alcohols or glycerol, polyols, mannitol, polyethylene glycols, polypropylene glycols, glycerol triacetate, polyvinylpyrrolidone, gelatin, cellulose, carbohydrates such as lactose, glucose, saccharose or starch like corn starch, stearic acid and its salts such as magnesium stearate, talc, lanolin, petroleum jelly, or mixtures thereof, for example mixtures of water with one or more organic solvents such as mixtures of water with alcohols. The compounds of the formula I and their physiologically acceptable salts and solvates can also be lyophilized and the obtained lyophilisates used for the production of injectable compositions, for example.

The dosage of a compound of the formula I and/or a physiologically acceptable salt and/or solvate thereof to be administered depends on the specific case and, as is usual, has to be adapted by the physician according to the customary rules and procedures to the individual circumstances in order to achieve an optimum effect. It depends, for example, on the nature and the severity of the disorder to be treated, the sex, age, weight and individual responsiveness of the human or animal patient, on the efficacy and duration of action of the compound used, on whether the treatment is for the therapy of an acute or chronic disease or prophylactic, or on whether other active ingredients are administered in addition to a compound of the formula I. In general, a daily dose from about 0.01 mg/kg to about 100 mg/kg, or from about 0.1 mg/kg to about 10 mg/kg, or from about 0.3 mg/kg to about 5 mg/kg (in each case mg per kg of bodyweight), for example, is appropriate for administration to an adult weighing about 75 kg in order to obtain the desired results. The daily dose can be administered in a single dose or, in particular when larger amounts are administered, divided into several, for example two, three or four, individual doses. The administration can also be carried out continuously, for example by continuous infusion or injection. Depending on the individual behavior in a specific case, it may be necessary to deviate upward or downward from the indicated dosages.

In one embodiment, there is provided the use of a therapeutically effective amount of the pharmaceutical composition as defined herein, in the manufacture of a medicament for treating wound healing disorders.

In one embodiment, there is provided the use of a therapeutically effective amount of the pharmaceutical composition as defined herein, in the manufacture of a medicament for wound healing.

In one embodiment, there is provided the use of a therapeutically effective amount of the pharmaceutical composition as defined herein, in the manufacture of a medicament for wound healing in diabetics.

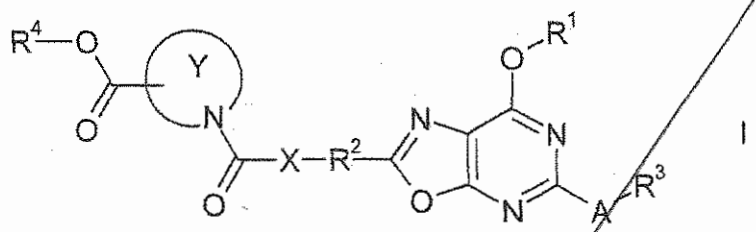
In one embodiment, there is provided the use of a therapeutically effective amount of the pharmaceutical composition as defined herein, in the manufacture of a medicament for treating diabetic foot syndrome.

The examples below illustrate the invention.

When example compounds containing a basic group were purified by preparative high pressure liquid chromatography (HPLC) on reversed phase (RP) column

Claims

1. A compound of the formula I, in any of its stereoisomeric forms, or a mixture of stereoisomeric forms in any ratio, or a physiologically acceptable salt thereof, or a physiologically acceptable solvate of such a compound or such a salt,



I

wherein

A is selected from the group consisting of NH, O and S;

X is selected from the group consisting of $(C_1$-$C_6)$-alkanediyl, $(C_2$-$C_6)$-alkenediyl, $(C_2$-$C_6)$-alkynediyl, $(C_3$-$C_7)$-cycloalkanediyl and $(C_1$-$C_6)$-alkanediyloxy, all of which are optionally substituted by one or more identical or different substituents selected from the group consisting of fluorine and hydroxyl, where the oxygen atom of the $(C_1$-$C_6)$-alkanediyloxy group is attached to the group R^2;

Y is a 4-membered to 7-membered saturated or partially unsaturated monocyclic or bicyclic heterocycle which, in addition to the ring nitrogen atom shown in formula I, contains 0, 1, 2 or 3 identical or different ring heteroatoms selected from the group consisting of N, O and S, where one or two of the additional ring nitrogen atoms may carry a hydrogen atom or a $(C_1$-$C_4)$-alkyl substituent and one of the ring sulfur atoms may carry one or two oxo groups and where the heterocycle is optionally substituted at one or more ring carbon atoms by identical or different $(C_1$-$C_4)$-alkyl substituents;

R^1 is selected from the group consisting of $(C_1$-$C_6)$-alkyl, $(C_2$-$C_6)$-alkenyl, $(C_2$-$C_6)$-alkynyl, $(C_3$-$C_7)$-cycloalkyl-C_tH_{2t}- and Het-C_tH_{2t}-, in which t is selected from the group consisting of 0, 1, 2 and 3;

R^2 is selected from the group consisting of phenylene and a bivalent radical of an aromatic 5-membered or 6-membered monocyclic heterocycle which contains 1, 2 or 3 identical or different ring heteroatoms selected from the group consisting of N, O and S, where one of the ring nitrogen atoms may carry a hydrogen atom or a substituent R^{21} and where the phenylene and the bivalent radical of an aromatic heterocycle are optionally substituted at one or more ring carbon atoms by identical or different substituents R^{22};

