preventing the transport of maternal antibodies across the placenta. Thus, the methods disclosed herein can be used reduce the risk of a child developing ASD or reduce the symptoms of ASD. The methods disclosed herein can also be used reduce the risk or symptoms of ASD associated with the presence of maternal autoantibodies.

[0004] Thus, disclosed herein are methods of reducing auto-reactive antibodies (e.g., an amount present in blood or sera) in a pregnant individual or an individual trying to become or an individual considering pregnancy, or an individual serving as a surrogate for the pregnancy, comprising administering, to the pregnant individual or individual trying to become pregnant or individual considering pregnancy, or an individual serving as a surrogate for the pregnancy, an inhibitor of neonatal Fc receptor (FcRn) function.

[0004a] In one aspect, provided herein is a use of an inhibitor of neonatal Fc receptor (FcRn) function in the manufacture of a medicament to reduce auto-reactive antibodies in a pregnant individual, an individual trying to become pregnant, an individual considering pregnancy, or an individual serving as a surrogate for a pregnancy.

[0005] In some embodiments, the auto-reactive antibodies comprise antibodies that bind a central nervous system (CNS) target. In certain embodiments, an embryo or fetus expresses the CNS target. In some embodiments, the auto-reactive antibodies bind to a target selected from the group consisting of lactate dehydrogenase A or B (LDH A,B), guanine deaminase (GDA), collapsin response mediator protein 1 or 2 (CRMP1,2)), stress-induced phosphoprotein 1 (STIP1), alpha subunit of the barbed-end actin binding protein Cap Z (CAPZA2), Y Box Binding Protein 1 (YBX1), eukaryotic translation and elongation factor 1A1 (EEF1A1), microtubule-associated protein Tau (MAPT), dihydropyrimidinase-like protein 2 (DPYSL2), dynamin 1-like protein (DNM1L), radixin (RDX), moesin (MSN), non-specific enolase (NSE), Caspr2, KCNAB2, KCNAB1, endothelial integrin ligand (EDIL3), IVD, brain specific sultatransferase (SULT4A1), TNIP2, retinoic acid induced 16 (RAI16), GDP D5, ezrin (EZR), and any combination thereof. In certain embodiments, the auto-reactive antibodies bind to the target LDH-A. In certain embodiments, the auto-reactive antibodies bind to the target LDH-B. In certain embodiments, the auto-reactive antibodies bind to the target GDA. In certain embodiments, the auto-reactive antibodies bind to the target CRMP1. In certain embodiments, the auto-reactive antibodies bind to the target STIP1. In certain embodiments, the auto-reactive antibodies bind to the target DPYSL2. In certain embodiments, the auto-reactive antibodies bind to the target YBX1. In certain embodiments, the auto-reactive antibodies bind to the target NSE. In certain embodiments, the auto-reactive

antibodies bind to the target Caspr2. In certain embodiments, the auto-reactive antibodies bind to the target KCNAB2. In certain embodiments, the auto-reactive antibodies bind to the target KCNAB1. In certain embodiments, the auto-reactive antibodies bind to the target EDIL3. In certain embodiments, the auto-reactive antibodies bind to the target IVD. In

CLAIMS

1. Use of an inhibitor of neonatal Fc receptor (FcRn) function in the manufacture of a medicament to reduce auto-reactive antibodies in a pregnant individual, an individual trying to become pregnant, an individual considering pregnancy, or an individual serving as a surrogate for a pregnancy.

2. The use of claim 1, wherein the auto-reactive antibodies comprise antibodies that bind a central nervous system (CNS) target, optionally wherein the CNS target is expressed by a fetus.

