



The NSF-CREST Center for Cellular and Biomolecular Machines (CCBM) uses an interdisciplinary approach combining physical, biological and engineering methods to understand and control the functioning of multi-scale assemblies of biomolecules and cells, and to design and develop novel bio-inspired functioning machines ranging from designer cells and tissue to diagnostic and therapeutic devices. The center is also focused on enhancing biophysics, biochemistry and bioengineering graduate and undergraduate education, as well as leading K-12 STEM outreach activities in the Merced area for teachers and students.

Hosted by the NSF-CREST  
Center for Cellular and Biomolecular Machines  
at the University of California, Merced

# MIRIAM BARLOW

Science for Humanity

a series of scientific sessions for the community

## A Study: Antibiotic Resistance in Merced

Tuesday, March 19, 2019  
12:00 PM – 1:00 PM, SSB 130

**Antibiotic Resistance** is an enormous problem throughout the world. It can also be difficult to study because health care providers are very private with specific information about antibiotic resistance. In a rare opportunity to collaborate with a health care provider, Dignity Health Mercy Medical Center has provided us with antibiotic resistant hospital isolates and patient data for the past five years. With those data in hand, we are performing rigorous studies of old assumptions about the antibiotic resistance situations and we are finding surprising results that are causing us to reassess how the problem of antibiotic resistance should be handled.

**Miriam Barlow** has studied antibiotic resistance for 20 years because it is an excellent model of evolution in action and a serious threat to human health. Her groundbreaking work in this area has earned her widespread international press, the Siemens Young Investigator Award, a World Technology Network Award, and the opportunity to share her findings with government agencies, think tank groups, academic peers, and lobbying groups. Her research has provided widely used experimental and analytic models for the study of evolving bacteria, cancer, and phylogenetics by numerous researchers throughout the world.



Professor of Molecular Cell Biology  
University of California, Merced

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<https://ccbm.ucmerced.edu/>

*Open to all students, faculty, staff & local community. Free admission.  
Guest parking in **Bellevue Lot**. Permit-less parking dispenser; credit card only.  
You're welcome to **bring your lunch!** Coffee, tea and snacks provided.*

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