R^3 is selected from the group consisting of $(C_1$-$C_6)$-alkyl, $(C_2$-$C_6)$-alkenyl, $(C_2$-$C_6)$-alkynyl, $(C_3$-$C_7)$-cycloalkyl-C_uH_{2u}- and Het-C_vH_{2v}-, in which u and v are selected from the group consisting of 1 and 2, or R^3 is a radical of a saturated or unsaturated 3-membered to 10-membered monocyclic or bicyclic ring which contains 0, 1, 2, 3 or 4 identical or different ring heteroatoms selected from the group consisting of N, O and S, where one or two of the ring nitrogen atoms may carry a hydrogen atom or a $(C_1$-$C_4)$-alkyl substituent and one or two of the ring sulfur atoms may carry one or two oxo groups and where the radical of a ring is optionally substituted at one or more ring carbon atoms by identical or different substituents R^{31}, with the proviso that R^3 may not represent $(C_1$-$C_6)$-alkyl if A represents S;

R^4 is selected from the group consisting of hydrogen, $(C_1$-$C_4)$-alkyl and $(C_3$-$C_7)$-cycloalkyl-C_zH_{2z}-, where z is selected from the group consisting of 0, 1 and 2;

R^{21} is selected from the group consisting of $(C_1$-$C_4)$-alkyl and $(C_3$-$C_7)$-cycloalkyl-C_wH_{2w}- and oxy, where w is selected from the group consisting of 0, 1 and 2;

R^{22} is selected from the group consisting of halogen, hydroxyl, $(C_1$-$C_4)$-alkyl-, $(C_1$-$C_4)$-alkyloxy, $(C_1$-$C_4)$-alkyl-$S(O)_m$-, amino, nitro, cyano, hydroxycarbonyl, $(C_1$-$C_4)$-alkyloxycarbonyl, aminocarbonyl and aminosulfonyl;

R^{31} is selected from the group consisting of halogen, (C_1-C_4)-alkyl, (C_3-C_7)-cycloalkyl, hydroxyl, (C_1-C_4)-alkyloxy, oxo, (C_1-C_4)-alkyl-S(O)$_m$-, amino, (C_1-C_4)-alkylamino, di((C_1-C_4)-alkyl)amino, (C_1-C_4)-alkylcarbonylamino, (C_1-C_4)-alkylsulfonylamino, nitro, cyano, (C_1-C_4)-alkylcarbonyl, aminosulfonyl, (C_1-C_4)-alkylaminosulfonyl and di((C_1-C_4)-alkyl)aminosulfonyl;

Het is a radical of a saturated 4-membered to 7-membered monocyclic heterocycle which contains 1 or 2 identical or different ring heteroatoms selected from the group consisting of N, O and S and which is attached via a ring carbon atom, where the radical of a heterocycle is optionally substituted by one or more identical or different substituents selected from the group consisting of fluorine and (C_1-C_4)-alkyl;

m is selected from the group consisting of 0, 1 and 2, where all numbers m are independent of one another;

where all cycloalkyl and cycloalkanediyl groups independently of one another and independently of other substituents are optionally substituted by one or more identical or different substituents which are selected from the group consisting of fluorine and (C_1-C_4)-alkyl;

where all alkyl, alkanediyl, C_tH_{2t}, C_uH_{2u}, C_vH_{2v}, C_wH_{2w}, C_zH_{2z}, alkenyl, alkenediyl, alkynyl and alkynediyl groups independently of one another and independently of other substituents are optionally substituted by one or more fluorine substituents.

2. The compound of the formula I, in any of its stereoisomeric forms, or a mixture of stereoisomeric forms in any ratio, or a physiologically acceptable salt thereof, or a physiologically acceptable solvate of such a compound or such a salt as claimed in claim 1, wherein A is selected from the group consisting of O and S.

3. The compound of the formula I, in any of its stereoisomeric forms, or a mixture of stereoisomeric forms in any ratio, or a physiologically acceptable salt thereof, or a

physiologically acceptable solvate of such a compound or such a salt as claimed in one or more of claims 1 and 2, wherein X is selected from the group consisting of $(C_1$-$C_6)$-alkanediyl, $(C_2$-$C_6)$-alkenediyl and $(C_1$-$C_6)$-alkanediyloxy.

4. The compound of the formula I , in any of its stereoisomeric forms, or a mixture of stereoisomeric forms in any ratio, or a physiologically acceptable salt thereof, or a physiologically acceptable solvate of such a compound or such a salt as claimed in one or more of claims 1 to 3 in which
Y is a 4-membered to 7-membered saturated monocyclic or bicyclic heterocycle which, in addition to the ring nitrogen atom shown in formula I, contains 0 or 1 ring heteroatom selected from the group consisting of N, O and S, where the additional ring nitrogen atom may carry a hydrogen atom or a $(C_1$-$C_4)$-alkyl substituent and the ring sulfur atom may carry one or two oxo groups and where the heterocycle is optionally substituted at one or more ring carbon atoms by identical or different $(C_1$-$C_4)$-alkyl substituents.

5. The compound of the formula I, in any of its stereoisomeric forms, or a mixture of stereoisomeric forms in any ratio, or a physiologically acceptable salt thereof, or a physiologically acceptable solvate of such a compound or such a salt as claimed in one or more of claims 1 to 4 in which
R^1 is selected from the group consisting of $(C_1$-$C_6)$-alkyl and $(C_3$-$C_7)$-cycloalkyl-C_tH_{2t}-, where t is selected from the group consisting of 0, 1 and 2.

