APOTRANSFERRIN TO TREAT STROKE

TECHNOLOGY APPROACH
This invention utilizes intravenous apotransferrin to prevent damage induced by permanent and also transient ischemic stroke.

BACKGROUND
Every year, 15 million new stroke cases occur worldwide (source: WHO). Despite our present knowledge of the pathophysiology of brain ischemic events, stroke continues to be one of the leading causes of death and disability because we do not have effective therapies. Current stroke treatments are based on thrombus removal and these can be only prescribed for fewer than 20% of stroke patients. For this reason there is still a desperate need for effective stroke therapy, which clearly provides a very important opportunity to develop successful therapeutic strategies.

OUR RESULTS TO DATE
Our group has demonstrated that intravenous administration of apotransferrin sharply reduces brain damage (up to 75%) in 3 different rat middle cerebral artery occlusion (MCAO) models, including both transient and permanent ischemic stroke; it also improves the neurological impairment induced by stroke. Thus, this new approach may benefit not only stroke patients, who can be treated with current treatment to induce recanalization (transient stroke), but also the 80% of patients who cannot benefit from current therapies directed at inducing recanalization of the artery (permanent strokes).

The mechanism involved in protection by apotransferrin is different from those previously targeted in stroke.

Complete results upon CDA signature.

ADVANTAGES
- Identified mechanism of action.
- Apotransferrin is an endogenous protein used at physiological levels to treat stroke; this minimizes the risk of generating adverse reactions.
- Apotransferrin has been used for the treatment of patients on myeloablative therapy and shows good safety and tolerability data. Apotransferrin might be potentially used in both ischemic and haemorrhagic stroke.
- Apotransferrin administration is also beneficial in the absence of reperfusion or restoration of the blood flow. It provides an option for patients that cannot be treated with current strategies directed at recanalization of the artery occluded.
- Apotransferrin can be administered at the same time as a thrombolytic agent and/or during surgical intervention to remove the thrombus.
INTELLECTUAL PROPERTY

EU Grant
US, Canada Application

PRODUCT PROFILE

<table>
<thead>
<tr>
<th>Category</th>
<th>Target Product Profile</th>
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<tbody>
<tr>
<td>Clinical Indication</td>
<td>Ischemic Stroke (transient and permanent)</td>
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<tr>
<td>Mechanism of action</td>
<td>Prevents prooxidant events during stroke</td>
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<tr>
<td>Efficacy</td>
<td>Reduces stroke-induced brain damage (up to 75%) in 3 different rat models of transient or permanent ischemic stroke and improves the neurological impairment (neuroscore 60%)</td>
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<td>Safety</td>
<td>Has been used for the treatment of patients with myeloablative therapy showing good safety and tolerability data</td>
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CLAIMS AND EVIDENCE


