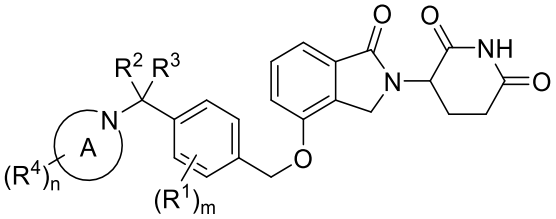
Claims

1. A compound represented by general formula (I), or a pharmaceutically acceptable salt, a stable isotope derivative, or a stereoisomer thereof:



(I)

wherein:
ring A is a nitrogen-containing 4- to 10-membered heterocycle;
R^1 is D or halogen;
R^2 is H; R^3 is methyl, or both R^2 and R^3 are methyl or R^2 and R^3 together with the carbon atoms attached thereto form C_{3-6}cycloalkane;
R^4 is D, halogen, cyano, oxo, C_{1-6}alkyl, C_{3-6}cycloalkyl, -OC_{1-6}alkyl, -C(O)C_{1-6}alkyl, -C(O)C_{3-6}cycloalkyl, -S(O)$_2C_{1-6}$alkyl, -S(O)$_2C_{3-6}$cycloalkyl, aryl or heteroaryl, wherein one or more hydrogens of the alkyl, the cycloalkyl, the aryl and the heteroaryl are optionally substituted with D, halogen, cyano, C_{1-2}alkyl or fluoroC_{1-2}alkyl;
m is an integer of 0-4; and
n is an integer of 0-2.

2. The compound according to claim 1 or a pharmaceutically acceptable salt, a stable isotope derivative, or a stereoisomer thereof, wherein ring A is a 4- to 10-membered monocyclic heterocycle containing one N atom, or a fused-, bridged- or spiro-bicyclic heterocycle (such as morpholine, piperidine, thiomorpholine-1,1-dioxide, 2-oxa-5-azabicyclo[2.2.1]heptane); R^4 is D, halogen, oxo, -CF_3 or C_{1-6}alkyl.

3. The compound according to claim 1 or a pharmaceutically acceptable salt, a stable isotope derivative, or a stereoisomer thereof, wherein ring A is a 6- to 10-membered monocyclic heterocycle containing two N atoms, or a fused-, bridged- or spiro-bicyclic heterocycle (such as piperazine, 3,6-diazabicyclo[3.1.1]heptane, 2,6-diazaspiro[3.3]heptane), preferably ring A is piperazine; R^4 is attached to the second N atom and is C_{1-6}alkyl, C_{3-6}cycloalkyl, -C(O)C_{1-6}alkyl, -C(O)C_{3-6}cycloalkyl, -S(O)$_2C_{1-6}$alkyl, -S(O)$_2C_{3-6}$cycloalkyl, phenyl, or 5- or 6-membered heteroaryl containing N, O and/or S, wherein one or more hydrogens of the alkyl, the cycloalkyl, the phenyl and the heteroaryl are optionally substituted with D, halogen, cyano, C_{1-2}alkyl or fluoroC_{1-2}alkyl; n is 0 or 1.

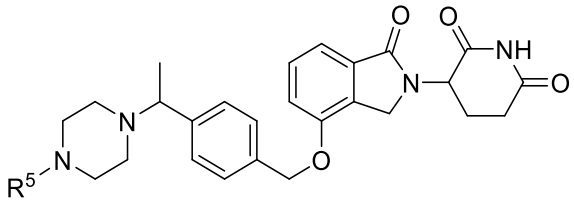
4. The compound according to any of claims 1-3 or a pharmaceutically acceptable salt, a stable isotope derivative, or a stereoisomer thereof, wherein both R^2 and R^3 are methyl.

5. The compound according to any of claims 1-3 or a pharmaceutically acceptable salt, a

stable isotope derivative, or a stereoisomer thereof, wherein R^2 and R^3 together with the carbon atoms attached thereto form C_{3-6}cycloalkane.

