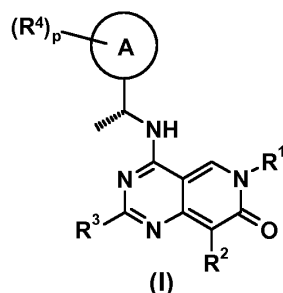


Claims

1. A compound of formula (I)



wherein

5 **R¹** is **R^{a1}**;

R^{a1} is selected from the group consisting of C₁₋₆alkyl, C₁₋₆haloalkyl, C₂₋₆alkenyl, C₂₋₆alkynyl, C₃₋₁₀cycloalkyl, C₄₋₁₀cycloalkenyl, 3-10 membered heterocyclyl, C₆₋₁₀aryl and 5-10 membered heteroaryl, wherein the C₁₋₆alkyl, C₁₋₆haloalkyl, C₂₋₆alkenyl, C₂₋₆alkynyl, C₃₋₁₀cycloalkyl, C₄₋₁₀cycloalkenyl, 3-10 membered heterocyclyl, C₆₋₁₀aryl and 5-10 membered heteroaryl are all optionally substituted by one or more, identical or different **R^{b1}** and/or **R^{c1}**;

each **R^{b1}** is independently selected from the group consisting of -OR^{c1}, -NR^{c1}R^{c1}, halogen, -CN, -C(O)R^{c1}, -C(O)OR^{c1}, -C(O)NR^{c1}R^{c1}, -S(O)₂R^{c1}, -S(O)₂NR^{c1}R^{c1}, -NHC(O)R^{c1}, -N(C₁₋₄alkyl)C(O)R^{c1}, -NHC(O)OR^{c1} and -N(C₁₋₄alkyl)C(O)OR^{c1};

15 each **R^{c1}** is independently selected from the group consisting of hydrogen, C₁₋₆alkyl, C₁₋₆haloalkyl, C₂₋₆alkenyl, C₂₋₆alkynyl, C₃₋₁₀cycloalkyl, C₄₋₁₀cycloalkenyl, 3-10 membered heterocyclyl, C₆₋₁₀aryl and 5-10 membered heteroaryl, wherein the C₁₋₆alkyl, C₁₋₆haloalkyl, C₂₋₆alkenyl, C₂₋₆alkynyl, C₃₋₁₀cycloalkyl, C₄₋₁₀cycloalkenyl, 3-10 membered heterocyclyl, C₆₋₁₀aryl and 5-10 membered heteroaryl are all optionally substituted by one or more, identical or different **R^{d1}** and/or **R^{e1}**;

each **R^{d1}** is independently selected from the group consisting of -OR^{e1}, -NR^{e1}R^{e1}, halogen, -CN, -C(O)R^{e1}, -C(O)OR^{e1}, -C(O)NR^{e1}R^{e1}, -S(O)₂R^{e1}, -S(O)₂NR^{e1}R^{e1}, -NHC(O)R^{e1}, -N(C₁₋₄alkyl)C(O)R^{e1}, -NHC(O)OR^{e1} and -N(C₁₋₄alkyl)C(O)OR^{e1};

each **R^{e1}** is independently selected from the group consisting of hydrogen, C₁₋₆alkyl, C₁₋₆haloalkyl, C₂₋₆alkenyl, C₂₋₆alkynyl, C₃₋₁₀cycloalkyl, C₄₋₁₀cycloalkenyl, 3-10 membered

heterocyclyl, C₆₋₁₀aryl and 5-10 membered heteroaryl;

R² is selected from the group consisting of hydrogen, C₁₋₄alkyl, C₃₋₆cycloalkyl, 3-6 membered heterocyclyl and halogen;

R³ is selected from the group consisting of hydrogen, C₁₋₄alkyl and C₁₋₄haloalkyl;

5 ring system **A** is selected from the group consisting of C₆₋₁₀aryl, 5-10 membered heteroaryl and 9-10 membered bicyclic heterocyclyl;

p denotes 1, 2 or 3;

each **R**⁴ is independently selected from the group consisting of C₁₋₄alkyl, C₂₋₄alkenyl, C₂₋₄alkynyl, C₁₋₄haloalkyl, hydroxy-C₁₋₄alkyl, hydroxy-C₁₋₄haloalkyl, C₃₋₆cycloalkyl, 3-6
 10 membered heterocyclyl, hydroxy-C₃₋₆cycloalkyl, C₁₋₄haloalkyl substituted with a 3-6 membered heterocyclyl, 3-6 membered heterocyclyl substituted with hydroxy, halogen, -NH₂, -SO₂-C₁₋₄alkyl and the bivalent substituent =O, while =O may only be a substituent in a non-aromatic ring;

or a salt thereof.

