

# KPI-1: A Broad-Spectrum Antiviral Therapeutic against Respiratory Viral Pathogens

## Technology

Respiratory viral infections, including those caused by SARS-CoV-2, Influenza A and B, various other Coronaviruses, Metapneumoviruses, and Parainfluenza viruses, pose significant health risks globally. Our team has identified KPI-1, a natural endogenous protease inhibitor with potent activity against TMPRSS2, a critical protease involved in the cellular invasion by a broad spectrum of respiratory pathogens. KPI-1 has demonstrated effective inhibition of infections by not only SARS-CoV-2 and Influenza A virus but also a wide range of respiratory coronaviruses and other significant respiratory viruses *in vitro*. Thus, KPI-1 can serve as broad-spectrum prophylaxis or therapy against respiratory virus infections.

### Innovation

- Broad-spectrum antiviral agent
- Substance with no or low toxicity profile
- Different mode of action than approved medications
- Better efficacy than other naturally occurring protease inhibitors
- Less prone to induce viral resistance
- Biotechnological production straight-forward

### Application

- Prophylactic use against infections from Influenza A/B, SARS-CoV-2, Metapneumoviruses, and Parainfluenza viruses.
- Therapeutic application: Designed as a treatment option for individuals already infected with the aforementioned respiratory viruses.
- Inhaler Development: Advancing the formulation of KPI-1 for use in an inhaler delivery system, optimizing ease of use and targeting respiratory pathways directly.

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