6. The compound of the formula I, in any of its stereoisomeric forms, or a mixture of stereoisomeric forms in any ratio, or a physiologically acceptable salt thereof, or a physiologically acceptable solvate of such a compound or such a salt as claimed in one or more of claims 1 to 4 in which R^2 is selected from the group consisting of phenylene and pyridindiyl, where the phenylene and the pyridinediyl are optionally substituted at one or more ring carbon atoms by identical or different substituents R^{22}.

7. The compound of the formula I, in any of its stereoisomeric forms, or a mixture of stereoisomeric forms in any ratio, or a physiologically acceptable salt thereof, or a physiologically acceptable solvate of such a compound or such a salt as claimed in one or more of claims 1 to 6 in which

R^3 is selected from the group consisting of $(C_1$-$C_6)$-alkyl, $(C_3$-$C_7)$-cycloalkyl-C_uH_{2u}- and Het-C_vH_{2v}-, in which u and v are selected from the group consisting of 1 and 2, or

R^3 is the radical of a saturated or unsaturated 3-membered to 10-membered monocyclic or bicyclic ring which contains 0, 1 or 2 identical or different ring heteroatoms selected from the group consisting of N, O and S, where one or two of the ring nitrogen atoms may carry a hydrogen atom or a $(C_1$-$C_4)$-alkyl substituent and one of the ring sulfur atoms may carry one or two oxo groups and where the radical of a ring is optionally substituted at one or more ring carbon atoms by identical or different substituents R^{31}, with the proviso that R^3 may not represent $(C_1$-$C_6)$-alkyl if A represents S;

Het is a radical of a saturated 4-membered to 6-membered monocyclic heterocycle which contains 1 ring heteroatom selected from the group consisting of N, O and S and which is attached via a ring carbon atom, where the radical of a heterocycle is optionally substituted by one or more identical or different substituents selected from the group consisting of fluorine and $(C_1$-$C_4)$-alkyl.

8. The compound of the formula I, in any of its stereoisomeric forms, or a mixture of stereoisomeric forms in any ratio, or a physiologically acceptable salt thereof, or a physiologically acceptable solvate of such a compound or such a salt as claimed in one or more of claims 1 to 7 in which A is selected from the group consisting of O and S;

X is selected from the group consisting of $(C_1$-$C_6)$-alkanediyl, $(C_2$-$C_6)$-alkenediyl and $(C_1$-$C_6)$-alkanediyloxy;

Y is a 4-membered to 7-membered saturated monocyclic or bicyclic heterocycle which, in addition to the ring nitrogen atom shown in formula I, contains 0 or 1 ring heteroatom selected from the group consisting of N, O and S, where the additional ring nitrogen atom may carry a hydrogen atom or a $(C_1$-$C_4)$-alkyl substituent and the ring sulfur atom may carry one or two oxo groups and where the heterocycle is

optionally substituted at one or more ring carbon atoms by identical or different (C_1-C_4)-alkyl substituents;

R^1 is selected from the group consisting of (C_1-C_6)-alkyl, (C_3-C_7)-cycloalkyl-C_tH_{2t}- and Het-C_tH_{2t}-, where t is selected from the group consisting of 0, 1 and 2;

R^2 is selected from the group consisting of phenylene and pyridinediyl, where the phenylene and the pyridinediyl are optionally substituted at one or more ring carbon atoms by identical or different substituents R^{22};

R^3 is selected from the group consisting of (C_1-C_6)-alkyl, (C_3-C_7)-cycloalkyl-C_uH_{2u}- and Het-C_vH_{2v}-, in which u and v are selected from the group consisting of 1 and 2, or

R^3 is a radical of a saturated or unsaturated 3-membered to 10-membered monocyclic or bicyclic ring which contains 0, 1 or 2 identical or different ring heteroatoms selected from the group consisting of N, O and S, where one or two of the ring nitrogen atoms may carry a hydrogen atom or a (C_1-C_4)-alkyl substituent and one of the ring sulfur atoms may carry one or two oxo groups and where the radical of a ring is optionally substituted at one or more ring carbon atoms by identical or different substituents R^{31}, with the proviso that R^3 may not represent (C_1-C_6)-alkyl if A represents S;

Het is a radical of a saturated 4-membered to 6-membered monocyclic heterocycle which contains 1 ring heteroatom selected from the group consisting of N, O and S and which is attached via a ring carbon atom, where the radical of a heterocycle is optionally substituted by one or more identical or different substituents selected from the group consisting of fluorine and (C_1-C_4)-alkyl.

9. The compound of the formula I, in any of its stereoisomeric forms, or a mixture of stereoisomeric forms in any ratio, or a physiologically acceptable salt thereof, or a physiologically acceptable solvate of such a compound or such a salt as claimed in one or more of claims 1 to 8 in which

A is O;

X is selected from the group consisting of (C_1-C_6)-alkanediyl and (C_1-C_6)-alkanediyloxy;

Y is a 4-membered to 6-membered saturated monocyclic heterocycle which, in addition to the ring nitrogen atom shown in formula I, contains no further ring

heteroatoms, where the ring is optionally substituted at one or more ring carbon atoms by identical or different $(C_1$-$C_4)$-alkyl substituents;

R^1 is selected from the group consisting of $(C_1$-$C_6)$-alkyl and $(C_3$-$C_7)$-cycloalkyl-C_tH_{2t}-, where t is selected from the group consisting of 0 and 1;

R^2 is phenylene which is optionally substituted at one or more ring carbon atoms by identical or different substituents R^{22};

