

Das **Institut für Biochemie** lädt gemeinsam mit dem Ortsverband der  
**Gesellschaft Deutscher Chemiker** zu einem

## ***K o l l o q u i u m   d e r   G D C h***

**Großer Hörsaal des Instituts für Biochemie**

Felix-Hausdorff-Str. 4, Greifswald

**Montag, 16. Januar 2017, 16 Uhr c.t.**

**Dr. Till Bachmann PhD**

College of Medicine and Veterinary Medicine,  
University of Edinburgh

**spricht zum Thema:**

## **Rapid Diagnostic Tests to combat Antimicrobial Resistance**

### **Abstract:**

Antimicrobial Resistance (AMR) is a major threat to healthcare systems and societies on a global scale and is discussed at the highest policy levels, including at the United Nations General Assembly in September 2016. If not tackled, the UK independent Review on AMR determined that AMR could cause an additional 10 million deaths per year and a loss of up to US\$100 trillion from global GDP by 2050. Rapid diagnostics are needed to help reducing this threat but current methods are too slow and lack information depth to enable tailored therapy decisions. To overcome this limitation molecular tools are developed for rapid in vitro diagnostics. In an ideal scenario such devices would be available at point of care to make therapy decisions at the site of the patient possible. Here, we report the successful development of an electrochemical biosensor platform based on electrochemical impedance spectroscopy (EIS) for label-free molecular diagnostics covering a wide range of targets from small molecules over proteins to different types of nucleic acids. Nucleic acid targets which have been successfully detected with the EIS platform range from synthetic targets over PCR products derived from several antibiotic resistance genes, genomic DNA and ribosomal RNA for direct amplification-free bacterial species identification to host biomarkers for infection detection. The presentation will review our recent in the context of the soaring problem of antimicrobial resistance.

Einladender

Prof. Dr. Uwe Bornscheuer

PD Dr. Heike Kahlert

Vorsitzende des Ortsverbandes der GDCh