15 **2.** A compound or salt according to claim 1, wherein

R¹ is **R**^{a1};

R^{a1} is selected from the group consisting of C₁₋₆alkyl, C₁₋₆haloalkyl, C₃₋₁₀cycloalkyl, C₄₋₁₀cycloalkenyl, 3-10 membered heterocyclyl, C₆₋₁₀aryl and 5-10 membered heteroaryl, wherein the C₁₋₆alkyl, C₁₋₆haloalkyl, C₃₋₁₀cycloalkyl, C₄₋₁₀cycloalkenyl, 3-10 membered
 20 heterocyclyl, C₆₋₁₀aryl and 5-10 membered heteroaryl are all optionally substituted by one or more, identical or different **R**^{b1} and/or **R**^{c1};

each **R**^{b1} is independently selected from the group consisting of -OR^{c1}, -NR^{c1}R^{c1}, halogen, -CN, -C(O)R^{c1}, -C(O)OR^{c1} and -C(O)NR^{c1}R^{c1};

each **R**^{c1} is independently selected from the group consisting of hydrogen, C₁₋₆alkyl, C₁₋₆haloalkyl, C₃₋₁₀cycloalkyl, C₄₋₁₀cycloalkenyl, 3-10 membered heterocyclyl, C₆₋₁₀aryl and 5-10 membered heteroaryl, wherein the C₁₋₆alkyl, C₁₋₆haloalkyl, C₃₋₁₀cycloalkyl, C₄₋₁₀cycloalkenyl, 3-10 membered heterocyclyl, C₆₋₁₀aryl and 5-10 membered heteroaryl
 25 are all optionally substituted by one or more, identical or different **R**^{d1} and/or **R**^{e1};

each **R**^{d1} is independently selected from the group consisting of -OR^{e1}, -NR^{e1}R^{e1},

halogen, -CN, -C(O)R^{e1}, -C(O)OR^{e1} and -C(O)NR^{e1}R^{e1};

each R^{e1} is independently selected from the group consisting of hydrogen, C₁₋₆alkyl, C₁₋₆haloalkyl, C₃₋₁₀cycloalkyl, C₄₋₁₀cycloalkenyl, 3-10 membered heterocyclyl, C₆₋₁₀aryl and 5-10 membered heteroaryl.

5 **3.** A compound or salt according to claim 2, wherein

R¹ is R^{a1};

R^{a1} is selected from the group consisting of C₁₋₆alkyl, C₁₋₆haloalkyl, C₃₋₁₀cycloalkyl, C₄₋₁₀cycloalkenyl, 3-10 membered heterocyclyl and 5-10 membered heteroaryl, wherein the C₁₋₆alkyl, C₁₋₆haloalkyl, C₃₋₁₀cycloalkyl, C₄₋₁₀cycloalkenyl, 3-10 membered heterocyclyl and 5-10 membered heteroaryl are all optionally substituted by one or more, identical or different R^{b1} and/or R^{c1};

each R^{b1} is independently selected from the group consisting of -OR^{c1}, halogen and -C(O)NR^{c1}R^{c1};

each R^{c1} is independently selected from the group consisting of hydrogen, C₁₋₆alkyl, C₁₋₆haloalkyl, 3-10 membered heterocyclyl, C₆₋₁₀aryl and 5-10 membered heteroaryl, wherein the C₁₋₆alkyl, C₁₋₆haloalkyl, 3-10 membered heterocyclyl, C₆₋₁₀aryl and 5-10 membered heteroaryl are all optionally substituted by one or more, identical or different R^{d1} and/or R^{e1};

each R^{d1} is independently selected from the group consisting of -OR^{e1} and halogen;

20 each R^{e1} is independently selected from the group consisting of hydrogen and C₁₋₆alkyl.

