Genomic, transcriptomic and proteomic consequences of dsRNA viruses on host cell are interpreted as model framework to establish universal mechanisms behind any virus of interest, so creating a paradigm network for virus-host interactions. Totiviridae family viruses from yeast Saccharomyces cerevisiae and closely related yeast are being investigated by means of modern molecular biology techniques, involving advanced level manipulations on genomic material, its cloning, sequencing and further comparative analysis. We aim at understanding of intra- and extracellular relations of yeast dsRNA viruses in order to elucidate evolutionary pathways of these viruses and uncover principles of distribution within an ecosystem.

Nucleoside/nucleotide based antivirals constitute an essence of modern high efficacy antiretroviral (HIV, for instance) treatment. While being a game-changer treatment upon discovery, nowadays it suffers from emerging resistance and multiple side effects due to life-long administration. Recently, innovative and more advanced measures against genuine retroviral replication enzymes have been proposed and substantiated. The aim of our research is to develop compounds active at level of catalytic cycle of retroviral replication enzymes, linking an exclusive specificity and efficacy into binding approach.
Meet our team

PI:
Dr. Saulius Serva

PhD students:
Aleksandras Konovalovas
Algirdas Mikalkėnas
Lina Aitmanaitė

Bachelor and Master level students

Research outcomes

Group participates in a number of collaborations, both at leading or partnership positions in diverse programs: National Research Programme, Global Grants, Researcher teams’ and Challenge ideas.


- Serva, S., Lagunavičius, A. Direct conjugation of peptides and 5-hydroxymethylcytosine in DNA. Bioconjugate Chem. 2015, 26, 1008–1012. DOI: 10.1021/acs.bioconjchem.5b00165.


Contacts

Dr. Česlovas Venclovas
Department of bionformatics

Phone: +370 5 239 8244
Fax: +370 5 239 8231
E-mail: saulius.serva@gf.vu.lt

More about center: jgmc.vu.lt/en