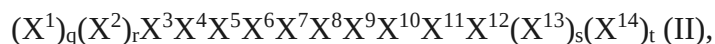


Claims

1. A compound containing a peptide of the following formula (II),



or a derivative, prodrug, analogue, pharmaceutically acceptable salt, solvate or solvate of the salt, wherein

X^1 represents a natural amino acid or an unnatural amino acid,

q represents the integer 0 or 1,

X^2 represents the natural amino acid I,

r represents the integer 0 or 1,

X^3 represents the natural amino acid C or the unnatural amino acid L-Penicillamine (Pen),

X^4 represents the natural amino acid S,

X^5 represents the natural amino acid R or the unnatural amino acid N(5)-Methyl-L-arginine ((Me)R),

X^6 represents the natural amino acid S,

X^7 represents the natural amino acid L or the unnatural amino acid L-tert-Butylalanine ((tBu)A),

X^8 represents the natural amino acid P or the unnatural amino acid L-Proline (3,4-₂H),

X^9 represents the natural amino acid P or the unnatural amino acid 2,3,3a,4,5,6,7,7a-Octahydroindole-2-carboxylic acid (Oic),

X^{10} represents the natural amino acid I,

X^{11} represents an unnatural amino acid selected from a list consisting of L-N-Methylcysteine ((N-Me)C) and L-Penicillamine (Pen),

X^{12} represents the natural amino acid I,

X^{13} represents the natural amino acid P,

s represents the integer 0 or 1,

X^{14} represents a natural amino acid selected from a list consisting of D, Q and E,

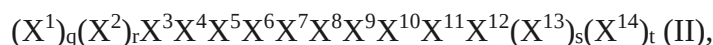
t represents the integer 0 or 1,

wherein the N-terminus of the peptide is unsubstituted, acetylated or mono- or disubstituted with C_1 - C_{20} -alkyl,

wherein the C-terminus of the peptide is unsubstituted or amidated, and

wherein the peptide is cyclized via a linkage connecting X^3 and X^{11} .

2. A compound containing a peptide of formula (II),



or a derivative, prodrug, analogue, pharmaceutically acceptable salt, solvate or solvate of the salt, wherein

X^1 represents a natural amino acid or an unnatural amino acid,

q represents the integer 0 or 1,

X^2 represents the natural amino acid I,

r represents the integer 0 or 1,

X^3 represents the natural amino acid C or the unnatural amino acid L-Penicillamine (Pen),

X^4 represents the natural amino acid S,

X^5 represents the natural amino acid R or the unnatural amino acid N(5)-Methyl-L-arginine ((Me)R),

X^6 represents the natural amino acid S,

X^7 represents the natural amino acid L or the unnatural amino acid L-tert-Butylalanine ((tBu)A),

X⁸ represents the natural amino acid P or the unnatural amino acid L-Proline (3,4-₂H),

X⁹ represents the unnatural amino acid 2,3,3a,4,5,6,7,7a-Octahydroindole-2-carboxylic acid (Oic),

X¹⁰ represents the natural amino acid I,

X¹¹ represents the natural amino acid C, or an unnatural amino acid selected from a list consisting of L-N-Methylcysteine ((N-Me)C) and L-Penicillamine (Pen),

X¹² represents the natural amino acid I,

X¹³ represents the natural amino acid P,

s represents the integer 0 or 1,

X¹⁴ represents a natural amino acid selected from a list consisting of D, Q and E,

t represents the integer 0 or 1,

wherein the N-terminus of the peptide is unsubstituted, acetylated or mono- or disubstituted with C₁-C₂₀-alkyl,

wherein the C-terminus of the peptide is unsubstituted or amidated, and

wherein the peptide is cyclized via a linkage connecting X³ and X¹¹.

3. A compound containing a peptide according to Claim 1, or a derivative, prodrug, analogue, pharmaceutically acceptable salt, solvate or solvate of the salt, wherein

X⁹ represents the unnatural amino acid 2,3,3a,4,5,6,7,7a-Octahydroindole-2-carboxylic acid (Oic).

