We claim:

1. A method for detecting an RSP composition comprising the steps:
    a. providing a substantially pure preparation of one or more capture polypeptides;
    b. affixing the one or more capture polypeptides to a means for quantitatively detecting the RSP composition;
    c. determining binding of the RSP composition to the one or more capture polypeptides.
2. A method for improving the design of an RSP composition comprising the steps:
    a. providing a substantially pure preparation of one or more capture polypeptides;
    b. affixing the one or more capture polypeptides to a means for quantitatively detecting the RSP composition;
    c. determining binding of the RSP composition to the one or more capture polypeptides;
    d. adjusting the design of said RSP composition to either enhance or reduce binding to one or more capture polypeptides;
    e. repeating step (c);
    f. optionally repeating steps (c-e),
    wherein adjusting the design of the RSP composition results in any one or more of: increased bioavailability, reduction in toxicity, and increase in efficacy.
3. A method for detecting species within an RSP composition comprising:
    a. providing a substantially pure preparation of one or more capture polypeptides;
    b. affixing the one or more capture polypeptides to a solid support;
    c. contacting the solid support with the RSP composition; and
    d. determining binding of individual species of the RSP composition to the solid support.

4. A method for improving the design of species within an RSP composition comprising:

a. providing a substantially pure preparation of one or more capture polypeptides;

b. affixing the one or more capture polypeptides to a solid support;

c. contacting the solid support with the RSP composition;

d. determining binding of individual species of the RSP composition to the solid support;

e. adjusting the design of the RSP composition to either enhance or reduce binding to one or more capture polypeptides in (c);

f. repeating step (d);

g. optionally repeating steps (d-f),

wherein adjusting the design of species of the RSP composition results in any one or more of: increased bioavailability, reduction in toxicity, and increase in efficacy.

5. The method of any of claims 1-4, wherein the one or more capture polypeptides of (a) are identified by:

i. affixing the RSP composition to a solid support;

ii. contacting said solid support in (i) with a protein-containing biological fluid; iii. identifying the proteins from (ii) specifically bound to the solid support in

(i);

wherein a protein identified in (ii) is a capture polypeptide.

6. The method of any of claim 1-5, wherein the capture polypeptide is selected from complement C3, apolipoprotem A-1 preproprotein, apolipoprotem A-II preproprotein (apolipoprotem D), complement component C4A, trypsin inhibitor, inter-alpha-trypsin inhibitor family heavy chain-related protein (IHRP), alpha- 1-B- glycoprotein, alpha- 1 -antitrypsin, apolipoprotem A-IV, ceruloplasmin, unnamed protein product (NCBI Locus/ Accession No. CAA34971), apolipoprotem E, complement factor B, prealbumin, apolipoprotem C-III, alpha2-HS glycoprotein, apolipoprotem J precursor, Chain C, Immunoglobulin M, immunoglobulin lambda light chain, Coagulation factor II (thrombin), Ig kappa chain V-III (KAU cold agglutinin), apolipoprotem J precursor, Ig Al Bur, histidine-rich glycoprotein

~~precursor, Alpha-2-HS-glycoprotein, gelsolin isoform a precursor, inhibitor Kunitz type proteinase, unnamed protein product (NCBI Locus/ Accession No. CAA28659), and Ig J-chain.~~

~~7.~~ 1. A method for determining the presence of an RSP composition consisting of YFAK peptides comprising the steps:

a. affixing one or more proteins selected from the group consisting of:

complement component C3, apolipoprotein A-1 preproprotein, apolipoprotein A-II preproprotein (apolipoprotein D), complement component C4A, trypsin inhibitor, inter- alpha-trypsin inhibitor family heavy chain-related protein (IHRP), alpha- 1- B-glycoprotein, alpha- 1 -antitrypsin, apolipoprotein A-IV, ceruloplasmin, ~~unnamed protein product (NCBI Locus/ Accession No. CAA34971),~~ apolipoprotein E, complement factor B, prealbumin, apolipoprotein C-III, alpha2-HS glycoprotein, apolipoprotein J precursor, ~~Chain C, Immunoglobulin M, immunoglobulin lambda light chain,~~ Coagulation factor II (thrombin), ~~Ig kappa chain V-III (KAU cold agglutinin), apolipoprotein J precursor, Ig Al Bur,~~ histidine-rich glycoprotein precursor, Alpha-2-HS- glycoprotein, gelsolin isoform a precursor, and inhibitor Kunitz type proteinase, ~~unnamed protein product (NCBI Locus/ Accession No. CAA28659), and Ig J-chain~~ to a means for quantitatively detecting said RSP composition in a sample; and

b. determining the level of said RSP composition in said sample.

