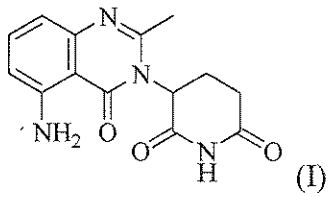
teratogenic effect of thalidomide was confirmed in animal models of zebra-fish and chick embryos. Understanding thalidomide and other drug targets will allow the definition of the molecular mechanisms of efficacy and/or toxicity and may lead to drugs with improved efficacy and toxicity profiles.

## 3. SUMMARY ~~OF THE INVENTION~~

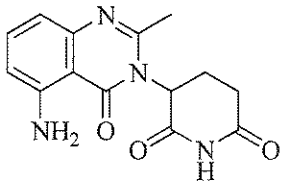
Provided herein are methods of treating and preventing cancer, including primary and metastatic cancer, as well as cancer that is refractory or resistant to conventional chemotherapy, which comprise administering to a patient in need of such treatment or prevention a therapeutically or prophylactically effective amount of 3-(5-amino-2-methyl-4-oxo-4*H*-quinazolin-3-yl)-piperidine-2,6-dione, having the structure of Formula I:



(I)

or an enantiomer or a mixture of enantiomers thereof, or a pharmaceutically acceptable salt, solvate, hydrate, co-crystal, clathrate, or polymorph thereof as a single agent or as a part of a combination therapy.

In one aspect, there is provided the use of a therapeutically effective amount of 3-(5-amino-2-methyl-4-oxo-4*H*-quinazolin-3-yl)-piperidine-2,6-dione, which has the following structure:



or an enantiomer or mixture of enantiomers thereof, or a pharmaceutically acceptable salt, solvate, hydrate, co-crystal, clathrate, or polymorph thereof in the manufacture of a medicament for treating or managing non-Hodgkin's lymphoma, wherein the non-Hodgkin's lymphoma is the diffuse large B-cell lymphoma of an activated B-cell phenotype.

In another aspect, there is provided the use of a therapeutically effective amount of 3-(5-amino-2-methyl-4-oxo-4*H*-quinazolin-3-yl)-piperidine-2,6-dione or a pharmaceutically acceptable salt, solvate or hydrate thereof in the manufacture of a medicament for treating or managing non-Hodgkin's lymphoma, wherein the non-Hodgkin's lymphoma is of an activated B-cell phenotype.

Also provided herein are methods of managing cancer (*e.g.*, preventing its recurrence, or lengthening the time of remission), which comprise administering to a patient in need of such management a therapeutically or prophylactically effective amount of 3-(5-amino-2-methyl-4-oxo-4*H*-quinazolin-3-yl)-piperidine-2,6-dione, or an enantiomer or a mixture of enantiomers thereof, or a pharmaceutically acceptable salt, solvate, hydrate, co-crystal, clathrate, or polymorph thereof.

Further provided herein are methods of treating, preventing, or managing cancer, comprising administering to a patient in need of such treatment, prevention, or management a therapeutically or prophylactically effective amount of 3-(5-amino-2-methyl-4-oxo-4*H*-quinazolin-3-yl)-piperidine-2,6-dione, or an enantiomer or a mixture of enantiomers thereof, or a pharmaceutically acceptable salt, solvate, hydrate, co-crystal, clathrate, or polymorph thereof; in combination with a therapy conventionally used to treat, prevent, or manage cancer. Examples of such conventional therapies include, but are not limited to, surgery, chemotherapy, radiation therapy, hormonal therapy, biological therapy, and immunotherapy.