SUMMARY

In one aspect, the present disclosure refers to a use of an anti-APRIL antibody molecule, or a pharmaceutical composition comprising the anti-APRIL antibody molecule, in the manufacture of a medicament for treating a disorder in a human subject,

wherein the antibody molecule is to be administered at a dose of about 0.5 mg/kg, 2.0 mg/kg, 6 mg/kg, 9 mg/kg, 9.1 mg/kg, 12 mg/kg, or at a fixed dose of about 200 mg, 400 mg, 600 mg, or 800 mg; and

wherein the administration reduces the level of aberrantly glycosylated IgA (a-g IgA) by at least 40%, 50%, 60%, 70%, 75%, 80%, 85%, 90%, 95%, 96%, 97%, 98%, 99%, or 100% in the subject; and

optionally wherein the antibody molecule comprises a heavy chain variable region (VH) comprising three heavy chain complementarity determining regions (HCDR1, HCDR2, and HCDR3) and a light chain variable region (VL) comprising three light chain complementarity determining regions (LCDR1, LCDR2, and LCDR3),

wherein the VH comprises an HCDR1 comprising the amino acid sequence of SEQ ID NO: 11; an HCDR2 comprising the amino acid sequence of SEQ ID NO: 12, and an HCDR3 comprising the amino acid sequence of SEQ ID NO: 13; and the VL comprises an LCDR1 comprising the amino acid sequence of SEQ ID NO: 280; an LCDR2 comprising the amino acid sequence of SEQ ID NO: 285, and an LCDR3 comprising the amino acid sequence of SEQ ID NO: 16; or

wherein the VH comprises an HCDR1 comprising the amino acid sequence of SEQ ID NO: 17; an HCDR2 comprising the amino acid sequence of SEQ ID NO: 282, and an HCDR3 comprising the amino acid sequence of SEQ ID NO: 13; and the VL comprises an LCDR1 comprising the amino acid sequence of SEQ ID NO: 280; an LCDR2 comprising the amino acid sequence of SEQ ID NO: 285, and an LCDR3 comprising the amino acid sequence of SEQ ID NO: 16,

optionally wherein the disorder is IgA nephropathy.

In another aspect, the present disclosure refers to a use of an anti-APRIL antibody molecule, or a pharmaceutical composition comprising the anti-APRIL antibody molecule, in the manufacture of a medicament for reducing the level of a-g IgA in a human subject,

wherein the antibody molecule is to be administered at a dose of about 0.5 mg/kg, 2.0 mg/kg, 6 mg/kg, 9 mg/kg, 9.1 mg/kg, 12 mg/kg, or at a fixed dose of about 200 mg, 400 mg, 600 mg, or 800 mg; and

wherein the administration reduces the level of a-g IgA by at least 40%, 50%, 60%, 70%, 75%, 80%, 85%, 90%, 95%, 96%, 97%, 98%, 99%, or 100% in the subject; and

optionally wherein the antibody molecule comprises a heavy chain variable region (VH) comprising three heavy chain complementarity determining regions (HCDR1, HCDR2, and HCDR3) and

a light chain variable region (VL) comprising three light chain complementarity determining regions (LCDR1, LCDR2, and LCDR3),

wherein the VH comprises an HCDR1 comprising the amino acid sequence of SEQ ID NO: 11; an HCDR2 comprising the amino acid sequence of SEQ ID NO: 12, and an HCDR3 comprising the amino acid sequence of SEQ ID NO: 13; and the VL comprises an LCDR1 comprising the amino acid sequence of SEQ ID NO: 280; an LCDR2 comprising the amino acid sequence of SEQ ID NO: 285, and an LCDR3 comprising the amino acid sequence of SEQ ID NO: 16; or

wherein the VH comprises an HCDR1 comprising the amino acid sequence of SEQ ID NO: 17; an HCDR2 comprising the amino acid sequence of SEQ ID NO: 282, and an HCDR3 comprising the amino acid sequence of SEQ ID NO: 13; and the VL comprises an LCDR1 comprising the amino acid sequence of SEQ ID NO: 280; an LCDR2 comprising the amino acid sequence of SEQ ID NO: 285, and an LCDR3 comprising the amino acid sequence of SEQ ID NO: 16,

optionally wherein the subject has, or is at risk of having, a disorder, e.g., IgA nephropathy.

