

CLAIMS

1. A method for assessing a risk in a subject having heart failure that is (i) the risk for getting a cardiovascular event and/or (ii) the risk of worsening heart failure condition and/or (iii) assessing the risk for mortality and/or (iv) assessing the risk of hospitalisation or re-hospitalisation due to heart failure, comprising
- a) determining the level and/or the amount of Selenoprotein P and/or fragments thereof in a sample of said subject,
- b) correlating the determined level and/or the amount of Selenoprotein P and/or fragments thereof in a subject having heart failure with (i) the risk for getting a cardiovascular event and/or (ii) with the risk of worsening heart failure condition and/or (iii) with the risk for mortality, and/or (iv) with the risk of hospitalisation or re-hospitalisation due to heart failure
- and wherein in a subject having heart failure (i) the risk for getting a cardiovascular event and/or (ii) the risk of worsening heart failure condition and/or (iii) the risk for mortality, and/or (iv) the risk of hospitalisation or re-hospitalisation due to heart failure is enhanced, when the determined level and/or the amount of Selenoprotein P and/or fragments thereof in a sample of said subject is below a threshold.
2. A method for assessing a risk in a subject having heart failure that is (i) the risk for getting a cardiovascular event and/or (ii) the risk of worsening heart failure condition and/or (iii) assessing the risk for mortality, and/or (iv) assessing the risk of hospitalisation or re-hospitalisation in due to heart failure according to claim 1, wherein in a subject having heart failure (i) the risk for getting a cardiovascular event and/or (ii) the risk of worsening heart failure condition and/or (iii) the risk for mortality, and/or (iv) the risk of hospitalisation or re-hospitalisation due to heart failure is enhanced when said and/or the amount of Selenoprotein P and/or fragments thereof in said sample is below a threshold, wherein said threshold is between 2.0 and 4.4 mg/L, preferably between 2.3 and 3.8 mg/L, more preferably between 2.6 and 3.4 mg/L, more

preferably between 3.0 and 3.3 mg/L, most preferred said threshold is 3.3 mg/L.

3. A method for assessing a risk in a subject having heart failure that is (i) the risk for getting a cardiovascular event and/or (ii) the risk of worsening heart failure condition and/or (iii) assessing the risk for mortality, and/or (iv) assessing the risk of hospitalisation or re-hospitalisation due to heart failure according to any of claims 1 or 2, wherein in a subject having heart failure (i) the risk for getting a cardiovascular event and/or (ii) the risk of worsening heart failure condition and/or (iii) the risk for mortality, and/or (iv) the risk of hospitalisation or re-hospitalisation due to heart failure is enhanced when said level and/or the amount of Selenoprotein P and/or fragments thereof in said sample is below a threshold, wherein said threshold has been determined by the calculation of receiver operating characteristic curves (ROC curves), plotting the true positive rate (sensitivity, "disease" population e.g. subjects who did develop the condition) against the false positive rate (1-specificity, "normal" population e.g. subjects who did not develop the condition) at various threshold value settings.
4. A method for assessing a risk in a subject having heart failure that is (i) the risk for getting a cardiovascular event and/or (ii) the risk of worsening heart failure condition and/or (iii) assessing the risk for mortality, and/or (iv) assessing the risk of hospitalisation or re-hospitalisation due to heart failure according to any of claims 1 to 3, wherein in a subject having heart failure (i) the risk for getting a cardiovascular event and/or (ii) the risk of worsening heart failure condition and/or (iii) the risk for mortality, and/or (iv) the risk of hospitalisation or re-hospitalisation due to heart failure is enhanced when said level and/or the amount of Selenoprotein P and/or fragments thereof in said sample is below a threshold, wherein said threshold is the lower range of a heart failure population e.g. below 4.4 mg/L, more preferred below 3.8 mg/L, even more preferred below 3.4 mg/L, most preferred equal to or below 3.3 mg/L.
5. A method for assessing a risk in a subject having heart failure that is (i) the risk for getting a cardiovascular event and/or (ii) the risk of worsening heart failure

condition and/or (iii) assessing the risk for mortality, and/or (iv) assessing the risk of hospitalisation or re-hospitalisation due to heart failure according to any of claims 1 to 4, wherein said cardiovascular event is selected from a group comprising myocardial infarction, stroke, coronary re-vascularization, and heart failure and said mortality is cardiovascular mortality.

