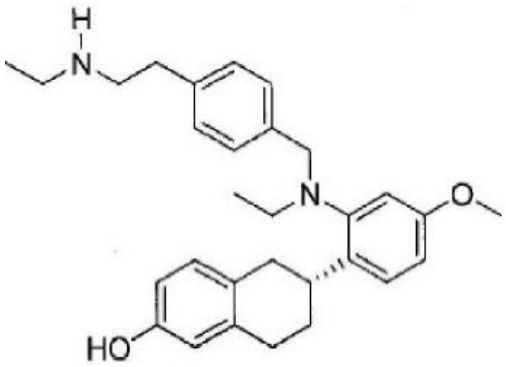
CLAIMS

1. Use of a therapeutically effective amount of RAD1901 having the structure:



or a salt or solvate thereof in the manufacture of a medicament for inhibiting tumor growth or producing tumor regression in a subject having a mutant estrogen receptor alpha positive cancer.

2. The use of claim 1, wherein the mutant estrogen receptor alpha positive cancer is drug-resistant.

3. The use of claim 1 or 2, wherein the cancer is selected from the group consisting of breast cancer, uterine cancer, ovarian cancer, and pituitary cancer.

4. The use of claim 1 or 2, wherein the cancer is a metastatic cancer.

5. The use of claim 1 or 2, wherein said cancer is positive for the mutant estrogen receptor alpha comprising one or more mutations selected from the group consisting of Y537Xi, L536X2, P535H, V534E, S463P, V392I, E380Q, D538G and combinations thereof, wherein:

X_1 is S, N, or C; and X_2 is R or Q.

6. The use of claim 1 or 2, wherein the ratio of the concentration of RAD1901 or a salt or solvate thereof in the tumor to the concentration of RAD1901 or a salt or solvate thereof in plasma (T/P) following administration is at least about 15.

7. The use of claim 1 or 2, wherein the subject is a post-menopausal woman who had relapsed or progressed after previous treatment with SERMs and/or AIs.

8. The use of claim 1 or 2, wherein the salt thereof is RAD1901 dihydrochloride.

9. The use of claim 1 or 2, wherein the tumor is resistant to a drug selected from the group consisting of anti-estrogens, aromatase inhibitors, and combinations thereof.

10. The use of claim 1 or 2, wherein the therapeutically effective amount is 150 mg to 2,000mg.