



gegründet 1808

## **Societas physico-medica Erlangenensis**

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## **Die Physikalisch-Medizinische Sozietät Erlangen und das Max-Planck-Institut für die Physik des Lichts**

lädt Sie zu folgendem Vortrag ein:

### **„Interventional diagnostic stewardship for the prevention of antimicrobial resistance”**

#### **Professor Alex W. Friedrich**

Medical Microbiology and Infection Prevention, University Medical Center Groningen, Netherlands  
E-Mail: alex.friedrich@umcg.nl

Due to demographic change and more complex healthcare, healthcare-associated infections (HCAI) will increase. Uncontrolled spread of multiple-drug resistant bacteria, such as MRSA, CPE, VRE will lead to therapy-failure in non-avoidable HCAI. Recent microbiological and epidemiological investigations have shown that the transmission dynamics of such nosocomial pathogens can only partly be influenced by single-hospital implementation of infection prevention measures. A broad spectrum of measures needs to be implemented within the hospital, but especially in the healthcare region in order to avoid transmission. Modern technology, such as Whole Genome Sequencing and Shot-Gun Metagenomics allow today to concomitantly identify microorganisms and put them into their epidemiological context. By identifying unique-marker genes typing is done first, allowing the development of an outbreak-specific diagnostic test, that identifies solely the outbreak strain within the hospital and the healthcare region. This way of combining microbiological diagnostics together with other modern imaging technology for improved therapy, especially for the specific adaptation of prevention measures, is called diagnostic stewardship. Medical microbiologists are an important gatekeeper here, not just delivering a test result, but giving a microbiological answer. As the current trend towards centralized or specialized healthcare systems favours the spread of hospital-associated pathogens, a coordinated regional, responsive and rapid diagnostic stewardship network is necessary to protect people from non-treatable infections.

Prof. Dr. Alex W. Friedrich, MD PhD is head of the department and Chair of Medical Microbiology and Infection Prevention at the University Medical Center Groningen (UMCG) in the Netherlands, since 2011. As a specialist in medical microbiology he coordinates large international and cross border research networks for the prevention of infections due to antimicrobial resistant microorganisms ([eurhealth-1health.eu](http://eurhealth-1health.eu); [mrsa-net.org](http://mrsa-net.org); [eursafety.eu](http://eursafety.eu); [www.health-i-care.eu](http://www.health-i-care.eu)). His research focus lies in the Genomics for Infection Prevention pointing out the need of close co-operation between academic and public health institutions as well as veterinary medicine under a One-health-aspect. His research activities comprise basic and translational microbiological research in the field of bacteriology, Molecular Typing of multi-drug resistant microorganisms (e.g. MRSA, CRE) using Next-Gen-technology in combination with network analysis as well as hyper virulent Shiga toxin-producing Escherichia coli (STEC). His main activity is the prevention of Healthcare associated Infections (HCAI), Antimicrobial resistant microorganisms (ARM), and zoonotic infections (STEC). He aims at fostering interdisciplinary and meta competent approaches in infection prevention and control in European training programs. He published 233 peer-reviewed publications. His h-index is 41 based on web of science (Feb, 2018).

**Mittwoch, 9. Mai 2018, 17.15 Uhr**

(45 Minuten Vortrag plus Diskussion,

#### **Veranstaltungsort:**

Seminarraum (1.OG) des Instituts für Klinische Mikrobiologie, Immunologie und Hygiene, Wasserturmstraße 3/5  
(Zugang: rückwärtiger Hörsaalzugang gegenüber der Orangerie)

Für Rückfragen wenden Sie sich bitte an:

Prof. Dr. med. Christian Bogdan

Mikrobiologisches Institut - Klinische Mikrobiologie, Immunologie und Hygiene

Universitätsklinikum Erlangen, Wasserturmstraße 3-5, D-91054 Erlangen

Telefon: 09131 / 852-2551/-2281 · Fax: 09131 / 852-2573 · E-mail: christian.bogdan@uk-erlangen.de