We Claim:

1. A stable immediate release formulation comprising 1-((2S,5R)-5-((7H-Pyrrolo[2,3-d]pyrimidin-4-yl)amino)-2-methylpiperidin-1-yl)prop-2-en-1-one, or a pharmaceutically acceptable salt thereof, a first filler, a second filler, a disintegrant, and a glidant or lubricant, wherein the formulation has 0.7% w/w or less of a dimer of 1-((2S,5R)-5-((7H-pyrrolo[2,3-d]pyrimidin-4-yl)amino)-2-methylpiperidin-1-yl)prop-2-en-1-one and a total degradant product amount of 1.2% w/w or less.

2. A stable immediate release formulation comprising 1-((2S,5R)-5-((7H-Pyrrolo[2,3-d]pyrimidin-4-yl)amino)-2-methylpiperidin-1-yl)prop-2-en-1-one para-toluenesulfonate salt, microcrystalline cellulose, lactose monohydrate, crospovidone, and glyceryl dibehenate, wherein the formulation has 0.7% w/w or less of a dimer of 1-((2S,5R)-5-((7H-pyrrolo[2,3-d]pyrimidin-4-yl)amino)-2-methylpiperidin-1-yl)prop-2-en-1-one and a total degradant product amount of 1.2% w/w or less at 0-30°C/10-65% relative humidity for at least one year.

3. A stable immediate release formulation comprising about 15-67% 1-((2S,5R)-5-((7H-pyrrolo[2,3-d]pyrimidin-4-yl)amino)-2-methylpiperidin-1-yl)prop-2-en-1-one para-toluenesulfonate salt, about 12-40% microcrystalline cellulose, about 12-40% lactose monohydrate, about 2-4% crospovidone; and about 3-10% glyceryl dibehenate, wherein the formulation has 0.7% w/w or less of a dimer of 1-((2S,5R)-5-((7H-pyrrolo[2,3-d]pyrimidin-4-yl)amino)-2-methylpiperidin-1-yl)prop-2-en-1-one and a total degradant product amount of 1.2% w/w or less at -30°C/10-65% relative humidity for at least one year.

4. A stable immediate release formulation comprising about 58-62% 1-((2S,5R)-5-((7H-pyrrolo[2,3-d]pyrimidin-4-yl)amino)-2-methylpiperidin-1-yl)prop-2-en-1-one para-toluenesulfonate salt, about 14-18% microcrystalline cellulose, about 14-18% lactose monohydrate, about 2-4% crospovidone; and about 3-8% glyceryl dibehenate, wherein the formulation has 0.7% w/w or less of a dimer of 1-((2S,5R)-5-((7H-pyrrolo[2,3-d]pyrimidin-4-yl)amino)-2-methylpiperidin-1-yl)prop-2-en-1-one and a total degradant product amount of 1.2% w/w or less at 0-30°C/10-65% relative humidity for at least one year.

5. A stable immediate release formulation in a HPMC capsule comprising 58-62% 1-((2S,5R)-5-((7H-pyrrolo[2,3-d]pyrimidin-4-yl)amino)-2-methylpiperidin-1-yl)prop-2-en-1-one para-toluenesulfonate salt, 14-18% microcrystalline cellulose, 14-18% lactose monohydrate, 2-4% crospovidone; and 3-8% glyceryl dibehenate, wherein the 1-((2S,5R)-5-((7H-pyrrolo[2,3-d]pyrimidin-4-yl)amino)-2-methylpiperidin-1-yl)prop-2-en-1-one para-

toluenesulfonate salt has particle size 300.50 microns $D_{[v, 0.9]}$, and wherein the formulation has 0.7% w/w or less of a dimer of 1-((2S,5R)-5-((7H-pyrrolo[2,3-d]pyrimidin-4-yl)amino)-2-methylpiperidin-1-yl)prop-2-en-1-one and a total degradant product amount of 1.2% w/w or less at 0-30°C/10-65% relative humidity for at least one year.

6. A stable immediate release formulation in a HPMC capsule comprising 46.08-50.08 mgs of 1-((2S,5R)-5-((7H-pyrrolo[2,3-d]pyrimidin-4-yl)amino)-2-methylpiperidin-1-yl)prop-2-en-1-one para-toluenesulfonate salt, 10.76-14.76 mgs of microcrystalline cellulose, 10.76-14.76 mgs of lactose monohydrate, 1.40-3.40 mgs of crospovidone, and 3.00-5.00 mgs of glyceryl dibehenate, wherein the formulation has 0.7% w/w or less of a dimer of 1-((2S,5R)-5-((7H-pyrrolo[2,3-d]pyrimidin-4-yl)amino)-2-methylpiperidin-1-yl)prop-2-en-1-one and a total degradant product amount of 1.2% w/w or less at 0-30°C/10-65% relative humidity for at least one year.