~~8. The method of any of claims 1-4 wherein a capture polypeptide is selected from complement component C3, apolipoprotein A-1 preproprotein, apolipoprotein A-II preproprotein (apolipoprotein D), complement component C4A, trypsin inhibitor, inter-alpha-trypsin inhibitor family heavy chain-related protein (IHRP), alpha- 1-B-glycoprotein, alpha- 1 -antitrypsin, apolipoprotein A-IV, ceruloplasmin, unnamed protein product (NCBI Locus/ Accession No. CAA34971), apolipoprotein E, complement factor B, prealbumin, apolipoprotein C-III, alpha2-HS glycoprotein, apolipoprotein J precursor, Chain C, Immunoglobulin M, immunoglobulin lambda light chain, Coagulation factor II (thrombin), Ig kappa chain V-III (KAU cold agglutinin), apolipoprotein J precursor, Ig Al Bur, histidine-rich glycoprotein precursor, Alpha-2-HS-glycoprotein, gelsolin isoform a precursor, inhibitor Kunitz~~

~~type proteinase, unnamed protein product (NCBI Locus/ Accession No. CAA28659), and Ig J-chain.~~

~~9. A method for detecting presence of an RSP composition in a biological sample, comprising:~~

~~a. contacting the biological sample with at least one capture polypeptide contained in normal human sera, normal non-human primate sera, normal rabbit sera, normal mouse sera, normal rat sera, normal ferret sera, normal pig sera, normal dog sera, normal horse sera, normal sheep sera, normal cow sera; and~~

~~b. detecting the presence or absence of binding of the capture polypeptide to the RSP composition,~~

~~wherein the presence of binding indicates the presence of RSP composition in the biological sample.~~

~~10. The method of claim 9, wherein the capture polypeptide is selected from a polypeptide comprising at least one component of the HDL proteome, LDL proteome, or at least one serum protein.~~

~~11. The method of claim 9, wherein the RSP composition comprises YFAK peptides.~~

~~12. The method of claim 9, wherein the RSP composition comprises YEAK peptides.~~

~~13.~~ 2. A method for detecting the presence of an RSP composition ~~comprising~~ consisting of YFAK ~~or YEAK~~ peptides in a biological sample, comprising:

a. contacting the biological sample with at least one capture polypeptide ~~comprising a peptide~~ selected from the group consisting of: complement component C3, apolipoprotein A-I preproprotein, apolipoprotein A-II preproprotein (apolipoprotein D), complement component C4A, trypsin inhibitor, inter- alpha-trypsin inhibitor family heavy chain-related protein (IHRP), alpha- 1- B-glycoprotein, alpha- 1 -antitrypsin, apolipoprotein A-IV, ceruloplasmin, ~~unnamed protein product (NCBI Locus/ Accession No. CAA34971),~~ apolipoprotein E, complement factor B, prealbumin, apolipoprotein C-III,

alpha2-HS glycoprotein, apolipoprotein J precursor, ~~Chain C, Immunoglobulin M, immunoglobulin lambda light chain,~~ Coagulation factor II (thrombin), ~~Ig kappa chain V-III (KAU cold agglutinin), apolipoprotein J precursor, Ig Al Bur,~~ histidine-rich glycoprotein precursor, Alpha-2-HS- glycoprotein, gelsolin isoform a precursor, and inhibitor Kunitz type proteinase~~, unnamed protein product (NCBI Locus/ Accession No. CAA28659), and Ig J-chain~~; and

b. detecting the presence or absence of binding of the capture polypeptide to the RSP composition,

wherein the presence of binding indicates the presence of YFAK ~~or YEAK~~ peptides in the biological sample.

