

# BBB seminar (BMED380)

Thursday, April 21, 14.30, at the BBB, Auditorium 4



## Fantastic enzymes and where to find them

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Viruses are microscopic infectious agents, usually much smaller than bacteria, that can only replicate inside living cells exploiting the machinery of their host organisms. While viruses are best known as human pathogens causing diseases ranging from flu to Ebola, different types of viruses can infect all forms of life from animals and plants to bacteria. Many of the viral enzymes are involved in the DNA and RNA processing and hence many of today's standard tools in biotechnology and molecular biology are derived from viral genes. With an estimated number exceeding  $10^{30}$ , and a short replication cycle, viruses represent the largest unexplored, genetic reservoir on the planet. The Horizon 2020 Virus-X project aims to explore the outer realms of this 'viroisphere' by searching out extreme microbial ecosystems such as hot Icelandic lakes and high-pressure arctic deep-sea vents to uncover novel genetic material with commercial potential. In this lecture, the key methods and challenges involved in establishing the pipeline from collecting virus samples to analyzing the structures and functions of the encoded enzymes will be presented. The potential of Virus-X results will be highlighted with specific examples of applications in Covid19 detection technologies.

Chairperson: Petri Kursula <petri.kursula@uib.no>, Dept. of Biomedicine