CLAIMS

1. Use of an acylated ghrelin molecule in the manufacture of a medicament for the treatment of Acute Heart Failure (AHF) in an individual.

2. The use according to Claim 1, wherein the AHF is selected from the group comprising: Acute Decompensated Heart Failure (ADHF); AHF associated with hypertension; tachycardia-mediated AHF; AHF associated with pulmonary edema; cardiogenic shock AHF; or severe cardiogenic shock AHF.

3. The use according to Claim 2, wherein the Acute Decompensated Heart Failure (ADHF) is Acute Decompensated Chronic Heart Failure (ADCHF) or congestive ADHF, preferably Acute Decompensated Chronic Heart Failure (ADCHF).

4. The use according to any one of Claims 1-3, wherein the AHF is not associated with a myocardial infarction.

5. The use according to any one of Claims 1-4, wherein the AHF is not *de novo* AHF.

6. The use according to any one of Claims 1-5, wherein after administration of the ghrelin molecule the individual exhibits one or more parameters from the group comprising: an increased heart output; and/or an increased heart contraction; and/or an increased heart stroke volume; and/or an increased ventricular function; and/or an increased ventricular ejection fraction; and/or reduced troponin I phosphorylation; and/or an increased calcium sensitivity; and/or reduced intracellular cAMP; and/or improved renal function; and/or improved estimated glomerular filtration rate (eGFR); and/or improved dyspnea; and/or improved edema; and/or reduced biomarkers; and/or reduced hypotension; and/or resolution of cardiogenic shock; and/or reduced dizziness; and/or reduced light-headedness; and/or a reduced arterio venous oxygen (AVO2) difference; and/or an increase in pulmonary blood flow (PBF); and/or a reduced estimated systemic vascular resistance (eSVR); and/or reduced pulmonary capillary wedge pressure; and/or reduced left ventricular end-diastolic pressure; and/or reduced left ventricular end-diastolic volume; and/or reduced pulmonary artery pressure; and/or reduced central venous pressure.

7. The use according to any one of Claims 1-6, wherein the AHF is associated with one or more factors of the group comprising: spontaneous worsening of chronic heart failure; an infection; and/or an allergic reaction; and/or a blood clot; and/or surgery; and/or cardiovascular disease; and/or lung disease; and/or cardiomyopathy; and/or sleep apnea; and/or alcohol consumption; and/or recreational drug consumption; and/or anaemia; and/or dyslipidemia; and/or an overactive thyroid; and/or Paget's disease; and/or hypertension (such as pulmonary hypertension); and/or prescription medication consumption; and/or smoking; and/or high blood pressure; and/or kidney dysfunction; and/or diabetes; and/or congenital heart defects; and/or lifestyle choices; and/or an irregular heartbeat; and/or rapid heartbeat; and/or slow heartbeat; and/or inflammation; and/or toxins; and/or autoimmune disease; and/or infiltrative disease; and/or connective tissue disease; and/or metabolic disease; and/or endocrine disease; and old age; and/or hereditary genetic mutations; and/or pregnancy.

8. The use according to any one of Claims 1-7, wherein the AHF comprises one or more of the symptoms of the group comprising: chest pain; and/or a cough; and/or shock (such as, cardiogenic shock); and/or high blood pressure; and/or oliguria; and/or anuria; and/or fatigue; and/or shortness of breath (dyspnea); and/or hypoxemia; and/or rapid breathing (tachypnea); and/or tachycardia; and/or ischemia; and/or edema (such as, a worsening edema); and/or impaired renal function (such as, worsening renal function); and/or low blood pressure; and/or organ failure (such as liver failure and/or kidney failure); and/or cold extremities; and/or numb extremities; and/or muscle fatigue; and/or nausea; and/or vomiting; and/or weight loss (such as anorexia); and/or pulmonary edema; and/or discomfort of the lower body; and/or peripheral swelling; and/or hypo-perfusion; and/or swelling of the lower body; and/or swelling of the heart; and/or weight gain (such as, sudden weight gain); and/or weight loss; and/or cachexia; and/or elevated neck blood vessels (such as an elevated neck blood vein and/or jugular venous distension); and/or hepatomegaly; and/or dizziness; and/or fainting (also known as syncope); and/or an altered mental state (for example, anxiety and/or confusion and/or depression); and/or loss of appetite; hypotension; and/or arrhythmia; and/or difficulty sleeping; and/or discomfort when lying flat; and/or sleep apnea.