R^3 is selected from the group consisting of $(C_3$-$C_7)$-cycloalkyl-C_uH_{2u}- and Het-C_vH_{2v}-, in which u and v are selected from the group consisting of 1 and 2, or R^3 is a radical of a saturated or unsaturated 3-membered to 7-membered monocyclic or bicyclic ring which contains 0, 1 or 2 identical or different ring heteroatoms selected from the group consisting of N, O and S, where one or two of the ring nitrogen atoms may carry a hydrogen atom or a $(C_1$-$C_4)$-alkyl substituent and one of the ring sulfur atoms may carry one or two oxo groups and where the radical of a ring is optionally substituted at one or more ring carbon atoms by identical or different substituents R^{31}, with the proviso that R^3 may not represent $(C_1$-$C_6)$-alkyl if A represents S;

R^4 is selected from the group consisting of hydrogen and $(C_1$-$C_4)$-alkyl;

R^{22} is selected from the group consisting of halogen, hydroxyl, $(C_1$-$C_4)$-alkyl and $(C_1$-$C_4)$-alkyloxy;

R^{31} is selected from the group consisting of halogen, $(C_1$-$C_4)$-alkyl, $(C_3$-$C_7)$-cycloalkyl, hydroxyl and $(C_1$-$C_4)$-alkyloxy;

Het is a radical of a saturated 4-membered to 6-membered monocyclic heterocycle which contains 1 ring heteroatom selected from the group consisting of O and S and which is attached via a ring carbon atom, where the radical of a heterocycle is optionally substituted by one or more identical or different substituents selected from the group consisting of fluorine and $(C_1$-$C_4)$-alkyl;

where all cycloalkyl groups independently of one another and independently of other substituents are optionally substituted by one or more identical or different substituents which are selected from the group consisting of fluorine and $(C_1$-$C_4)$-alkyl;

where all alkyl, alkanediyl, C_tH_{2t}, C_uH_{2u} and C_vH_{2v} groups independently of one another and independently of other substituents are optionally substituted by one or more fluorine substituents.

10. The compound of the formula I or a physiologically acceptable salt thereof or a physiologically acceptable salvate of such a compound or such a salt as claimed in one or more of claims 1 to 9, selected from the group consisting of

(S)-1-(2-{4-[5-(2,5-difluorophenoxy)-7-propoxyoxazolo[5,4-d]pyrimidin-2-yl]-2,6-dimethylphenoxy}acetyl)pyrrolidine-2-carboxylic acid

(S)-1-(2-{4-[5-(trans-2-fluorocyclohexyloxy)-7-propoxyoxazolo[5,4-d]pyrimidin-2-yl]-2,6-dimethylphenoxy}acetyl)pyrrolidine-2-carboxylic acid

(S)-1-(2-{4-[5-(2-fluorophenoxy)-7-propoxyoxazolo[5,4-d]pyrimidin-2-yl]-2,6-dimethylphenoxy}acetyl)pyrrolidine-2-carboxylic acid

(S)-1-(2-{4-[5-(5-fluoro-2-methylphenoxy)-7-propoxyoxazolo[5,4-d]pyrimidin-2-yl]-2,6-dimethylphenoxy}acetyl)pyrrolidine-2-carboxylic acid

(S)-1-(2-{4-[5-(3-fluoro-4-methylphenoxy)-7-propoxyoxazolo[5,4-d]pyrimidin-2-yl]-2,6-dimethylphenoxy}acetyl)pyrrolidine-2-carboxylic acid

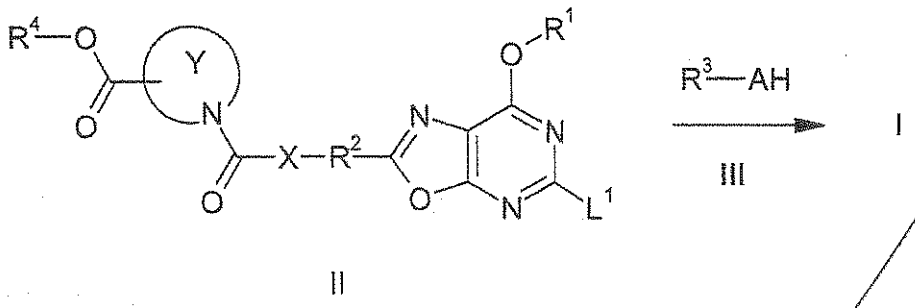
(S)-1-(2-{2,6-dimethyl-4-[7-propoxy-5-(pyridin-3-yloxy)oxazolo[5,4-d]pyrimidin-2-yl]phenoxy}acetyl)pyrrolidine-2-carboxylic acid

(S)-1-(2-{4-[5-(2,4-difluorophenoxy)-7-propoxyoxazolo[5,4-d]pyrimidin-2-yl]-2,6-dimethylphenoxy}acetyl)pyrrolidine-2-carboxylic acid

(S)-1-{2-[2,6-dimethyl-4-(5-phenoxy-7-propoxyoxazolo[5,4-d]pyrimidin-2-yl)-phenoxy]acetyl}pyrrolidine-2-carboxylic acid and

(S)-1-(2-{4-[5-(3-chlorophenoxy)-7-propoxyoxazolo[5,4-d]pyrimidin-2-yl]-2,6-dimethylphenoxy}acetyl)pyrrolidine-2-carboxylic acid

11. A process for preparing a compound of the formula I as claimed in any of claims 1 to 10, wherein a compound of the formula II is reacted with a compound of the formula III,



II

where the groups A, X, Y, R^1, R^2, R^3 and R^4 in the compounds of the formulae II and III are defined as in the compounds of the formula I and moreover functional groups may be present in protected form or in the form of a precursor group and the group L^1 is a halogen atom or a group of the formula –S(O)-Alk or $-S(O)_2$-Alk in which Alk is $(C_1$-$C_4)$-alkyl.