~~14.~~ 3. A method for measuring an amount of an RSP composition ~~comprising~~ consisting of YFAK ~~or YEAK~~ peptides in a biological sample, comprising:

a. contacting the biological sample with at least one capture polypeptide selected from the group consisting of:

~~comprising a peptide selected from~~ complement component C3, apolipoprotein A-I preproprotein, apolipoprotein A-II preproprotein (apolipoprotein D), complement component C4A, trypsin inhibitor, inter- alpha-trypsin inhibitor family heavy chain-related protein (IHRP), alpha- 1- B-glycoprotein, alpha- 1 -antitrypsin, apolipoprotein A-IV, ceruloplasmin, ~~unnamed protein product (NCBI Locus/ Accession No. CAA34971),~~ apolipoprotein E, complement factor B, prealbumin, apolipoprotein C-III, alpha2-HS glycoprotein, apolipoprotein J precursor, ~~Chain C, Immunoglobulin M, immunoglobulin lambda light chain,~~ Coagulation factor II (thrombin), ~~Ig kappa chain V-III (KAU cold agglutinin), apolipoprotein J precursor, Ig Al Bur,~~ histidine-rich glycoprotein precursor, Alpha-2-HS- glycoprotein, gelsolin isoform a precursor, and inhibitor Kunitz type proteinase~~, unnamed protein product (NCBI Locus/ Accession No. CAA28659), and Ig J-chain~~;

b. quantifying a level of binding of the capture polypeptide to the RSP composition;

wherein the level of binding indicates the amount of the RSP composition in the biological sample.

~~15.~~ 4. A method for measuring bioavailability of an RSP composition ~~comprising~~ consisting of YFAK ~~or YEAK~~ peptides in a mammal, comprising:

a. administering to a mammal a dose of a composition comprising the RSP composition;

b. removing a biological sample from the subject; and

c. contacting the biological sample with at least one capture polypeptide selected from the group consisting of:

~~comprising a peptide selected from~~ complement component C3, apolipoprotein A-I preproprotein, apolipoprotein A-II preproprotein (apolipoprotein D), complement component C4A, trypsin inhibitor, inter- alpha-trypsin inhibitor family heavy chain-related protein (IHRP), alpha- 1- B-glycoprotein, alpha- 1 -antitrypsin, apolipoprotein A-IV, ceruloplasmin, ~~unnamed protein product (NCBI Locus/ Accession No. CAA34971),~~ apolipoprotein E, complement factor B, prealbumin, apolipoprotein C-III, alpha2-HS glycoprotein, apolipoprotein J precursor, ~~Chain C, Immunoglobulin M, immunoglobulin lambda light chain,~~ Coagulation factor II (thrombin), ~~Ig kappa chain V-III (KAU cold agglutinin), apolipoprotein J precursor, Ig Al Bur,~~ histidine-rich glycoprotein precursor, Alpha-2-HS- glycoprotein, gelsolin isoform a precursor, and inhibitor Kunitz type proteinase~~, unnamed protein product (NCBI Locus/ Accession No. CAA28659), and Ig J-chain~~;

in an immunoassay that quantitatively detects the presence of the RSP composition;

thereby determining the bioavailability of the RSP composition in the biological sample, wherein the level of the RSP composition in the biological sample is indicative of the bioavailability of the RSP composition.

~~16.~~ 5. A method for determining a suitable dose of an RSP composition ~~comprising~~ consisting of YFAK ~~or YEAK~~ peptides to administer to a subject in need thereof, comprising:

a. administering to the subject a dose of the RSP composition;

b. removing a biological sample from the subject;

c. contacting the biological sample with at least one capture polypeptide selected from the group consisting of:

~~comprising a peptide selected from~~ complement component C3, apolipoprotein A-I preproprotein, apolipoprotein A-II preproprotein (apolipoprotein D), complement component C4A, trypsin inhibitor, inter- alpha-trypsin inhibitor family heavy chain-related protein (IHRP), alpha- 1-

B-glycoprotein, alpha- 1 -antitrypsin, apolipoprotein A-IV, ceruloplasmin, ~~unnamed protein product (NCBI Locus/ Accession No. CAA34971),~~ apolipoprotein E, complement factor B, prealbumin, apolipoprotein C-III, alpha2-HS glycoprotein, apolipoprotein J precursor, ~~Chain C,~~

~~Immunoglobulin M, immunoglobulin lambda light chain,~~ Coagulation factor II (thrombin), ~~Ig kappa chain V-III (KAU cold agglutinin), apolipoprotein J precursor, Ig Al Bur,~~ histidine-rich glycoprotein precursor, Alpha-2-HS- glycoprotein, gelsolin isoform a precursor, and inhibitor Kunitz type proteinase~~,~~ ~~unnamed protein product (NCBI Locus/ Accession No. CAA28659), and Ig J-chain~~;

d. determining a level of the capture polypeptide in the biological sample;

e. optionally repeating steps (a) through (d) using a different dose; and

f. comparing the levels to a predetermined suitable level of the RSPcomposition in the biological sample;

wherein the suitable dose is the dose that results in the predetermined suitable level of the RSP composition in the biological sample.

