



Department of Molecular and
Cell Biology

MCF Spring Symposium

MCF Spring Symposium

Monday, May 15th, 2017

Welcome Address

11:00am

Project Presentations

11:05am-12:00pm

Lunch and Poster Session

12:00-1:00pm

Dear MCF Trainees:

I'm happy to welcome you to the 1st annual Molecular Basis of Cell Function (MCF) Spring Symposium. The MCF training program embraces the multiple disciplinary nature of current research in molecular and cell biology by offering broad-based training and uniting researchers from across the broad spectrum of disciplines represented in the MCB Department. This symposium is meant to strengthen the MCF community by connecting current MCF trainees with MCF alumni so that they can share their research progress, discuss science, and learn more about navigating graduate school and beyond. In the future, we'd like to build this into a day-long symposium where, in addition to hearing about research, we'll discuss career development strategies, equity and inclusion, student wellness, and other issues of importance to the MCF graduate student community. Your ideas for adding new elements to the symposium are important to us so we invite your feedback on how we can build this into a special event that you find useful, enjoyable and even inspiring.



Matthew Welch
Program Director

MCF Project Presentations

Type VI CRISPR-Cas Systems: Basic Mechanism, Diversity, and Applications

Alexandra East Seletsky



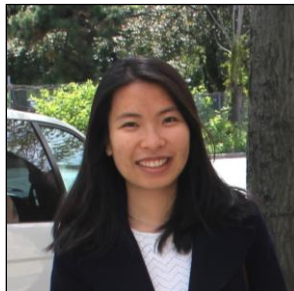
Is neuronal morphology the Star of the show in retinal direction selectivity?

Ryan Morrie



Harnessing evolution to study cellular regulation on synthetic pathways

Vivian Yu



MCF Poster Session

Katie Deets

Vance Lab
3rd Year

Amy Eisenberg

Brar Lab
4th Year

Vasiliki Karalis

Bateup Lab
3rd Year

Tomer Langberg

Feldman Lab
3rd Year

Thomas Laughlin

Davies/Savage Lab
3rd Year

Matthew Summers

Feller Lab
3rd Year

Timothy Turkalo

Hockemeyer Lab
4th Year

Judged by MCF Steering Committee Members:

Kathleen Collins, John Ngai, and Elçin Ünal

Current MCF Trainees 2016-2017

Erika Anderson
Rebecca Bartke
Victoria Blake
Mandy Boontanrart
Eliana Bondra
John Boyle
Emeric Charles
Sean Chen
Oliver Davis
Katherine Deets
Justin DeLeon
Paige Diamond
Amy Eisenberg
Phillip Frankino
Ryan Forster
Liliya Gabelev
Jase Gehring
Andrew Grenfell
Kayley Hake
Nicole Haloupek
Andrea Higdon
Christopher Hoel
Ryan Holly
Shinya Iguchi
Vasiliki Karalis
Mark Khoury
Grant King
Molly Kirk
Maiko Kitaoka
Nora Kostow

Daniel Kramer
Lieselotte Kreuk
Katie Lien
Melissa Locke
Tomer Langberg
Thomas Laughlin
Michael Manoharan
Joseph Martin
Hayley McCausland
Melissa Metcalf
Wilbur Mills
Ryan Morrie
Huntly Morrison
Robert Nichols
Michal Olszewski
George Otto
Ryan Protzko
Kathryn Sieverman
Akshay Tambe
Timothy Turkalo
Joshua Tworig
Alec Uebersohn
Charles Ulrich
Erik Van Dis
Marina Volegova
Laura Wetzel
Natalie Wolf
Vivian Yu
Justin Zhang

MCF Trainee First Author Papers 2016-2017

Amon JD, Koshland D. RNase H enables efficient repair of R-loop induced DNA damage. *Elife*. 2016 Dec 10;5. pii: e20533. doi: 10.7554/eLife.20533. PubMed PMID: 27938663; PubMed Central PMCID: PMC5215079.

Choe JE, Welch MD. Actin-based motility of bacterial pathogens: mechanistic diversity and its impact on virulence. *Pathog Dis*. 2016 Sep 20. pii: ftw099. [Epub ahead of print] PubMed PMID: 27655913.

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Grenfell AW, Strzelecka M, Heald R. Transcription brings the complex(ity) to the centromere. *Cell Cycle*. 2017 Feb;16(3):235-236. doi: 10.1080/15384101.2016.1242962. Epub 2016 Oct 13. PubMed PMID: 27736298; PubMed Central PMCID: PMC5345185.

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Hood RD, Higgins SA, Flamholz A, Nichols RJ, Savage DF. The stringent response regulates adaptation to darkness in the cyanobacterium *Synechococcus elongatus*. *Proc Natl Acad Sci U S A*. 2016 Aug 16;113(33): E4867-76. doi: 10.1073/pnas.1524915113.

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Lawson MR, Dyer K, Berger JM. Ligand-induced and small-molecule control of substrate loading in a hexameric helicase. *Proc Natl Acad Sci U S A.* 2016 Nov 29;113(48):13714-13719. Epub 2016 Nov 7. PMID: 27821776 PMCID: PMC5137764

Lu R, Drubin DG. Selection and stabilization of endocytic sites by Ede1, a yeast functional homologue of human Eps15. *Mol Biol Cell.* 2017 Mar 1;28(5):567-575. doi: 10.1091/mbc.E16-06-0391. Epub 2017 Jan 5. PubMed PMID: 28057762; PubMed Central PMCID: PMC5328616.

Morrie RD, Feller MB. Development of synaptic connectivity in the retinal direction selective circuit. *Curr Opin Neurobiol.* 2016 Oct;40:45-52. doi: 10.1016/j.conb.2016.06.009. Epub 2016 Jul 2. Review. PubMed PMID: 27380013; PubMed Central PMCID: PMC5098419.

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Visperas PR, Wilson CG, Winger JA, Yan Q, Lin K, Arkin MR, Weiss A, Kuriyan J. Identification of Inhibitors of the Association of ZAP-70 with the T

Cell Receptor by High-Throughput Screen. *SLAS Discov.* 2017 Mar;22(3):324-331. doi: 10.1177/1087057116681407. Epub 2016 Dec 13. PubMed PMID: 27932698.

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Yu VY, Chang MC. High-yield chemical synthesis by reprogramming central metabolism. *Nat Biotechnol.* 2016 Nov 8;34(11):1128-1129. doi: 10.1038/nbt.3723. PubMed PMID: 27824836.

Zimmer AD, Koshland D. Differential roles of the RNases H in preventing chromosome instability. *Proc Natl Acad Sci U S A.* 2016 Oct 25;113(43):12220-12225. Epub 2016 Oct 10. PubMed PMID: 27791008; PubMed Central PMCID: PMC5086985.