12. A pharmaceutical composition, comprising at least one compound of the formula I as claimed in any of claims 1 to 10 or a physiologically acceptable salt thereof, or a physiologically acceptable solvate of such a compound or such a salt, and a pharmaceutically acceptable carrier.

13. A compound of the formula I as claimed in any of claims 1 to 10 or a physiologically acceptable salt thereof, or a physiologically acceptable solvate of such a compound or such a salt, for use as a medicament.

14. A compound of the formula I as claimed in any of claims 1 to 10 or a physiologically acceptable salt thereof, or a physiologically acceptable solvate of such a compound or such a salt, for the treatment of wound healing disorders.

15. A compound of the formula I as claimed in any of claims 1 to 10 or a physiologically acceptable salt thereof, or a physiologically acceptable solvate of such a compound or such a salt, for wound healing.

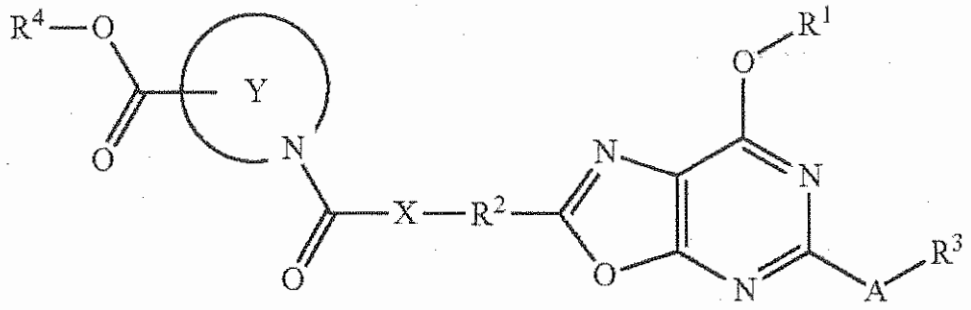
16. A compound of the formula I as claimed in any of claims 1 to 10 or a physiologically acceptable salt thereof, or a physiologically acceptable solvate of such a compound or such a salt, for wound healing in diabetics.

17. A compound of the formula I as claimed in any of claims 1 to 10 or a physiologically acceptable salt thereof, or a physiologically acceptable solvate of such a compound or such a salt, for the treatment of diabetic foot syndrome.

Claims

1. A compound of the formula I, in any of its stereoisomeric forms, or a mixture of stereoisomeric forms in any ratio, or a physiologically acceptable salt thereof, or a physiologically acceptable solvate of such a compound or such a salt,

I



wherein

A is selected from the group consisting of NH, O and S;

X is selected from the group consisting of $(C_1$-$C_6)$-alkanediyl, $(C_2$-$C_6)$-alkenediyl, $(C_2$-$C_6)$-alkynediyl, $(C_3$-$C_7)$-cycloalkanediyl and $(C_1$-$C_6)$-alkanediyloxy, all of which are optionally substituted by one or more identical or different substituents selected from the group consisting of fluorine and hydroxyl, where the oxygen atom of the $(C_1$-$C_6)$-alkanediyloxy group is attached to the group R^2;

Y is a 4-membered to 7-membered saturated or partially unsaturated monocyclic or bicyclic heterocycle which, in addition to the ring nitrogen atom shown in formula I, contains 0, 1, 2 or 3 identical or different ring heteroatoms selected from the group consisting of N, O and S, where one or two of the additional ring nitrogen atoms may carry a hydrogen atom or a $(C_1$-$C_4)$-alkyl substituent and one of the ring sulfur atoms may carry one or two oxo groups and where the heterocycle is optionally substituted at one or more ring carbon atoms by identical or different $(C_1$-$C_4)$-alkyl substituents;

R^1 is selected from the group consisting of $(C_1$-$C_6)$-alkyl, $(C_2$-$C_6)$-alkenyl, $(C_2$-$C_6)$-alkynyl, $(C_3$-$C_7)$-cycloalkyl-C_tH_{2t}— and Het-C_tH_{2t}—, in which t is selected from the group consisting of 0, 1, 2 and 3;

R^2 is selected from the group consisting of phenylene and a bivalent radical of an aromatic 5-membered or 6-membered monocyclic heterocycle which contains 1, 2 or 3 identical or different ring heteroatoms selected from the group consisting of N, O and S, where one of the ring nitrogen atoms may carry a hydrogen atom or a substituent R^{21} and

where the phenylene and the bivalent radical of an aromatic heterocycle are optionally substituted at one or more ring carbon atoms by identical or different substituents R^{22};

R^3 is selected from the group consisting of $(C_1$-$C_6)$-alkyl, $(C_2$-$C_6)$-alkenyl, $(C_2$-$C_6)$-alkynyl, $(C_3$-$C_7)$-cycloalkyl-C_uH_{2u}— and Het-C_vH_{2v}—, in which u and v are selected from the group consisting of 1 and 2, or R^3 is a radical of a saturated or unsaturated 3-membered to 10-membered monocyclic or bicyclic ring which contains 0, 1, 2, 3 or 4 identical or different ring heteroatoms selected from the group consisting of N, O and S, where one or two of the ring nitrogen atoms may carry a hydrogen atom or a $(C_1$-$C_4)$-alkyl substituent and one or two of the ring sulfur atoms may carry one or two oxo groups and where the radical of a ring is optionally substituted at one or more ring carbon atoms by identical or different substituents R^{31}, with the proviso that R^3 may not represent $(C_1$-$C_6)$-alkyl if A represents S;

