CLAIMS

What is claimed is:

1. A small activating nucleic acid molecule targeting a promoter of THPO, a nucleic acid molecule encoding the small activating nucleic acid molecule, or a composition or formulation comprising the small activating nucleic acid molecule for use in the treatment of thrombocytopenia and/or a disease and condition related to insufficient or decreased expression of THPO protein in a subject.

2. The small activating nucleic acid molecule targeting a promoter of THPO, the nucleic acid molecule encoding the small activating nucleic acid molecule, or the composition or formulation comprising the small activating nucleic acid molecule for use of claim 1, wherein the thrombocytopenia comprises thrombocytopenia caused congenital (hereditary) or acquired thrombocytopenia, preferably thrombocytopenia caused by myelo-thrombocytopenia, increased peripheral platelet destruction, or splenic sequestration.

3. The small activating nucleic acid molecule targeting a promoter of THPO, the nucleic acid molecule encoding the small activating nucleic acid molecule, or the composition or formulation comprising the small activating nucleic acid molecule for use of claim 1, wherein the thrombocytopenia includesthrombocytopenia related to insufficient or decreased expression of THPO protein, thrombocytopenia caused by immune thrombocytopenia, drug-induced thrombocytopenia, thrombotic thrombocytopenia purpura, or hereditary thrombocytopenia.

4. The small activating nucleic acid molecule targeting a promoter of THPO, the nucleic acid molecule encoding the small activating nucleic acid molecule, or the composition or formulation comprising the small activating nucleic acid molecule for use of any one of claims 1 to 3, wherein the individual is a mammal.

5. The small activating nucleic acid molecule targeting a promoter of THPO, the nucleic acid molecule encoding the small activating nucleic acid molecule, or the composition or formulation comprising the small activating nucleic acid molecule for use of claim 4, wherein the individual is a human.

6. The small activating nucleic acid molecule targeting a promoter of THPO, the nucleic acid molecule encoding the small activating nucleic acid molecule, or the composition or formulation

comprising the small activating nucleic acid molecule for use of any one of claims 1 to 3, wherein the small activating nucleic acid molecule comprises a first nucleic acid strand and a second nucleic acid strand, the first nucleic acid strand having at least 75% (e.g., at least about 79%, about 80%, about 85%, about 90%, about 95%, about 99% or about 100%) homology or complementarity to continuous 16 to 35 nucleotides in length of any one of SEQ ID NO: 601 to SEQ ID NO: 605, and the first nucleic acid strand and the second nucleic acid strand complementarily form a double-stranded nucleic acid structure capable of activating the expression of *THPO* gene in a cell.

7. The small activating nucleic acid molecule targeting a promoter of THPO, the nucleic acid molecule encoding the small activating nucleic acid molecule, or the composition or formulation comprising the small activating nucleic acid molecule for use of claim 6, wherein the first nucleic acid strand of the small activating nucleic acid molecule comprises or is selected from any nucleotide sequence selected from SEQ ID NOs: 1048 to SEQ ID NOs: 1489, and the second nucleic acid strand comprises or is selected from any nucleotide sequence selected from SEQ ID NOs: 1490 to SEQ ID NOs: 1931.

8. The small activating nucleic acid molecule targeting a promoter of THPO, the nucleic acid molecule encoding the small activating nucleic acid molecule, or the composition or formulation comprising the small activating nucleic acid molecule for use of claim 6, wherein the first nucleic acid strand and the second nucleic acid strand are present on two different nucleic acid strands.

9. The small activating nucleic acid molecule targeting a promoter of THPO, the nucleic acid molecule encoding the small activating nucleic acid molecule, or the composition or formulation comprising the small activating nucleic acid molecule for use of claim 6, wherein the first nucleic acid strand and the second nucleic acid strand are present on the same nucleic acid strand, preferably, the small activating nucleic acid molecule is a hairpin single-stranded nucleic acid molecule, wherein the first nucleic acid strand and the second nucleic acid strand comprise complementary regions forming a double-stranded nucleic acid structure.

10. The small activating nucleic acid molecule targeting a promoter of THPO, the nucleic acid molecule encoding the small activating nucleic acid molecule, or the composition or formulation comprising the small activating nucleic acid molecule for use of claim 1, wherein at least one strand of the small activating nucleic acid molecule has an overhang of 0 to 6 nucleotides in length

at 3' terminus.