4. A compound or salt according to claim 1, wherein

R¹ is R^{a1};

R^{a1} is selected from the group consisting of C₃₋₁₀cycloalkyl and C₄₋₁₀cycloalkenyl, wherein the C₃₋₁₀cycloalkyl and C₄₋₁₀cycloalkenyl are both optionally substituted by one or more, identical or different R^{b1} and/or R^{c1};

each R^{b1} is independently selected from the group consisting of -OR^{c1}, -NR^{c1}R^{c1}, halogen, -CN, -C(O)R^{c1}, -C(O)OR^{c1} and -C(O)NR^{c1}R^{c1};

each R^{c1} is independently selected from the group consisting of hydrogen, C₁₋₆alkyl,

C₁₋₆haloalkyl, C₃₋₁₀cycloalkyl, C₄₋₁₀cycloalkenyl, 3-10 membered heterocyclyl, C₆₋₁₀aryl and 5-10 membered heteroaryl, wherein the C₁₋₆alkyl, C₁₋₆haloalkyl, C₃₋₁₀cycloalkyl, C₄₋₁₀cycloalkenyl, 3-10 membered heterocyclyl, C₆₋₁₀aryl and 5-10 membered heteroaryl are all optionally substituted by one or more, identical or different **R^{d1}** and/or **R^{e1}**;

- 5 each **R^{d1}** is independently selected from the group consisting of -OR^{e1}, -NR^{e1}R^{e1}, halogen, -CN, -C(O)R^{e1}, -C(O)OR^{e1}, -C(O)NR^{e1}R^{e1};

each **R^{e1}** is independently selected from the group consisting of hydrogen, C₁₋₆alkyl, C₁₋₆haloalkyl, C₃₋₁₀cycloalkyl, C₄₋₁₀cycloalkenyl, 3-10 membered heterocyclyl, C₆₋₁₀aryl and 5-10 membered heteroaryl.

- 10 **5.** A compound or salt according to claim 4, wherein

R¹ is C₃₋₈cycloalkyl optionally substituted by one or more, identical or different **R^{b1}** and/or **R^{c1}**;

each **R^{b1}** is independently selected from the group consisting of -OR^{c1}, halogen and -C(O)NR^{c1}R^{c1};

- 15 each **R^{c1}** is independently selected from the group consisting of hydrogen, C₁₋₆alkyl, C₁₋₆haloalkyl, 3-8 membered heterocyclyl, phenyl and 5-6 membered heteroaryl, wherein the C₁₋₆alkyl, C₁₋₆haloalkyl, 3-8 membered heterocyclyl, phenyl and 5-6 membered heteroaryl are all optionally substituted by one or more, identical or different **R^{d1}** and/or **R^{e1}**;

- 20 each **R^{d1}** is independently selected from the group consisting of -OR^{e1} and halogen;

each **R^{e1}** is independently selected from the group consisting of hydrogen and C₁₋₆alkyl.

- 6.** A compound or salt according to claim 5, wherein

R¹ is C₃₋₈cycloalkyl optionally substituted by one or more, identical or different substituent(s) selected from the group consisting of C₁₋₄alkyl, C₁₋₄haloalkyl, C₁₋₄alkoxy-C₁₋₄alkyl, 5-6 membered heteroaryl, phenyl, halophenyl, halogen, 3-6 membered heterocyclyl, -C(O)N(C₁₋₄alkyl)₂ and hydroxy.

- 7.** A compound or salt according to claim 1, wherein

R¹ is selected from the group consisting of C₁₋₆alkyl and C₁₋₆haloalkyl.

