Discovery platform for antiviral drugs and diagnostics for high-risk pathogens in a BSL-3+ laboratory

In collaboration with the Medical University Graz and the computational biology company Innophore, acib is offering a powerful drug discovery and repurposing platform. The platform consists of an advanced computational modeling technology and of a high-end BSL-3+ laboratory for *in-vitro* drug testing and access to patient material including virus isolates.

BACKGROUND

The last Covid-19 pandemic demonstrated the need for rapid access to new drugs and diagnostics. By combining advanced computational modeling and a series of *in-vitro* assays established in a high-end BSL-3+ laboratory, available drugs and chemical compounds can be rapidly tested for antiviral activity including high-risk pathogens. The use of different *in-vitro* models along with cultured human organs (precision-cut organ slices) and human organ cultures reduces the need for animal models and provides a solid pre-clinical data base for drug repurposing and rapid clinical application.

TECHNOLOGY

We offer three phase *in-vitro* testing of antiviral drugs including evaluation of toxicity, evaluation of antiviral activity in different cell lines, and antiviral activity in cultured human organs (precision cut organ slices) and human organ cultures. The read-out is based on cytopathic effects, qPCR and plaque assays. In the high-end BSL-3+ laboratory, we can establish and characterize viral cultures from patient samples and test the relevance of different sub-strains. Viruses covered include influenza virus (H1N1 and H5N1), Mpox virus, Hanta virus, and SARS-CoV-2.

OFFER

We are offering pre-clinical R&D services and co-development of drugs and diagnostics against various types of high-risk pathogens including SARS-CoV-2, influenza, Hanta and Mpox virus. Additional offerings include diagnostics (including rapid diagnostics for field use), PPE, and decontamination technologies.

EXPERTS

Prof. Dr. Kurt Zatloukal
Dr. Christian Gruber

DEVELOPMENT STATUS:

Ready for external services

KEYWORDS

- Biological Safety Lab
- Structural Biology
- Computational Modeling
- *In-vitro* Drug Testing
- High-risk Pathogens
- Influenza
- Hanta
- Mpox
- SARS-CoV-2
- Patient Samples
- Diagnostics
- Personal Protective Equipment (PPE)
- Decontamination Technologies
- Human Organ Cultures

CONTACT

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