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6. A method for assessing a risk in a subject having heart failure that is (i) the risk for getting a cardiovascular event and/or (ii) the risk of worsening heart failure condition and/or (iii) assessing the risk for mortality and/or (iv) assessing the risk of hospitalisation or re-hospitalisation due to heart failure according to any of claims 1 to 5, wherein said mortality is cardiovascular mortality related to myocardial infarction, stroke or acute heart failure.

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7. A method for assessing a risk in a subject having heart failure that is (i) the risk for getting a cardiovascular event and/or (ii) the risk of worsening heart failure condition and/or (iii) assessing the risk for mortality and/or (iv) assessing the risk of hospitalisation or re-hospitalisation due to heart failure according to any of claims 1 to 6, wherein said level and/or amount of Selenoprotein P and/or fragments thereof has been determined by an immunoassay using at least one binder binding to SEQ ID No. 2.

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8. A method for assessing a risk in a subject having heart failure that is (i) the risk for getting a cardiovascular event and/or (ii) the risk of worsening heart failure condition and/or (iii) assessing the risk for mortality and/or (iv) assessing the risk of hospitalisation or re-hospitalisation due to heart failure according to claim 7, wherein said at least one binder is an antibody or a fragment thereof.

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9. A method for assessing a risk in a subject having heart failure that is (i) the risk for getting a cardiovascular event and/or (ii) the risk of worsening heart failure condition and/or (iii) assessing the risk for mortality and/or (iv) assessing the risk of hospitalisation or re-hospitalisation due to heart failure according to any of claims 1 to 6, wherein said level and/or amount of Selenoprotein P and/or fragments thereof has been determined by mass spectroscopy.

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- 5 10. A method for assessing a risk in a subject having heart failure that is (i) the risk for getting a cardiovascular event and/or (ii) the risk of worsening heart failure condition and/or (iii) assessing the risk for mortality and/or (iv) assessing the risk of hospitalisation or re-hospitalisation due to heart failure according to any of claims 1 to 9, wherein said (i) risk for getting a cardiovascular event and/or (ii) the risk of worsening heart failure condition and/or (iii) said risk for mortality is assessed for a period of time of up to one year.
- 10 11. A method for assessing a risk in a subject having heart failure that is (i) the risk for getting a cardiovascular event and/or (ii) the risk of worsening heart failure condition and/or (iii) assessing the risk for mortality and/or (iv) assessing the risk of hospitalisation or re-hospitalisation due to heart failure according to any of claims 1 to 10, wherein said risk of hospitalisation or re-hospitalisation due to heart failure is assessed for a period of up to 30 days.
- 15 12. A method for assessing a risk in a subject having heart failure that is (i) the risk for getting a cardiovascular event and/or (ii) the risk of worsening heart failure condition and/or (iii) assessing the risk for mortality and/or (iv) assessing the risk of hospitalisation or re-hospitalisation due to heart failure according to any of claims 1 to 11, wherein the sample is a bodily fluid.
- 20 13. A method for assessing a risk in a subject having heart failure that is (i) the risk for getting a cardiovascular event and/or (ii) the risk of worsening heart failure condition and/or (iii) assessing the risk for mortality and/or (iv) assessing the risk of hospitalisation or re-hospitalisation due to heart failure according to any of claims 1 to 12, wherein the sample is a bodily fluid selected from the group comprising whole blood, plasma, and serum.
- 25 14. Use of Selenium in the manufacture of a medicament for the treatment of a subject having heart failure and having an enhanced risk for (i) getting a cardiovascular event and/or (ii) having an enhanced risk for worsening heart failure condition and/or (iii) having an enhanced risk for mortality and/or (iv)
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having an enhanced risk of hospitalisation or re-hospitalisation due to heart failure as determined according to a method of any of claims 1 to 13.

- 5 15. Use of Selenium in the manufacture of a medicament for the treatment of a subject having heart failure and having an enhanced risk for (i) getting a cardiovascular event and/or (ii) having an enhanced risk for worsening heart failure condition and/or (iii) having an enhanced risk for mortality and/or (iv) having an enhanced risk of re-hospitalisation due to heart failure as determined according to a method of any of claims 1 to 13, wherein the determined level and/or the amount of Selenoprotein P and/or fragments thereof is below a threshold and wherein said threshold is between 2.0 and 4.4 mg/L.
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