R^4 is selected from the group consisting of hydrogen, $(C_1$-$C_4)$-alkyl and $(C_3$-$C_7)$-cycloalkyl-C_zH_{2z}—, where z is selected from the group consisting of 0, 1 and 2;

R^{21} is selected from the group consisting of $(C_1$-$C_4)$-alkyl and $(C_3$-$C_7)$-cycloalkyl-C_wH_{2w}— and oxy, where w is selected from the group consisting of 0, 1 and 2;

R^{22} is selected from the group consisting of halogen, hydroxyl, $(C_1$-$C_4)$-alkyl-, $(C_1$-$C_4)$-alkyloxy, $(C_1$-$C_4)$-alkyl-$S(O)_m$—, amino, nitro, cyano, hydroxycarbonyl, $(C_1$-$C_4)$-alkyloxycarbonyl, aminocarbonyl and aminosulfonyl;

R^{31} is selected from the group consisting of halogen, $(C_1$-$C_4)$-alkyl, $(C_3$-$C_7)$-cycloalkyl, hydroxyl, $(C_1$-$C_4)$-alkyloxy, oxo, $(C_1$-$C_4)$-alkyl-$S(O)_m$—, amino, $(C_1$-$C_4)$-alkylamino, di$((C_1$-$C_4)$-alkyl)amino, $(C_1$-$C_4)$-alkylcarbonylamino, $(C_1$-$C_4)$-alkylsulfonylamino, nitro, cyano, $(C_1$-$C_4)$-alkylcarbonyl, aminosulfonyl, $(C_1$-$C_4)$-alkylaminosulfonyl and di$((C_1$-$C_4)$-alkyl)aminosulfonyl;

Het is a radical of a saturated 4-membered to 7-membered monocyclic heterocycle which contains 1 or 2 identical or different ring heteroatoms selected from the group consisting of N, O and S and which is attached via a ring carbon atom, where the radical of a heterocycle is optionally substituted by one or more identical or different substituents selected from the group consisting of fluorine and $(C_1$-$C_4)$-alkyl;

m is selected from the group consisting of 0, 1 and 2, where all numbers m are independent of one another;

where all cycloalkyl and cycloalkanediyl groups independently of one another and independently of other substituents are optionally substituted by one or more identical or different substituents which are selected from the group consisting of fluorine and $(C_1$-$C_4)$-alkyl;

where all alkyl, alkanediyl, C_tH_{2t}, C_uH_{2u}, C_vH_{2v}, C_wH_{2w}, C_ZH_{2z}, alkenyl, alkenediyl, alkynyl and alkynediyl groups independently of one another and independently of other substituents are optionally substituted by one or more fluorine substituents.

2. The compound of the formula I, in any of its stereoisomeric forms, or a mixture of stereoisomeric forms in any ratio, or a physiologically acceptable salt thereof, or a physiologically acceptable solvate of such a compound or such a salt as claimed in claim 1, wherein A is selected from the group consisting of O and S.

3. The compound of the formula I, in any of its stereoisomeric forms, or a mixture of stereoisomeric forms in any ratio, or a physiologically acceptable salt thereof, or a physiologically acceptable solvate of such a compound or such a salt as claimed in claim 1, wherein X is selected from the group consisting of $(C_1$-$C_6)$-alkanediyl, $(C_2$-$C_6)$-alkenediyl and $(C_1$-$C_6)$-alkanediyloxy.

4. The compound of the formula I, in any of its stereoisomeric forms, or a mixture of stereoisomeric forms in any ratio, or a physiologically acceptable salt thereof, or a physiologically acceptable solvate of such a compound or such a salt as claimed in claim 1 wherein

Y is a 4-membered to 7-membered saturated monocyclic or bicyclic heterocycle which, in addition to the ring nitrogen atom shown in formula I, contains 0 or 1 ring heteroatom selected from the group consisting of N, O and S, where the additional ring nitrogen atom may carry a hydrogen atom or a $(C_1$-$C_4)$-alkyl substituent and the ring sulfur atom may carry one or two oxo groups and where the heterocycle is optionally substituted at one or more ring carbon atoms by identical or different $(C_1$-$C_4)$-alkyl substituents.

5. The compound of the formula I, in any of its stereoisomeric forms, or a mixture of stereoisomeric forms in any ratio, or a physiologically acceptable salt thereof, or a physiologically acceptable solvate of such a compound or such a salt as claimed in claim 1 wherein

R^1 is selected from the group consisting of $(C_1$-$C_6)$-alkyl and $(C_3$-$C_7)$-cycloalkyl-C_tH_{2t}—, where t is selected from the group consisting of 0, 1 and 2.

6. The compound of the formula I, in any of its stereoisomeric forms, or a mixture of stereoisomeric forms in any ratio, or a physiologically acceptable salt thereof, or a physiologically acceptable solvate of such a compound or such a salt as claimed in claim 1 wherein R^2 is selected from the group consisting of phenylene and pyridindiyl, where the phenylene and the pyridinediyl are optionally substituted at one or more ring carbon atoms by identical or different substituents R^{22}.

