Vall d'Hebron
Institut de Recerca
VHIR

Technology Offer
Ref.: VHIR/III-NS13-01

A new biomarker to predict the response to thrombolytic treatments

It has been identified a new indication for a plasma biomarker, which is able to predict the response to thrombolytic treatments. This allows to administer the correct therapy at early time points and therefore avoid poorer outcomes. The methodology to determine the levels of this biomarker has also been developed. Partners to establish licensing or co-development agreements are sought.

The Need

Stroke, or cerebrovascular accident (CVA) is the most prominent vascular occlusion disease in the industrialized world. It is usually managed in the clinic with thrombolytic therapy, like tissue Plasminogen Activator (tPA), but a number of patients fail to respond to this treatment. This is translated into larger infarcts and poorer outcomes, so biomarkers to quickly predict if patients suffering a stroke will respond to thrombolytic therapy are needed.

The Solution

A new function of a diagnostic marker of several pathologies has been found. Surprisingly, the levels of this plasma biomarker are a valuable tool to assess the likelihood to respond to thrombolytic treatment in patients suffering from CVA. Thus, low levels of this biomarker in stroke patients are an indication that there is a high probability to respond to tPA. Additionally, the means to detect this biomarker in an isolated sample from patients have been developed.

Innovative Aspects

✓ Although some biomarkers with diagnostic and prognostic value have been proposed in the scientific literature, such as S100B, matrix metalloproteinase-9 (MM-9) or von Willebrand factor, none of them have reached the market.

✓ In contrast with the aforementioned biomarkers, this one also predicts recanalization, which avoids to proceed with further invasive physical means of recanalization.

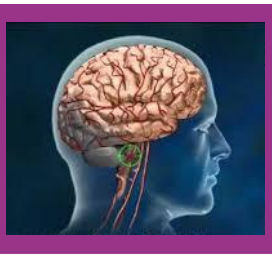
Stage of Development

The results were validated in a significant number of stroke patients that were prospectively recruited from an emergency department, where they were accepted for treatment with tPA. The methodology to determine the levels of this biomarker has been also described.

Target Market

Point of care units, as early intervention needs to be done.

Schematic representation of tPA breaking down a blood clot



The intravenous administration of tPA must be started within 3 hours of the onset of stroke symptoms

IP rights

EP priority application

Portfolio of technologies

www.vhir.org/innovacio

We are looking for…

Partners to establish co-development or licensing agreements in order to commercialize the technology.

Contact details

Innovation Unit
Vall d'Hebron Research Institute (VHIR)
Passeig Vall d'Hebron, 119 – 129
08035 – Barcelona
Tel. 934 893 000 (ext. 4844)
direccio.innovacio@vhir.org
www.vhir.org