CLAIMS

1. An *in vitro* method of detecting or predicting sepsis in a subject, the method comprising:

measuring the level of at least one biomarker in a first sample isolated from the subject; and

comparing the level measured to a reference level of a corresponding biomarker,

wherein the at least one biomarker is selected from a group consisting of: (a) a polynucleotide comprising a nucleotide sequence set forth in any one of ~~SEQ ID NO: 1, SEQ ID NO: 2,~~ SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, ~~SEQ ID NO: 10, SEQ ID NO: 11,~~ SEQ ID NO: 12, ~~SEQ ID NO: 13, SEQ ID NO: 14,~~ SEQ ID NO: 15, ~~SEQ ID NO: 16,~~ SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, ~~SEQ ID NO: 20, SEQ ID NO: 21, SEQ ID NO: 22, SEQ ID NO: 23, SEQ ID NO: 24, SEQ ID NO: 25, SEQ ID NO: 26, SEQ ID NO: 27, SEQ ID NO: 28, SEQ ID NO: 29, SEQ ID NO: 30, SEQ ID NO: 31, SEQ ID NO: 32, SEQ ID NO: 33,~~ SEQ ID NO: 34, ~~SEQ ID NO: 35,~~ SEQ ID NO: 36, SEQ ID NO: 37, ~~SEQ ID NO: 38, SEQ ID NO: 39,~~ SEQ ID NO: 40, or a fragment, homologue, variant or derivative thereof; (b) a polynucleotide comprising a nucleotide sequence set forth in any one of the sequences of (a), that encodes a polypeptide comprising the corresponding amino acid sequence; and (c) a polynucleotide comprising a nucleotide sequence capable of hybridising selectively to any one of the sequences of (a), (b), or a complement thereof,

wherein a difference between the level measured in the first sample and the reference level is indicative of sepsis being present in the first sample.

2. The method of claim 1, wherein the at least one biomarker comprises two or more biomarkers wherein the second or subsequent biomarker is not the same

as the first biomarker and is selected from a group consisting of: (a) a polynucleotide comprising a nucleotide sequence set forth in any one of SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, SEQ ID NO: 10, SEQ ID NO: 11, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 14, SEQ ID NO: 15, SEQ ID NO: 16, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, SEQ ID NO: 20, SEQ ID NO: 21, SEQ ID NO: 22, SEQ ID NO: 23, SEQ ID NO: 24, SEQ ID NO: 25, SEQ ID NO: 26, SEQ ID NO: 27, SEQ ID NO: 28, SEQ ID NO: 29, SEQ ID NO: 30, SEQ ID NO: 31, SEQ ID NO: 32, SEQ ID NO: 33, SEQ ID NO: 34, SEQ ID NO: 35, SEQ ID NO: 36, SEQ ID NO: 37, SEQ ID NO: 38, SEQ ID NO: 39, SEQ ID NO: 40, or a fragment, homologue, variant or derivative thereof; (b) a polynucleotide comprising a nucleotide sequence set forth in any one of the sequences of (a), that encodes a polypeptide comprising the corresponding amino acid sequence; and (c) a polynucleotide comprising a nucleotide sequence capable of hybridising selectively to any one of the sequences of (a), (b), or a complement thereof.

~~2~~ 3. The method of claim 1 or 2, wherein the presence of sepsis is determined by detecting in the subject an increase in the level of the at least one biomarker measured in the first sample, the at least one biomarker selected from a group consisting of: (a) a polynucleotide comprising a nucleotide sequence set forth in any one of ~~SEQ ID NO: 1, SEQ ID NO: 2,~~ SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, ~~SEQ ID NO: 10, SEQ ID NO: 11,~~ SEQ ID NO: 12, ~~SEQ ID NO: 13, SEQ ID NO: 14,~~ SEQ ID NO: 15, ~~SEQ ID NO: 16,~~ SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, ~~SEQ ID NO: 20, SEQ ID NO: 21, SEQ ID NO: 22, SEQ ID NO: 23, SEQ ID NO: 24, SEQ ID NO: 25, SEQ ID NO: 26, SEQ ID NO: 27, SEQ ID NO: 28, SEQ ID NO: 29, SEQ ID NO: 30,~~ or a fragment, homologue, variant or derivative thereof; (b) a polynucleotide comprising a nucleotide sequence set forth in any one of the sequences of (a), that encodes a polypeptide comprising the corresponding amino acid sequence; and (c) a polynucleotide comprising a nucleotide sequence capable of hybridising selectively to any one of the sequences of (a), (b), or a

complement thereof, as compared to the reference level of the corresponding biomarker.

