



# Slovenian NMR Centre

@ National Institute of Chemistry

vabi na **PREDAVANJE**:

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z naslovom:

**Correlative use of NMR and X-ray crystallography for the structure determination of challenging protein assemblies: a case study in DNA replication and repair**

**v četrtek, 19. februarja 2015 ob 11:30**

v Veliki predavalnici na Kemijskem inštitutu, Hajdrihova 19, Ljubljana

*Kratek povzetek:*

High-resolution structure determination of protein-protein complexes is a daunting task. In fact, protein-protein complexes represent less than 0.5% of the structures deposited in the Protein Data Bank. We developed a methodology, based on the correlative use of NMR and X-ray crystallography data, to characterize protein complexes in which one partner is intrinsically disordered prior to binding. In this talk I will describe how this approach led to the determination of the structure of Proliferating Cell Nuclear Antigen (PCNA), the eukaryotic DNA sliding clamp, bound to PAF15, an intrinsically disordered protein that regulates DNA repair during replication via its interaction with PCNA. This experimental setup may be applied to further protein systems that are refractory to be tackled by one high-resolution technique only.

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