

## Pharnext Announces Identification of a Large Set of Frequently Prescribed Drugs to be Repurposed for Fighting COVID-19, Using its Pleotherapy™ Platform

- *A novel strategy to rapidly reposition drugs using existing COVID-19 clinical data*
- *Methods, findings and proposals from Pharnext are available at [Preprints.org](https://www.preprints.org) (<https://www.preprints.org/manuscript/202003.0302/v1>) and awaiting peer review*

**PARIS, France, 7:30am, March 23, 2020 (CET) – Pharnext SA (FR0011191287 - ALPHA)**, a biopharmaceutical company pioneering a new approach to developing innovative drug combinations based on big genomic data and artificial intelligence, today announced the identification of 97 frequently prescribed drugs as potential candidates to be repositioned for treating COVID-19 through the use of its Pleotherapy™ platform.

In a pandemic emergency situation, the repurposing of already-known drugs is a method of choice prior to vaccine development. Various drug repositioning efforts are ongoing worldwide. However, the understanding of COVID-19, a disease that emerged less than four months ago, is highly limited. To respond to the urgency, especially as it may take up to a year before a vaccine is available to patients, Pharnext applied an original strategy based on its experience in complex disease mechanisms and bioinformatics methods in order to find drugs to modify the disease more immediately.

Once a virus enters human cells, it utilizes the cellular machinery to its advantage, allowing the virus to proliferate within the human host. Pharnext's strategy was to evaluate which part of this machinery is affected by coronaviruses (e.g., COVID-19, SARS, MERS). This allowed the Company to identify already approved drugs for common diseases, which can also potentially impair the COVID-19-related viral process. In total, Pharnext identified 97 candidate drugs, most of which are not known to have antiviral activities. In addition, four of the drugs Pharnext identified using its methodology are already undergoing clinical trials for COVID-19, including chloroquine.

A large group of the identified repositioning candidate drugs were originally developed and used for frequent medical conditions such as type 2 diabetes and hypertension. It happens that the individuals suffering from these diseases have some of the highest risks to evolve towards severe forms of COVID-19. This suggests, besides multiple potential reasons linking these pathologies and an outcome of COVID-19 infection, a biological link between these common diseases, sensitivity to COVID-19 and the drugs Pharnext has identified.

Pharnext's strategy of focusing on already approved drugs for common diseases as repositioning candidates (e.g., statins, anti-diabetic and anti-hypertensive drugs) results in two significant advantages:

1. Quickly prioritizes the best candidates by comparing COVID-19 evolution among patients taking these drugs vs. patients not taking these drugs, through big data analysis of medical records ("real-world evidence" testing), to rapidly launch further confirmatory studies.
2. Provide to the population: The rapid spread of the COVID-19 virus calls for a rapid response. Once proven effective, the top candidates could be made immediately available as they are already produced to treat common diseases.

*"Pharnext is dedicated to identifying potential drugs that may be repurposed to treat COVID-19," said Daniel Cohen, M.D., Ph.D., co-founder and Chief Executive Officer of Pharnext. "From our Pleotherapy approach,*

*which can be applied to any disease, Pharnext has conceived a method enabling a rapid drug repositioning to fight COVID-19. A coordinated international effort is urgently needed to mutualize i) comprehensive COVID-19 patient data and ii) confined facilities suited for significant experimental testing. For the sake of patients and our communities, we hope that the biopharma community and health regulatory agencies worldwide can work together to find a way for ultra-fast approval tracks for these and other therapies.”*

Candidate drugs proposed by Pharnext need to be further tested for confirmation, as mono- or polytherapy, following two parallel processes for an accelerated preclinical evaluation and clinical development: 1) standard preclinical disease models and 2) “real-world evidence” testing, whereby big data from medical records are used to compare COVID-19 patients, who are already taking these candidate drugs.<sup>1</sup>

Hydroxychloroquine, Chloroquine and Azythromicine have generated encouraging results in clinical trials, which have also been identified by Pharnext’s approach.