~~17.~~ 6. A method for treating or preventing an unwanted immune response in a subject, comprising:

a. administering to the subject a suitable dose of an RSP composition consisting of ~~comprising YEAK or~~ YFAK peptides, wherein such suitable dose is determined by:

(i) administering to the subject a dose of the RSP composition; (ii) removing a biological sample from the experimental subject; (iii) contacting the biological sample with at least one capture polypeptide selected from the group consisting of:

complement component C3, apolipoprotein A-I preproprotein, apolipoprotein A-II preproprotein (apolipoprotein D), complement component C4A, trypsin inhibitor, inter-alpha-trypsin inhibitor family heavy chain-related protein (IHRP), alpha- 1 -B-glycoprotein, alpha- 1- antitrypsin, apolipoprotein A-IV, ceruloplasmin, ~~unnamed protein product (NCBI Locus/ Accession No. CAA34971),~~ apolipoprotein E, complement factor B, prealbumin, apolipoprotein C-III, alpha2-HS glycoprotein, apolipoprotein J precursor, ~~Chain C,~~ ~~Immunoglobulin M, immunoglobulin~~

~~lambda light chain,~~ Coagulation factor II (thrombin), ~~Ig kappa chain V-III (KAU cold agglutinin), apolipoprotein J precursor, Ig Al Bur,~~ histidine-rich glycoprotein precursor, Alpha-2-HS-glycoprotein, gelsolin isoform a precursor, and inhibitor Kunitz type proteinase, ~~unnamed protein product (NCBI Locus/ Accession No. CAA28659), and Ig J-chain~~;

(iv) determining a level of the capture polypeptide in the biological sample;

(v) optionally repeating steps (i) through (iv) using a different dose; and

(vi) comparing the level(s) against a predetermined suitable level of the RSP composition in the biological sample;

wherein a suitable dose is the dose that results in the predetermined suitable level of the RSP composition in said biological sample~~.~~ ;

wherein a suitable level of the RSP composition is at a level of a functional read-out of immune response enhancement or sequestering, wherein an increase or detection of TNFα, IL-6, CXCL1, CXCL2 and IL-12p70 indicates an undesired immune stimulation, and an increase or detection of I1-1ra, CXCL13 and CCL22 indicates a desireable immune stimulation.

~~18.~~ 7. The method of ~~any of~~ claim~~s 13-17~~ 2, wherein the capture polypeptide is labeled.

~~19.~~ 8. The method of ~~any of~~ claim~~s 13-17~~ 2, wherein the capture polypeptide is affixed to a solid support.

~~20.~~ 9. The method of ~~any of~~ claim~~s 13-17~~ 2, further comprising isolating a complex comprising the capture polypeptide bound to the RSP composition.

~~21.~~ 10. The method of ~~any of~~ claim~~s 13-17~~ 2, further comprising detecting binding of the capture polypeptide to the RSP composition with antibodies to the capture polypeptide.

~~22.~~ 11. The method of ~~any of~~ claim~~s 13-17~~ 2, wherein the composition is administered subcutaneously.

~~23. A composition for detecting an RSP composition comprising YEAK or YFAK~~

~~peptides in a biological sample, comprising at least one capture polypeptide comprising a peptide selected from complement component C3, apolipoprotein A-1 preproprotein, apolipoprotein A-II preproprotein (apolipoprotein D), complement component C4A, trypsin inhibitor, inter-alpha-trypsin inhibitor family heavy chain-~~

related protein (IHRP), alpha- 1-B -glycoprotein, alpha- 1 -antitrypsin, apolipoprotein A-IV, ceruloplasmin, unnamed protein product (NCBI Locus/ Accession No. CAA34971), apolipoprotein E, complement factor B, prealbumin, apolipoprotein C- III, alpha2-HS glycoprotein, apolipoprotein J precursor, Chain C, Immunoglobulin M, immunoglobulin lambda light chain, Coagulation factor II (thrombin), Ig kappa chain V-III (KAU cold agglutinin), apolipoprotein J precursor, Ig Al Bur, histidine- rich glycoprotein precursor, Alpha-2-HS-glycoprotein, gelsolin isoform a precursor, inhibitor Kunitz type proteinase, unnamed protein product (NCBI Locus/ Accession No. CAA28659), and Ig J-chain.