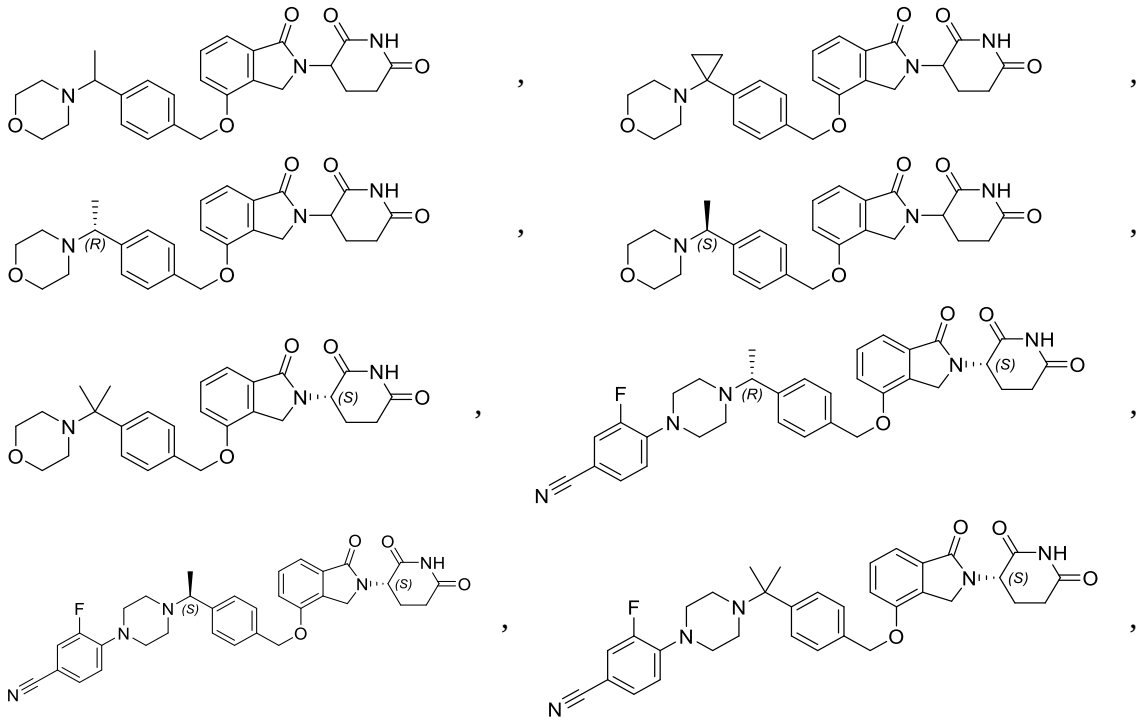
6. The compound according to any of the previous claims or a pharmaceutically acceptable salt, a stable isotope derivative, or a stereoisomer thereof, wherein m is 0.

