What is claimed is:

1. A pharmaceutical soft gelatin capsule dosage form comprising a soft gelatin shell and a fill, wherein:

(a) the soft gelatin shell comprises gelatin and at least one plasticizer; and

(b) the fill comprises an anti-oxidant, at least one solvent, and talazoparib or a pharmaceutically acceptable salt thereof.

2. The pharmaceutical soft gelatin capsule dosage form of claim 1, wherein the at least one plasticizer is a) glycerol; b) sorbitol; or c) glycerol and sorbitol.

3. The pharmaceutical soft gelatin capsule dosage form of claim 1 or 2, wherein the anti-oxidant is tocopherol.

4. The pharmaceutical soft gelatin capsule dosage form of any one of claims 1-3, wherein the at least one solvent is a) polyethylene glycol; b) glycerol; or c) polyethylene glycol and glycerol.

5. A pharmaceutical soft gelatin capsule dosage form comprising a soft gelatin shell and a fill,

wherein the soft gelatin shell comprises:

about 60 percent to about 61 percent by weight of gelatin,

about 15 percent to about 16 percent by weight of glycerol, and

about 23 percent of sorbitol; and

wherein, the fill comprises:

about 0.3 percent by weight of tocopherol,

about 95 percent by weight of polyethylene glycol,

about 4 percent by weight of glycerol, and

talazoparib, or a pharmaceutically acceptable salt thereof in about 0.15 percent to about 0.3 percent by weight free base equivalent.

6. A pharmaceutical soft gelatin capsule dosage form comprising a soft gelatin shell and a fill,

wherein the soft gelatin shell comprises:

about 46.270 mg/capsule of gelatin,

about 11.790 mg/capsule of glycerol, and

about 17.57 mg/capsule of sorbitol; and

wherein, the fill comprises:

about 0.300 mg/capsule of tocopherol,

about 95.555 mg/capsule of polyethylene glycol,

about 4.000 mg/capsule of glycerol, and

about 0.1 mg of talazoparib free base, or a pharmaceutically acceptable salt thereof.

7. A pharmaceutical soft gelatin capsule dosage form comprising a soft gelatin shell and a fill,

wherein the soft gelatin shell comprises:

about 61.097 mg/capsule of gelatin,

about 16.610 mg/capsule of glycerol, and

about 23.190 mg/capsule of sorbitol; and

wherein, the fill comprises:

about 0.375 mg/capsule of tocopherol,

about 119.262 mg/capsule of polyethylene glycol,

about 5.000 mg/capsule of glycerol, and

about 0.25 mg of talazoparib free base, or a pharmaceutically acceptable salt thereof.

8. A pharmaceutical soft gelatin capsule dosage form comprising a soft gelatin shell and a fill,

wherein the soft gelatin shell comprises:

about 78.130 mg/capsule of gelatin,

about 20.250 mg/capsule of glycerol, and

about 29.66 mg/capsule of sorbitol; and

wherein, the fill comprises:

about 0.509 mg/capsule of tocopherol,

about 166.966 mg/capsule of polyethylene glycol,

about 7.000 mg/capsule of glycerol, and

about 0.35 mg of talazoparib free base, or a pharmaceutically acceptable salt thereof.

9. A pharmaceutical soft gelatin capsule dosage form comprising a soft gelatin shell and a fill,

wherein the soft gelatin shell comprises:

about 104.930 mg/capsule of gelatin,

about 26.640 mg/capsule of glycerol, and

about 39.830 mg/capsule of sorbitol; and

wherein, the fill comprises:

about 00.750 mg/capsule of tocopherol,

about 238.523 mg/capsule of polyethylene glycol,

about 10.000 mg/capsule of glycerol, and

about 0.5 mg of talazoparib free base, or a pharmaceutically acceptable salt thereof.

10. A pharmaceutical soft gelatin capsule dosage form comprising a soft gelatin shell and a fill,

wherein the soft gelatin shell comprises:

about 141.260 mg/capsule of gelatin,

about 36.000 mg/capsule of glycerol, and

about 53.620 mg/capsule of sorbitol; and

wherein, the fill comprises:

about 1.125 mg/capsule of tocopherol,

about 357.784 mg/capsule of polyethylene glycol,

about 15.000 mg/capsule of glycerol, and

about 0.75 mg of talazoparib free base, or a pharmaceutically acceptable salt thereof.