4. A compound containing a peptide according to any one of Claims 1 to 3, or a derivative, prodrug, analogue, pharmaceutically acceptable salt, solvate or solvate of the salt, wherein

X¹ represents a natural amino acid selected from a list consisting of A and G, or an unnatural amino acid selected from a list consisting of N-Methyl-L-Alanine (N-Me)A, N-Methyl-Glycine ((N-Me)G), L-Norleucine (Nle), L-Norvaline (Nva) and L-Ornithine (Orn).

5. A compound containing a peptide according to any one of Claims 1 to 4, or a derivative, prodrug, analogue, pharmaceutically acceptable salt, solvate or solvate of the salt, wherein the N-terminus and C-terminus of the peptide are unsubstituted.
6. A compound containing a peptide according to any one of Claims 1 to 5 or a derivative, prodrug, analogue, pharmaceutically acceptable salt, solvate or solvate of the salt, wherein the peptide is cyclized via a disulfide bond connecting X³ and X¹¹.
7. A compound containing a peptide according to any one of Claims 1 to 6 or a derivative, prodrug, analogue, pharmaceutically acceptable salt, solvate or solvate of the salt, wherein the peptide is substituted by at least one PEG group.
8. A compound containing a peptide according to any one of Claims 1 to 7 or a derivative, prodrug, analogue, pharmaceutically acceptable salt, solvate or solvate of the salt, which acts as a MASP-1 and/or MASP-2 inhibitor and/or which inhibits C3 deposition.
9. A process for preparing a compound containing a peptide according to any one of Claims 1 to 8 or a derivative, prodrug, analogue, pharmaceutically acceptable salt, solvate or solvate of the salt, using solid phase peptide synthesis.
10. A compound containing a peptide according to any one of Claims 1 to 8 or a derivative, prodrug, analogue, pharmaceutically acceptable salt, solvate or solvate of the salt, for use in the prophylaxis and/or treatment of diseases.
11. A pharmaceutical composition comprising at least one compound containing a peptide according to any one of Claims 1 to 8 or a derivative, prodrug, analogue, pharmaceutically acceptable salt, solvate or solvate of the salt, in combination with one or more inert, nontoxic, pharmaceutically suitable excipients.
12. A pharmaceutical composition comprising at least one compound containing a peptide according to any one of Claims 1 to 8 or a derivative, prodrug, analogue, pharmaceutically acceptable salt, solvate or solvate of the salt, in combination with one or more further active ingredients selected from the group consisting of inhibitors of phosphodiesterases, stimulators or activators of guanylate cyclase, IP receptor agonists, mineralocorticoid-receptor antagonist, diuretic, PPAR-gamma agonist, PPAR-delta agonist, corticosteroids, active ingredients which reduce damage to organs under oxidative stress, compounds which inhibit induction of cell death and apoptosis pathway, compounds which inhibit inflammatory response and T cell

proliferation, antithrombotic agents, platelet aggregation inhibitor, thrombin inhibitor, GPIIb/IIIa antagonist, factor Xa inhibitor, heparin or a low molecular weight (LMW) heparin derivative and inhibitors of coagulation factor XI.

13. A pharmaceutical composition according to Claim 11 or 12 for use in the prophylaxis and/or treatment of diseases.

14. Use of an effective amount of at least one compound as defined in any one of Claims 1 to 8, or of a pharmaceutical composition according to Claim 11 or 12 in the manufacture of a medicament for treatment and/or prevention of cardiovascular and cardiopulmonary disorders, shock, inflammatory disorders, cardiovascular, pulmonary, cerebral and renal sequels of sepsis, ischemia and/or reperfusion-related damage, acute kidney injury, transplant protection and delayed graft function, diseases of the blood and blood-forming organs and the immune system, sequels of diabetes mellitus, inflammatory diseases of the nervous system, diseases of the eye, diseases of the skin, diseases of the respiratory, digestive or genitourinary system and sequels of burns and injuries in humans and animals.