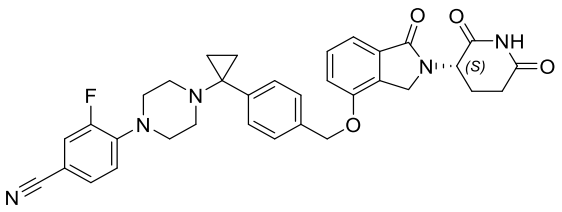
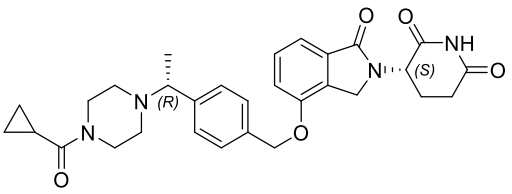
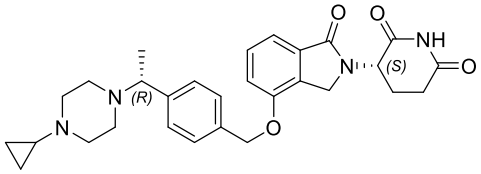
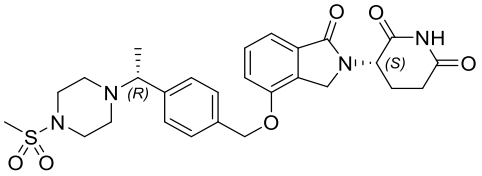
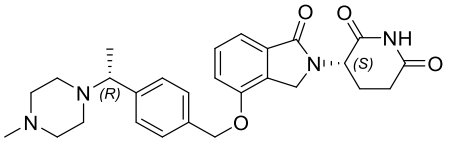
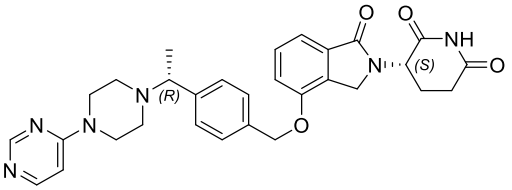
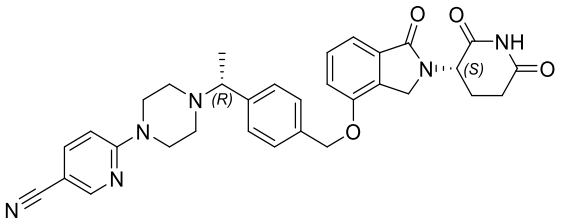
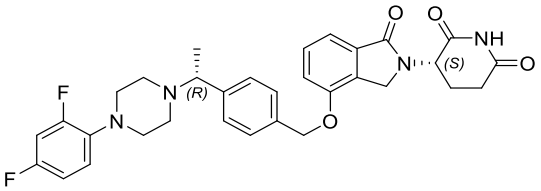
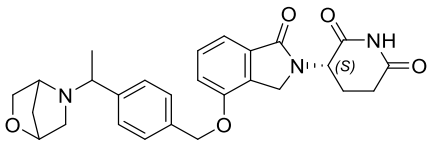
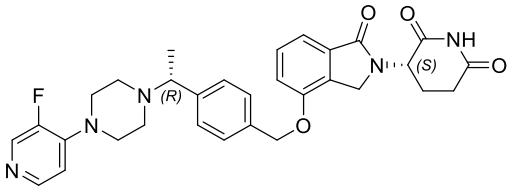
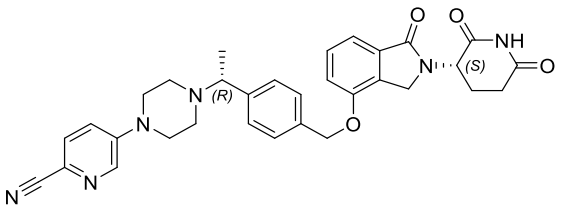
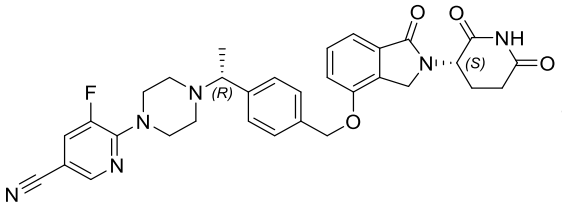
7. The compound according to claim 1 or a pharmaceutically acceptable salt, a stable isotope derivative, or a stereoisomer thereof, which is a compound represented by the following general formula (II):


(II)

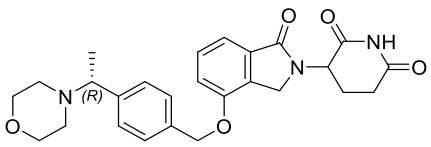
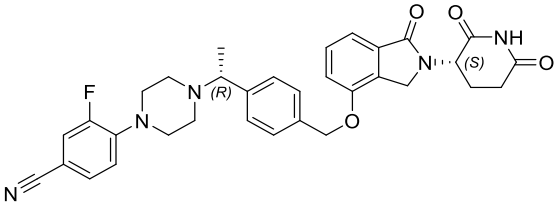
wherein:
R^5 is H, C_{1-6}alkyl, C_{3-6}cycloalkyl, -C(O)C_{1-6}alkyl, -C(O)C_{3-6}cycloalkyl, -S(O)$_2C_{1-6}$alkyl, phenyl or 5- to 6-membered heteroaryl containing N, O and/or S, wherein one or more hydrogens of the alkyl, the cycloalkyl, the phenyl and the heteroaryl are optionally substituted with D, halogen, cyano or C_{1-2}alkyl, preferably R^5 is phenyl, pyridinyl or pyrimidinyl, wherein one or two hydrogens of the phenyl, the pyridinyl and the pyrimidinyl are optionally substituted with F or cyano.

