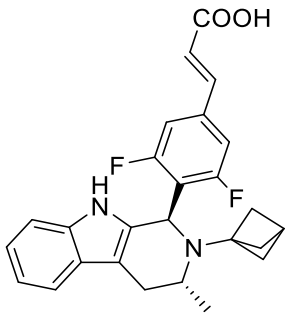
WHAT IS CLAIMED IS:

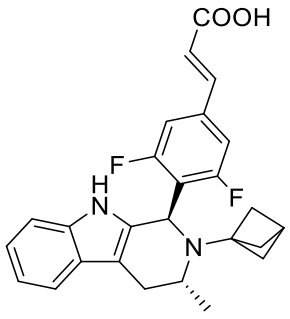
1. A pharmaceutically acceptable salt of (*E*)-3-(4-((1*R*,3*R*)-2-(Bicyclo[1.1.1]pentan-1-yl)-3-methyl-2,3,4,9-tetrahydro-1*H*-pyrido[3,4-b]indol-1-yl)-3,5-difluorophenyl)acrylic acid (Compound A):



Compound A

wherein the pharmaceutically acceptable salt is a hydrosulfate salt of Compound A.

2. A pharmaceutically acceptable salt of (*E*)-3-(4-((1*R*,3*R*)-2-(Bicyclo[1.1.1]pentan-1-yl)-3-methyl-2,3,4,9-tetrahydro-1*H*-pyrido[3,4-b]indol-1-yl)-3,5-difluorophenyl)acrylic acid (Compound A):



Compound A

wherein the pharmaceutically acceptable salt is a sulfate salt of Compound A.

3. A pharmaceutically acceptable salt form of Compound A comprising the hydrosulfate salt of Compound A; and the sulfate salt of Compound A.

4. The pharmaceutically acceptable salt form of Claim 3 consisting essentially of the hydrosulfate salt of Compound A; and the sulfate salt of Compound A.

5. The pharmaceutically acceptable salt form of Claim 3, wherein the amount of the hydrosulfate salt of Compound A + the amount of the sulfate salt of Compound A is ≥ 85% of the pharmaceutically acceptable salt form of Compound A.

~~6. The pharmaceutically acceptable salt form of Claim 3, wherein the amount of the hydrosulfate salt of Compound A + the amount of the sulfate salt of Compound A is ≥ 98% of the pharmaceutically acceptable salt form of Compound A.~~

~~7. The pharmaceutically acceptable salt form of Claim 3, wherein the amount of the hydrosulfate salt of Compound A + the amount of the sulfate salt of Compound A is 100% of the pharmaceutically acceptable salt form of Compound A.~~

~~8.~~6. The pharmaceutically acceptable salt form of any one of Claims 3-~~7~~5, wherein the salt form is Form A.

~~9.~~7. The pharmaceutically acceptable salt form of Claim ~~8~~6, wherein Form A is characterized by one or more peaks in an X-ray powder diffraction pattern, wherein the one or more peaks is selected from a peak in the range of from about 9.4 degrees 2θ to about 9.7 degrees 2θ, a peak in the range of from about 10.2 degrees 2θ to about 10.5 degrees 2θ and a peak in the range of from about 10.9 degrees 2θ to about 11.2 degrees 2θ.

~~10. The pharmaceutically acceptable salt form of Claim 8, wherein Form A is characterized by one or more peaks in an X-ray powder diffraction pattern, wherein the one or more peaks is selected from a peak in the range of from about 4.7 degrees 2θ to about 5.0 degrees 2θ, a peak in the range of from about 9.4 degrees 2θ to about 9.7 degrees 2θ, a peak in the range of from about 10.2 degrees 2θ to about 10.5 degrees 2θ, a peak in the range of from about 10.9 degrees 2θ to about 11.2 degrees 2θ, a peak in the range of from about 14.7 degrees 2θ to about 15.0 degrees 2θ, a peak in the range of from about 16.9 degrees 2θ to about 17.2 degrees 2θ, a peak in the range of from about 19.6 degrees 2θ to about 19.9 degrees 2θ, and a peak in the range of from about 20.9 degrees 2θ to about 21.1 degrees 2θ.~~

