



Vabilo na Forum40 / Invitation to the Forum40

dr. Marko Trajkovski

D15, Slovenian NMR Centre

Četrtek / Thursday, 23.4.2020 ob / at 13.00 na /on WEBEX

Meeting link:

<https://ki-si.webex.com/ki-si/j.php?MTID=m7fcf2cdfaa6bba22f162e8e6c6ea54e2>

Meeting number: 145 989 235 / Password: forum40 / Host key: 309334

Non-canonical nucleic acid structures and their interactions with small molecules: NMR-based perceptions

While initially considered as curiosities, non-canonical structural motifs came to the spotlight upon noting their roles in crucial biological processes, including maintenance of genome integrity, gene expression as well as DNA replication and recombination. Among the intriguing forms of nucleic-acids, special interest is drawn to four-stranded helical structures G-quadruplexes and i-motifs adopted by G- and C-rich DNA, respectively. Segments exhibiting the potential to form G-quadruplex and i-motif structures are widespread across (human) genomes, being enriched in regulatory regions, e.g. (onco)gene promoters, telomeres and immunoglobulin switch regions. The susceptibility of G- and C-rich DNA features to (micro)environmental conditions appears to suit well to a number of molecular pathways, while also represents a linchpin for several diseases. The presentation will focus on NMR studies of non-canonical structures formed in equimolar mixtures of G- and C-rich DNA strands and assessment of G-quadruplex interactions with small molecules, in particular cosolutes and potential therapeutics.

Koordinator / Host of the event:
Dr. Petar Djinović



Vljudno vabljeni / Kindly invited