8. A compound or salt according to claim 1, wherein

R^1 is 3-10 membered heterocyclyl optionally substituted by one or more, identical or different R^{b1} and/or R^{c1} ;

each R^{b1} is independently selected from the group consisting of $-OR^{c1}$, $-NR^{c1}R^{c1}$,
5 halogen, $-CN$, $-C(O)R^{c1}$, $-C(O)OR^{c1}$ and $-C(O)NR^{c1}R^{c1}$;

each R^{c1} is independently selected from the group consisting of hydrogen, C_{1-6} alkyl,
 C_{1-6} haloalkyl, C_{3-10} cycloalkyl, C_{4-10} cycloalkenyl, 3-10 membered heterocyclyl, C_{6-10} aryl and
5-10 membered heteroaryl, wherein the C_{1-6} alkyl, C_{1-6} haloalkyl, C_{3-10} cycloalkyl,
 C_{4-10} cycloalkenyl, 3-10 membered heterocyclyl, C_{6-10} aryl and 5-10 membered heteroaryl
10 are all optionally substituted by one or more, identical or different R^{d1} and/or R^{e1} ;

each R^{d1} is independently selected from the group consisting of $-OR^{e1}$, $-NR^{e1}R^{e1}$,
halogen, $-CN$, $-C(O)R^{e1}$, $-C(O)OR^{e1}$ and $-C(O)NR^{e1}R^{e1}$;

each R^{e1} is independently selected from the group consisting of hydrogen, C_{1-6} alkyl,
 C_{1-6} haloalkyl, C_{3-10} cycloalkyl, C_{4-10} cycloalkenyl, 3-10 membered heterocyclyl, C_{6-10} aryl and
15 5-10 membered heteroaryl.

9. A compound or salt according to claim 8, wherein

R^1 is 3-10 membered heterocyclyl optionally substituted by one or more, identical or
different substituent(s) selected from the group consisting of C_{1-6} alkyl, C_{1-6} haloalkyl and
 C_{6-10} aryl.

20 10. A compound or salt according to claim 9, wherein

R^1 is 3-8 membered heterocyclyl optionally substituted by one substituent selected from
the group consisting of C_{1-6} alkyl, C_{1-6} haloalkyl and C_{6-10} aryl.

11. A compound or salt according to claim 1, wherein

R^1 is 5-6 membered heteroaryl optionally substituted with C_{1-4} alkyl.

25 12. A compound or salt according to any one of claims 1 to 11, wherein

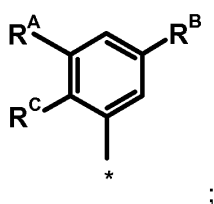
ring system **A** is selected from the group consisting of C_{6-10} aryl, 5-10 membered
heteroaryl and 9-10 membered bicyclic heterocyclyl;

p denotes 1 or 2;

each **R**⁴ is independently selected from the group consisting of C₁₋₄alkyl, C₂₋₄alkinyl, C₁₋₄haloalkyl, hydroxy-C₁₋₄haloalkyl, C₁₋₄haloalkyl substituted with a 3-6 membered heterocyclyl, halogen and the bivalent substituent =O, while =O may only be a substituent in a non-aromatic ring.

13. A compound or salt according to any one of claims 1 to 11, wherein

A together with the **p** substituents **R**⁴ has substructure



R^A is selected from the group consisting of C₁₋₄alkyl, C₁₋₄haloalkyl, hydroxy-C₁₋₄alkyl, hydroxy-C₁₋₄haloalkyl, C₁₋₄haloalkyl substituted with a 3-6 membered heterocyclyl, C₃₋₆cycloalkyl, hydroxy-C₃₋₆cycloalkyl, 3-6 membered heterocyclyl, 3-6 membered hydroxy-heterocyclyl, halogen and -SO₂-C₁₋₄alkyl;

R^B is selected from the group consisting of hydrogen and -NH₂;

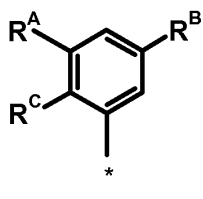
R^C is selected from the group consisting of hydrogen, C₁₋₄alkyl and halogen;

or

R^A and **R**^C together with the carbon atoms they are attached form a 5-6 membered non-aromatic carbocycle, a 5-6 membered non-aromatic heterocycle or a 5-6 membered heteroaryl, wherein the 5-6 membered non-aromatic carbocycle, 5-6 membered non-aromatic heterocycle and 5-6 membered heteroaryl are all optionally substituted by one or more halogen or by an oxo group.