~~11. The pharmaceutically acceptable salt form of Claim 8, wherein Form A is characterized by one or more peaks in an X-ray powder diffraction pattern, wherein the one or more peaks is selected from about 9.6 degrees 2θ ± 0.2 degrees 2θ, about 10.3 degrees 2θ ± 0.2 degrees 2θ and about 11.0 degrees 2θ ± 0.2 degrees 2θ.~~

~~12. The pharmaceutically acceptable salt form of Claim 8, wherein Form A is characterized by one or more peaks in an X-ray powder diffraction pattern, wherein the one or more peaks is selected from about 4.8 degrees 2θ ± 0.2 degrees 2θ, about 9.6 degrees 2θ ± 0.2 degrees 2θ, about 10.3 degrees 2θ ± 0.2 degrees 2θ, about 11.0 degrees 2θ ± 0.2 degrees~~

~~2θ, about 14.9 degrees 2θ ± 0.2 degrees 2θ, about 17.1 degrees 2θ ± 0.2 degrees 2θ, about 19.8 degrees 2θ ± 0.2 degrees 2θ and about 21.0 degrees 2θ ± 0.2 degrees 2θ.~~

~~13.~~8. The pharmaceutically acceptable salt form of Claim ~~8~~6, wherein the Form A is characterized by one or more peaks in an X-ray powder diffraction pattern, wherein the one or more peaks is selected from about 4.8 degrees 2θ ± 0.2 degrees 2θ, about 6.5 degrees 2θ ± 0.2 degrees 2θ, about 7.4 degrees 2θ ± 0.2 degrees 2θ, about 9.6 degrees 2θ ± 0.2 degrees 2θ, about 10.3 degrees 2θ ± 0.2 degrees 2θ, about 11.0 degrees 2θ ± 0.2 degrees 2θ, about 11.4 degrees 2θ ± 0.2 degrees 2θ, about 13.1 degrees 2θ ± 0.2 degrees 2θ, about 13.8 degrees 2θ ± 0.2 degrees 2θ, about 14.9 degrees 2θ ± 0.2 degrees 2θ, about 15.5 degrees 2θ ± 0.2 degrees 2θ, about 15.9 degrees 2θ ± 0.2 degrees 2θ, about 16.6 degrees 2θ ± 0.2 degrees 2θ, about 17.1 degrees 2θ ± 0.2 degrees 2θ, about 17.7 degrees 2θ ± 0.2 degrees 2θ, about 18.7 degrees 2θ ± 0.2 degrees 2θ, about 19.8 degrees 2θ ± 0.2 degrees 2θ, about 20.2 degrees 2θ ± 0.2 degrees 2θ, about 21.0 degrees 2θ ± 0.2 degrees 2θ, about 21.9 degrees 2θ ± 0.2 degrees 2θ, about 22.9 degrees 2θ ± 0.2 degrees 2θ, about 23.8 degrees 2θ ± 0.2 degrees 2θ, about 24.9 degrees 2θ ± 0.2 degrees 2θ, about 27.3 degrees 2θ ± 0.2 degrees 2θ and about 28.8 degrees 2θ ± 0.2 degrees 2θ.

~~14. The pharmaceutically acceptable salt form of Claim 8, wherein Form A has an X-ray powder diffraction pattern spectrum corresponding to the representative XRPD spectrum depicted in Figure 1.~~

~~15. The pharmaceutically acceptable salt form of Claim 8, wherein Form A is characterized by a differential scanning calorimetry (DSC) thermogram comprising an exotherm peak at about 185 ºC.~~

~~16. The pharmaceutically acceptable salt form of Claim 8, wherein Form A has a differential scanning calorimetry (DSC) thermogram corresponding to the representative DSC thermogram depicted in Figure 2.~~

~~17.~~9. The pharmaceutically acceptable salt form of any one of Claims 3-~~7~~5, wherein the salt form is Form C.

