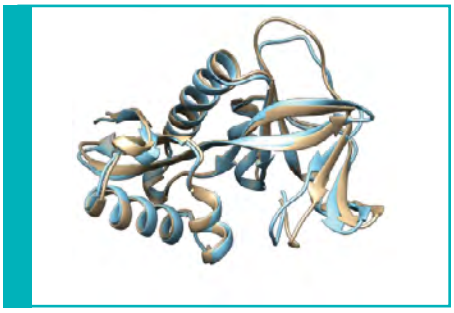
Fondation
Hôpital Charles-LeMoyne
A + for your Hospital

RESEARCH CHAIR:

PUTTING ARTIFICIAL INTELLIGENCE TO WORK IN THE FIGHT AGAINST ANTIBIOTIC RESISTANCE



Every day, infections that were once benign are becoming deadly due to antibiotic resistance. At Hôpital Charles-Le Moyne, we have a solution: combining artificial intelligence and microbiology to revolutionize the fight against this silent pandemic.

An innovative approach

AI makes it possible to precisely predict the structure of the proteins responsible for antibiotic resistance, even when their genetic sequences are quite different.

This approach will help to better understand the evolution of antibiotic resistance and could contribute to developing new strategies to fight it.

Fondation Hôpital Charles-LeMoyne is pulling out all the stops to support Dr. Louis-Patrick Haraoui and his team in their efforts to stop the growth of antibiotic resistance by discovering effective ways to care for patients from here, in the Montéregie, and contributing to international advances.

To respond to this urgent challenge, the Foundation has committed to raising **$1.7 million** to create a Research Chair and a leading-edge microbiology and social science research lab.

YOUR DONATION WILL TRANSFORM LIVES

You'll be part of a research and university teaching revolution at Hôpital Charles-Le Moyne!

CONTEXT

- No new class of antibiotics has been developed since 1987.
- Since 1998, antibiotic prescriptions have increased by 36%.
- 26% of infections were resistant to antibiotics in 2018. This rate could reach 40% by 2050.
- Infections caused by antibiotic-resistant bacteria double the risk of death.
- By 2050, the number of deaths caused by antibiotic resistance will be equal to that of cancer deaths today.
- Common medical procedures are compromised, such as: dialysis, joint replacements, chemotherapy and caesareans.
- Antibiotic resistance costs the health system and the economy billions of dollars.

IMPACTS in microbiology and social science

- **Understanding** how health, the economy, the environment and food safety influence the emergence and spread of antibiotic resistance.
- **Participating in improving knowledge** in order to prevent the risks associated with antibiotic resistance.
- **Offering the best health care possible** to patients in the Montérégie.
- **Attracting and training students** in medicine, microbiology and social science.

STRENGTH

At Hôpital Charles-Le Moyne, we have the privilege of counting on the expertise of Dr. Haraoui, an internationally renowned researcher, and his research team.

VISION

By creating the Research Chair and the laboratory, Hôpital Charles-Le Moyne will strengthen its role as leader in Montérégie and its international profile.

DR. HARAOUI'S DREAM

"The molecular biology and social science laboratory—the first in Canada—will be a major research hub, allowing us to push the boundaries of medical research."

– Dr. Louis-Patrick Haraoui

Medical Microbiologist and Infectious Disease Specialist
Hôpital Charles-Le Moyne

Associate Professor
Faculty of Medicine and Health Sciences Université de Sherbrooke

Clinical Research Scholar
Fonds de recherche du Quebec – Health

Member
Canadian Institute for Advanced Research (CIFAR)

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