

CLAIMS

We claim:

- 5 1. A method of treating a cancer in a subject identified as having a KRAS G12V mutation, the method comprising administering to the subject an effective amount of a MEK inhibitor, thereby treating the subject.
2. A method of treating a cancer in a subject identified as having a KRAS G12D mutation, the method comprising administering to the subject an effective amount of a MEK
10 inhibitor, thereby treating the subject.
3. A method of treating a cancer characterized as having a KRAS G12V mutation in a subject in need thereof, the method comprising administering to the subject an effective amount of a MEK inhibitor, thereby treating the subject.
- 15 4. A method of treating a cancer characterized as having a KRAS G12D mutation in a subject in need thereof, the method comprising administering to the subject an effective amount of a MEK inhibitor, thereby treating the subject.
5. A method of treating a cancer in a subject in need thereof, comprising administering
20 to the subject an effective amount of a MEK inhibitor, wherein the subject has previously been identified as having a KRAS G12V mutation.
6. A method of treating a cancer in a subject in need thereof, comprising administering to the subject an effective amount of a MEK inhibitor, wherein the subject has previously
25 been identified as having a KRAS G12D mutation.
7. A method of treating a cancer in a subject in need thereof, comprising selecting a subject with cancer having a KRAS G12V mutation in a tumor of the subject; and treating the subject with an effective amount of a MEK inhibitor.

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8. A method of treating cancer in a subject in need thereof, comprising selecting a subject with cancer having a KRAS G12D mutation in a tumor of the subject; and treating the subject with an effective amount of a MEK inhibitor.
- 5 9. The method of any one of claims 1-8, wherein the MEK inhibitor is selected from the group consisting of trametinib, cobimetinib, binimetinib, selumetinib, PD-325901, CI-1040, VS-6766, MEK162, AZD8330, GDC-0623, refametinib, pimasertib, WX-554, HL-085, CH4987655, TAK-733, CInQ-03, G-573, PD184161, PD318088, PD98059, RO5068760, U0126, and SL327, or a pharmaceutically acceptable salt thereof.
- 10 10. The method of any one of claims 1-9, wherein the MEK inhibitor is a dual RAF/MEK inhibitor.
11. The method of any one of claims 1-10, wherein the MEK inhibitor is VS-6766 or a pharmaceutically acceptable salt thereof.
12. The method of any one of claims 1-11, wherein the MEK inhibitor is dosed once a
15 week.
13. The method of any one of claims 1-11, wherein the MEK inhibitor is dosed twice a week.
14. The method of any one of claims 1-11, wherein the MEK inhibitor is dosed once daily.
- 20 15. The method of any one of claims 1-11, wherein the MEK inhibitor is dosed twice daily.
16. The method of any one of claims 1-15, wherein the MEK inhibitor is dosed for at least three weeks.
17. The method of any one of claims 1-16, wherein the MEK inhibitor is dosed as a cycle,
25 wherein the cycle comprises administering the MEK inhibitor for three weeks and then not administering the MEK inhibitor for one week.
18. The method of any one of claims 1-17, wherein the MEK inhibitor is dosed at about 0.1 mg to about 100 mg.

19. The method of any one of claims 1-18, wherein the MEK inhibitor is dosed at about 0.5 mg to about 10 mg.
20. The method of any one of claims 1-19, wherein the MEK inhibitor is dosed at about 4 mg.
- 5 21. The method of any one of claims 1-19, wherein the MEK inhibitor is dosed at about 3.2 mg.
22. The method of any one of claims 1-21, wherein the MEK inhibitor is administered orally.
23. The method of any one of claims 1-22, further comprising administering to the subject
10 an additional agent.
24. The method of claim 23, wherein the additional agent is administered prior to the MEK inhibitor.
25. The method of claim 23, wherein the additional agent is administered concurrently with the MEK inhibitor.
- 15 26. The method of claim 23, wherein the additional agent is administered subsequent to the MEK inhibitor.
27. The method of any one of claims 23-26, wherein the additional agent is a FAK inhibitor.
28. The method of claim 27, wherein the FAK inhibitor is selected from the group
20 consisting of defactinib, TAE226, BI-853520 (IN10018), GSK2256098, PF-03814735, BI-4464, VS-4718, and APG-2449, or a pharmaceutically acceptable salt thereof.
29. The method of claim 27 or 28, wherein the FAK inhibitor is defactinib or a pharmaceutically acceptable salt thereof.
30. The method of any one of claims 27-29, wherein the FAK inhibitor is dosed twice
25 daily.
31. The method of any one of claims 27-29, wherein the FAK inhibitor is dosed once daily.

32. The method of any one of claims 27-31, wherein the FAK inhibitor is dosed at about 100 mg to about 1000 mg.
33. The method of any one of claims 27-32, wherein the FAK inhibitor is dosed at about 200 mg to about 400 mg.
- 5 34. The method of any one of claims 27-33, wherein the FAK inhibitor is dosed at about 200 mg.
35. The method of any one of claims 27-33, wherein the FAK inhibitor is dosed at about 400 mg.
36. The method of any one of claims 27-35, wherein the FAK inhibitor is administered
10 orally.
37. The method of any one of claims 1-36, wherein the cancer is ovarian cancer, non-small cell lung cancer (e.g., NSCLC adenocarcinoma), uterine endometrioid carcinoma, pancreatic adenocarcinoma, colorectal adenocarcinoma, or lung adenocarcinoma.
38. The method of any one of claims 1-37, wherein the cancer is non-small cell lung
15 cancer.
39. A method of treating a cancer in a subject identified as having a KRAS G12V mutation, the method comprising administering to the subject an effective amount of a pan-RAF inhibitor, thereby treating the subject.
40. A method of treating a cancer in a subject identified as having a KRAS G12D
20 mutation, the method comprising administering to the subject an effective amount of a pan-RAF inhibitor, thereby treating the subject.