3. The use of claim 1, wherein the auto-reactive antibodies bind to a target selected from the group consisting of lactate dehydrogenase A or B (LDH A,B), guanine deaminase (GDA), collapsin response mediator protein 1 or 2 (CRMP1,2)), stress-induced phosphoprotein 1 (STIP1), alpha subunit of the barbed-end actin binding protein Cap Z (CAPZA2), Y Box Binding Protein 1 (YBX1), eukaryotic translation and elongation factor 1A1 (EEF1A1), microtubule-associated protein Tau (MAPT), dihydropyrimidinase-like protein 2 (DPYSL2), dynamin 1-like protein (DNM1L), radixin (RDX), moesin (MSN), non-specific enolase (NSE), Caspr2, KCNAB2, KCNAB1, endothelial integrin ligand (EDIL3), IVD, brain specific sultatransferase (SULT4A1), TNIP2, retinoic acid induced 16 (RAI16), GDP D5, ezrin (EZR), and any combination thereof.

4. The use of claim 3, wherein the auto-reactive antibodies bind to a target selected from the group consisting of lactate dehydrogenase A (LDHA), lactate dehydrogenase B (LDHB), collapsin response mediator protein 1 (CRMP1), stress-induced phosphoprotein 1 (STIP1), and any combination thereof.

5. The use of claim 3, wherein the auto-reactive antibodies bind to a target selected from the group consisting of lactate dehydrogenase collapsin response mediator protein 1 (CRMP1), stress-induced phosphoprotein 1 (STIP1), and both collapsin response mediator protein 1 (CRMP1), stress-induced phosphoprotein 1 (STIP1).

6. The use of any one of claims 1 to 5, wherein the inhibitor prevents an interaction between the FcRn and an immunoglobulin G (IgG) molecule.

7. The use of any one of claims 1 to 6, wherein the inhibitor prevents FcRn-mediated rescue of an IgG molecule.

8. The use of any one of claims 1 to 7, wherein the inhibitor comprises an antibody or a target-binding fragment thereof, a small molecule, a peptide, a polypeptide, or a nucleic acid.

9. The use of any one of claims 1 to 8, wherein the inhibitor is an antibody or an antigen-binding fragment thereof.

10. The use of claim 9, wherein the antibody or the antigen-binding fragment thereof is selected from the group consisting of Rozanolixizumab, SYNT001, M281, Argx-113, HL161-11G, HL161-11H, HL161-1A, DX-2504, DX-2507, ABY039,IMVT-1401/RVT1401, and any combination thereof.

11. The use of any one of claims 1 to 10, wherein the inhibitor is an aptamer, oligonucleotide or a small molecule.

12. The use of claim 11, wherein the small molecule is selected from TABLE 1.

13. The use of any one of claims 1 to 8, wherein the inhibitor is a peptide inhibitor.

14. The use of claim 13, wherein the peptide inhibitor is selected from TABLE 2.

15. The use of any one of claims 1 to 8, wherein the inhibitor is a polypeptide.

16. The use of claim 15, wherein the polypeptide comprises a variant Fc molecule, or FcRn-binding fragment thereof, wherein the variant Fc region molecule or FcRn-binding fragment thereof comprise one or more amino acid substitutions that increase binding to FcRn relative to a wildtype immunoglobulin Fc region.

17. The use of any one of claims 1 to 16, wherein the pregnant individual, the individual trying to become pregnant, the individual considering pregnancy, or the individual serving as a surrogate for a pregnancy is greater than 30 years old.

18. The use of any one of claims 1 to 16, wherein the pregnant individual, the individual trying to become pregnant, the individual considering pregnancy, or the individual serving as a surrogate for a pregnancy is greater than 40 years old.

19. The use of any one of claims 1 to 18, wherein a sperm that fertilized an egg of the pregnant individual, the individual trying to become pregnant, the individual considering pregnancy, or the individual serving as a surrogate for a pregnancy is from a person greater than 30 years old.

20. The use of any one of claims 1 to 19, wherein reducing auto-reactive antibodies in the pregnant individual or the individual trying to become pregnant prevents or reduces symptoms associated with autism or an autism spectrum disorder in an offspring of the pregnant individual, the individual trying to become pregnant, the individual considering pregnancy, or the individual serving as a surrogate for a pregnancy.