eric Simental, Peter W Reddien
- 7:15 - 7:30 pm Src acts with Wnt/FGFR signaling to globally suppress anterior identities in planarians
Nicolle A. Bonar, David Gittin, Christian P. Petersen
- 7:30 - 7:45 pm Patterning alteration uncouples regeneration from homeostatic tissue maintenance
Eric M. Hill and **Christian P. Petersen**
- 7:45 - 8:00 pm A model for eye progenitor targeting in *Schmidtea mediterranea*
Kutay Deniz Atabay, Peter W. Reddien
- 8:30 - 10:00pm Poster Session 1 (odd numbers) (Swope Center)

Saturday, October 21st:

- 7:00 - 8:30 am Breakfast (Swope Center).
- 8:45 - 10:00 am Session II (Lillie Auditorium). **Neuronal regeneration and neurotoxicity**. Moderator: Rachel Roberts-Galbraith
- 8:45 - 9:00 am Planarian cholinesterase: structural and functional characterization of an evolutionarily ancient enzyme to study organophosphorus pesticide toxicity
Danielle Hagstrom, Siqi Zhang, Alicia Ho, Eileen Tsai, Aryo Jahromi, Zoran Radic, Kelson Kaj, Palmer Taylor, and Eva-Maria S. Collins

- 9:00 - 9:15 am Freshwater planarians as an alternative animal model for medium-throughput developmental neurotoxicology testing
Siqi Zhang, Danielle Hagstrom and Eva-Maria S. Collins
- 9:15 - 9:30 am The biocide methylisothiazolinone inhibits planarian wound healing and regeneration
Alanna Van Huizen, Ai-Sun Tseng, Wendy Beane
- 9:30 - 9:45 am A planarian Tec family kinase suppresses neuronal regeneration
Alex Karge and Christian P. Petersen
- 9:45 - 10:00 am Activation of TRPA1 by reactive oxygen species in *Schmidtea mediterranea* reveals a conserved signaling mechanism at the origin of animal nociception
Oscar M. Arenas, Emanuela E. Zaharieva, Alessia Para, Constanza Vásquez-Doorman, Christian P. Petersen and Marco Gallio.
- 10:00 - 10:30 am Coffee break
- 10:30 - 11:45 am Session III (Lillie Auditorium). **Stem cells and regeneration**. Moderator: Josien van Wolfswinkel
- 10:30 - 10:45 am Single cell sequencing reveals diverse neoblast specialization for the *Schmidtea mediterranea* nervous system
Kellie M. Kravarik and Peter W. Reddien
- 10:45 - 11:00 am Expression-based phenotyping identifies signaling molecules regulating neoblast self-renewal and differentiation
Schad EG and Christian P. Petersen
- 11:00 - 11:15 am Regulators of Tegument Biogenesis in Parasitic Flatworms
George R. Wendt and James J. Collins, III
- 11:15 - 11:30 am Injury Alters Stem Cell Response to Radiation in Planaria
Divya A Shiroor, Tisha E Bohr and Carolyn E Adler
- 11:30 - 11:45 am *Hymenolepis diminuta*: a parasite model for stem cells and regeneration
Tania Rozario, Edward B. Quinn, Jennifer R. McDonald and Phillip A. Newmark
- 12:00 - 1:30 pm Lunch (Swope Center)
- 1:45 - 3:15 pm Poster Session 2 (even numbers) (Swope Center)
- 3:30 - 4:30 pm Session IV (Lillie Auditorium): **Technological innovation**. Moderator: Jason Pelletieri
- 3:30 - 3:45 pm Locked Expansion Microscopy for Super-resolution Fluorescence Imaging of Microbes, Worms, and Microbes in Worms
Youngbin Lim, Margarita Khariton, Katharine Ng, Samuel Bray, Kerwyn C Huang, and **Bo Wang**

- 3:45 - 4:00 pm Optimizing culture conditions for large scale planaria culture
M. Shane Merryman
- 4:00 - 4:15 pm Defining the transcriptomes of planarian cell types
Christopher T. Fincher, Omri Wurtzel, and Peter W. Reddien
- 4:15 - 4:30 pm EMBO Young Investigator Talk: **Jochen Rink**
- 4:30 - 5:00 pm Coffee break
- 5:00 - 6:15 pm Session V (Lillie Auditorium). **Patterning, homeostasis and regeneration II**. Moderator: Mansi Srivastava
- 5:00 - 5:15 pm Orthogonal muscle fibers have different instructive roles in planarian regeneration
M. Lucila Scimone, Lauren E. Cote, and Peter W. Reddien
- 5:15 - 5:30 pm The role of the missing tissue response during regeneration in the planarian *Schmidtea mediterranea*
Aneesha Tewari, Sarah Stern, Isaac Oderberg, and Peter W. Reddien
- 5:30 - 5:45 pm The Regulatory Landscape of Whole-body Regeneration
Andrew R. Gehrke, Emily Neverett, Annika Gompers, and Mansi Srivastava
- 5:45 - 6:00 pm The role of activin-2 in homeostatic and regenerative tissue patterning
Jennifer K. Cloutier, Isaac Oderberg, and Peter W. Reddien
- 6:00 - 6:15 pm Understanding Morphogenesis During Planarian Regeneration
Wendy S. Beane
- 6:45 - 7:00 pm Group Photo
- 7:00 - 10:00 pm Lobster Dinner and Entertainment (Meigs room)

Sunday, October 22nd:

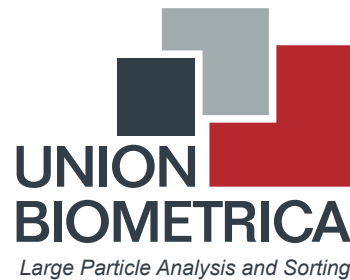
- 7:00 - 8:30 am Breakfast (Swope Center).
- 8:45 - 10:45 am Session VI (Lillie Auditorium): **Germ cells and embryogenesis**.
Moderator: Jim Collins
- 8:45 - 9:00 am Development of a novel media that supports *Schistosoma* reproduction *in vitro*
Jipeng Wang, Aracely Romero, and James Collins
- 9:00 - 9:15 am Strength in Numbers: Classroom-driven screens for genes involved in planarian sexual reproduction
Labib Rouhana, Athanasios Bubulya

- 9:15 - 9:30 am Unfolding germline development in the human parasite *Schistosoma* using biomimetic nanoparticles
Pengyang Li, Yuan Xue, Fabio Zanini, Stephen R. Quake, and Bo Wang
- 9:30 - 9:45 am A genome-wide screen in planarians reveals critical factors for germ cell development
Melanie Issigonis, Alyshia Scholl, and Phillip Newmark
- 9:45 - 10:15 am Coffee break
- 10:15 - 10:30 am Functional genomics screen in the planarian *Schmidtea mediterranea* to identify regulators of female germ cell development
Umair W Khan and Phillip A Newmark
- 10:30 - 10:45 am Embryonic origins of regenerative potential
Erin L Davies and Alejandro Sánchez Alvarado
- 10:45 - 11:00 am Closing Remarks
- 11:15 – 1:00 pm Boxed Lunch



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