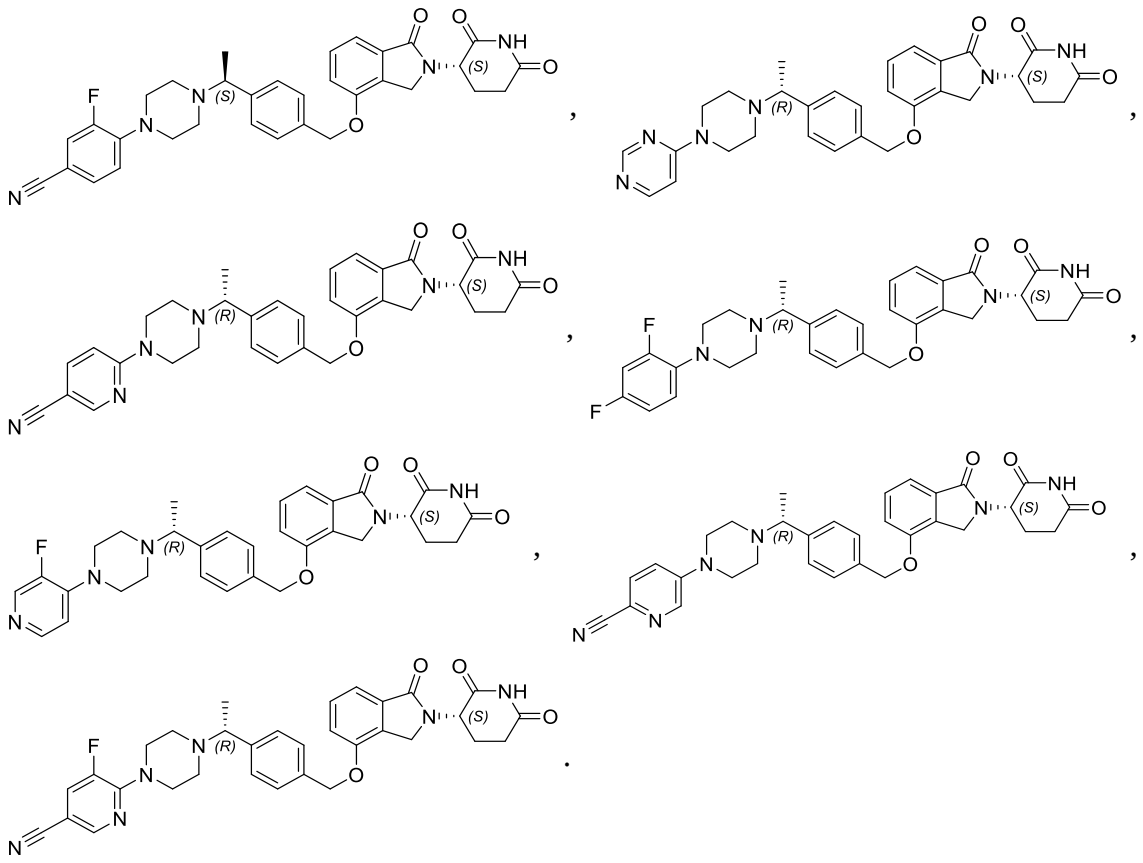
8. The compound according to claim 1 or a pharmaceutically acceptable salt, a stable isotope derivative, or a stereoisomer thereof, wherein the compound is selected from:




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9. The compound according to claim 8, which is:


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10. A pharmaceutical composition, which contains the compound according to any of claims 1-9 or a pharmaceutically acceptable salt, a stable isotope derivative, or a stereoisomer thereof and a pharmaceutically acceptable carrier or adjuvant.

11. A pharmaceutical composition, which contains the compound according to any of claims 1-9 or a pharmaceutically acceptable salt, a stable isotope derivative, or a stereoisomer thereof and at least one additional drug, wherein said at least one additional drug is selected from chemotherapeutic agents, immune and/or inflammation modulators, neurologically related disease modulators.

12. Use of the compound according to any of claims 1-9 or a pharmaceutically acceptable salt, a stable isotope derivative, or a stereoisomer thereof, or the pharmaceutical composition containing the compound according to any of claims 10-11 in manufacture of medicament for treating or preventing a correlated disease mediated by Aiolos, Ikaros, Helios, CK1α, GSPT1, IL-2, IL-6, TNFα, IFNγ, VEGF, wherein said disease is selected from the group consisting of hematological tumors, solid tumors, autoimmune diseases, inflammations, neurodegenerative diseases, and skin diseases.