11. The small activating nucleic acid molecule targeting a promoter of THPO, the nucleic acid molecule encoding the small activating nucleic acid molecule, or the composition or formulation comprising the small activating nucleic acid molecule for use of claim 10, wherein both strands of the small activating nucleic acid molecule have an overhang of 0 to 6 nucleotides in length at the 3' terminus, preferably an overhang of 2 or 3 nucleotides in length.

12. The small activating nucleic acid molecule targeting a promoter of THPO, the nucleic acid molecule encoding the small activating nucleic acid molecule, or the composition or formulation comprising the small activating nucleic acid molecule for use of claim 6 or 7, wherein the first nucleic acid strand and the second nucleic acid strand independently have 16 to 35 nucleotides in length.

13. The small activating nucleic acid molecule targeting a promoter of THPO, the nucleic acid molecule encoding the small activating nucleic acid molecule, or the composition or formulation comprising the small activating nucleic acid molecule for use of any of claims 1 to 12, wherein the small activating nucleic acid molecule comprises only natural non-chemically modified nucleotides, or wherein the small activating nucleic acid molecule for use comprises at least one modification, preferably, the modification is a chemical modification.

14. The small activating nucleic acid molecule targeting a promoter of THPO, the nucleic acid molecule encoding the small activating nucleic acid molecule, or the composition or formulation comprising the small activating nucleic acid molecule for use of claim 13, wherein the chemical modification comprises or is selected from one or more modifications selected from the group consisting of:

(1) modification of a phosphodiester bond connecting nucleotides in the nucleotide sequence of the small activating nucleic acid molecule;

(2) modification of 2'-OH of a ribose in the nucleotide sequence of the small activating nucleic acid molecule;

(3) modification of a base in the nucleotide sequence of the small activating nucleic acid molecule; and

(4) at least one nucleotide in the nucleotide sequence of the small activating nucleic acid molecule being a locked nucleic acid.

15. The small activating nucleic acid molecule targeting a promoter of THPO, the nucleic acid molecule encoding the small activating nucleic acid molecule, or the composition or formulation comprising the small activating nucleic acid molecule for use of claim 13, wherein the chemical modification comprises one or more rmodifications selected from the group consisting of: 2'-fluoro modification, 2'-oxymethyl modification, 2'-oxyethylidene methoxy modification, 2,4'-dinitrophenol modification, locked nucleic acid (LNA), 2'-amino modification, 2'-deoxy modification, 5'-bromouracil modification, 5'-iodouracil modification, N-methyluracil modification, 2,6-diaminopurine modification, phosphorothioate modification, and boranophosphate modification.

16. The small activating nucleic acid molecule targeting a promoter of THPO, the nucleic acid molecule encoding the small activating nucleic acid molecule, or the composition or formulation comprising the small activating nucleic acid molecule for use of claim 3, wherein the acquired thrombocytopenia includes is caused by aplastic anemia, myelodysplastic syndrome, leukemia, drugs, infection, tumor diseases, radiotherapy, bone marrow transplantation and chronic liver diseases, or immune thrombocytopenia, wherein the factors causing increased peripheral platelet destruction comprise thrombotic thrombocytopenia, heparin-induced thrombocytopenia, drug-induced thrombocytopenia, ITP, or thrombotic thrombocytopenia purpura.

17. A small activating nucleic acid molecule targeting a promoter of THPO, a nucleic acid molecule encoding the small activating nucleic acid molecule, or a composition or formulation comprising the small activating nucleic acid molecule for use in activating/up-regulating the expression of *THPO* gene in a subject or a cell, wherein the small activating nucleic acid molecule, the nucleic acid coding the small activating nucleic acid molecule, or the composition or formulation comprising the small activating nucleic acid molecule is to be administered to the subject or the cell.

18. A nucleic acid coding the small activating nucleic acid molecule of any one of claims 1 to 17.

19. A cell comprising the small activating nucleic acid molecule of any one of claims 1 to 17 or a nucleic acid encoding the small activating nucleic acid molecule of any one of claims 1 to 17.

20. A formulation comprising the small activating nucleic acid molecule of any one of claims 1 to 17, wherein the formulation comprises a liposome, preferably an LNP-entrapped small activating

nucleic acid molecule.