24. A method for isolating peptides from a sample comprising an RSP composition comprising YFAK or YEAK peptides, comprising:

a. contacting the sample with at least one capture polypeptide comprising a peptide selected from complement component C3, apolipoprotein A-I preproprotein, apolipoprotein A-II preproprotein (apolipoprotein D), complement component C4A, trypsin inhibitor, inter-alpha-trypsin inhibitor family heavy chain-related protein (IHRP), alpha- 1-B -glycoprotein, alpha- 1- antitrypsin, apolipoprotein A-IV, ceruloplasmin, unnamed protein product (NCBI Locus/ Accession No. CAA34971), apolipoprotein E, complement factor B, prealbumin, apolipoprotein C-III, alpha2-HS glycoprotein, apolipoprotein J precursor, Chain C, Immunoglobulin M, immunoglobulin lambda light chain, Coagulation factor II (thrombin), Ig kappa chain V-III (KAU cold agglutinin), apolipoprotein J precursor, Ig Al Bur, histidine-rich glycoprotein precursor, Alpha-2-HS-glycoprotein, gelsolin isoform a precursor, inhibitor Kunitz type proteinase, unnamed protein product (NCBI Locus/ Accession No. CAA28659), and Ig J-chain; and

b. separating peptides that bind to the capture polypeptide from the mixture.

25. The method of claim 24, wherein the capture polypeptide is immobilized on solid support.

26. The method of claim 25, wherein the capture polypeptide is epitope-tagged.

27. The method of claim 24, further comprising separating bound peptides from the capture polypeptides.

28. The method of claim 24, further comprising determining characteristics of isolated peptides.

29. The method of claim 28, wherein determining characteristics comprises determining an amino acid sequence of a bound peptide or determining relative ratios of amino acids in bound peptides.

30. A method for identifying bioavailable peptides in an RSP composition comprising YFAK or YEAK peptides in a subject, comprising:

a. administering the RSP composition to the subject at a first time; and

b. at a second time after administration, removing a tissue sample from the patient; and

c. identifying peptides in the sample that bind to at least one capture polypeptide comprising a peptide selected from complement component C3, apolipoprotein A-I preproprotein, apolipoprotein A-II preproprotein (apolipoprotein D), complement component C4A, trypsin inhibitor, inter- alpha-trypsin inhibitor family heavy chain-related protein (IHRP), alpha- 1- B-glycoprotein, alpha- 1 -antitrypsin, apolipoprotein A-IV, ceruloplasmin, unnamed protein product (NCBI Locus/ Accession No. CAA34971), apolipoprotein E, complement factor B, prealbumin, apolipoprotein C-III, alpha2-HS glycoprotein, apolipoprotein J precursor, Chain C, Immunoglobulin M, immunoglobulin lambda light chain, Coagulation factor II (thrombin), Ig kappa chain V-III (KAU cold agglutinin), apolipoprotein J precursor, Ig Al Bur, histidine-rich glycoprotein precursor, Alpha-2-HS- glycoprotein, gelsolin isoform a precursor, inhibitor Kunitz type proteinase, unnamed protein product (NCBI Locus/ Accession No. CAA28659), and Ig J-chain.