4. The method of claim 2, wherein the second biomarker is selected from a group consisting of: (a) a polynucleotide comprising a nucleotide sequence set forth in any one of SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, SEQ ID NO: 10, SEQ ID NO: 11, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 14, SEQ ID NO: 15, SEQ ID NO: 16, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, SEQ ID NO: 20, SEQ ID NO: 21, SEQ ID NO: 22, SEQ ID NO: 23, SEQ ID NO: 24, SEQ ID NO: 25, SEQ ID NO: 26, SEQ ID NO: 27, SEQ ID NO: 28, SEQ ID NO: 29, SEQ ID NO: 30, or a fragment, homologue, variant or derivative thereof; (b) a polynucleotide comprising a nucleotide sequence set forth in any one of the sequences of (a), that encodes a polypeptide comprising the corresponding amino acid sequence; and (c) a polynucleotide comprising a nucleotide sequence capable of hybridising selectively to any one of the sequences of (a), (b), or a complement thereof, as compared to the reference level of the corresponding biomarker.

~~3~~ 5. The method of claim 1 or 2, wherein the presence of sepsis is determined by detecting in the subject a decrease in the level of the at least one biomarker measured in the first sample, the at least one biomarker selected from a group consisting of: (a) a polynucleotide comprising a nucleotide sequence set forth in any one of ~~SEQ ID NO: 31, SEQ ID NO: 32, SEQ ID NO: 33,~~ SEQ ID NO: 34, ~~SEQ ID NO: 35,~~ SEQ ID NO: 36, SEQ ID NO: 37, ~~SEQ ID NO: 38, SEQ ID NO: 39,~~ SEQ ID NO: 40, or a fragment, homologue, variant or derivative thereof; (b) a polynucleotide comprising a nucleotide sequence set forth in any one of the sequences of (a), that encodes a polypeptide comprising the corresponding amino acid sequence; and (c) a polynucleotide comprising a nucleotide sequence capable of hybridising selectively to any one of the sequences of (a), (b), or a complement thereof, as compared to the reference level of the corresponding biomarker.

6. The method of claim 2, wherein the second biomarker is selected from a group consisting of: (a) a polynucleotide comprising a nucleotide sequence set forth in any one of SEQ ID NO: 31, SEQ ID NO: 32, SEQ ID NO: 33, SEQ ID NO: 34, SEQ ID NO: 35, SEQ ID NO: 36, SEQ ID NO: 37, SEQ ID NO: 38, SEQ ID NO: 39, SEQ ID NO: 40, or a fragment, homologue, variant or derivative thereof; (b) a polynucleotide comprising a nucleotide sequence set forth in any one of the sequences of (a), that encodes a polypeptide comprising the corresponding amino acid sequence; and (c) a polynucleotide comprising a nucleotide sequence capable of hybridising selectively to any one of the sequences of (a), (b), or a complement thereof, as compared to the reference level of the corresponding biomarker.

~~4~~ 7. The method of any one of the preceding claim, wherein the reference level is the level of the corresponding biomarker in a second sample isolated from at least one subject with no sepsis.

~~5~~ 8. The method of any one of the preceding claims, wherein the comparing step comprises applying a decision rule to determine or predict the presence or absence of sepsis in the subject.

~~6~~ 9. An *in vitro* method of detecting or predicting whether a subject has one of a plurality of conditions selected from a group consisting of: control, infection, non-infected systemic inflammatory response syndrome (SIRS), mild sepsis, severe sepsis, septic shock and cryptic shock, the method comprising:

measuring the level of at least one biomarker in a first sample isolated from the subject; and

comparing the level measured to a reference level of a corresponding biomarker,

wherein the at least one biomarker is selected from a group consisting of: (a) a polynucleotide comprising a nucleotide sequence set forth in any one of ~~SEQ ID NO: 1, SEQ ID NO: 2,~~ SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, ~~SEQ ID NO: 10, SEQ ID NO: 11,~~ SEQ ID

NO: 12, ~~SEQ ID NO: 13, SEQ ID NO: 14,~~ SEQ ID NO: 15, ~~SEQ ID NO: 16,~~ SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, ~~SEQ ID NO: 20, SEQ ID NO: 21, SEQ ID NO: 22, SEQ ID NO: 23, SEQ ID NO: 24, SEQ ID NO: 25, SEQ ID NO: 26, SEQ ID NO: 27, SEQ ID NO: 28, SEQ ID NO: 29, SEQ ID NO: 30, SEQ ID NO: 31, SEQ ID NO: 32, SEQ ID NO: 33,~~ SEQ ID NO: 34, ~~SEQ ID NO: 35,~~ SEQ ID NO: 36, SEQ ID NO: 37, ~~SEQ ID NO: 38, SEQ ID NO: 39,~~ SEQ ID NO: 40, or a fragment, homologue, variant or derivative thereof; (b) a polynucleotide comprising a nucleotide sequence set forth in any one of the sequences of (a), that encodes a polypeptide comprising the corresponding amino acid sequence; and (c) a polynucleotide comprising a nucleotide sequence capable of hybridising selectively to any one of the sequences of (a), (b), or a complement thereof,

wherein the level measured in the first sample is statistically substantially similar to the reference level is indicative of whether the subject has one of the conditions.

