

CLAIMS

1. A method for the diagnosis of ischemia or ischemic tissue damage in a subject comprising determining in a sample of said subject the levels of glycosylated Apo J containing N-acetylglucosamine (GlcNAc) residues or the levels of glycosylated Apo J containing N-acetylglucosamine (GlcNAc) and sialic acid residues, wherein decreased levels of Apo J containing N-acetylglucosamine residues with respect to a reference value or decreased levels of Apo J containing N-acetylglucosamine (GlcNAc) and sialic acid residues with respect to a reference value are indicative that the patient suffers ischemia or ischemic tissue damage and wherein the sample is a biofluid or feces.
2. The method according to claim 1 wherein the ischemia is myocardial or cerebral ischemia.
3. The method of claim 2 wherein the myocardial ischemia is acute myocardial ischemia or microvascular angina.
4. The method of claim 2 wherein the cerebral ischemia is stroke.
5. The method of any of claims 1 to 4 wherein the patient is suspected to have suffered an ischemic event.
6. The method of claim 5 wherein the determination is carried out within the first 6 hours after the onset of the suspected ischemic event, before the raising of the levels of at least one necrotic marker or before the patient has received any treatment for the suspected ischemic event.
7. A method for predicting the progression of ischemia in a patient having suffered an ischemic event or for determining the prognosis of a patient having suffered an ischemic event, comprising determining in a sample of said patient the levels of glycosylated Apo J, wherein decreased levels of glycosylated Apo J with

respect to a reference value are indicative that the ischemia is progressing or of a poor prognosis of the patient and wherein the sample is a biofluid or feces.

8. The method of claim 7 wherein the glycosylated Apo J is glycosylated Apo J containing N-acetylglucosamine (GlcNAc) residues or glycosylated Apo J containing N-acetylglucosamine (GlcNAc) and sialic acid residues.
9. The method according to any of claims 7 or 8 wherein the ischemic event is a myocardial ischemic event.
10. The method according to claim 9 wherein the myocardial ischemic event is a ST-elevation myocardial infarction.
11. The method according to any of claims 7 to 10 wherein the prognosis of the patient is determined as the risk of 6 months recurrence, the risk of in hospital mortality or the risk of 6-months mortality.
12. A method for determining the risk that a patient suffering from stable coronary disease suffers a recurrent ischemic event comprising determining in a sample of said patient the levels of glycosylated Apo J, wherein decreased levels of glycosylated Apo J with respect to a reference value are indicative that the patient shows an increased risk of suffering a recurrent ischemic event and wherein the sample is a biofluid or feces.
13. The method of claim 12 wherein the glycosylated Apo J is glycosylated Apo J containing N-acetylglucosamine (GlcNAc) residues or glycosylated Apo J containing N-acetylglucosamine (GlcNAc) and sialic acid residues.
14. The method of any of claims 12 to 13 wherein the patient suffering from stable coronary disease had suffered acute coronary syndrome prior to the stable coronary disease.

15. The method of any of claims 12 to 14 wherein the recurrent ischemic event is an acute coronary syndrome, a stroke or a transient ischemic event.
16. The method of any of claims 1 to 15 wherein the level of glycosylated Apo J containing N-acetylglucosamine (GlcNAc) residues correspond to the level of Apo J capable of specifically binding to the *Datura stramonium* lectin or wherein levels of glycosylated Apo J containing N-acetylglucosamine (GlcNAc) and sialic acid residues correspond to the levels of Apo J capable of specifically binding to the *Triticum vulgaris* lectin.
17. The method of any of claims 1 to 16 wherein the sample is a biofluid.
18. The method of claim 17 wherein the biofluid is plasma or serum.
19. A kit comprising
- A first reagent which is a lectin which specifically binds to a glycan residue selected from N-acetylglucosamine and sialic acid and
 - A second reagent which is capable of specifically binding to the Apo J polypeptide,
- wherein the first reagent is immobilized.
20. The kit of claim 19 wherein the lectin is the lectin from *Triticum vulgaris* or the lectin from *Datura stramonium* or a combination thereof.
21. The kit of claims 19 or 20 wherein the second reagent is an antibody or a fragment thereof containing its antigen-binding region.
22. The kit of any of claims 19 to 21 wherein the second reagent contains a label.
23. The kit of claim 22 wherein the label can be detected by a change in at least one of its chemical, electrical or magnetic properties.

24. The kit of any of claims 19 to 21 further comprising a third reagent which is capable of specifically binding to the second reagent.
- 5 25. The kit of claim 24 wherein the third reagent is an antibody or a fragment thereof containing its antigen-binding region.
26. Use of a kit according to any of claims 19 to 25 for the diagnosis of ischemia or ischemic tissue damage in a patient, for determining the progression of ischemia in a patient having suffered an ischemic event, for the prognosis of
10 a patient having suffered an ischemic event or for determining the risk that a patient suffering from stable coronary disease suffers a recurrent ischemic event.
- 15 27. A method for the determination of glycosylated Apo J in a sample comprising the steps of:
- (i) Contacting the sample with a lectin which specifically binds to a glycan residue present in glycosylated Apo J under conditions adequate for the formation of a complex between the glycosylated Apo J in the sample and the
20 lectin, wherein the lectin which specifically binds to a glycan residue is immobilized and
- (ii) Detecting the amount of complex containing the lectin and the glycosylated Apo J.
- 25 28. The method according to claim 27 wherein the lectin used in step (i) is a lectin which specifically binds to N-acetylglucosamine or a lectin which specifically binds to N-acetylglucosamine and sialic acid.
29. The method according to claims 27 or 28 wherein the lectin which
30 specifically binds to N-acetylglucosamine is the lectin from *Datura stramonium* or wherein the lectin which specifically binds to N-acetylglucosamine and sialic acid is the lectin from *Triticum vulgare*.

30. The method according to any of claims 27 to 29 wherein the complex in step (ii) is detected using a reagent that specifically binds to the Apo J polypeptide.
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31. The method of claim 30 wherein the reagent that specifically binds to the Apo J polypeptide is an antibody or a fragment thereof containing its antigen-binding region.
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32. The method of claim 31 wherein the antibody is coupled to a detectable label.
33. The method of claim 32 wherein the label can be detected by means of a change in at least one of its chemical, electrical or magnetic properties.
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34. The method of any of claims 27 to 31 wherein the detection is carried out using a reagent which is capable of specifically binding to the reagent that specifically binds to the Apo J polypeptide.
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35. The method of claim 34 wherein the third reagent which is capable of specifically binding to the reagent that specifically binds to the Apo J polypeptide is an antibody or a fragment thereof containing its antigen-binding region.
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36. The method of any of claims 1 to 18 wherein the determination of the level of glycosylated Apo J containing N-acetylglucosamine (GlcNAc) residues or of the levels of glycosylated Apo J containing N-acetylglucosamine (GlcNAc) and sialic acid residues are determined using a kit as defined in any of claims 19 to 25 or a method as defined in any of claims 27 to 35.