~~18. The pharmaceutically acceptable salt form of Claim 17, wherein Form C is characterized by one or more peaks in an X-ray powder diffraction pattern, wherein the one or more peaks is selected from a peak in the range of from about 9.0 degrees 2θ to about 9.3 degrees~~

~~2θ, a peak in the range of from about 9.8 degrees 2θ to about 10.1 degrees 2θ and a peak in the range of from about 14.1 degrees 2θ to about 14.4 degrees 2θ.~~

~~19. The pharmaceutically acceptable salt form of Claim 17, wherein Form C is characterized by one or more peaks in an X-ray powder diffraction pattern, wherein the one or more peaks is selected from a peak in the range of from about 4.4 degrees 2θ to about 4.7 degrees 2θ, a peak in the range of from about 7.2 degrees 2θ to about 7.5 degrees 2θ, a peak in the range of from about 9.0 degrees 2θ to about 9.3 degrees 2θ, a peak in the range of from about 9.8 degrees 2θ to about 10.1 degrees 2θ, a peak in the range of from about 10.2 degrees 2θ to about 10.5 degrees 2θ, a peak in the range of from about 11.4 degrees 2θ to about 11.7 degrees 2θ, a peak in the range of from about 13.5 degrees 2θ to about 13.8 degrees 2θ, a peak in the range of from about 14.1 degrees 2θ to about 14.4 degrees 2θ, a peak in the range of from about 17.7 degrees 2θ to about 18.0 degrees 2θ, a peak in the range of from about 18.1 degrees 2θ to about 18.4 degrees 2θ, a peak in the range of from about 19.7 degrees 2θ to about 20.0 degrees 2θ, a peak in the range of from about 20.5 degrees 2θ to about 20.8 degrees 2θ and a peak in the range of from about 22.2 degrees 2θ to about 22.5 degrees 2θ.~~

~~20. The pharmaceutically acceptable salt form of Claim 17, wherein Form C has an X-ray powder diffraction pattern corresponding to the representative XRPD spectrum depicted in Figure 5.~~

~~21. The pharmaceutically acceptable salt form of Claim 17, wherein Form C is characterized by a differential scanning calorimetry (DSC) thermogram comprising an exotherm at about 182 ºC.~~

~~22. The pharmaceutically acceptable salt form of Claim 17, wherein Form C has a differential scanning calorimetry (DSC) thermogram corresponding to the representative DSC thermogram depicted in Figure 6.~~

~~23.~~10. The pharmaceutically acceptable salt form of any one of Claims 3-~~7~~5, wherein the salt form is Form D.

~~24. The pharmaceutically acceptable salt form of Claim 23, wherein Form D is characterized by one or more peaks in an X-ray powder diffraction pattern, wherein the one or more peaks can be selected from a peak in the range of from a peak in the range of from about 6.2 degrees 2θ to about 6.6 degrees 2θ, a peak in the range of from about 9.3 degrees~~

~~2θ to about 9.7 degrees 2θ and a peak in the range of from about 9.8 degrees 2θ to about 10.2 degrees 2θ.~~

~~25. The pharmaceutically acceptable salt form of Claim 23, wherein Form D has an X-ray powder diffraction pattern corresponding to the representative XRPD spectrum depicted in Figure 8.~~

~~26. The pharmaceutically acceptable salt form of Claim 23, wherein Form D has a differential scanning calorimetry (DSC) thermogram corresponding to the representative DSC thermogram depicted in Figure 9.~~

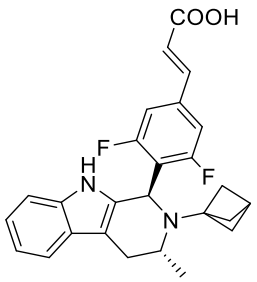
~~27.~~11. The pharmaceutically acceptable salt form of any one of Claims 3-~~7~~5, wherein the salt form is Form E.