10. The method of claim 9, wherein the at least one biomarker comprises two or more biomarkers wherein the second or subsequent biomarker is not the same as the first biomarker and is selected from a group consisting of: (a) a polynucleotide comprising a nucleotide sequence set forth in any one of SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, SEQ ID NO: 10, SEQ ID NO: 11, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 14, SEQ ID NO: 15, SEQ ID NO: 16, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, SEQ ID NO: 20, SEQ ID NO: 21, SEQ ID NO: 22, SEQ ID NO: 23, SEQ ID NO: 24, SEQ ID NO: 25, SEQ ID NO: 26, SEQ ID NO: 27, SEQ ID NO: 28, SEQ ID NO: 29, SEQ ID NO: 30, SEQ ID NO: 31, SEQ ID NO: 32, SEQ ID NO: 33, SEQ ID NO: 34, SEQ ID NO: 35, SEQ ID NO: 36, SEQ ID NO: 37, SEQ ID NO: 38, SEQ ID NO: 39, SEQ ID NO: 40, or a fragment, homologue, variant or derivative thereof; (b) a polynucleotide comprising a nucleotide sequence set forth in any one of the sequences of (a), that encodes a polypeptide comprising the corresponding amino acid sequence; and (c) a polynucleotide comprising a nucleotide sequence

capable of hybridising selectively to any one of the sequences of (a), (b), or a complement thereof.

~~7~~ 11. The method of claim ~~6~~9 or 10, wherein the reference level is the level of a corresponding biomarker in a second sample isolated from at least one subject selected from a group consisting of: a control subject, an infection positive subject, a non-infected SIRS positive subject, a mild sepsis positive subject, a severe sepsis positive subject and a cryptic shock positive subject.

~~8~~ 12. The method of any one of claims 9-11~~6 or claim 7~~, wherein the comparing step comprises applying a decision rule to determine or predict whether the subject has one of the conditions.

~~9~~ 13. A kit for performing the method of any one of claims 1 to ~~5~~8, the kit comprising:

at least one reagent capable of specifically binding to the at least one biomarker to quantify the level of the biomarker in the first sample of a subject; and

a reference standard indicating the reference level of the corresponding biomarker.

~~10~~ 14. The kit of claim ~~9~~13, wherein the at least one reagent comprises at least one antibody capable of specifically binding to the at least one biomarker.

~~11~~ 15. The kit of claim ~~9~~ 13 or ~~10~~14, further comprising at least one additional reagent capable of specifically binding at least one additional biomarker in the first sample, and a reference standard indicating a reference level of a corresponding at least one additional biomarker.

~~12~~ 16. A kit for performing the method of any one of claims ~~6~~ 9 to ~~8~~12, the kit comprising:

at least one reagent capable of specifically binding to the at least one biomarker to quantify the level of the biomarker in the first sample of a subject; and

a reference standard indicating the reference level of the corresponding biomarker.

~~13~~ 17. The kit of claim ~~12~~16, wherein the at least one reagent comprises at least one antibody capable of specifically binding to the at least one biomarker.

~~14~~ 18. The kit of claim ~~12~~ 16 or ~~13~~17, further comprising at least one additional reagent capable of specifically binding at least one additional biomarker in the first sample, and a reference standard indicating a reference level of a corresponding at least one additional biomarker.

