ANTICANCER COMPOSITIONS

The present invention concerns pharmaceutical formulations of abiraterone actetate and ARN-509, which can be administered to a mammal, in particular a human, suffering from an androgen receptor (AR)-related disease or condition, in particular cancer, more in particular prostate cancer, including but not limited to castration-resistant prostate cancer, metastatic castration resistant prostate cancer, chemotherapy-naive metastatic castration resistant prostate cancer, biochemically relapsed hormone sensitive prostate cancer, or high-risk, non-metastatic castration-resistant prostate cancer. In one aspect, these formulations comprise abiraterone acetate and a solid dispersion of ARN-509 and a polymer selected from HPMCAS, a poly(meth)acrylate copolymer, and mixtures thereof. In one aspect, these formulations comprise a granulate of abiraterone acetate and a solid dispersion of ARN-509 and a polymer selected from HPMCAS, a poly(meth)acrylate copolymer, and mixtures thereof. In one aspect, the solid dispersion of ARN-509 and a polymer selected from HPMCAS, a poly(meth)acrylate copolymer, and mixtures thereof is obtainable, in particular is obtained, by melt-extruding a mixture comprising ARN-509 and a polymer selected from HPMCAS, a poly(meth)acrylate copolymer, and mixtures thereof and optionally subsequently milling said melt-extruded mixture. In one aspect, the solid dispersion of ARN-509 and a polymer selected from HPMCAS, a poly(meth)acrylate copolymer, and mixtures thereof is obtainable, in particular is obtained, by spray drying a mixture comprising ARN-509 and a polymer selected from HPMCAS, a poly(meth)acrylate copolymer, and mixtures thereof in a suitable solvent.

The pharmaceutical formulations of the present invention provide improved stability or improved shelf life. With the formulations of the present invention the pill burden for the patient, in particular the cancer patient, can be reduced, and hence therapy adherence and therapy efficiency can be improved. The manufacture of the pharmaceutical formulations, in particular in the form of a tablet or a capsule, does not require a flow or density property improving step such as a roller compaction step notwithstanding the presence of a solid dispersion in the formulations of the present invention.

SUMMARY

In one aspect, there is provided a pharmaceutical formulation comprising a pharmaceutically acceptable carrier, abiraterone acetate and a solid dispersion, said solid dispersion comprising ARN-509 and a polymer selected from HPMCAS, a poly(meth)acrylate copolymer, and mixtures thereof.

In another aspect, there is provided a process for preparing a pharmaceutical formulation as defined herein comprising the steps of: a) preparing a solid dispersion of ARN-509 and a polymer selected from HPMCAS, a poly(meth)acrylate copolymer, and mixtures thereof; b) preparing a granulate comprising abiraterone acetate; c) mixing the solid dispersion of a) and the granulate of b) and a pharmaceutically acceptable carrier.

In another aspect, there is provided use of the pharmaceutical formulation as defined herein for the preparation of a medicament for the treatment of prostate cancer.

In another aspect, there is provided a combination of a pharmaceutical formulation as defined herein and a glucocorticoid selected from the group consisting of prednisone, prednisolone, methylprednisolone, dexamethasone and pharmaceutically acceptable salts and acetates thereof.

FIGURES

Fig. 1 : XRD pattern of ARN-509 Form B.