~~28. The pharmaceutically acceptable salt form of Claim 27, wherein Form E is characterized by one or more peaks in an X-ray powder diffraction pattern, wherein the one or more peaks can be selected from a peak in the range of from about 4.2 degrees 2θ to about 4.6 degrees 2θ, a peak in the range of from about 8.5 degrees 2θ to about 8.9 degrees 2θ, a peak in the range of from about 9.7 degrees 2θ to about 10.1 degrees 2θ and a peak in the range of from about 11.7 degrees 2θ to about 12.1 degrees 2θ.~~

~~29. The pharmaceutically acceptable salt form of Claim 27, wherein Form E has an X-ray powder diffraction pattern corresponding to the representative XRPD spectrum depicted in Figure 10.~~

~~30. The pharmaceutically acceptable salt form of Claim 27, wherein Form E has a differential scanning calorimetry (DSC) thermogram corresponding to the representative DSC thermogram depicted in Figure 11.~~

~~31.~~12. A pharmaceutically acceptable salt of (*E*)-3-(4-((1*R*,3*R*)-2-(Bicyclo[1.1.1]pentan-1-yl)-3-methyl-2,3,4,9-tetrahydro-1*H*-pyrido[3,4-b]indol-1-yl)-3,5-difluorophenyl)acrylic acid (Compound A):



Compound A

wherein the pharmaceutically acceptable salt selected form the group consisting of a HCl salt of Compound A, a citrate salt of Compound A, a mesylate salt of Compound A, a besylate salt of Compound A, a choline salt of Compound A and an oxalate salt of Compound A.

~~32.~~13. The pharmaceutically acceptable salt of Claim ~~31~~12, wherein the pharmaceutically acceptable salt is a HCl salt of Compound A.

~~33. The pharmaceutically acceptable salt form of Claim 32, wherein the HCl salt of Compound A has an X-ray powder diffraction pattern corresponding to the representative XRPD spectrum depicted in Figure 13.~~

~~34. The pharmaceutically acceptable salt form of Claim 32, wherein the HCl salt of Compound A has an X-ray powder diffraction pattern corresponding to the representative XRPD spectrum depicted in Figure 14.~~

~~35. The pharmaceutically acceptable salt form of Claim 27, wherein the HCl salt of Compound A has a differential scanning calorimetry (DSC) thermogram corresponding to the representative DSC thermogram depicted in Figure 16.~~

~~36. The pharmaceutically acceptable salt of Claim 31, wherein the pharmaceutically acceptable salt is a citrate salt of Compound A.~~

~~37. The pharmaceutically acceptable salt form of Claim 36, wherein the citrate salt of Compound A has an X-ray powder diffraction pattern corresponding to the representative XRPD spectrum depicted in Figure 17.~~

~~38. The pharmaceutically acceptable salt form of Claim 36, wherein the citrate salt of Compound A has a differential scanning calorimetry (DSC) thermogram corresponding to the representative DSC thermogram depicted in Figure 18.~~

~~39.~~14. The pharmaceutically acceptable salt of Claim ~~31~~12, wherein the pharmaceutically acceptable salt is a mesylate salt of Compound A.

~~40. The pharmaceutically acceptable salt form of Claim 39, wherein the mesylate salt of Compound A has an X-ray powder diffraction pattern corresponding to the representative XRPD spectrum depicted in Figure 19.~~

~~41. The pharmaceutically acceptable salt form of Claim 39, wherein the mesylate salt of Compound A is characterized by one or more peaks in an X-ray powder diffraction pattern, wherein the one or more peaks can be selected from a peak in the range of from about 5.0 degrees~~

2θ to about 5.4 degrees 2θ, a peak in the range of from about 8.4 degrees 2θ to about 8.8 degrees 2θ, a peak in the range of from about 9.4 degrees 2θ to about 9.8 degrees 2θ, a peak in the range of from about 10.3 degrees 2θ to about 10.7 degrees 2θ and a peak in the range of from about 12.9 degrees 2θ to about 13.3 degrees 2θ.

42. The pharmaceutically acceptable salt form of Claim 39, wherein the mesylate salt of Compound A is characterized by one or more peaks in an X-ray powder diffraction pattern, wherein the one or more peaks can be selected from a peak in the range of from about 5.0 degrees 2θ to about 5.4 degrees 2θ, a peak in the range of from about 9.4 degrees 2θ to about 9.8 degrees 2θ and a peak in the range of from about 10.3 degrees 2θ to about 10.7 degrees 2θ.

