CLAIMS

1. Peptidylglycine alpha-amidating monooxygenase (PAM) for use as a medicament.

2. PAM for use as a medicament for treatment of a subject, wherein said treatment comprises:
(i) reducing the potential or risk for a disease or disorder, and/ or
(ii) reducing the occurrence of a disease or disorder, and/ or
(iii) reducing the severity of a disease or disorder.

3. PAM for use as a medicament for treatment of a subject according to claim 2, wherein said disease or disorder is selected from the group consisting of dementia, cardiovascular disorders, kidney diseases, cancer, inflammatory or infectious diseases and/or metabolic diseases.

4. PAM for use as a medicament for treatment of a subject according to claim 2 or 3, wherein said subject is characterized by:

- a level of PAM and/or isoforms and/or fragments thereof below a threshold, wherein the level of PAM, the isoforms and/or fragments is (a) the total concentration of PAM, the isoforms and/or fragments having at least 12 amino acids, or (b) the activity of PAM, the isoforms and/or fragments, wherein the PAM isoforms are selected from isoforms comprising the sequence of SEQ ID No. 1, SEQ ID No. 2, SEQ ID No. 3, SEQ ID No. 4, SEQ ID No. 5 and SEQ ID No. 6,

and/ or

- a peptide-Gly/ peptide-amide ratio above a threshold, in a sample of bodily fluid of said subject,

wherein activity of PAM, and/or isoforms and/or fragments thereof is the alpha-amidating activity of PAM, and/or isoforms and/or fragments thereof.

5. PAM for use as a medicament for treatment of a subject according to claim 4, wherein said peptide is selected from the group consisting of adrenomedullin (ADM), adrenomedullin-2, intermedin-short, pro-adrenomedullin N-20 terminal peptide (PAMP), amylin, gastrin-releasing peptide, neuromedin C, neuromedin B, neuromedin S, neuromdin U, calcitonin, calcitonin gene-related peptide (CGRP) 1 and 2, islet amyloid polypeptide, chromogranin A, , pancreastatin, prolactin-releasing peptide (PrRP), cholecystokinin, big gastrin, gastrin, glucagon-like peptide 1 (GLP-1), pituitary adenylate cyclase-activating polypeptide (PACAP), secretin, somatoliberin, peptide histidine methionine (PHM), vasoactive intestinal peptide (VIP), gonadoliberin, kisspeptin, MIF-1, metastin, neuropeptide K, neuropeptide gamma, substance P, neurokinin A, neurokinin B, peptide YY,

pancreatic hormone, deltorphin I, orexin A and B, melanotropin alpha (alpha-MSH), melanotropin gamma, thyrotropin-releasing hormone (TRH), oxytocin, vasopressin.

6. PAM for use as a medicament for treatment of a subject according to claim 4 or 5, wherein said subject is characterized by:

- an ADM-Gly/ bio-ADM ratio above a threshold, and/ or
- a bio-ADM concentration below a threshold,

in a bodily fluid of said patient.

7. PAM for use as a medicament for treatment of a subject according to claim 4, wherein PAM and/or its isoforms and/or fragments thereof are selected from the group consisting of SEQ ID No. 1, SEQ ID No. 2, SEQ ID No. 3, SEQ ID No. 4, SEQ ID No. 5, SEQ ID No. 6, SEQ ID No. 7, SEQ ID No. 8 and SEQ ID No. 10.

8. PAM for use as a medicament for treatment of a subject according to any one of claims 4-7, wherein the sample of bodily fluid of said subject is selected from the group consisting of blood, serum, plasma, urine, cerebrospinal fluid (CSF), and saliva.

9. PAM for use as a medicament according to any one of claims 1-8, wherein said PAM is selected from isolated and/ or recombinant and/or chimeric PAM.

10. PAM for use as a medicament according to any one of claims 1-9, wherein said recombinant PAM is selected from the sequences consisting of SEQ ID No. 1, SEQ ID No. 2, SEQ ID No. 3, SEQ ID No. 4, SEQ ID No. 5, SEQ ID No. 6, SEQ ID No. 7, SEQ ID No. 8 and SEQ ID No. 10.

11. PAM for use as a medicament for treatment of a subject according to any one of claims 1 to 10 wherein PAM is combined with ascorbate and/ or copper.

12. Pharmaceutical formulation comprising peptidylglycine alpha-amidating monooxygenase (PAM).

13. Pharmaceutical formulation comprising PAM according to claim 12, wherein said pharmaceutical formulation is formulated to be administered orally, epicutaneously, subcutaneously, intradermally, sublingually, intramuscularly, intraarterially, intravenously, or via the central nervous system (CNS, intracerebrally, intracerebroventricularly, intrathecally) or via intraperitoneal administration.

14. Pharmaceutical formulation according to claim 12 or 13, wherein said pharmaceutical formulation is a solution, preferably a ready-to-use solution.

15. Pharmaceutical formulation according to any one of claims 12-14, wherein said pharmaceutical formulation is in a freeze-dried state.

16. Pharmaceutical formulation according to any one of claims 12-15, wherein said pharmaceutical formulation is formulated to be administered intra-muscularly.

17. Pharmaceutical formulation according to any one of claims 12-16, wherein said pharmaceutical formulation is formulated to be administered intra-vascularly.

18. Pharmaceutical formulation according to any one of claims 12-17, wherein said pharmaceutical formulation is formulated to be administered via infusion.

19. Pharmaceutical formulation according to any one of claims 12-18, wherein said pharmaceutical formulation is formulated to be administered systemically.

20. Pharmaceutical formulation according to any one of claims 12-19, the formulation comprising PAM or PAM and one or more pharmaceutically acceptable ingredients.

21. Pharmaceutical formulation according to any one of claims 12-20, the formulation comprising PAM, PAM and ascorbate, PAM and copper, or PAM, ascorbate and copper.