9. The use according to any one of Claims 1-8, wherein the individual is diagnosed as having AHF using one or more of the procedures of the group comprising: an X-ray; and/or a blood test; and/or an electrocardiogram (ECG); and/or based on

the medical history of the individual; and/or a positron emission tomography (PET) scan; and/or multigated acquisition (MUGA) scan; and/or scintigraphy; and/or an echocardiogram; and/or an angiogram; and/or hemodynamic measurement; and/or a computerised tomography (CT) scan; and/or a physical examination of symptoms; and/or measuring biomarkers (such as serum natriuretic peptides and/or plasma natriuretic peptides); and/or, a magnetic resonance imaging (MRI) scan.

10. The use according to any one of Claims 1-9, wherein after administration of the ghrelin molecule the individual does not exhibit one or more parameters of the group comprising: an increased heart rate; and/or tachycardia; and/or a decreased blood pressure; and/or hypotension; and/or an increased oxygen demand; and/or ischemia; and/or increased plasma troponin T; and/or heart arrhythmias; and/or affected calcium transients.

11. The use according to any one of Claims 1-10, wherein the acylated ghrelin molecule comprises one or more of the group comprising: a modified ghrelin; and/or a ghrelin fusion molecule; and/or a ghrelin fragment; and/or a ghrelin variant; and/or a ghrelin derivative; and/or, wildtype ghrelin.

12. The use according to any one of Claims 1-11, wherein the ghrelin molecule comprises one or more of the group comprising: a synthetic ghrelin molecule; and/or a recombinant ghrelin molecule; and/or, an endogenous ghrelin molecule.

13. The use according to any one of Claims 1-12, wherein the ghrelin molecule is to be administered once or more each day, preferably twice each day.

14. The use according to any one of Claims 1-13, wherein the ghrelin molecule is to be administered by infusion.

15. The use according to any one of Claims 1-14, wherein the individual is aged 18 years or older, preferably 65 years or older.

16. The use according to any one of Claims 1-15, wherein the ghrelin molecule is to be administered before surgery, and/or during surgery, and/or after surgery.

17. The use according to any one of Claims 1-16, wherein the individual is to be administered with one or more additional therapeutic agents.

18. The use according to any one of Claims 1-17, wherein the ghrelin molecule is in a composition, preferably a pharmaceutical composition.

19. The use according to Claim 18, wherein the composition comprises one or more additional therapeutic agents.

20. The use according to any one of Claims 17-19, wherein any additional therapeutic agent is one or more therapeutic agent selected from the group comprising: angiotensin-converting enzyme (ACE) inhibitors; and/or angiotensin II receptor blockers; and/or vasopressin receptor antagonists; and/or beta blockers; and/or an inodilator (in particular, mirinone and/or enoximone and/or dobutamine and/or levosimendan); and/or omecamtiv mecarbil; and/or renin antagonist; and/or relaxin; and/or ularitide; and/or digoxin (Lanoxin); and/or vasodilators; and/or angiotensin II receptor antagonists (such as valsartan); and/or aspirin; and/or statins; and/or antihypertensive drugs (such as sacubitril); and/or calcium sensitisers; and/or ivabradine; and/or diuretics; and/or vasopressor (such as noradrenaline, dopamine, vasopressin, and/or angiotensin II); and/or adenosine antagonists; and/or aldosterone antagonists.