



JOB WEBINAR FOR STUDENTS AND RECENT GRADUATES IN PHARMACY, INDUSTRIAL PHARMACY (CTF) and BIOTECHNOLOGIES

Friday March 12th 2021, 18:00-19:30

Link: <https://meet.google.com/ukb-qzav-xzq>

STARTING A SUCCESSFUL ACADEMIC CAREER

Cristian Ruiz Rueda

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The goal of this seminar is to introduce my current research on antibiotic resistance and **discuss career paths for young scientists**. Resistance to antibiotics is a major threat worldwide because it causes failed treatment of previously curable infections, increased hospital costs, and impacts modern medicine procedures that rely on antibiotics such as surgery or chemotherapy. According to the CDC, antibiotic resistant (AR) bacteria infect nearly 3 million and directly kill nearly 36,000 people each year in the U.S. Between 2015 and 2050, the worldwide estimates are 300 million people dying prematurely, and \$100 trillion in economic losses caused by AR infections. Finding new antibiotics is a lengthy and difficult process, which further exacerbates this problem. My lab focuses on understanding the molecular mechanisms and environmental spread of antibiotic resistant bacteria. Our two main research projects are: 1) studying multidrug efflux pumps that expel antibiotics out of bacterial cells to develop novel therapies against antibiotic resistant infections; and 2) understanding the distribution and identifying novel antibiotic resistance genes in the environment, with the ultimate goal of developing novel diagnostic methods and preventing the spread of antibiotic resistant bacteria.



Cristian Ruiz Rueda obtained my Ph.D. in Microbiology at the University of Barcelona (Spain) in 2005, where I studied microbial lipases and their inhibition. From 2006 to 2012, he was a Postdoctoral Fellow/Research Associate at Tufts University School of Medicine (Boston, MA, USA), where he worked on the regulation of different multiple antibiotic resistance genes. From 2013 to 2015, he was a Research Associate at Weill Cornell Medical College (New York, NY, USA), where he worked on the development of new antimicrobials and on single molecule methods to detect colon cancer. Since 2015, he has been an Assistant Professor in the Department of Biology at California State University Northridge (Los Angeles, CA, USA). His current research focuses on different aspects of antibiotic resistance in bacteria, especially on: 1) Regulation, physiology and inhibition of the AcrAB-TolC multidrug efflux pump in

Escherichia coli; 2) Distribution, genomics and molecular mechanisms of resistance to carbapenems in the environment; and 3) molecular detection methods.

Participation is free

Language of the webinar: English

For any further information, it is possible to contact Prof. Luciano Saso (luciano.saso@uniroma1.it)

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