# FNDR-11124: A novel broad-spectrum small molecule anti-viral targeting SARS-CoV-2 and pandemic influenza viruses.

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The COVID-19 pandemic led to millions of deaths globally and influenza has been estimated to cause 290000 to 650000 deaths per year globally. Currently, vaccination remains the most effective way to counteract COVID-19 and influenza, and only a few antiviral medications are available. The constant evolution and development of antiviral resistance by SARS-CoV-2 and influenza viruses is of great concern. Hence, there is an urgent need to develop broad-spectrum antiviral agents. We have recently discovered FNDR-11124 a novel, synthetic flavonoid compound with broad-spectrum *in-vitro* antiviral activity against SARS-CoV-2 and Influenza A (H1N1) and B, including subtypes of influenza A (H5N1, H2N3, and H7N9) with $IC_{50}$ ranging from 0.5 µM to 2.0 µM. FNDR-11124 is orally bioavailable and has a suitable PK and DM profile to progress into efficacy studies. In vivo, studies in the Syrian golden hamsters' infection model for SARS-CoV-2 have shown a significant reduction (~1.0 $Log_{10}$ $TCID_{50}$/Lung) in lung viral load and reduced virus-induced lung pathology. Similarly, FNDR-11124 resulted in 100% survival of BALB/c mice infected with a lethal dose of influenza (H1N1 A/Puerto Rico/8/34 (PR8) in both short-term (7 days) and long-term (21 days) models associated with a significant reduction in lung viral loads (>1.0 $Log_{10}$ $TCID_{50}$/Lung), and reduced virus-induced lung pathology.

Our data suggest that FNDR-11124 is a promising early lead compound suitable for optimization to deliver a broad-spectrum therapeutic molecule against SARS-CoV-2, influenza, and possibly, other respiratory viruses.