

## TWINCORE - Seminar

Thursday July 9th, 2015, 5 p.m.

TWINCORE Lecture hall 0.03

### „Insights into the complexity of hepatitis C virus NS5A function and regulation “



#### Prof. Dr. Mark Harris

The hepatitis C virus (HCV) NS5A protein has multiple, independent functions within the virus lifecycle that contribute to viral genome replication, the assembly of infectious virus particles and perturbation of cellular signalling.

Recently, NS5A has become a particular focus of interest due to the development of potent small molecule inhibitors of HCV replication that target this protein, exemplified by daclatasvir. In this seminar I will introduce NS5A and its various functions and then describe two studies from my laboratory. Firstly, I will describe our long term efforts to define the role of a highly conserved polyproline motif in NS5A. Several years ago we showed that this motif was required for an anti-apoptotic function of NS5A by preventing the activation of a pro-apoptotic potassium channel, Kv2.1, potentially contributing to HCV persistence. I will describe this data and our more recent efforts to define the mechanism and cellular pathways involved. Secondly I will describe our recent study into NS5A phosphorylation. We have identified multiple sites of phosphorylation and our studies have revealed a complex pattern of regulation of phosphorylation that may have implications for the control of the various functions of NS5A.

#### Who is Mark Harris?

- Professor of Virology, School of Molecular and Cellular Biology, University of Leeds
- Member of Medical Research Council (MRC) Non-Clinical Fellowship Panel  
Member of Wellcome Trust Peer Review College
- Member of Society for General Microbiology (SGM) Council
- Editor in Chief, Journal of General Virology

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