In another aspect, the present disclosure refers to a use of an anti-APRIL antibody molecule, or a pharmaceutical composition comprising the anti-APRIL antibody molecule, in the manufacture of a medicament for treating a disorder in a human subject,

wherein the use comprises selecting a dose or dosage for the antibody molecule; and

wherein administration of the antibody molecule at the selected dose or dosage reduces, or is likely to reduce, the level of a-g IgA by at least 40%, 50%, 60%, 70%, 75%, 80%, 85%, 90%, 95%, 96%, 97%, 98%, 99%, or 100% in the subject; and

optionally wherein the antibody molecule comprises a heavy chain variable region (VH) comprising three heavy chain complementarity determining regions (HCDR1, HCDR2, and HCDR3) and a light chain variable region (VL) comprising three light chain complementarity determining regions (LCDR1, LCDR2, and LCDR3),

wherein the VH comprises an HCDR1 comprising the amino acid sequence of SEQ ID NO: 11; an HCDR2 comprising the amino acid sequence of SEQ ID NO: 12, and an HCDR3 comprising the amino acid sequence of SEQ ID NO: 13; and the VL comprises an LCDR1 comprising the amino acid sequence of SEQ ID NO: 280; an LCDR2 comprising the amino acid sequence of SEQ ID NO: 285, and an LCDR3 comprising the amino acid sequence of SEQ ID NO: 16; or

wherein the VH comprises an HCDR1 comprising the amino acid sequence of SEQ ID NO: 17; an HCDR2 comprising the amino acid sequence of SEQ ID NO: 282, and an HCDR3 comprising the amino acid sequence of SEQ ID NO: 13; and the VL comprises an LCDR1 comprising the amino acid sequence of SEQ ID NO: 280; an LCDR2 comprising the amino acid sequence of SEQ ID NO: 285, and an LCDR3 comprising the amino acid sequence of SEQ ID NO: 16,

optionally wherein the antibody molecule is to be administered at a dose of about 0.5 mg/kg, 2.0 mg/kg, 6 mg/kg, 9 mg/kg, 9.1 mg/kg, 12 mg/kg, or at a fixed dose of about 200 mg, 400 mg, 600 mg, or 800 mg,

optionally wherein the disorder is IgA nephropathy.

In another aspect, the present disclosure refers to a use of an anti-APRIL antibody molecule, or a pharmaceutical composition comprising the anti-APRIL antibody molecule, in the manufacture of a medicament for treating a disorder in a human subject,

wherein the use comprises responsive to a determination that administration of the antibody molecule reduces, or is likely to reduce, the level of a-g IgA by at least 40%, 50%, 60%, 70%, 75%, 80%, 85%, 90%, 95%, 96%, 97%, 98%, 99%, or 100% in the subject,

wherein the antibody molecule is to be administered to the subject at a dose of about 0.5 mg/kg, 2.0 mg/kg, 6 mg/kg, 9 mg/kg, 9.1 mg/kg, 12 mg/kg, or at a fixed dose of about 200 mg, 400 mg, 600 mg, or 800 mg; and

optionally wherein the antibody molecule comprises a heavy chain variable region (VH) comprising three heavy chain complementarity determining regions (HCDR1, HCDR2, and HCDR3) and a light chain variable region (VL) comprising three light chain complementarity determining regions (LCDR1, LCDR2, and LCDR3),

wherein the VH comprises an HCDR1 comprising the amino acid sequence of SEQ ID NO: 11; an HCDR2 comprising the amino acid sequence of SEQ ID NO: 12, and an HCDR3 comprising the amino acid sequence of SEQ ID NO: 13; and the VL comprises an LCDR1 comprising the amino acid sequence of SEQ ID NO: 280; an LCDR2 comprising the amino acid sequence of SEQ ID NO: 285, and an LCDR3 comprising the amino acid sequence of SEQ ID NO: 16; or

wherein the VH comprises an HCDR1 comprising the amino acid sequence of SEQ ID NO: 17; an HCDR2 comprising the amino acid sequence of SEQ ID NO: 282, and an HCDR3 comprising the amino acid sequence of SEQ ID NO: 13; and the VL comprises an LCDR1 comprising the amino acid sequence of SEQ ID NO: 280; an LCDR2 comprising the amino acid sequence of SEQ ID NO: 285, and an LCDR3 comprising the amino acid sequence of SEQ ID NO: 16,

optionally wherein the disorder is IgA nephropathy.

