

VIRVOLT

VIRology Operational Laboratories for drug Testing



Newsletter

The 3rd workshop of VIRvOLT in Verona !



On May 6th, all the laboratories attended the workshop organized as part of the EU-RESPONSE consortium meeting. It provided an opportunity to introduce the representative of the Irish laboratory that will be joining us at the next External Quality Assessment (EQA), to discuss this EQA with bioMérieux and the sample logistics for the PROACT project with CEPHR, and finally to hear Jérémie Guedj from INSERM present the use of viral dynamic models.

June 2025#5

" Being part of the VIRvOLT network is a valuable opportunity to collaborate across Europe in strengthening public health systems. By advancing and standardizing RT-PCR testing for SARS-CoV-2, VIRvOLT helps improve diagnostic quality and laboratory capabilities. We're honored to contribute to this important initiative and to help translate its outcomes into broader applications in virology."

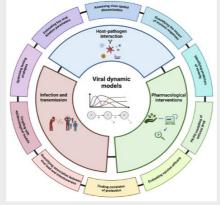
> Pr Monika Halánová Pavol Jozef Šafárik University, Faculty of Medicine in Kosice, Department Epidemiology/clinical biochemistry Discovery Investigator

Using viral dynamic models for drug evaluation

One of the features made possible by VIRvOLT is the collaboration with mathematical modelers to provide state of the art data analysis. During our annual meeting in Verona, Jérémie Guedj (INSERM, Paris) presented how mathematical models of viral dynamics can be used, in tandem with high quality virology data, to improve data analysis and identify more robust signals on drug antiviral activity.

He presented in particular the methods developed during the COVID-19 pandemics, where modelers provided critical insights on drug evaluations at the different stages of the pandemics. In the early stages, and before the implementation of clinical trials, simple well-established models of pharmacokinetics and pharmacodynamics can be used to accelerate drug evaluation and discard drugs with low expected antiviral activity *in vivo*.

During clinical trials performed in the DisCoVeRy trials, models were also instrumental to identify signals of antiviral activity of drugs on standardized viral load data in hospitalized patients. This is particularly relevant in the context of late-treated individuals, where the variability across patients in the stage of disease at treatment initiation, the immune background or the variant of infection can blur the evaluation of antiviral drugs.



Such approaches, coupled with VIRvOLT high-quality standardized data, hold the promise to improve the analysis of virological data and accelerate the therapeutic development of antiviral drugs !

NEXT STEPS

• 3rd EQA in October 2025



- Integration of new labs
- Look for potential collaboration with other networks

COMMUNICATION

POSTER

ESCV – September 2025, Greece Abstract submitted in May 2025

PAPERS

<u>Safety of baricitinib in vaccinated patients with severe</u> and critical COVID-19 sub study of the randomised Bari-<u>SolidAct trial</u> – January 2025

<u>sST2 is a key outcome biomarker in COVID-19: insights</u> <u>from discovery randomized trial</u> – April 2025



https://eu-response.eu/virology-network/



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