

COLLEGE OF **SCIENCES**
BIOLOGICAL SCIENCES

Biological Sciences

May 15th, 2017 AY 16-17 #167

Announcements

The Department of Biological Sciences conferred over 300 degrees on Friday the 12th in Reynold's Coliseum. Our commencement speaker, Director of NIEHS Dr. Linda Birnbaum, recognized our graduates on their achievements. Congrats Wolfpack Class of 2017!



On Thursday, May 11th the Department of Biological Sciences wished Bill Grant well in his retirement. Numerous speakers and the presence of 4 cakes speak to how much Bill is loved and how much he will be missed!



Save-the-Date

Next Wednesday (5/17) will be the first Biolunch seminar of the summer. The seminar will feature this summer's outside speaker, Prof. Mary Dunlop from Boston University. Prof. Dunlop is investigating the basis of drug resistance in single cells using modern approaches in synthetic biology and systems biology. She is a wonderful speaker and doing exciting work on single-cell analyses and modeling in a critical area of research. More information on the seminar is below and part of the below flyer.

Date - Wednesday, May 17

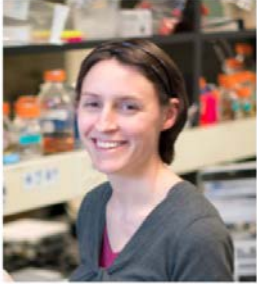
Time - 12 pm

Location - Room 1231, Engineering Building 2, Centennial Campus

Food - free pizza, snacks, and drinks. You are also welcome to bring your own lunch.

Parking: Beginning Friday, May 6, through Tuesday, Aug. 16, any vehicle with a valid parking permit may park in student parking areas (RC, RE, RP, RW, RS) and university-owned parking decks other than the Pouton Deck and Oval West Deck on Centennial Campus.

2017 NC State BioLunch Seminar Series



Dynamics, Feedback, and Transient Antibiotic Resistance in Single Cells

Cells live in uncertain, dynamic environments and have many mechanisms for sensing and responding to changes in their surroundings. However, sudden fluctuations in the environment can be catastrophic if a population relies solely on sensory responses, which have a delay associated with them. Cells can reconcile this by using a stochastic approach, creating phenotypic diversity within an isogenic population to hedge against environmental uncertainty. In this talk I will discuss the multiple antibiotic resistance network in enteric bacteria. Using a combination of time-lapse microscopy experiments and stochastic modeling I will show that cells can use feedback to generate dynamics and noise in expression of a key regulatory protein, providing transient antibiotic resistance at the single-cell level. Further, I will discuss how noise in an upstream regulator can propagate to downstream genes to orchestrate a coordinated response to environmental stresses.

Dr. Mary Dunlop

Assistant Professor
Biomedical Engineering
Boston University

Wednesday May 17th, 2017 12:00pm Room 1231, EB2

Pizza, snacks, and drinks will be provided or bring your own lunch!

Funding provided by the NC State Office of Research, Innovation and Economic Development (ORIED)

There will be a **Hot Water, Heating, Steam and Reheat Disconnect** for multiple buildings starting **on Friday, June 9, 2017 at 5:00 PM** until Monday, **June 12, 2017 at 7:00 AM**. This disconnect is needed for piping and the **installation of the PRV station**.

The following buildings will be affected:

Dabney
DH Hill (All)
Williams & Addition
Bostian
Scott
Kilgore
Nelson
David Clark Labs & Addition
Thomas
Gardner
Phytotron
Biological Resources Facility
Marye Anne Fox

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