In another aspect, the present disclosure refers to a use of an anti-APRIL antibody molecule, or a pharmaceutical composition comprising the anti-APRIL antibody molecule, in the manufacture of a medicament for treating a disorder in a human subject,

wherein the use comprises determining whether administration of an anti-APRIL antibody molecule reduces, or is likely to reduce, the level of a-g IgA by at least 40%, 50%, 60%, 70%, 75%, 80%, 85%, 90%, 95%, 96%, 97%, 98%, 99%, or 100% in the subject,

if the antibody molecule reduces, or is likely to reduce, the level of a-g IgA by at least 40%, 50%, 60%, 70%, 75%, 80%, 85%, 90%, 95%, 96%, 97%, 98%, 99%, or 100%, administration of the antibody molecule at a dosage of about 0.5 mg/kg, 2.0 mg/kg, 6 mg/kg, 9 mg/kg, 9.1 mg/kg, 12 mg/kg, or at a fixed dose of about 200 mg, 400 mg, 600 mg, or 800 mg is initiated, continued, or maintained; and

optionally wherein the antibody molecule comprises a heavy chain variable region (VH) comprising three heavy chain complementarity determining regions (HCDR1, HCDR2, and HCDR3) and a light chain variable region (VL) comprising three light chain complementarity determining regions (LCDR1, LCDR2, and LCDR3),

wherein the VH comprises an HCDR1 comprising the amino acid sequence of SEQ ID NO: 11; an HCDR2 comprising the amino acid sequence of SEQ ID NO: 12, and an HCDR3 comprising the amino acid sequence of SEQ ID NO: 13; and the VL comprises an LCDR1 comprising the amino acid sequence of SEQ ID NO: 280; an LCDR2 comprising the amino acid sequence of SEQ ID NO: 285, and an LCDR3 comprising the amino acid sequence of SEQ ID NO: 16; or

wherein the VH comprises an HCDR1 comprising the amino acid sequence of SEQ ID NO: 17; an HCDR2 comprising the amino acid sequence of SEQ ID NO: 282, and an HCDR3 comprising the amino acid sequence of SEQ ID NO: 13; and the VL comprises an LCDR1 comprising the amino acid sequence of SEQ ID NO: 280; an LCDR2 comprising the amino acid sequence of SEQ ID NO: 285, and an LCDR3 comprising the amino acid sequence of SEQ ID NO: 16,

optionally wherein the antibody molecule is to be administered at a dose of about 0.5 mg/kg, 2.0 mg/kg, 6 mg/kg, 9 mg/kg, 9.1 mg/kg, 12 mg/kg, or at a fixed dose of about 200 mg, 400 mg, 600 mg, or 800 mg,

optionally wherein the disorder is IgA nephropathy,

optionally wherein if the antibody molecule does not reduce, or is not likely to reduce, the level of a-g IgA by at least 40%, 50%, 60%, 70%, 75%, 80%, 85%, 90%, 95%, 96%, 97%, 98%, 99%, or 100%, administration of the antibody molecule is terminated, discontinued, or altered, and/or a different therapeutic agent or modality is to be administered.

In another aspect, the present disclosure refers to a use of an anti-APRIL antibody molecule, or a pharmaceutical composition comprising the anti-APRIL antibody molecule, in the manufacture of a medicament for treating a disorder in a human subject,

wherein the use comprises determining whether administration of a therapeutic agent or modality other than the antibody molecule reduces, or is likely to reduce, the level of a-g IgA by at least 40%, 50%, 60%, 70%, 75%, 80%, 85%, 90%, 95%, 96%, 97%, 98%, 99%, or 100% in a subject in need thereof,

if the therapeutic agent or modality does not reduce, or is not likely to reduce, the level of a-g IgA by at least 40%, 50%, 60%, 70%, 75%, 80%, 85%, 90%, 95%, 96%, 97%, 98%, 99%, or 100%, the

antibody molecule is to be administered to the subject at a dose of about 0.5 mg/kg, 2.0 mg/kg, 6 mg/kg, 9 mg/kg, 9.1 mg/kg, 12 mg/kg, or at a fixed dose of about 200 mg, 400 mg, 600 mg, or 800 mg; and