7. The compound of the formula I, in any of its stereoisomeric forms, or a mixture of stereoisomeric forms in any ratio, or a physiologically acceptable salt thereof, or a physiologically acceptable solvate of such a compound or such a salt as claimed in claim 1 wherein

R^3 is selected from the group consisting of $(C_1$-$C_6)$-alkyl, $(C_3$-$C_7)$-cycloalkyl-C_uH_{2u}— and Het-C_vH_{2v}—, in which u and v are selected from the group consisting of 1 and 2, or R^3 is the radical of a saturated or unsaturated 3-membered to 10-membered monocyclic or bicyclic ring which contains 0, 1 or 2 identical or different ring heteroatoms selected from the group consisting of N, O and S, where one or two of the ring nitrogen atoms may carry a hydrogen atom or a $(C_1$-$C_4)$-alkyl substituent and one of the ring sulfur atoms may carry one or two oxo groups and where the radical of a ring is optionally substituted at one or more ring carbon atoms by identical or different substituents R^{31}, with the proviso that R^3 may not represent $(C_1$-$C_6)$-alkyl if A represents S;

Het is a radical of a saturated 4-membered to 6-membered monocyclic heterocycle which contains 1 ring heteroatom selected from the group consisting of N, O and S and which is attached via a ring carbon atom, where the radical of a heterocycle is optionally substituted by one or more identical or different substituents selected from the group consisting of fluorine and $(C_1$-$C_4)$-alkyl.

8. The compound of the formula I, in any of its stereoisomeric forms, or a mixture of stereoisomeric forms in any ratio, or a physiologically acceptable salt thereof, or a physiologically acceptable solvate of such a compound or such a salt as claimed in claim 1 wherein A is selected from the group consisting of O and S;

X is selected from the group consisting of $(C_1$-$C_6)$-alkanediyl, $(C_2$-$C_6)$-alkenediyl and $(C_1$-$C_6)$-alkanediyloxy;

Y is a 4-membered to 7-membered saturated monocyclic or bicyclic heterocycle which, in addition to the ring nitrogen atom shown in formula I, contains 0 or 1 ring heteroatom selected from the group consisting of N, O and S, where the additional ring nitrogen atom may carry a hydrogen atom or a $(C_1$-$C_4)$-alkyl substituent and the ring sulfur atom may carry one or two oxo groups and where the heterocycle is optionally substituted at one or more ring carbon atoms by identical or different $(C_1$-$C_4)$-alkyl substituents;

R^1 is selected from the group consisting of $(C_1$-$C_6)$-alkyl, $(C_3$-$C_7)$-cycloalkyl-C_tH_{2t}— and Het-C_tH_{2t}—, where t is selected from the group consisting of 0, 1 and 2;

R^2 is selected from the group consisting of phenylene and pyridinediyl, where the phenylene and the pyridinediyl are optionally substituted at one or more ring carbon atoms by identical or different substituents R^{22};

R^3 is selected from the group consisting of $(C_1$-$C_6)$-alkyl, $(C_3$-$C_7)$-cycloalkyl-C_uH_{2u}— and Het-C_vH_{2v}—, in which u and v are selected from the group consisting of 1 and 2, or R^3 is a radical of a saturated or unsaturated 3-membered to 10-membered monocyclic or bicyclic ring which contains 0, 1 or 2 identical or different ring heteroatoms selected from the group consisting of N, O and S, where one or two of the ring nitrogen atoms may carry a hydrogen atom or a $(C_1$-$C_4)$-alkyl substituent and one of the ring sulfur atoms may carry one or two oxo groups and where the radical of a ring is optionally substituted at one or more ring carbon atoms by identical or different substituents R^{31}, with the proviso that R^3 may not represent $(C_1$-$C_6)$-alkyl if A represents S;

Het is a radical of a saturated 4-membered to 6-membered monocyclic heterocycle which contains 1 ring heteroatom selected from the group consisting of N, O and S and which is attached via a ring carbon atom, where the radical of a heterocycle is optionally substituted by one or more identical or different substituents selected from the group consisting of fluorine and $(C_1$-$C_4)$-alkyl.

9. The compound of the formula I, in any of its stereoisomeric forms, or a mixture of stereoisomeric forms in any ratio, or a physiologically acceptable salt thereof, or a physiologically acceptable solvate of such a compound or such a salt as claimed in claim 1 wherein

A is O;

X is selected from the group consisting of $(C_1$-$C_6)$-alkanediyl and $(C_1$-$C_6)$-alkanediyloxy;

Y is a 4-membered to 6-membered saturated monocyclic heterocycle which, in addition to the ring nitrogen atom shown in formula I, contains no further ring heteroatoms, where the ring is optionally substituted at one or more ring carbon atoms by identical or different $(C_1$-$C_4)$-alkyl substituents;

R^1 is selected from the group consisting of $(C_1$-$C_6)$-alkyl and $(C_3$-$C_7)$-cycloalkyl-C_tH_{2t}—, where t is selected from the group consisting of 0 and 1;

R^2 is phenylene which is optionally substituted at one or more ring carbon atoms by identical or different substituents R^{22};

R^3 is selected from the group consisting of $(C_3$-$C_7)$-cycloalkyl-C_uH_{2u}— and Het-C_vH_{2v}—, in which u and v are selected from the group consisting of 1 and 2, or R^3 is a radical of a saturated or unsaturated 3-membered to 7-membered monocyclic or bicyclic ring which contains 0, 1 or 2 identical or different ring heteroatoms selected from the group consisting of N, O and S, where one or two of the ring nitrogen atoms may carry a hydrogen atom or a $(C_1$-$C_4)$-alkyl substituent and one of the ring sulfur atoms may carry one or two oxo groups and where the radical of a ring is optionally substituted at one or more ring carbon atoms by

identical or different substituents R^{31}, with the proviso that R^3 may not represent $(C_1$-$C_6)$-alkyl if A represents S;

R^4 is selected from the group consisting of hydrogen and $(C_1$-$C_4)$-alkyl;