7. A stable immediate release formulation in a HPMC capsule comprising 48.077 mgs of 1-((2S,5R)-5-((7H-pyrrolo[2,3-d]pyrimidin-4-yl)amino)-2-methylpiperidin-1-yl)prop-2-en-1-one para-toluenesulfonate salt, 12.762 mgs of microcrystalline cellulose, 12.762 mgs of lactose monohydrate, 2.400 mgs of crospovidone, and 4.000 mgs of glyceryl dibehenate, wherein the 1-((2S,5R)-5-((7H-pyrrolo[2,3-d]pyrimidin-4-yl)amino)-2-methylpiperidin-1-yl)prop-2-en-1-one para-toluenesulfonate salt has particle size 300.5 microns $D_{[v, 0.9]}$, and wherein the formulation has 0.7% w/w or less of a dimer of 1-((2S,5R)-5-((7H-pyrrolo[2,3-d]pyrimidin-4-yl)amino)-2-methylpiperidin-1-yl)prop-2-en-1-one and a total degradant product amount of 1.2% w/w or less at 0-30°C/10-65% relative humidity for at least one year.

8. A stable immediate release formulation in a HPMC capsule comprising 78.13-82.13 mgs of 1-((2S,5R)-5-((7H-pyrrolo[2,3-d]pyrimidin-4-yl)amino)-2-methylpiperidin-1-yl)prop-2-en-1-one para-toluenesulfonate salt, 19.27-23.27 mgs of microcrystalline cellulose, 19.27-23.27 mgs of lactose monohydrate, 3.00-5.00 mgs of crospovidone, and 5.67-7.67 mgs of glyceryl dibehenate, wherein the formulation has 0.7% w/w or less of a dimer of 1-((2S,5R)-5-((7H-pyrrolo[2,3-d]pyrimidin-4-yl)amino)-2-methylpiperidin-1-yl)prop-2-en-1-one and a total degradant product amount of 1.2% w/w or less at 0-30°C/10-65% relative humidity for at least one year.

9. A stable immediate release formulation in a HPMC capsule comprising 80.128 mgs of 1-((2S,5R)-5-((7H-pyrrolo[2,3-d]pyrimidin-4-yl)amino)-2-methylpiperidin-1-yl)prop-2-en-1-one para-toluenesulfonate salt, 21.269 mgs of microcrystalline cellulose, 21.269 mgs of lactose monohydrate, 4.000 mgs of crospovidone, and 6.667 mgs of glyceryl dibehenate,

wherein the 1-((2S,5R)-5-((7H-pyrrolo[2,3-d]pyrimidin-4-yl)amino)-2-methylpiperidin-1-yl)prop-2-en-1-one para-toluenesulfonate salt has particle size 300.5 microns $D_{[v, 0.9]}$, and wherein the formulation has 0.7% w/w or less of a dimer of 1-((2S,5R)-5-((7H-pyrrolo[2,3-d]pyrimidin-4-yl)amino)-2-methylpiperidin-1-yl)prop-2-en-1-one and a total degradant product amount of 1.2% w/w or less at 0-30°C/10-65% relative humidity for at least one year.

10. A stable immediate release formulation in a HPMC capsule comprising 158.26-162.26mgs of 1-((2S,5R)-5-((7H-pyrrolo[2,3-d]pyrimidin-4-yl)amino)-2-methylpiperidin-1-yl)prop-2-en-1-one para-toluenesulfonate salt, 40.54-44.54 mgs of microcrystalline cellulose, 40.54-44.54 mgs of lactose monohydrate, 7.00-9.00 mgs of crospovidone, and 12.33-14.33 mgs of glyceryl dibehenate, wherein the formulation has 0.7% w/w or less of a dimer of 1-((2S,5R)-5-((7H-pyrrolo[2,3-d]pyrimidin-4-yl)amino)-2-methylpiperidin-1-yl)prop-2-en-1-one and a total degradant product amount of 1.2% w/w or less at 0-30°C/10-65% relative humidity for at least one year.

11. A stable immediate release formulation in a HPMC capsule comprising 160.256mgs of 1-((2S,5R)-5-((7H-pyrrolo[2,3-d]pyrimidin-4-yl)amino)-2-methylpiperidin-1-yl)prop-2-en-1-one para-toluenesulfonate salt, 42.539 mgs of microcrystalline cellulose, 42.539 mgs of lactose monohydrate, 8.000 mgs of crospovidone, and 13.333 mgs of glyceryl dibehenate, wherein the 1-((2S,5R)-5-((7H-pyrrolo[2,3-d]pyrimidin-4-yl)amino)-2-methylpiperidin-1-yl)prop-2-en-1-one para-toluenesulfonate salt has particle size 300.5 microns $D_{[v, 0.9]}$, and wherein the formulation has 0.7% w/w or less of a dimer of 1-((2S,5R)-5-((7H-pyrrolo[2,3-d]pyrimidin-4-yl)amino)-2-methylpiperidin-1-yl)prop-2-en-1-one and a total degradant product amount of 1.2% w/w or less at 0-30°C/10-65% relative humidity for at least one year.