

## Press release

Paris, September 21<sup>st</sup> 2020

# Startup Magic LEMP wins the AI4Curie challenge

Institut Curie and Swiss Life are pleased to announce the result of the challenge, launched last January, to identify a project aimed at better predicting, through AI, the response to immunotherapy treatment for patients with lung cancer. The jury - following the auditions held on September 16<sup>th</sup> - selected the startup Magic LEMP for its project "CaPriCoRN". The implementation of the selected project should start at the end of the year on the premises of Institut Curie with a financial support of 60,000 euros granted by Swiss Life. The winners will be supported by the best experts to set up their proof of concept (or POC).

### The winning startup and its "CaPriCoRN" project

Magic LEMP, startup selected for its "CaPriCoRN" project (Calibration of Neuron Network Constructed Immunotherapy Protocols) develops new machine learning and AI approaches to solve complex problems in many areas. It focuses on the explainability of its algorithms, a concept that is at the heart of the project presented to the AI4Curie jury. It is this explainability that made the difference among all the candidates, as explained by **Dr Alain Livartowski, oncologist and advisor to the Data Director of Institut Curie**: *"Today, what is not explained is why, for the same tumor and the same treatment, some patients respond and heal, while others do not and develop toxicities. Explainability will allow us to understand this in order to progress in the understanding of the disease and the response to treatment."*

The project proposed by the startup will enable doctors to make a personalized decision based on patient data, as is pleased to note the president of the jury, **Pr Nicolas Girard, lung oncologist at Institut Curie and head of Institut du Thorax Curie-Montsouris**: *"As a medical oncologist, we are required to make complex decisions every day by integrating all patient data. The project proposed allows us to formalize these elements with one objective: improve the care of our patients."*

It is important to emphasize the importance of this data: the data generated during routine care for a patient are "real life data". Once extracted from computerized patient records and analyzed by Artificial Intelligence (AI) methods, it helps in the choice of medical decisions. Today, health data can save lives. In oncology, treatments are evolving rapidly and analyzing this "real-life data" is critical.

### AI4Curie, a challenge carried by two longstanding partners

*"I was particularly impressed by the high level projects presented at the audition, but only one had to be chosen; I am now looking forward to following the project in question. It was quite legitimate for us to be associated with such a challenge, on the one hand because we have been a great supporter of Institut Curie over the years through various projects and, on the other hand, because we feel we have a societal role to play as a health insurer"* said **Pierre François, CEO of SwissLife Prévoyance et Santé and member of the AI4Curie jury**.

On January 22<sup>nd</sup>, Institut Curie and Swiss Life officially launched this challenge for startups and researchers specializing in AI who had to answer a clinical question: *"Is it possible to predict the response to immunotherapy treatment based on the analysis of images of patients with lung cancer?"* - a promising treatment that is still not effective for all patients.

Candidates had until the end of April to submit their applications, but this deadline was extended to June 30<sup>th</sup> due to the COVID-19 health crisis. The jury composed of experts in

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oncology and artificial intelligence, among others, and chaired by Pr Nicolas Girard, selected three startups to audition.

This partnership was a first for the insurer, a key player in the health sector, thanks to which it reaffirmed its societal role. Swiss Life supports its clients throughout their lives, even in difficult times. This is why, since #LivingLonger is one of the fundamental components of its purpose, Swiss Life naturally joined forces with Institut Curie, its long-time partner, to launch this major challenge.

Institut Curie is a world leader in the fight against cancer. The MC21 project for Marie Curie in the 21<sup>st</sup> century, aims to do everything possible to ensure that tomorrow's post-cancer world will be a reality for every patient. One of the first milestones of the MC21 project was the creation of the Center for Cancer Immunotherapy, which brings together researchers, doctors, caregivers and patients in a single location. In addition, Institut Curie joined forces with Institut Mutualiste Montsouris (IMM) to create the Institut du Thorax Curie-Montsouris, in order to offer patients comprehensive and coordinated care. Finally, to accompany the revolution in health data, Institut Curie has created a cross-functional structure, the Data Department, which supports its researchers and physicians in structuring, making available and promoting health and research data. Today, Institut Curie is at the forefront of the use of data and artificial intelligence to improve research and patient treatment.

### **Artificial intelligence at the service of immunotherapy: a revolution announced for cancer research and patient treatment**

*"AI is a revolution for cancerology because it will allow us to better classify tumors, better predict treatment response and improve prognosis,"* said Dr. Alain Livartowski.

In this age of artificial intelligence, it is essential to work with these masses of data, i.e. to identify and interpret them. This is the case at Institut Curie, which has 500,000 patient files and is a pioneer in the computerization of clinical data. Medical records have been computerized there for over 20 years and there is a shared medical record that structures medical information in a precise way to provide usable quality data.

### **Lung cancer: the priority is to keep personalizing treatments and innovate in order to reduce mortality**

Every year, more than 31,000 men and more than 15,000 women are affected by lung cancer. Second cause of cancer for men, after the prostate, and third cause of cancer for women, after the breast and colon-rectum, it occurs on average at the age of 66 and remains the leading cause of cancer mortality in France with more than 33,000 deaths each year, notably due to tobacco.

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### About Swiss Life

Swiss Life is a leading player in insurance and wealth management, with a recognized positioning as a private management insurer. Our approach is global in private banking, financial management, as well as in health, provident and property and casualty insurance. A global approach, because the essence of our business is to accompany each individual's private and professional life, and to build every day a lasting relationship with each of our clients, both individuals and companies. Our personalized advice, based on proximity and mutual trust, enlightens our clients so that they can make their own choices and be fully involved in their lives, at every stage. By acting responsibly in this way, Swiss Life fulfils a societal role that is a source of pride for its employees and sales forces.

[swisslife.fr](http://swisslife.fr)



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### About Institut Curie

Institut Curie, France's leading cancer center, combines an internationally-renowned research center with a cutting-edge hospital group that treats all types of cancer, including the rarest. Founded in 1909 by Marie Curie, Institut Curie employs 3,500 researchers, physicians, and health professionals across three sites (Paris, Saint-Cloud, and Orsay), working on its three missions: treatment, research, and teaching. A private foundation with public utility status, Institut Curie is authorized to receive donations and legacies, and thanks to the support of its donors, is able to make discoveries more quickly, improving treatments and quality of life for patients. [curie.fr](http://curie.fr)

### Press contacts

#### Institut Curie

Catherine Goupillon - 06 13 91 63 63 - [catherine.goupillon-senghor@curie.fr](mailto:catherine.goupillon-senghor@curie.fr)

Myriam Hamza – 06 45 87 46 51 - [myriam.hamza@havas.com](mailto:myriam.hamza@havas.com)

#### Swiss Life

Véronique Eriaud - 06 18 64 33 19 - [veronique.eriaud@swisslife.fr](mailto:veronique.eriaud@swisslife.fr)

Pascale Nesci - 06 33 97 35 69 - [pascale.nesci@swisslife.fr](mailto:pascale.nesci@swisslife.fr)

Nassim Guessous - 01 85 09 27 14 - [nguessous@lebureaudecom.fr](mailto:nguessous@lebureaudecom.fr)

Laure Curien - 01 85 09 27 15 - [lcurien@lebureaudecom.fr](mailto:lcurien@lebureaudecom.fr)