26 AUG

11.30 A.M.
ROOM A208
POVO 1

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FULL PROFESSOR – MOLECULAR BIOLOGY AND GENETIC F– ACULTY OF CHEMISTRY, VUT, BRNO

A comparative analysis of G-Quadruplexes in viral genomes

G-quadruplexes (G4s) are non-canonical nucleic acid structures that play a pivotal role in **regulating essential molecular processes**. Their potential as targets for antiviral therapies has garnered increasing attention. We performed a comprehensive **analysis of putative G-quadruplex-forming sequences (PQS) across all viral genomes** currently available in the NCBI database, including subviral agents. Using the **G4Hunter algorithm**, we screened **over 11,000 viral genomes** totaling approximately **350 Mbp**. Our findings reveal that PQS distribution varies significantly among viral evolutionary groups. G-quadruplexes may play a **regulatory role** in viral replication and lifecycle control. The distinct localization of PQS highlights their potential as molecular targets for therapeutic intervention, offering **new avenues for antiviral strategy development.**

CIBIO EXTERNAL SEMINAR

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