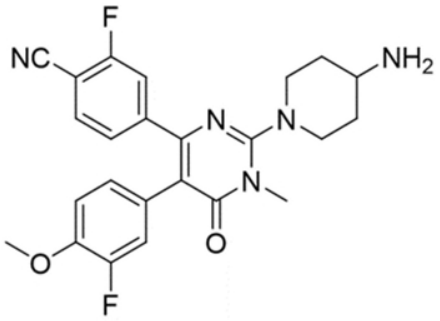
WHAT IS CLAIMED IS:

1. Use of an LSD-1 inhibitor in the manufacture of a medicament for ~~A method of~~ treating a subject having small cell lung cancer (SCLC) and/or squamous non-small cell lung cancer (sqNSCLC), wherein ~~comprising~~:

(a) the LSD-1 inhibitor is to be administered~~administering~~ to the subject ~~an LSD-1 inhibitor~~; and

(b) nivolumab is to be administered concomitantly ~~administering nivolumab~~;

wherein the LSD-1 inhibitor is a compound having the structure:



,

or a besylate salt thereof.

2. The ~~method~~ use of claim 1, wherein the subject has any one of the following:

(a) a complete response (CR) as assessed by Response Evaluation Criteria In Solid Tumor (RECIST), Version 1.1;

(b) the disappearance of all target lesions; and/or

(c) the reduction of target and/or non-target pathological lymph nodes in short axis to less than about 10 mm.

3. The ~~method~~ use of claim 1, wherein the subject has any one of the following:

(a) a partial response (PR) as assessed by Response Evaluation Criteria In Solid Tumor (RECIST), Version 1.1; and/or

(b) at least a 30% decrease in the sum of diameters of target lesions, taking as reference the baseline sum diameter.

4. The ~~method~~ use of claim 1, wherein the subject has a duration of response as defined by a time from the first occurrence of a documented objective response to a time of a first objectively documented progression, as determined by Response Evaluation Criteria In Solid Tumor (RECIST), Version 1.1, or death from any cause, whichever comes first, wherein the duration of the response is:

(a) about 1, about 2, about 5, about 10, about 52, or greater weeks;

(b) at least about 1 week, at least about 2 weeks, at least about 3 weeks, at least about 4 weeks, at least about 5 weeks, at least about 6 weeks, at least about 12 weeks, at least about 18 weeks, at least about 24 weeks, at least about 30 weeks, at least about 36 weeks, at least about 42 weeks, at least about 48 weeks, or at least about 54 weeks; and/or

(c) about 1 week, about 2 weeks, about 3 weeks, about 4 weeks, about 5 weeks, about 6 weeks, about 12 weeks, about 18 weeks, about 24 weeks, about 30 weeks, about 36 weeks, about 42 weeks, about 48 weeks, or about 54 weeks.

5. The ~~method~~ use of claim 1, wherein the subject has a progression-free survival as defined by from first dose of study treatment to the date of the first objectively documented tumor progression as determined by Response Evaluation Criteria In Solid Tumor (RECIST), Version 1.1, or death from any cause, whichever comes first, wherein the duration of the progression-free survival is:

(a) about 1, about 2, about 5, about 10, about 52, or greater weeks;

(b) at least about 1 week, at least about 2 weeks, at least about 3 weeks, at least about 4 weeks, at least about 5 weeks, at least about 6 weeks, at least about 12 weeks, at least about 18 weeks, at least about 24 weeks, at least about 30 weeks, at least about 36 weeks, at least about 42 weeks, at least about 48 weeks, or at least about 54 weeks; and/or

(c) about 1 week, about 2 weeks, about 3 weeks, about 4 weeks, about 5 weeks, about 6 weeks, about 12 weeks, about 18 weeks, about 24 weeks, about 30 weeks, about 36 weeks, about 42 weeks, about 48 weeks, or about 54 weeks.

6. The ~~method~~ use of any one of claims 1-5, further comprising any one of the following:

(a) the LSD-1 inhibitor is to be administered orally;

(b) the LSD-1 inhibitor is to be administered in the form of a tablet or a capsule;

(c) the LSD-1 inhibitor is to be administered once a week;

(d) the LSD-1 inhibitor is to be administered at a dose of about 20 mg, 40 mg, or 60 mg; and/or

(e) the LSD-1 inhibitor is to be administered at a dose of about 40 mg.

7. The ~~method~~ use of claim 1, wherein:

(a) the LSD-1 inhibitor is to be administered at about 20 mg, 40 mg, or 60 mg orally once a week in a 28-day period; and/or

(b) the LSD-1 inhibitor is to be administered at about 40 mg orally once a week in a 28-day period; and/or

(c) the LSD-1 inhibitor is to be administered on Days 1, 8, 15, and 22 in a 28-day period; and/or

(d) the 28 day period is repeated for as long as the subject has a complete response (CR) or partial response (PR) as assessed by Response Evaluation Criteria In Solid Tumor (RECIST), Version 1.1.

8. The ~~method~~ use of any one of claims 1-7, wherein:

(a) the nivolumab is to be administered intravenously; and/or

(b) the nivolumab is to be administered in the form of an injection; and/or

(c) the nivolumab is to be administered once every two weeks or every 4 weeks; and/or

(d) the nivolumab is to be administered at a dose of at least about 240 mg or about 480 mg; and/or

(e) the nivolumab is to be administered at a dose of about 240 mg or about 480 mg.