optionally wherein the antibody molecule comprises a heavy chain variable region (VH) comprising three heavy chain complementarity determining regions (HCDR1, HCDR2, and HCDR3) and a light chain variable region (VL) comprising three light chain complementarity determining regions (LCDR1, LCDR2, and LCDR3),

wherein the VH comprises an HCDR1 comprising the amino acid sequence of SEQ ID NO: 11; an HCDR2 comprising the amino acid sequence of SEQ ID NO: 12, and an HCDR3 comprising the amino acid sequence of SEQ ID NO: 13; and the VL comprises an LCDR1 comprising the amino acid sequence of SEQ ID NO: 280; an LCDR2 comprising the amino acid sequence of SEQ ID NO: 285, and an LCDR3 comprising the amino acid sequence of SEQ ID NO: 16; or

wherein the VH comprises an HCDR1 comprising the amino acid sequence of SEQ ID NO: 17; an HCDR2 comprising the amino acid sequence of SEQ ID NO: 282, and an HCDR3 comprising the amino acid sequence of SEQ ID NO: 13; and the VL comprises an LCDR1 comprising the amino acid sequence of SEQ ID NO: 280; an LCDR2 comprising the amino acid sequence of SEQ ID NO: 285, and an LCDR3 comprising the amino acid sequence of SEQ ID NO: 16,

optionally wherein the disorder is IgA nephropathy.

In another aspect, the present disclosure refers to a use of an anti-APRIL antibody molecule, or a pharmaceutical composition comprising the anti-APRIL antibody molecule, in the manufacture of a medicament for treating a disorder in a human subject,

wherein the antibody molecule is to be administered at a dose of about 0.5 mg/kg, 2.0 mg/kg, 6 mg/kg, 9 mg/kg, 9.1 mg/kg, 12 mg/kg, or at a fixed dose of about 200 mg, 400 mg, 600 mg, or 800 mg; and

wherein the subject has received, or is going to receive, a vaccine within 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, or 15 weeks of administration of the antibody molecule, optionally wherein the vaccine comprises tetanus toxoid, diphtheria toxoid, or both (e.g., TENIVAC®),

optionally wherein the antibody molecule comprises a heavy chain variable region (VH) comprising three heavy chain complementarity determining regions (HCDR1, HCDR2, and HCDR3) and a light chain variable region (VL) comprising three light chain complementarity determining regions (LCDR1, LCDR2, and LCDR3),

wherein the VH comprises an HCDR1 comprising the amino acid sequence of SEQ ID NO: 11; an HCDR2 comprising the amino acid sequence of SEQ ID NO: 12, and an HCDR3 comprising the amino acid sequence of SEQ ID NO: 13; and the VL comprises an LCDR1 comprising the amino acid

sequence of SEQ ID NO: 280; an LCDR2 comprising the amino acid sequence of SEQ ID NO: 285, and an LCDR3 comprising the amino acid sequence of SEQ ID NO: 16; or

wherein the VH comprises an HCDR1 comprising the amino acid sequence of SEQ ID NO: 17; an HCDR2 comprising the amino acid sequence of SEQ ID NO: 282, and an HCDR3 comprising the amino acid sequence of SEQ ID NO: 13; and the VL comprises an LCDR1 comprising the amino acid sequence of SEQ ID NO: 280; an LCDR2 comprising the amino acid sequence of SEQ ID NO: 285, and an LCDR3 comprising the amino acid sequence of SEQ ID NO: 16,

optionally wherein the disorder is IgA nephropathy,

optionally wherein administration of the antibody molecule at the selected dose or dosage reduces, or is likely to reduce, the level of a-g IgA by at least 40%, 50%, 60%, 70%, 75%, 80%, 85%, 90%, 95%, 96%, 97%, 98%, 99%, or 100% in the subject.