31. A method for producing an RSP composition comprising YFAK or YEAK peptides having reduced toxicity, comprising:

a. contacting the RSP composition with at least one capture polypeptide comprising a peptide selected from complement component C3, apolipoprotein A-I preproprotein, apolipoprotein A-II preproprotein (apolipoprotein D), complement component C4A, trypsin inhibitor, inter- alpha-trypsin inhibitor family heavy chain-related protein (IHRP), alpha- 1- B-glycoprotein, alpha- 1 - antitrypsin, apolipoprotein A-IV, ceruloplasmin, unnamed protein product (NCBI Locus/ Accession No. CAA34971), apolipoprotein E, complement factor B, prealbumin, apolipoprotein C-III, alpha2-HS glycoprotein, apolipoprotein J precursor, Chain C, Immunoglobulin M, immunoglobulin lambda light chain, Coagulation factor II (thrombin), Ig kappa chain V-III (KAU cold agglutinin), apolipoprotein J precursor, Ig Al Bur, histidine-rich glycoprotein precursor, Alpha-2-HS- glycoprotein, gelsolin isoform a precursor, inhibitor Kunitz type proteinase, unnamed protein product (NCBI Locus/ Accession No. CAA28659), and Ig J-chain; and

b. separating peptides that bind to the capture polypeptide from the mixture;

c. determining characteristics of the separated peptides; and

d. preparing a set of peptides with the characteristics of the separated peptides.

32. A method for producing an RSP composition comprising YFAK or YEAK peptides having enhanced potency, comprising:

a. contacting the RSP composition with at least one capture polypeptide comprising a peptide selected from complement component C3, apolipoprotein A-I preproprotein, apolipoprotein A-II preproprotein (apolipoprotein D), complement component C4A, trypsin inhibitor, inter- alpha-trypsin inhibitor family heavy chain-related protein (IHRP), alpha- 1- B-glycoprotein, alpha- 1 - antitrypsin, apolipoprotein A-IV, ceruloplasmin, unnamed protein product (NCBI Locus/ Accession No. CAA34971), apolipoprotein E, complement factor B,

~~prealbumin, apolipoprotein C-III, alpha2-HS glycoprotein, apolipoprotein J precursor, Chain C,~~

~~Immunoglobulin M, immunoglobulin lambda light chain, Coagulation factor II (thrombin), Ig kappa chain V-III (KAU cold agglutinin), apolipoprotein J precursor, Ig Al Bur, histidine-rich glycoprotein precursor, Alpha-2-HS-~~

glycoprotein, gelsolin isoform a precursor, inhibitor Kunitz type proteinase, unnamed protein product (NCBI Locus/ Accession No. CAA28659), and Ig J-chain; and

b. separating peptides that bind to the capture polypeptide from the mixture;

c. determining characteristics of the separated peptides; and

d. preparing a set of peptides with the characteristics of the separated peptides.

33. A method for treating or preventing an unwanted immune response in a subject, comprising:

a. providing an RSP composition comprising YFAK or YEAK peptides;

b. administering the RSP composition to a test subject;

c. removing a biological sample from the test subject;

d. contacting the biological sample with at least one capture polypeptide comprising a peptide sequence selected from complement component C3, apolipoprotein A-I preproprotein, apolipoprotein A-II preproprotein (apolipoprotein D), complement component C4A, trypsin inhibitor, inter-alpha-trypsin inhibitor family heavy chain-related protein (IHRP), alpha- 1-B-glycoprotein, alpha- 1 -antitrypsin, apolipoprotein A-IV, ceruloplasmin, unnamed protein product (NCBI Locus/ Accession No. CAA34971), apolipoprotein E, complement factor B, prealbumin, apolipoprotein C-III, alpha2-HS glycoprotein, apolipoprotein J precursor, Chain C, Immunoglobulin M, immunoglobulin lambda light chain, Coagulation factor II (thrombin), Ig kappa chain V-III (KAU cold agglutinin), apolipoprotein J precursor, Ig Al Bur, histidine-rich glycoprotein precursor, Alpha-2-HS-glycoprotein, gelsolin isoform a precursor, inhibitor Kunitz type proteinase, unnamed protein product (NCBI Locus/ Accession No. CAA28659), and Ig J-chain;

e. separating peptides that bind to the capture polypeptide from the mixture; f. determining characteristics of the separated peptides;

g. preparing a set of peptides with the characteristics of the separated peptides, and

h. administering the new set of peptides to a subject.

34. The method of claim 30 or 33, wherein the peptides are administered to the subject more than once.

35. The method of claim 34, wherein the peptides are administered to the subject at intervals of 1, 2, 3, 4, 6, 12, 18, 24, 36, 48, or 72 hours.

