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## **Owkin announces a new collaboration to identify High Immunogenic Epitopes and Candidates for COVID-19 and Coronaviruses Future Vaccines.**

November 24, 2020, New York -- Owkin, a startup company that deploys artificial intelligence (AI) and Federated Learning (FL) technologies to augment medical research, accelerate drug development and enable scientific discoveries, announces a collaboration with the Institut Pasteur, a private, non-profit foundation whose mission is to help prevent and treat diseases, mainly those of infectious origin, through research, teaching, and public health initiatives.

This collaboration will focus on developing a new machine learning model capable of identifying COVID-19, and more generally, any coronaviruses, protein sequences (as known as epitopes) with high immunogenic potential that could be used for peptide-based future vaccines. The machine learning models' performance will be compared to existing models currently not taking into account the critical biochemical properties of such epitopes. Based on the challenges of such a current COVID-19 pandemic and the need for a vaccine, we are focusing our effort on defining peptides expressed by all present strains of the actual COVID-19 virus and any future human coronaviruses.

*"We are really happy to start this collaboration, for us it is an unprecedented opportunity to help the Institut Pasteur in the development of vaccines to fight COVID-19, and to bring our machine learning technology to the bench to help to find a solution to one of the most difficult medical challenges today."* says Mikhail Zaslavsky, Chief Research Officer at Owkin.

### **About Owkin:**

The French-American startup, which was co-founded in 2016 by Dr. Thomas Clozel, a clinical research doctor and former assistant professor in clinical hematology and Gilles Wainrib, Ph.D., a pioneer in the field of artificial intelligence in biology, has raised \$74 million USD in venture capital.

Owkin connects several of the largest medical research centers and pharmaceutical companies in Europe and the U.S. within a federated research ecosystem. Owkin has developed four key components to build this ecosystem: Owkin Loop (the network), Owkin Connect (the technology infrastructure), Owkin Studio (the AI software tool) and Owkin Lab (the integrated medical and AI expertise).

Owkin Connect is a privacy-preserving, traceable, secure technology that allows the company to connect with research centers in the Owkin Loop network. Using Owkin Connect's federated learning approach, the data do not move, only algorithms travel. This enables insights from the data to be collectively shared while guaranteeing privacy for patients and compliance with data ownership.

In October 2019, Owkin published [in Nature Medicine](#) its breakthrough analysis of tumor biology using an interpretable deep-learning model, called MesoNet. In February 2020, [Hepatology](#) published Owkin's novel deep learning models to predict survival after hepatocellular carcinoma resection from histology slides. Most recently, in May 2020, following a winning entry to the data challenge organized last October

by the [Société Française de Radiologie et d'imagerie médicale \(SFR\)](#), Owkin published its methodology to automatically measure muscular area from CT scans to assess sarcopenia in [Diagnostic and Interventional Imaging](#). In August 2020, Owkin published its novel genomic analysis tool (HE2RNA) in [Nature Communications](#).

For more information, please visit [www.owkin.com](http://www.owkin.com), follow @OWKINscience on Twitter, contact Anna Huyghues-Despointes: [anna.hd@owkin.com](mailto:anna.hd@owkin.com)