9. The ~~method~~ use of any one of claims 1-8, wherein:

(a) the nivolumab is to be administered at about 480 mg intravenously once a week in a 28-day period; and/or

(b) the nivolumab is to be administered on Day 1 in a 28-day period; and/or

(c) the 28 day period is repeated for as long as the subject has a complete response (CR) or partial response (PR) as assessed by Response Evaluation Criteria In Solid Tumor (RECIST), Version 1.1.

10. The ~~method~~ use of any one of claims 1-9, wherein the subject exhibits one or more of the following changes from baseline:

(a) gene expression in peripheral blood (LSD1-regulated genes in PBMCs) and/or in tumor samples (SOX-2, Notch1, ASCL1, IGFBP2/5, REST, Hes1, Hey1, MDK, CgA, GRP); and/or

(b) secreted proteins in blood selected from pro-gastrin-releasing peptide (pro-GRP) and chromogranin A (CgA) and midkine; and/or

(c) localization and/or density of T cells, MDSCs and other immune cells in tumor tissues; and/or

(d) expression of programmed cell death protein 1 (PD-1) and/or programmed death-ligand 1 (PD-L1) in tumor tissues; and/or

(e) expression of lysine-specific histone demethylase 1A (LSD1) and/or an LSD1-associated molecular signature in tumor tissue; and/or

(f) protein markers in tumor tissues (such as CXCL9, MCSF, Notch1/2, chromagraninA) and/or in circulating tumor cells (CTCs); and/or

(g) amount and molecular features of circulating tumor DNA (ctDNA) in the blood.

11. The ~~method~~ use of claim 10, wherein the gene expression in tumor samples is the gene expression of sex determining region Y-box 2 (SOX2).

12. The use~~method~~ of claim 10, wherein the protein markers in tumor tissues is one or more of AC124319.1, ADAR, APOL6, ARID5B, ARL4A, ASCL1, AUTS2, B2M, BANK1, BATF2, BPGM, BST2, BTG1, C1R, C1S, CASP1, CASP3, CASP4, CASP7, CASP8, CHGA, CCL2, CCL5, CCL7, CD274 (PDL1), CD3, CD38, CD4, CD40, CD69, CD74, CD8, CD86, CDH2, CDKN1A, CFB, CFH, CIITA, CMKLR1, CMPK2, CMTR1, CSF2RB, CXCL10, CXCL11, CXCL9, DDX58, DDX60, DHX58, DLL1, DLL3, EIF2AK2, EIF4E3, EPSTI1, FAS, FCGR1A, FGFR1, FGFR13, FGL2, FPR1, GBP4, GBP6, GCH1, GPR18, GRP, GZMA, HELZ2, HERC6, HEY1, HES1, HIF1A, HLA-A, HLA-B, HLA-DMA, HLA-DQA1, HLA-DRB1, HLA-G, ICAM1, IDO1, IFI27, IFI30, IFI35, IFI44, IFI44L, IFIH1, IFIT1, IFIT2, IFIT3, IFITM2, IFITM3, IFNAR2, IFL10RA, IGFBP2, IGFBP5, IL15, IL15RA, IL18BP, IL2RB, IL4R, IL6, IL7, IRF1, IRF2, IRF4, IRF5, IRF7, IRF8, IRF9, ISG15, ISG20, ISOC1, ITGAB, ITGB7, JAG1, JAK2, KAT2B, KLRK1, LAP3, LATS2, LCP2, LGALS3BP, LYSE, LYSMD2, MAGEC2, 1-MAR, MCSF, MDK, METTL7B, MT2A, MEHFD2, MVP, MX1, MX2, MYD88, M-CSF, NAMPT, NCOA3, NEUROD1, NFKB1, NFKBIA, NLRC5, NMI, NOD1, NOTCH1, NOTCH2, NUP93, OAS2, OAS3, OASL, OGFR, P2RY14, PARP12, PARP14, PDE4B, PD1, PELI1, PFKP, PIM1, PLA2G4A, PLSCR1, PML, PNP, PNPT1, POU2F3, PSMA2, PSMA3, PSMB10, PSMB2, PSMB8, PSMB9, PSME1, PSME2, PTGS2, PTPN1, PTPN2, PTPN6, RAPGEF6, RBCK1, RCOR2, REST, RIPK1, RIPK2, RNF31, RSAD2, RTP4, SAMD9L, SAMHD1, SECTM1, SELP, SERPING1,SGK1, SLAMF7, SLC25A28, SOCS1, SOCS3, SOD2, SOX2, SP110, SPPL2A, SRI, SSPN, ST3GAL5, ST8SIA4, STAT1, STAT2, STAT3, STAT4, TAP1, TAPBP, TDRD7, THBS1, TNFAIP2, TNFAIP3, TNFAIP6, TNFAIP10, TOR1B, TRAFD1, TRIM14, TRIM 21, TRIM25, TRIM 26, TXNIP, UBE2L6, UPP1, USP18, VAMP5, VAMP8, VEGF, VCAM1, WARS, WNT11, XAF1, XCL1, ZBP1, ZEB1, ZEB2, or ZNFX1.