43. The pharmaceutically acceptable salt form of Claim 39, wherein the mesylate salt of Compound A is characterized by one or more peaks in an X-ray powder diffraction pattern, wherein the one or more peaks can be selected from a peak in the range of from about 8.5 degrees 2θ to about 8.9 degrees 2θ, a peak in the range of from about 12.7 degrees 2θ to about 13.1 degrees 2θ and a peak in the range of from about 18.8 degrees 2θ to about 19.2 degrees 2θ.

44. The pharmaceutically acceptable salt form of Claim 39, wherein the mesylate salt of Compound A is characterized by one or more peaks in an X-ray powder diffraction pattern, wherein the one or more peaks can be selected from about 5.2 degrees 2θ ± 0.2 degrees 2θ, about 8.6 degrees 2θ ± 0.2 degrees 2θ, about 9.6 degrees 2θ ± 0.2 degrees 2θ, about 10.5 degrees 2θ ± 0.2 degrees 2θ and about 13.1 degrees 2θ ± 0.2 degrees 2θ.

45. The pharmaceutically acceptable salt form of Claim 39, wherein the mesylate salt of Compound A is characterized by one or more peaks in an X-ray powder diffraction pattern, wherein the one or more peaks can be selected from about 8.7 degrees 2θ ± 0.2 degrees 2θ, about 12.9 degrees 2θ ± 0.2 degrees 2θ and about 19.0 degrees 2θ ± 0.2 degrees 2θ.

46. The pharmaceutically acceptable salt form of Claim 39, wherein the mesylate salt of Compound A has an X-ray powder diffraction pattern corresponding to the representative XRPD spectrum depicted in Figure 20.

~~47. The pharmaceutically acceptable salt form of Claim 39, wherein the mesylate salt of Compound A has a differential scanning calorimetry (DSC) thermogram corresponding to the representative DSC thermogram depicted in Figure 22.~~

~~48. The pharmaceutically acceptable salt form of Claim 39, wherein the mesylate salt of Compound A has a differential scanning calorimetry (DSC) thermogram corresponding to the representative DSC thermogram depicted in Figure 23.~~

~~49.~~15. The pharmaceutically acceptable salt of Claim ~~31~~12, wherein the pharmaceutically acceptable salt is a besylate salt of Compound A.

~~50. The pharmaceutically acceptable salt form of Claim 49, wherein the besylate salt of Compound A has an X-ray powder diffraction pattern corresponding to the representative XRPD spectrum depicted in Figure 24.~~

~~51. The pharmaceutically acceptable salt form of Claim 49, wherein the besylate salt of Compound A has a differential scanning calorimetry (DSC) thermogram corresponding to the representative DSC thermogram depicted in Figure 25.~~

~~52. The pharmaceutically acceptable salt of Claim 31, wherein the pharmaceutically acceptable salt is a choline salt of Compound A.~~

~~53. The pharmaceutically acceptable salt form of Claim 52, wherein the choline salt of Compound A has an X-ray powder diffraction pattern corresponding to the representative XRPD spectrum depicted in Figure 26.~~

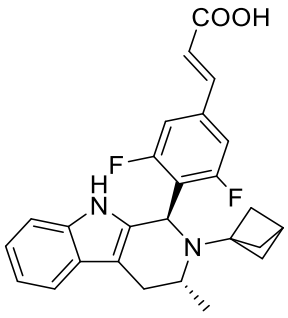
~~54. The pharmaceutically acceptable salt form of Claim 52, wherein the choline salt of Compound A has a differential scanning calorimetry (DSC) thermogram corresponding to the representative DSC thermogram depicted in Figure 28.~~

~~55.~~16. The pharmaceutically acceptable salt of Claim ~~31~~12, wherein the pharmaceutically acceptable salt is an oxalate salt of Compound A.

