High Throughput Screening Platform For Inhibitors of Viral Membrane Fusion

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Principal investigator

Ori Porat Avinoam

Faculty of Biochemistry
Department of Biomolecular Sciences

Overview

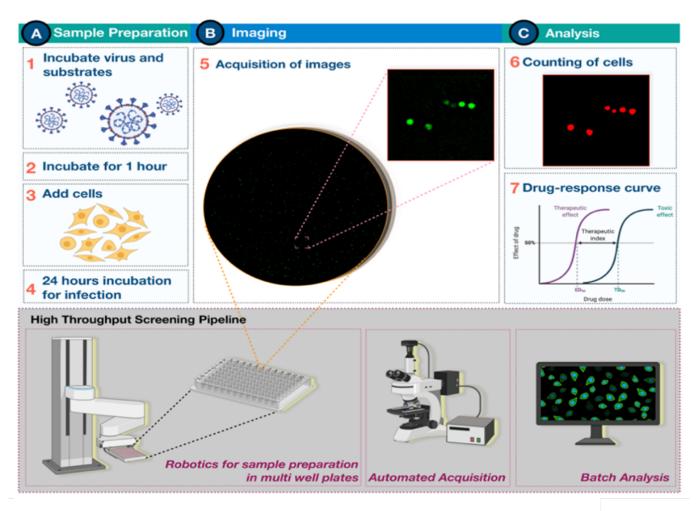
Emerging and re-emerging enveloped viruses, such as SARS-CoV-2, influenza, Nipah, and Ebola, continue to pose serious global health threats, with limited treatment options. A novel screening platform enables rapid discovery of small molecules that inhibit viral membrane fusion—a conserved and essential step in viral infection, offering a promising strategy to combat both current and future pandemics.

Applications

- High-throughput screening for viral membrane fusion inhibitors
- Discovery of novel antivirals targeting SARS-CoV-2 and related viruses
- Development of broad-spectrum antivirals against future pandemic threats
- Identification of small molecules with unique antiviral mechanisms
- Developing antivirals for animal infections, including feline viral diseases (e.g., FIP in cats)

Differentiation

- High signal-to-noise ratio and single-cell resolution
- · Automated, scalable platform suitable for high-content screening
- Targets a conserved viral mechanism, enabling broad-spectrum potential
- Discovery of compounds with novel mechanisms of action



Schematic showing the design of the HCS

Development Stage

~200,000 compounds screened using the platform. Several novel fusion inhibitors identified; hit-to-lead optimization currently underway.

Patent Status

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