36. A method for comparing different preparations of RSP composition comprising YFAK or YEAK peptides having, comprising:

a. contacting a first RSP composition with at least one capture polypeptide contained in normal human sera, normal non-human primate sera, normal rabbit sera, normal mouse sera, normal rat sera, normal ferret sera, normal pig sera, normal dog sera, normal horse sera, normal sheep sera, normal cow sera; and

b. contacting a second RSP composition with at least one capture polypeptide comprising a peptide selected from: normal human sera, normal non-human primate sera, normal rabbit sera, normal mouse sera, normal rat sera, normal ferret sera, normal pig sera, normal dog sera, normal horse sera, normal sheep sera, normal cow sera; and

c. repeating step (b) as necessary; and

d. separating peptides that bind to the capture polypeptide from the mixtures from steps (a-c);

e. determining characteristics of the separated peptides from step (d); and f. comparing said separated set of peptides with the characteristics of the separated peptides from step (d).

37. A method for preparing a therapeutic agent to a target tissue in a subject, comprising:

a. providing an RSP composition comprising YFAK or YEAK peptides; and b. coupling a therapeutic agent to the RSP composition to form a conjugate.

38. A method for delivering a therapeutic agent to a specific tissue in a subject, comprising:

a. isolating a peptide tag by:

(i) contacting an RSP composition comprising YFAK or YEAK peptides with a tissue-specific peptide comprising a peptide selected from complement component C3, apolipoprotem A-I preproprotein, apolipoprotem A-II preproprotein (apolipoprotem D), complement component C4A, trypsin inhibitor, inter-alpha-trypsin inhibitor family heavy chain-related protein (IHRP), alpha- 1-B-glycoprotein, alpha- 1 -antitrypsin, apolipoprotem A-IV, ceruloplasmin, unnamed protein product (NCBI Locus/Accession No. CAA34971), apolipoprotem E, complement factor B, prealbumin, apolipoprotem C-III, alpha2-HS glycoprotein, apolipoprotem J precursor, Chain C, Immunoglobulin M, immunoglobulin lambda light chain, Coagulation factor II (thrombin), Ig kappa chain V-III (KAU cold agglutinin), apolipoprotem J precursor, Ig Al Bur, histidine-rich glycoprotein precursor, Alpha-2-HS-glycoprotein, gelsolin isoform a precursor, inhibitor Kunitz type proteinase, unnamed protein product (NCBI Locus/Accession No. CAA28659), and Ig J-chain; and

(ii) separating peptides that bind to the tissue-specific peptide from the mixture;

b. coupling the peptide tag to a therapeutic agent; and

c. administering the conjugate to a subject.

39. A conjugate comprising a therapeutic agent coupled to a peptide tag, wherein the peptide tag comprises a YEAK or YFAK peptide.

40. The conjugate of claim 39, wherein the peptide is isolated from the RSP composition on the basis of binding affinity to complement component C3, apolipoprotem A-I preproprotein, apolipoprotem A-II preproprotein (apolipoprotem D), complement component C4A, trypsin inhibitor, inter-alpha- trypsin inhibitor family heavy chain-related protein (IHRP), alpha- 1-B- glycoprotein, alpha- 1 -antitrypsin, apolipoprotem A-IV, ceruloplasmin, unnamed protein product (NCBI Locus/ Accession No. CAA34971), apolipoprotem E, complement factor B, prealbumin, apolipoprotem C-III, alpha2-HS glycoprotein, apolipoprotem J precursor, Chain C, Immunoglobulin M, immunoglobulin lambda

light chain, Coagulation factor II (thrombin), Ig kappa chain V-III (KAU cold agglutinin), apolipoprotein J precursor, Ig Al Bur, histidine-rich glycoprotein precursor, Alpha-2-HS-glycoprotein, gelsolin isoform a precursor, inhibitor Kunitz type proteinase, unnamed protein product (NCBI Locus/ Accession No. CAA28659), and Ig J-chain.

41. The method of claim 37 or 38 or the conjugate of claim 39, wherein the therapeutic agent is a small organic molecule or a biological macromolecule.

42. The method of claims 37 or 38 or the conjugate of claim 39, wherein the tissue is brain, lung, or liver tissue.

43. The method of claims 37 or 38 or the conjugate of claim 39, wherein the peptide tag comprises a YEAK or YFAK peptide.

44. The method of claims 37 or 38 or the conjugate of claim 39, wherein the peptide tag is coupled to the therapeutic agent by a covalent bond, inclusion complexes, ionic bonds, or hydrogen bonds.