Pharnext is currently evaluating various options to validate its initial findings as well as to further advance the work towards a treatment for COVID-19 through various collaborations.

### About COVID-19

COVID-19 is a respiratory disease caused by the SARS-CoV-2 (nCoV-2019) virus, a coronavirus like MERS-CoV and SARS-CoV, which first emerged four months ago in Asia, and which has infected more than 260,000 individuals and caused more than 11,000 deaths worldwide according to the latest World Health Organization report. As of today, there are no approved treatments against COVID-19 and vaccines are still in their early development.

### About Pharnext

Pharnext is an advanced clinical-stage biopharmaceutical company developing novel therapeutics for orphan and common neurodegenerative diseases that currently lack curative and/or disease-modifying treatments. Pharnext has two lead products in clinical development. PXT3003 completed an international Phase 3 trial with positive topline results for the treatment of Charcot-Marie-Tooth disease type 1A and benefits from orphan drug status in Europe and the United States. PXT864 has generated encouraging Phase 2 results in Alzheimer’s disease. Pharnext has developed a new drug discovery paradigm based on big genomic data and artificial intelligence: PLEOTHERAPY™. Pharnext identifies and develops synergic combinations of drugs called PLEODRUG™. The Company was founded by renowned scientists and entrepreneurs, including Professor Daniel Cohen, a pioneer in modern genomics, and is supported by a world-class scientific team. More information at [www.pharnext.com](http://www.pharnext.com).

Pharnext is listed on the Euronext Growth Stock Exchange in Paris (ISIN code: FR0011191287).

### Disclaimer

This press release contains certain forward-looking statements concerning Pharnext and its business. Such forward-looking statements are based on assumptions that Pharnext considers to be reasonable. However, there can be no assurance that the estimates contained in such forward-looking statements will be verified, which estimates are subject to numerous risks including the risks set forth in Pharnext’s document de base filed with the AMF on June 2, 2016, under number I.016-0050 as well as in its annual periodic management reports and press releases (copies of which are available on [www.pharnext.com](http://www.pharnext.com)) and to the development of economic conditions, financial markets and the markets in which Pharnext operates. The forward-looking statements contained in this press release are also subject to risks not yet known to Pharnext or not currently considered material by Pharnext. The occurrence of all or part of such risks could cause actual results, financial conditions, performance, or achievements of Pharnext to be materially different from such forward-looking

---

<sup>1</sup> Pharnext emphasizes that the drugs proposed as candidates from its novel methods and analysis have not yet completed preclinical or clinical testing with COVID-19 virus, which is needed to confirm efficacy and safety in COVID-19 patients prior to prescription and use.

statements. Pharnext disclaims any intention or obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events, or otherwise.

This press release and the information that it contains do not constitute an offer to sell or subscribe for, or a solicitation of an offer to purchase or subscribe for, Pharnext shares in any country.

## Contacts

### Pharnext

Daniel Cohen  
Chief Executive Officer  
[contact@pharnext.com](mailto:contact@pharnext.com)  
+33 (0)1 41 09 22 30

### Media Relations (Europe)

Ulysse Communication  
Bruno Arabian  
+33 (0)6 87 88 47 26  
[barabian@ulyse-communication.com](mailto:barabian@ulyse-communication.com)  
Pierre-Louis Germain  
+33 (0)6 64 79 97 51  
[plgermain@ulyse-communication.com](mailto:plgermain@ulyse-communication.com)  
+33 (0)1 81 70 96 30

### Financial Communication (France)

Actifin  
Stéphane Ruiz  
[sruiz@actifin.fr](mailto:sruiz@actifin.fr)  
+33 (0)1 56 88 11 15

### Investors Relations (U.S.)

Stern Investor Relations, Inc.  
Jane Urheim  
[jane.urheim@sternir.com](mailto:jane.urheim@sternir.com)  
+1 212 362 1200

### Media Relations (U.S.)

Rooney Partners  
Kate Barrette  
[kbarrette@rooneyco.com](mailto:kbarrette@rooneyco.com)  
+1 212 223 0561