In yet another aspect, the present disclosure refers to a method of selecting an anti-APRIL antibody molecule for treating a disorder, comprising:

determining whether administration of the antibody molecule at a dose or dosage reduces, or is likely to reduce, the level of a-g IgA by at least 40%, 50%, 60%, 70%, 75%, 80%, 85%, 90%, 95%, 96%, 97%, 98%, 99%, or 100% in a human subject in need thereof,

wherein the dose is about 0.5 mg/kg, 2.0 mg/kg, 6 mg/kg, 9 mg/kg, 9.1 mg/kg, 12 mg/kg, or at a fixed dose of about 200 mg, 400 mg, 600 mg, or 800 mg,

optionally wherein the antibody molecule comprises a heavy chain variable region (VH) comprising three heavy chain complementarity determining regions (HCDR1, HCDR2, and HCDR3) and a light chain variable region (VL) comprising three light chain complementarity determining regions (LCDR1, LCDR2, and LCDR3),

wherein the VH comprises an HCDR1 comprising the amino acid sequence of SEQ ID NO: 11; an HCDR2 comprising the amino acid sequence of SEQ ID NO: 12, and an HCDR3 comprising the amino acid sequence of SEQ ID NO: 13; and the VL comprises an LCDR1 comprising the amino acid sequence of SEQ ID NO: 280; an LCDR2 comprising the amino acid sequence of SEQ ID NO: 285, and an LCDR3 comprising the amino acid sequence of SEQ ID NO: 16; or

wherein the VH comprises an HCDR1 comprising the amino acid sequence of SEQ ID NO: 17; an HCDR2 comprising the amino acid sequence of SEQ ID NO: 282, and an HCDR3 comprising the amino acid sequence of SEQ ID NO: 13; and the VL comprises an LCDR1 comprising the amino acid sequence of SEQ ID NO: 280; an LCDR2 comprising the amino acid sequence of SEQ ID NO: 285, and an LCDR3 comprising the amino acid sequence of SEQ ID NO: 16,

optionally wherein the disorder is IgA nephropathy,

thereby selecting the antibody molecule.

In yet another aspect, the present disclosure refers to a method of selecting a dose or dosage for an anti-APRIL antibody molecule for treating a disorder, comprising:

determining whether administration of the antibody molecule at a dose or dosage reduces, or is likely to reduce, the level of a-g IgA by at least 40%, 50%, 60%, 70%, 75%, 80%, 85%, 90%, 95%, 96%, 97%, 98%, 99%, or 100% in a human subject in need thereof,

optionally wherein the dose is about 0.5 mg/kg, 2.0 mg/kg, 6 mg/kg, 9 mg/kg, 9.1 mg/kg, 12 mg/kg, or at a fixed dose of about 200 mg, 400 mg, 600 mg, or 800 mg,

optionally wherein the antibody molecule comprises a heavy chain variable region (VH) comprising three heavy chain complementarity determining regions (HCDR1, HCDR2, and HCDR3) and a light chain variable region (VL) comprising three light chain complementarity determining regions (LCDR1, LCDR2, and LCDR3),

wherein the VH comprises an HCDR1 comprising the amino acid sequence of SEQ ID NO: 11; an HCDR2 comprising the amino acid sequence of SEQ ID NO: 12, and an HCDR3 comprising the amino acid sequence of SEQ ID NO: 13; and the VL comprises an LCDR1 comprising the amino acid sequence of SEQ ID NO: 280; an LCDR2 comprising the amino acid sequence of SEQ ID NO: 285, and an LCDR3 comprising the amino acid sequence of SEQ ID NO: 16; or

wherein the VH comprises an HCDR1 comprising the amino acid sequence of SEQ ID NO: 17; an HCDR2 comprising the amino acid sequence of SEQ ID NO: 282, and an HCDR3 comprising the amino acid sequence of SEQ ID NO: 13; and the VL comprises an LCDR1 comprising the amino acid sequence of SEQ ID NO: 280; an LCDR2 comprising the amino acid sequence of SEQ ID NO: 285, and an LCDR3 comprising the amino acid sequence of SEQ ID NO: 16,

optionally wherein the disorder is IgA nephropathy,

thereby selecting the dose or dosage.

In yet another aspect, the present disclosure refers to a method of selecting a human subject for treating a disorder, comprising:

determining whether administration of an anti-APRIL antibody molecule at a dosage of about 0.5 mg/kg, 2.0 mg/kg, 6 mg/kg, 9 mg/kg, 9.1 mg/kg, 12 mg/kg, or at a fixed dose of about 200 mg, 400 mg, 600 mg, or 800 mg reduces, or is likely to reduce, the level of a-g IgA by at least 40%, 50%, 60%, 70%, 75%, 80%, 85%, 90%, 95%, 96%, 97%, 98%, 99%, or 100% in the subject,

