Claims

[Claim 1] A pharmaceutical composition for treating 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.

[Claim 2] The pharmaceutical composition according to claim 1, wherein the AXL-related cancer is cancer with high expression of AXL.

[Claim 3] The pharmaceutical composition according to claim 1, wherein the AXL-related cancer is cancer which has acquired resistance by the activation of AXL against therapy with an anticancer agent.

[Claim 4] The pharmaceutical composition according to claim 3, 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.

[Claim 5] The pharmaceutical composition according to claim 4, which is used in combination with the EGFR tyrosine kinase inhibitor.

[Claim 6] The pharmaceutical composition according to claim 5, wherein the EGFR tyrosine kinase inhibitor is an EGFR tyrosine kinase inhibitor selected from the group consisting of erlotinib, gefitinib, and lapatinib.

[Claim 7] The pharmaceutical composition according to claim 6, wherein the EGFR tyrosine kinase inhibitor is erlotinib.

[Claim 8] The pharmaceutical composition according to any one of claims 1 to 7, 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 9] The pharmaceutical composition according to any one of claims 1 to 7, 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.

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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.

[Claim 2] The pharmaceutical composition according to claim 1, wherein the AXL-related cancer is cancer with high expression of AXL.

[Claim 3] The pharmaceutical composition according to claim 1, wherein the AXL-related cancer is cancer which has acquired resistance by the activation of AXL against therapy with an anticancer agent.

[Claim 4] The pharmaceutical composition according to claim 3, 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.

[Claim 5] The pharmaceutical composition according to claim 4, which is used in combination with the EGFR tyrosine kinase inhibitor.

[Claim 6] The pharmaceutical composition according to claim 5, wherein the EGFR tyrosine kinase inhibitor is an EGFR tyrosine kinase inhibitor selected from the group consisting of erlotinib, gefitinib, and lapatinib.

[Claim 7] The pharmaceutical composition according to claim 6, wherein the EGFR tyrosine kinase inhibitor is erlotinib.

[Claim 8] The pharmaceutical composition according to any one of claims 1 to 7, 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 9] The pharmaceutical composition according to any one of claims 1 to 7, 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 10] 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.

[Claim 11] The use according to claim 10, wherein the AXL-related cancer is cancer with high expression of AXL.

[Claim 12] The use according to claim 10, wherein the AXL-related cancer is cancer which has acquired resistance by the activation of AXL against therapy with an anticancer agent.

[Claim 13] The use according to claim 12, 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.

[Claim 14] The use according to claim 13, which is used in combination with the EGFR tyrosine kinase inhibitor.

[Claim 15] The use according to claim 14, wherein the EGFR tyrosine kinase inhibitor is an EGFR tyrosine kinase inhibitor selected from the group consisting of erlotinib, gefitinib, and lapatinib.

[Claim 16] The use according to claim 15, wherein the EGFR tyrosine kinase inhibitor is erlotinib.

[Claim 17] The use according to any one of claims 10 to 16, 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 18] The use according to any one of claims 10 to 16, 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.