

Harmonic Pharma HPH561 and COVID-19 : Synopsis

HPH561 – a drug originally developed as an antifungal agent – was selected and revisited through the proprietary Harmonic Rediscovery platform. The resulting polypharmacology profile revealed an ensemble of biomolecular targets shared with haloperidol and clemastine, two repurposed drug candidates for COVID-19 treatment. Thus, HPH561 was tested against SARS-CoV-2 in an *in vitro* assay and showed a consistent antiviral activity.

Furthermore, the polypharmacological profile of HPH561 pointed out a biomolecular target involved in dampening inflammation as well as lung permeability and pulmonary edema.

At the cellular level, HPH561 has shown a lysosomotropism that is assumed to lead to a significant decrease in viral load or no SARS-CoV-2 infection of airway epithelial cells.

In addition, it has been reported that HPH561 shows a high affinity for SARS-CoV-2 papain-like protease (PLpro) – an essential coronavirus enzyme that is required for processing viral polyproteins to generate a functional replicase complex and enable viral spread.

Altogether, the current biological properties associated with HPH561 make this repurposed drug a potential candidate of high interest to treat COVID-19.

About Harmonic Pharma

The company originates from LORIA* and is based at Ecole des Mines, campus ARTEM, in Nancy, France. Harmonic Pharma has developed a unique technology based platform and its works are published in peer-review scientific journals and patents. The company has been collaborating with Institut Curie and Gustave Roussy in the oncology area. Harmonic Pharma is a SEQENS'Lab partner.

* LORIA is the French acronym for the “Lorraine Research Laboratory in Computer Science and its Applications”

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