~~56. The pharmaceutically acceptable salt of any one of Claims 3-7 and 31-55 wherein the salt form is substantially chemically pure.~~

~~57. The pharmaceutically acceptable salt of any one of Claims 3-7 and 31-55 wherein the salt form is substantially physically pure.~~

~~58.~~17. Crystalline (*E*)-3-(4-((1*R*,3*R*)-2-(Bicyclo[1.1.1]pentan-1-yl)-3-methyl-2,3,4,9-tetrahydro-1*H*-pyrido[3,4-b]indol-1-yl)-3,5-difluorophenyl)acrylic acid (Compound A):



Compound A.

~~59. The crystalline Compound A of Claim 58, having a differential scanning calorimetry (DSC) thermogram corresponding to the representative DSC thermogram depicted in Figure 29.~~

~~60. A mixture comprising an amount of pharmaceutically acceptable salt Form A, an amount of pharmaceutically acceptable salt Form C and an amount of amorphous Compound A.~~

~~61. A mixture comprising an amount of pharmaceutically acceptable salt Form A and an amount of amorphous Compound A.~~

~~62. A mixture comprising an amount of pharmaceutically acceptable salt Form C and an amount of amorphous Compound A.~~

~~63.~~18. A pharmaceutical composition comprising an effective amount of the pharmaceutically acceptable salt of any one of Claims 1-~~57~~17, and a pharmaceutically acceptable carrier, diluent, excipient or combination thereof.

~~64. The pharmaceutical composition of Claim 63, further comprising an amount of amorphous Compound A.~~

~~65. The pharmaceutical composition of Claim 63 or 64, further comprising an amount of the free base of Compound A.~~

~~66.~~19. ~~A method of~~ Use of the pharmaceutically acceptable salt of any one of Claims 1-17, or the pharmaceutical composition of Claim 18, in the manufacture of a medicament for inhibiting the growth of a cell, ~~comprising~~ wherein the cell is

~~identifying~~ identified~~a cell~~ as having an estrogen receptor alpha that mediates a growth characteristic of the cell.~~; and~~

~~contacting the cell with an effective amount of the pharmaceutically acceptable salt of any one of Claims 1-57, a mixture of any one of Claims 60-62, or the pharmaceutical composition of any one of Claims 63-65.~~

~~67. A method of treatment, the method comprising~~

~~identifying a subject that is in need of treatment for a disease or condition that is estrogen receptor alpha dependent and/or estrogen receptor alpha mediated; and~~

~~administering to said subject an effective amount of the pharmaceutically acceptable salt of any one of Claims 1-57, a mixture of any one of Claims 60-62, or the pharmaceutical composition of any one of Claims 63-65.~~

~~68.~~20. Use of the pharmaceutically acceptable salt of any one of Claims 1-~~57~~17, ~~a mixture of any one of Claims 60-62,~~ or the pharmaceutical composition of ~~any one of Claims 63-65~~Claim 18, in the manufacture of a medicament for the treatment of a disease or condition that is estrogen receptor alpha dependent and/or estrogen receptor alpha mediated.

~~69. The method of Claim 67 or the use of Claim 68, wherein the disease or condition is selected from the group consisting of a breast cancer and a gynecological cancer.~~

~~70. The method of Claim 67 or the use of Claim 68, wherein the disease or condition is selected from the group consisting of breast cancer, endometrial cancer, ovarian cancer, and cervical cancer.~~

~~71. The method of Claim 67 or the use of Claim 68, wherein the disease or condition is breast cancer.~~

~~72. The method or use of Claim 71, wherein the breast cancer is ER positive breast cancer.~~

~~73. The method or use of Claim 71, wherein the breast cancer is ER positive/HER2-negative breast cancer.~~

~~74. The method or use of Claim 71, wherein the breast cancer is local breast cancer.~~

~~75. The method or use of Claim 71, wherein the breast cancer is metastatic breast cancer.~~

~~76. The method or use of Claim 71, wherein the breast cancer is recurrent breast cancer.~~

~~77. The method or use of Claim 71, wherein the breast cancer has been previously treated with an endocrine therapy.~~