

Method for determining the predisposition of patients to toxicity or lack of efficacy of a drug

Technology

New assays (predictive testing) for the presence of specific genetic variations used in personalized drug treatment.

This information could help medical teams make personalized drug treatment decisions for patients with altered metabolism for uridine diphosphate glucuronosyltransferase (UGT) substrates, potential drug-drug interactions, and adverse/side effects, as well as diseases that result from environmental or occupational exposure to toxins.

The present invention relates to additional genes involved in the metabolism of irinotecan (a chemotherapeutic agent used in the first line treatment of colorectal cancer) and a most of other widely used drugs.

Applications

- Developing predictive tests that will identify those individuals likely to require particular drug doses, to those likely to suffer adverse drug reactions.
- Detection of a predisposing gene for drug-averse reaction
- Detection of a patient genetic make up associated with improved response to drug therapy
- Detection of a patient genetic make up associated with susceptibility to diseases

Competitive advantages

- Assessment of genetic profiles in Uridine diphosphate glucuronosyltransferase UGT metabolizing genes:
- Non invasive method
- Reduction of side effects and optimisation of patient response to therapy.
- Can be applied to a most of therapeutic drugs, xenobiotics (carcinogens) and endobiotics (hormones)

State of development

- In vitro characterisation of genetic variants completed
- Pharmacogenetic-pharmacokinetics study in healthy volunteers completed

Business opportunity

Université Laval is seeking partners to either scale-up for specific uses, commercialize or licence this technology.

Intellectual Property

Patent pending

CA: 2505410, US:20060183119, EP: 1546407A2

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Chantal Guillemette.

Contact

Najat Aattouri Ph.D.

Research Management Advisor

418.656.2131 #2576

najat.aattouri@vrr.ulaval.ca



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