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## **A major breakthrough in the fight against Covid19**

Alphanosos is a French Green-Health DeepTech company, specialized in the research of new innovative treatments. The company has developed proprietary artificial intelligence to elaborate, from aqueous botanical extracts, highly effective products against viruses, bacteria or cancer cells. This innovative approach tackles the most resistant pathologies thanks to its active ingredients, capable of unbalancing and eliminating the pathogenic target without impairing the host.

Artificial intelligence makes it possible to identify among  $10^{40}$  mixing possibilities of 1000 plants preselected for their safety, the one mix that will act against the pathogen target but not against the host organism. The target is thus subjected to massive perturbations by a large number of highly diverse molecules, each at low dosage but acting together to empirically obtain the desired effect on the target organism. This is the principle of multitherapy "raised to the power of 10".

This approach has already demonstrated its effectiveness with in vitro experiments on *Staphylococcus aureus*, which is multi-resistant to powerful antibiotics. This activity has been confirmed with in vivo tests by achieving 100% survival of treated mice versus 100% mortality of untreated mice after induced sepsis.

Today, Alphanosos discovered an effective product against SARS-Cov2 that has achieved superior efficacy relative to the best drug candidates. Without toxic risk, affordable, easy to manufacture and supported by convincing research results, this product brings a breakthrough innovation in the fight against COVID19. This French product revives the French experimental discovery tradition that Claude Bernard embodied in his time.

Developed from common edible plants, the non-toxic and easy-to-produce W17P4690 will enter animal testing mid-February. A clinical study is envisaged for March. The product will be available in May.

The company Alphanosos is now looking for support to finalize its development and accelerate its contribution to controlling the COVID19 crisis.

## About Alphanosos

Alphanosos, a French Green-Health DeepTech company, was founded in 2014 by Pascal Mayer and Daniel Valtueña Maestre. They were joined in 2020 by Jacques Chevallet. The company is based in Riom, France. It is supported by the Rhône-Alpes region, BpiFrance and private investors.

The mission of Alphanosos: Compose by Artificial Intelligence (AI) complex mixtures of edible plant extracts with high activity against bacteria, viruses or cancer cells.

Pascal Mayer holds a PhD in biophysics from the Louis Pasteur University of Strasbourg and is the inventor and co-inventor of a dozen patents, including those now held by ILLUMINA® on a massively parallel sequencing technology that has enabled 90% of the world's DNA to be sequenced. He is also a biofilm specialist. Thanks to its expertise, Alphanosos has developed its own AI to compose highly effective products against pathogens.

Starting from common and edible aqueous extracts guarantees safety and universal access to the product. Then, a multi-therapy approach, as in heavy pathologies such as HIV and cancer but here "brought to the power 10" by AI, brings efficiency and tolerance.

The mode of action is based on multiple and complex perturbations that will unbalance rudimentary (bacteria, virus) or disturbed (cancerous or infected cell) targets: we speak of massive networked polypharmacology. The AI selects among the  $10^{40}$  possible compositions the one that will act against the target pathogen but not against the robust host organism.

The design process is reversed: we no longer start from a reductive pharmacological hypothesis but directly from "hypothesis free" experiments with results investigated by AI to navigate natural complexity and discover innovative treatments. We revisit with AI what had, in the past, led to the greatest medical discoveries such as antibiotics. Alphanosos has already developed treatments for pathologies as diverse as atopic dermatitis, gonorrhoea and pyoderma in dogs, each of which have the common point of involving pathogens.

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