



In vivo high throughput preclinical pipeline for studying Andes virus

Provider: Czech Centre for Phenogenomics (CCP)

What service do we offer?

We provide an in vivo infectious disease research pipeline using rodent models, focused on investigating host-pathogen interactions and therapeutics evaluation.

User input: Mouse model selection, therapeutic compounds

Service output: Comparative infectious load assessment, rodent infectious phenotype, immunological analysis, physiological readouts

APPLY NOW!!



Included in the service:

This is included in the service provision by default.

The service includes in vivo infectious cohort preparation in BSL-3 conditions, tracking viral distribution in different tissues (PFA, bioimaging) and assessing accompanying changes in immune profiles (Flow Cytometry, ELISA, hemoanalysis) as well as physiological factors (lung function, cardiac function, histopathological analysis).

Additional support:

This can be provided on demand if there is ISIDORE funding available, or on a fee-for-service or collaborative basis and will require further negotiations with the applicant.

Advanced infectious phenotypization

We offer specialized services based on the requirements of complex projects. This can include development of new techniques and technologies, implementing published experimentation workflows or providing access to network of specialized scientists from different expertise. Additional support is based on individual requirements and requires further discussion.

Rat infectious model

Rodents are the natural hosts of the Andes virus. We are equipped to perform pathogenesis studies that specifically focus on host immune responses and pathophysiological outcomes during experimental infection.

Transgenic and specialized rodent models

With cooperation of the in-house transgenic unit, we are able to offer development and production of specialized transgenic rodents suitable for infectious disease research. Furthermore, we can provide relevant immunodeficient rodent models for studying host factors or immune-mediated disease mechanisms.

Who provides this service?

The Czech Centre for Phenogenomics (CCP) is a large, integrated research infrastructure that combines genetic engineering capabilities, advanced phenotyping and preclinical modalities, specific pathogen-free (SPF) animal housing and husbandry, and cryopreservation and archiving at a single location on the BIOCEV campus. This concentration of specialised infrastructure and expertise provides a unique and valuable resource for the biomedical and biotechnology research community.

CCP operates as an all-under-one-roof centre, bringing together an animal facility, transgenic unit, animal phenotyping platform, preclinical research capabilities, new approach methodologies, and dedicated infectious disease models. As a GLP-approved testing site, CCP is able to deliver complex, end-to-end solutions, including the design and generation of transgenic and alternative rodent models and validated experimental pipelines suitable for preclinical research.

The Models of Infectious Diseases module at CCP operates under BSL-2 and BSL-3 conditions, with substantial capacity for acute and chronic infection studies and infectious phenotyping. The unit provides comprehensive support for infectious disease research, from animal model development through preclinical compound testing and detailed infection profiling.



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[INFRAFRONTIER, the European Research Infrastructure for Modelling Human Diseases](#), is a non-profit organisation dedicated to advancing disease understanding and treatment through cutting-edge models. Operated by a [network of over 20 leading biomedical research institutes](#), it empowers research on human health and disease. Committed to excellence, INFRAFRONTIER adheres to rigorous scientific benchmarks and prioritises animal welfare. Through [collaboration with other infrastructures](#), it fosters global data sharing and contributes to tackling significant health challenges. INFRAFRONTIER serves as a platform for innovative technologies and knowledge exchange, leveraging the power of disease modelling to improve human health.