R^{22} is selected from the group consisting of halogen, hydroxyl, $(C_1$-$C_4)$-alkyl and $(C_1$-$C_4)$-alkyloxy;

R^{31} is selected from the group consisting of halogen, $(C_1$-$C_4)$-alkyl, $(C_3$-$C_7)$-cycloalkyl, hydroxyl and $(C_1$-$C_4)$-alkyloxy;

Het is a radical of a saturated 4-membered to 6-membered monocyclic heterocycle which contains 1 ring heteroatom selected from the group consisting of O and S and which is attached via a ring carbon atom, where the radical of a heterocycle is optionally substituted by one or more identical or different substituents selected from the group consisting of fluorine and $(C_1$-$C_4)$-alkyl;

where all cycloalkyl groups independently of one another and independently of other substituents are optionally substituted by one or more identical or different substituents which are selected from the group consisting of fluorine and $(C_1$-$C_4)$-alkyl;

where all alkyl, alkanediyl, C_tH_{2t}, C_uH_{2u} and C_vH_{2v} groups independently of one another and independently of other substituents are optionally substituted by one or more fluorine substituents.

10. The compound of the formula I or a physiologically acceptable salt thereof or a physiologically acceptable salvate of such a compound or such a salt as claimed in claim 1, selected from the group consisting of

(S)-1-(2-{4-[5-(2,5-difluorophenoxy)-7-propoxyoxazolo[5,4-d]pyrimidin-2-yl]-2,6-dimethylphenoxy}acetyl)pyrrolidine-2-carboxylic acid

(S)-1-(2-{4-[5-(trans-2-fluorocyclohexyloxy)-7-propoxyoxazolo[5,4-d]pyrimidin-2-yl]-2,6-dimethylphenoxy}acetyl)pyrrolidine-2-carboxylic acid

(S)-1-(2-{4-[5-(2-fluorophenoxy)-7-propoxyoxazolo[5,4-d]pyrimidin-2-yl]-2,6-dimethylphenoxy}acetyl)pyrrolidine-2-carboxylic acid

(S)-1-(2-{4-[5-(5-fluoro-2-methylphenoxy)-7-propoxyoxazolo[5,4-d]pyrimidin-2-yl]-2,6-dimethylphenoxy}acetyl)pyrrolidine-2-carboxylic acid

(S)-1-(2-{4-[5-(3-fluoro-4-methylphenoxy)-7-propoxyoxazolo[5,4-d]pyrimidin-2-yl]-2,6-dimethylphenoxy}acetyl)pyrrolidine-2-carboxylic acid

(S)-1-(2-{2,6-dimethyl-4-[7-propoxy-5-(pyridin-3-yloxy)oxazolo[5,4-d]pyrimidin-2-yl]phenoxy}acetyl)pyrrolidine-2-carboxylic acid

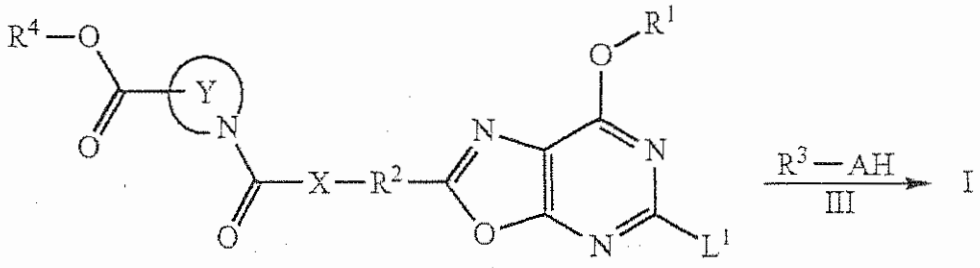
(S)-1-(2-{4-[5-(2,4-difluorophenoxy)-7-propoxyoxazolo[5,4-d]pyrimidin-2-yl]-2,6-dimethylphenoxy}acetyl)pyrrolidine-2-carboxylic acid

(S)-1-{2-[2,6-dimethyl-4-(5-phenoxy-7-propoxyoxazolo[5,4-d]pyrimidin-2-yl)-phenoxy]acetyl}pyrrolidine-2-carboxylic acid and

(S)-1-(2-{4-[5-(3-chlorophenoxy)-7-propoxyoxazolo[5,4-d]pyrimidin-2-yl]-2,6-dimethylphenoxy}acetyl)pyrrolidine-2-carboxylic acid.

11. A pharmaceutical composition, comprising at least one compound of the formula I as claimed in claim 1 or a physiologically acceptable salt thereof, or a physiologically acceptable solvate of such a compound or such a salt, and a pharmaceutically acceptable carrier.

12. A process for preparing a compound of the formula I as claimed inclaim 1, wherein a compound of the formula II is reacted with a compound of the formula III,



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where the groups A, X, Y, R1, R2, R3 and R4 in the compounds of the formulae II and III are defined as in the compounds of the formula I and moreover functional groups may be present in protected form or in the form of a precursor group and the group L' is a halogen atom or a group of the formula —S(O)-Alk or —S(O)2-Alk in which Alk is (C1-C4)-alkyl.

13. Use of a therapeutically effective amount of the pharmaceutical composition of claim 11, in the manufacture of a medicament for treating wound healing disorders.

14. Use of a therapeutically effective amount of the pharmaceutical composition of claim 11, in the manufacture of a medicament for wound healing.

15. Use of a therapeutically effective amount of the pharmaceutical composition of claim 11, in the manufacture of a medicament for wound healing in diabetics.

16. Use of a therapeutically effective amount of the pharmaceutical composition of claim 11, in the manufacture of a medicament for treating diabetic foot syndrome.