14. A compound or salt according to claim 13, wherein

A together with the **p** substituents **R**⁴ has substructure



R^A is selected from the group consisting of C_{1-4} haloalkyl, hydroxy- C_{1-4} haloalkyl and C_{1-4} haloalkyl substituted with a 3-6 membered heterocyclyl;

R^B is hydrogen;

5 R^C is selected from the group consisting of hydrogen, C_{1-4} alkyl and fluorine;

or

R^A and R^C together with the carbon atoms they are attached form a 5-6 membered non-aromatic carbocycle, a 5-6 membered non-aromatic heterocycle or a 5-6 membered heteroaryl, wherein the 5-6 membered non-aromatic carbocycle, 5-6 membered non-aromatic heterocycle and 5-6 membered heteroaryl are all optionally substituted by one or
 10 more fluorine or by an oxo group.

15. A compound according to any one of claim 1 to 14 – or a pharmaceutically acceptable salt thereof – for use as a medicament.

16. A compound according to any one of claim 1 to 14 – or a pharmaceutically
 15 acceptable salt thereof – for use in the treatment and/or prevention of a disease and/or condition wherein the inhibition of the interaction of SOS1 and a RAS-family protein and/or RAC1 is of therapeutic benefit.

17. A compound according to any one of claim 1 to 14 – or a pharmaceutically acceptable salt thereof – for use in the treatment and/or prevention of cancer.

20 18. A compound – or a pharmaceutically acceptable salt thereof – for use according to any one of claim 15 to 17, wherein said compound or salt is administered before, after or together with at least one other pharmacologically active substance.

19. A compound – or a pharmaceutically acceptable salt thereof – for use according to any one of claim 15 to 17, wherein said compound or salt is administered in combination

with at least one other pharmacologically active substance.

20. A method for the treatment and/or prevention of a disease and/or condition wherein the inhibition of the interaction of SOS1 and a RAS-family protein or RAC1 is of therapeutic benefit comprising administering a therapeutically effective amount of a compound of any one of claim 1 to 14 – or a pharmaceutically acceptable salt thereof – to a human being.

21. A method for the treatment and/or prevention of cancer comprising administering a therapeutically effective amount of a compound of any one of claim 1 to 14 – or a pharmaceutically acceptable salt thereof – to a human being.

22. A method according to any one of claim 20 and 21, wherein the compound – or a pharmaceutically acceptable salt thereof – is administered before, after or together with at least one other pharmacologically active substance.

23. A method according to any one of claim 20 and 21, wherein the compound – or a pharmaceutically acceptable salt thereof – is administered in combination with a therapeutically effective amount of at least one other pharmacologically active substance.

24. The compound – or the pharmaceutically acceptable salt thereof – for use according to any one of claim 18 and 19, or the method according to any one of claim 22 and 23, wherein the at least one other pharmacologically active substance is an inhibitor of MEK and/or of mutants thereof.

25. The compound – or the pharmaceutically acceptable salt thereof – for use according to any one of claim 17 to 19, or the method according to any one of claim 21 to 23, wherein the cancer is selected from the group consisting of pancreatic cancer, lung cancer, colorectal cancer, cholangiocarcinoma, multiple myeloma, melanoma, uterine cancer, endometrial cancer, thyroid cancer, acute myeloid leukaemia, bladder cancer, urothelial cancer, gastric cancer, cervical cancer, head and neck squamous cell carcinoma, diffuse large B cell lymphoma, oesophageal cancer, chronic lymphocytic leukaemia, hepatocellular cancer, breast cancer, ovarian cancer, prostate cancer, glioblastoma, renal cancer and sarcoma.

26. A pharmaceutical composition comprising a compound according to any one of claim 1 to 14 – or a pharmaceutically acceptable salt thereof – and one or more pharmaceutically acceptable excipient(s).

27. A pharmaceutical preparation comprising a compound according to any one of claim
5 1 to 14 – or a pharmaceutically acceptable salt thereof – and at least one (preferably one) other pharmacologically active substance.