optionally wherein the antibody molecule comprises a heavy chain variable region (VH) comprising three heavy chain complementarity determining regions (HCDR1, HCDR2, and HCDR3) and a light chain variable region (VL) comprising three light chain complementarity determining regions (LCDR1, LCDR2, and LCDR3),

wherein the VH comprises an HCDR1 comprising the amino acid sequence of SEQ ID NO: 11; an HCDR2 comprising the amino acid sequence of SEQ ID NO: 12, and an HCDR3 comprising the amino acid sequence of SEQ ID NO: 13; and the VL comprises an LCDR1 comprising the amino acid sequence of SEQ ID NO: 280; an LCDR2 comprising the amino acid sequence of SEQ ID NO: 285, and an LCDR3 comprising the amino acid sequence of SEQ ID NO: 16; or

wherein the VH comprises an HCDR1 comprising the amino acid sequence of SEQ ID NO: 17; an HCDR2 comprising the amino acid sequence of SEQ ID NO: 282, and an HCDR3 comprising the amino acid sequence of SEQ ID NO: 13; and the VL comprises an LCDR1 comprising the amino acid sequence of SEQ ID NO: 280; an LCDR2 comprising the amino acid sequence of SEQ ID NO: 285, and an LCDR3 comprising the amino acid sequence of SEQ ID NO: 16,

optionally wherein the disorder is IgA nephropathy,

thereby selecting the subject,

Accordingly, in certain aspects, this disclosure provides a method for treating a disorder, the method comprising administering to a subject in need thereof an anti-APRIL antibody molecule described herein, wherein the antibody molecule is administered at a dose that reduces, or is likely to reduce, the level of aberrantly glycosylated IgA (a-g IgA), e.g. aberrantly glycosylated IgA1 (a-g IgA1), by at least 40% in the subject, thereby treating the disorder. In an embodiment, the level of a-g IgA comprises, or is, the level of a-g IgA1.

In an embodiment, the level of a-g IgA is reduced by at least 40% about 4 weeks after the antibody molecule is administered. In an embodiment, the level of a-g IgA is reduced by at least 40% about 8 weeks after the antibody molecule is administered. In an embodiment, the level of a-g IgA is reduced by at least 40% about 12 weeks after the antibody molecule is administered. In an embodiment, the level of a-g IgA is reduced by at least 40% about 16 weeks after the antibody molecule is administered. In an embodiment, the level of a-g IgA is reduced by at least 40% for a predetermined period, e.g., at least one, two, three, or four weeks, or at least one, two, or three months. In an embodiment, the level of a-g IgA is reduced by at least 50%. In an embodiment, the level of a-g IgA is reduced by at least 55%, 60%, 65%, 70%, 75%, 80%, 85%, 90%, or 95%. In an embodiment, the antibody molecule is administered as a single dose. In an embodiment, the antibody molecule is administered as a repeated dose. In an embodiment, the antibody molecule is administered subcutaneously. In an embodiment, the antibody molecule is administered intravenously.

In an embodiment, the disorder is an APRIL-associated disorder. In an embodiment, the disorder is associated with an aberrant level of total IgA. In an embodiment, the disorder is a disorder associated with a-g IgA (e.g., a-g IgA1).

In an embodiment, the disorder is IgA nephropathy (IgAN). In an embodiment, the IgAN is a familial IgAN. In an embodiment, the IgA is an adult IgAN. In an embodiment, the IgAN is a post-transplant IgAN, a pediatric IgAN, or a crescentic IgAN.

In an embodiment, the disorder is a chronic kidney disease (CKD) or a disorder associated with CKD. In an embodiment, the CKD is an advanced CKD, e.g., with an estimated glomerular filtration rate (eGFR) equal to or greater than about 30 or about 45.

In an embodiment, the disorder is Henoch-Schonlein purpura (HSP). In an embodiment, the disorder is cutaneous vasculitis or IgA vasculitis. In an embodiment, the disorder is IgA dermatitis, e.g., IgA bullous dermatosis. In an embodiment, the disorder is Waldenström macroglobulinemia (WM). In an embodiment, the disorder is lupus nephritis.

In an embodiment, the subject is a human. In an embodiment, the subject has, or is identified as having, a level of a-g IgA that is at least 1, 1.5, 2, 2.5, 3.5, 4, 4.5, or 5-fold higher than the level of a-g