Claims

[Claim 1] A pharmaceutical composition for use in the treatment of AXL-related cancer, comprising 6-ethyl-3-({3-methoxy-4-[4-(4-methylpiperazin-1-yl)piperidin-1-yl]phenyl}amino)-5-(tetrahydro-2H-pyran-4-ylamino)pyrazine-2-carboxamide or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable excipient;

wherein the AXL-related cancer is cancer which has acquired resistance by the activation of AXL against therapy with an anticancer agent;

wherein the cancer which has acquired resistance by the activation of AXL against therapy with an anticancer agent is non-small cell lung cancer with activating mutations of EGFR, which has acquired resistance to therapy with an EGFR tyrosine kinase inhibitor; and

wherein the pharmaceutical composition is to be used in combination with the EGFR tyrosine kinase inhibitor.

[Claim 2] The pharmaceutical composition according to claim 1, wherein the EGFR tyrosine kinase inhibitor is an EGFR tyrosine kinase inhibitor selected from the group consisting of erlotinib, gefitinib, and lapatinib.

[Claim 3] The pharmaceutical composition according to claim 2, wherein the EGFR tyrosine kinase inhibitor is erlotinib.

[Claim 4] The pharmaceutical composition according to any one of claims 1 to 3, wherein 6-ethyl-3-({3-methoxy-4-[4-(4-methylpiperazin-1-yl)piperidin-1-yl]phenyl}amino)-5-(tetrahydro-2H-pyran-4-ylamino)pyrazine-2-carboxamide or a pharmaceutically acceptable salt thereof is 6-ethyl-3-({3-methoxy-4-[4-(4-methylpiperazin-1-yl)piperidin-1-yl]phenyl}amino)-5-(tetrahydro-2H-pyran-4-ylamino)pyrazine-2-carboxamide.

[Claim 5] The pharmaceutical composition according to any one of claims 1 to 3, wherein 6-ethyl-3-({3-methoxy-4-[4-(4-methylpiperazin-1-yl)piperidin-1-yl]phenyl}amino)-5-(tetrahydro-2H-pyran-4-ylamino)pyrazine-2-carboxamide or a pharmaceutically acceptable salt thereof is 6-ethyl-3-({3-methoxy-4-[4-(4-methylpiperazin-1-yl)piperidin-1-yl]phenyl}amino)-5-(tetrahydro-2H-pyran-4-ylamino)pyrazine-2-carboxamide hemifumarate.

[Claim 6] The use of a pharmaceutical composition comprising 6-ethyl-3-({3-methoxy-4-[4-(4-methylpiperazin-1-yl)piperidin-1-yl]phenyl}amino)-5-(tetrahydro-2H-pyran-4-ylamino)pyrazine-2-carboxamide or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable excipient, in the manufacture of a medicament for the treatment of AXL-related cancer;

wherein the AXL-related cancer is cancer which has acquired resistance by the activation of AXL against therapy with an anticancer agent; and

further wherein the cancer which has acquired resistance by the activation of AXL against therapy with an anticancer agent comprises non-small cell lung cancer, head-and-neck cancer, estrogen hormone receptor-, progesterone hormone receptor-, HER2 receptor-negative breast cancer (triple negative breast cancer), each of which has activating mutations of EGFR, which has acquired resistance to therapy with an EGFR inhibitor; acute myeloid leukemia, astrocytoma, each of which has acquired resistance to chemotherapy; or lung cancer which is not EGFR mutation-positive and has acquired resistance to therapy with cisplatin.

[Claim 7] The use according to claim 6, wherein the non-small cell lung cancer is a non-small cell lung cancer with activating mutations of EGFR, which has acquired resistance to therapy with an EGFR tyrosine kinase inhibitor.

[Claim 8] The use according to claim 7, which is to be used in combination with the EGFR tyrosine kinase inhibitor.

[Claim 9] The use according to claim 8, wherein the EGFR tyrosine kinase inhibitor is an EGFR tyrosine kinase inhibitor selected from the group consisting of erlotinib, gefitinib, and lapatinib.

[Claim 10] The use according to claim 9, wherein the EGFR tyrosine kinase inhibitor is erlotinib.

[Claim 11] The use according to any one of claims 6 to 10, wherein 6-ethyl-3-({3-methoxy-4-[4-(4-methylpiperazin-1-yl)piperidin-1-yl]phenyl}amino)-5-(tetrahydro-2H-pyran-4-ylamino)pyrazine-2-carboxamide or a pharmaceutically acceptable salt thereof is 6-ethyl-3-({3-methoxy-4-[4-(4-methylpiperazin-1-yl)piperidin-1-yl]phenyl}amino)-5-(tetrahydro-2H-pyran-4-ylamino)pyrazine-2-carboxamide.

[Claim 12] The use according to any one of claims 6 to 10, wherein 6-ethyl-3-({3-methoxy-4-[4-(4-methylpiperazin-1-yl)piperidin-1-yl]phenyl}amino)-5-(tetrahydro-2H-pyran-4-ylamino)pyrazine-2-carboxamide or a pharmaceutically acceptable salt thereof is 6-ethyl-3-({3-methoxy-4-[4-(4-methylpiperazin-1-yl)piperidin-1-yl]phenyl}amino)-5-(tetrahydro-2H-pyran-4-ylamino)pyrazine-2-carboxamide hemifumarate.