SUMMARY

[0008] The present disclosure is based in part on the inventors' recent research on apoaequorin, a calcium binding protein, and the unexpected finding that apoaequorin possesses novel neuroprotective abilities. In particular, apoaequorin has been found to be useful in preconditioning neurons in a subject to reduce subsequent neuronal inflammation. Accordingly, the present disclosure provides apoaquoring-containing compositions and methods of use which offer substantial advantageous in neuroprotective applications.

[0009] Disclosed is apoaequorin for preconditioning neurons to reduce neuronal inflammation in a subject. In one aspect, there is provided use of apoaequorin for the manufacture of a composition for preconditioning neurons to reduce neuronal inflammation in a subject, wherein said apoaequorin is to be provided in a therapeutically effective dosage to precondition neurons in a subject having neuronal inflammation to reduce neuronal inflammation wherein said apoaequorin is formulated for administration to said subject in the form of a nutraceutical composition. The present disclosure is also directed to methods of preconditioning neurons to reduce neuronal inflammation in a subject. Such methods include the step of administering apoaequorin to a subject, wherein the subject's neurons are preconditioned to reduce neuronal inflammation.

[0010] In one embodiment, administering to the subject is by injection. In an alternative embodiment, administering to the subject is by oral delivery, for example, by apoaequorin formulated in a unit dosage form selected from a tablet or capsule. In certain embodiments, apoaequorin is administered to a subject in the form of a nutraceutical composition.

[0011] As can be appreciated, the present disclosure encompasses apoaequorin for preconditioning neurons to reduce neuronal inflammation in a subject, as well as the use of apoaequorin for the manufacture of a composition for preconditioning neurons to reduce neuronal inflammation in a subject.

[0012] Also disclosed is apoaequorin for reducing Tumor Necrosis Factor α protein level in a subject. In one aspect, there is provided use of apoaequorin for the manufacture of a composition for reducing neuronal inflammation in a subject, wherein said apoaequorin is to be provided in a therapeutically effective dosage to reduce neuronal inflammation in a subject having neuronal inflammation wherein said apoaequorin is formulated for administration to said subject in the form of a nutraceutical composition. The present disclosure is also directed to methods of reducing Tumor Necrosis Factor α (TNFα) protein level in a subject. Such methods include the step of administering apoaequorin to a subject, wherein the subject's level of TNFα protein is reduced.

[0013] In certain embodiments, administering to the subject is by injection. In alternative embodiments, administering to the subject is by oral delivery, for example, by apoaequorin formulated in a unit dosage form selected from a tablet or capsule. In certain embodiments, apoaequorin is administered to a subject in the form of a nutraceutical composition.

CLAIMS

What is claimed is:

1. Use of apoaequorin for the manufacture of a composition for preconditioning neurons to reduce neuronal inflammation in a subject, wherein said apoaequorin is to be provided in a therapeutically effective dosage to precondition neurons in a subject having neuronal inflammation to reduce neuronal inflammation wherein said apoaequorin is formulated for administration to said subject in the form of a nutraceutical composition.

2. The use according to claim 1, wherein the composition is to be administered by injection.

3. The use according to claim 1, wherein the composition is to be administered by oral delivery.

4. The use according to claim 3, wherein said composition is in a unit dosage form selected from a tablet or capsule.

5. Use of apoaequorin for the manufacture of a composition for reducing neuronal inflammation in a subject, wherein said apoaequorin is to be provided in a therapeutically effective dosage to reduce neuronal inflammation in a subject having neuronal inflammation wherein said apoaequorin is formulated for administration to said subject in the form of a nutraceutical composition.

6. The use according to claim 5, wherein the composition is to be administered by injection.

7. The use according to claim 5, wherein the composition is to be administered by oral delivery.

8. The use according to claim 7, wherein said composition is in a unit dosage form selected from a tablet or capsule.