



REPUBLIC OF SLOVENIA  
MINISTRY OF EDUCATION,  
SCIENCE AND SPORT

University  
of Ljubljana  
Faculty of Chemistry  
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**VABILO NA PREDAVANJE  
V OKVIRU DOKTORSKEGA ŠTUDIJA  
KEMIJSKE ZNANOSTI**

**Dr. Begoña Heras**

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z naslovom:

**Battling bacteria: Alternative therapeutics for  
pathogenic bacteria**

**v sredo, 10. decembra 2014 ob 15:00 uri**

v predavalnici 1 (K1.119) v 1. nadstropju Fakultete  
za kemijo in kemijsko tehnologijo, Večna pot 113

*Vljudno vabljeni!*



## **Abstract**

Antibiotics have shaped modern medicine by providing treatment options for a wide range of bacterial infections. Antibiotics have enabled innumerable advancements in medical care, greatly contributing to the long life expectancy observed in the 20th century. However, the last few decades have witnessed an alarming explosion in the rate of antibiotic resistant infections. Meanwhile, the antibiotics development pipeline has undergone an equally frightening decline which greatly complicates the treatment of bacterial infections. In my laboratory we study proteins from medically important Gram-negative human pathogens, which are major contributors to multidrug resistant (MDR) infections globally. Our research focuses on investigating the structure and function of key virulence factors in these pathogens in order to obtain a detailed understanding of how they operate. This work is allowing us to identify pathogen-specific virulence targets for inhibitor design, which we are pursuing using structure-based approaches. Our overarching goal is to develop novel alternative antivirulence therapies to combat bacterial infections.