11. A pharmaceutical soft gelatin capsule dosage form comprising a soft gelatin shell and a fill,

wherein the soft gelatin shell comprises:

about 177.790 mg/capsule of gelatin,

about 45.310 mg/capsule of glycerol, and

about 67.490 mg/capsule of sorbitol; and

wherein, the fill comprises;

about 1.453 mg/capsule of tocopherol,

about 477.047 mg/capsule of polyethylene glycol,

about 20.000 mg/capsule of glycerol, and

about 1 mg of talazoparib free base, or a pharmaceutically acceptable salt thereof.

12. The pharmaceutical soft gelatin capsule dosage form of any one of claims 1-11, wherein the gelatin is acid bone gelatin.

13. The pharmaceutical soft gelatin capsule dosage form of claim 2 or 4-12, wherein the glycerol is glycerol 85%.

14. The pharmaceutical soft gelatin capsule dosage form of claim 2 or 5-13, wherein the sorbitol is anhydrized liquid sorbitol NF.

15. The pharmaceutical soft gelatin capsule dosage form of claim 2 or 5-14, wherein the tocopherol is all-rac-alpha-tocopherol.

16. The pharmaceutical soft gelatin capsule dosage form of any one of claims 1-15, wherein the dosage form comprises talazoparib, or a pharmaceutically acceptable salt thereof, in an amount equivalent to about 0.1 mg talazoparib free base: in an amount equivalent to about 0.25 mg talazoparib free base; in an amount equivalent to about 0.35 mg talazoparib free base: in an amount equivalent to about 0.5 mg talazoparib free base: in an amount equivalent to about 0.75 mg talazoparib free base; or in an amount equivalent to about 1 mg talazoparib free base.

17. The pharmaceutical soft gelatin capsule dosage form of any one of claims 1-16, wherein the talazoparib, or a pharmaceutically acceptable salt thereof, is talazoparib tosylate.

18. The pharmaceutical soft gelatin capsule dosage form of any one of the preceding claims, wherein the dosage form is for oral administration.

19. A pharmaceutical soft gelatin capsule dosage form of any one of claims 1-18, wherein the dosage form provides a 90% confidence interval for a geometric mean for log-transformed AUC_{24} within the range of 80% to 125% of the geometric mean for log-transformed AUC_{24} for a powder filled immediate release oral capsule containing an equivalent amount of talazoparib after oral administration to a subject, wherein the subject is in a fasted condition.

20. A pharmaceutical soft gelatin capsule dosage form of any one of claims 1-18, wherein the dosage form (a) provides a geometric mean for log-transformed AUC_{24} in the range of 80% to 125% of the geometric mean for log-transformed AUC_{24} for a powder filled oral capsule containing an equivalent amount of talazoparib after administration to a subject, wherein the subject is in a fasted condition; (b) provides a

geometric mean for log-transformed C_{max} in the range of 80% to 125% of the geometric mean for log-transformed C_{max} for a powder filled oral capsule containing an equivalent amount of talazoparib after administration to a subject, wherein the subject is in a fasted condition; or (c) both (a) and (b).

21. A pharmaceutical soft gelatin capsule dosage form of any one of claims 1-18, wherein the dosage form (a) has a geometric mean fed/fasted ratio for log-transformed AUC_{24} from about 0.8 to about 1.25 after oral administration to a subject; (b) has a geometric mean fed/fasted ratio for log-transformed C_{max} from about 0.8 to about 1.25 after oral administration to a subject; or (c) both (a) and (b).

22. ~~A method of treating cancer in a subject comprising administering to the subject a pharmaceutical soft gelatin capsule dosage form of any one of claims 1-21.~~ A pharmaceutical soft gelatin capsule dosage form of any one of claims 1-21 for use in the treatment of cancer in a subject.

23. Use of a pharmaceutical soft gelatin capsule dosage form of any one of claims 1-21 in the manufacture of a medicament for the treatment of cancer in a subject, wherein the medicament is to be administered to the subject in need thereof.