

The effect of statins influenced by gene profiles

October 28 2014, by Julie Chevrete

The Montreal Heart Institute Research Centre is once again pushing the limits of knowledge in personalized medicine. A meta-analysis combining the results of several pharmacogenomic studies and involving over 40,000 research subjects now makes it possible to demonstrate a different response to statins according to the patient's gene profile. This important contribution of two Montreal researchers from the Montreal Heart Institute (MHI), Dr. Jean-Claude Tardif, Director of the Research Centre and Dr. Marie-Pierre Dubé, Director of the Pharmacogenomics Centre, was the subject of a scientific publication released today in the prestigious journal *Nature Communications*.

"Once again, the Montreal Heart Institute and its team of committed doctors, researchers and professionals stand out as world leaders in the fight against cardiovascular diseases. This research project benefitted from our participation in this international consortium, leveraged by our knowledge and our pharmacogenomic laboratory dedicated to the search for innovative treatments in the fight against heart disease. Today, these advances make it possible to identify a different response to a statin commonly used to reduce LDL-cholesterol (bad cholesterol), according to the individual's gene profile. And for the first time, two genomic regions (loci) have been identified as determining locations for responses to a statin," said Dr. Tardif.

Patients will benefit considerably in the medium and long term from these findings and innovations as the [medical practices](#) used to treat [heart disease](#) are transformed to allow each patient to receive suitable

treatment. This is another of the MHI researchers' tangible contributions to the transformation of medical practices in the treatment of cardiovascular diseases.

Keep in mind that more than 1.3 million Canadians suffer from cardiovascular diseases, which are the world's primary cause of hospitalization and death. These diseases also put the greatest burden on our health system, with health costs nearing \$22 billion per year.

Provided by Montreal Heart Institute

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