~~15~~ 19. A kit for detecting or predicting sepsis in a subject, comprising an antibody capable of binding selectively to at least one biomarker in a first sample isolated from the subject and reagents for detection of a complex formed between the antibody and complement component of the at least one biomarker, wherein the at least one biomarker is selected from a group consisting of: (a) a polynucleotide comprising a nucleotide sequence set forth in any one of ~~SEQ ID NO: 1, SEQ ID NO: 2,~~ SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, ~~SEQ ID NO: 10, SEQ ID NO: 11,~~ SEQ ID NO: 12, ~~SEQ ID NO: 13, SEQ ID NO: 14,~~ SEQ ID NO: 15, ~~SEQ ID NO: 16,~~ SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, ~~SEQ ID NO: 20, SEQ ID NO: 21, SEQ ID NO: 22, SEQ ID NO: 23, SEQ ID NO: 24, SEQ ID NO: 25, SEQ ID NO: 26, SEQ ID NO: 27, SEQ ID NO: 28, SEQ ID NO: 29, SEQ ID NO: 30, SEQ ID NO: 31, SEQ ID NO: 32, SEQ ID NO: 33,~~ SEQ ID NO: 34, ~~SEQ ID NO: 35,~~ SEQ ID NO: 36, SEQ ID NO: 37, ~~SEQ ID NO: 38, SEQ ID NO: 39,~~ SEQ ID NO: 40, or a fragment, homologue, variant or derivative thereof; (b) a polynucleotide comprising a nucleotide sequence set forth in any one of the sequences of (a), that encodes a polypeptide comprising the corresponding amino acid sequence; and (c) a polynucleotide comprising a nucleotide sequence capable of hybridising selectively to any one of the sequences of (a), (b), or a complement thereof, and a

reference standard indicating a reference level of a corresponding biomarker, wherein a difference between a level of the at least one biomarker measured in the first sample and the reference level is indicative of sepsis being present in the first sample.

20. The kit of claim 19, wherein the at least one biomarker comprises two or more biomarkers wherein the second or subsequent biomarker is not the same as the first biomarker and is selected from a group consisting of: (a) a polynucleotide comprising a nucleotide sequence set forth in any one of SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, SEQ ID NO: 10, SEQ ID NO: 11, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 14, SEQ ID NO: 15, SEQ ID NO: 16, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, SEQ ID NO: 20, SEQ ID NO: 21, SEQ ID NO: 22, SEQ ID NO: 23, SEQ ID NO: 24, SEQ ID NO: 25, SEQ ID NO: 26, SEQ ID NO: 27, SEQ ID NO: 28, SEQ ID NO: 29, SEQ ID NO: 30, SEQ ID NO: 31, SEQ ID NO: 32, SEQ ID NO: 33, SEQ ID NO: 34, SEQ ID NO: 35, SEQ ID NO: 36, SEQ ID NO: 37, SEQ ID NO: 38, SEQ ID NO: 39, SEQ ID NO: 40, or a fragment, homologue, variant or derivative thereof; (b) a polynucleotide comprising a nucleotide sequence set forth in any one of the sequences of (a), that encodes a polypeptide comprising the corresponding amino acid sequence; and (c) a polynucleotide comprising a nucleotide sequence capable of hybridising selectively to any one of the sequences of (a), (b), or a complement thereof.

~~16~~ 21. The kit of claim ~~15~~20, wherein the reference level is the level of the corresponding biomarker in a second sample isolated from at least one subject with no sepsis.

~~17~~ 22. A kit for detecting or predicting whether a subject has one of a plurality of conditions selected from a group consisting of: control, infection, non-infected systemic inflammatory response syndrome (SIRS), mild sepsis, severe sepsis, septic shock and cryptic shock, comprising an antibody ~~comprising~~ capable of binding selectively to at least one biomarker in a first sample isolated from the subject and reagents for detection of a complex formed between the antibody and

complement component of the at least one biomarker, wherein the at least one biomarker is selected from a group consisting of: (a) a polynucleotide comprising a nucleotide sequence set forth in any one of ~~SEQ ID NO: 1, SEQ ID NO: 2,~~ SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, ~~SEQ ID NO: 10, SEQ ID NO: 11,~~ SEQ ID NO: 12, ~~SEQ ID NO: 13, SEQ ID NO: 14,~~ SEQ ID NO: 15, ~~SEQ ID NO: 16,~~ SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, ~~SEQ ID NO: 20, SEQ ID NO: 21, SEQ ID NO: 22, SEQ ID NO: 23, SEQ ID NO: 24, SEQ ID NO: 25, SEQ ID NO: 26, SEQ ID NO: 27, SEQ ID NO: 28, SEQ ID NO: 29, SEQ ID NO: 30, SEQ ID NO: 31, SEQ ID NO: 32, SEQ ID NO: 33,~~ SEQ ID NO: 34, ~~SEQ ID NO: 35,~~ SEQ ID NO: 36, SEQ ID NO: 37, ~~SEQ ID NO: 38, SEQ ID NO: 39,~~ SEQ ID NO: 40, or a fragment, homologue, variant or derivative thereof; (b) a polynucleotide comprising a nucleotide sequence set forth in any one of the sequences of (a), that encodes a polypeptide comprising the corresponding amino acid sequence; and (c) a polynucleotide comprising a nucleotide sequence capable of hybridising selectively to any one of the sequences of (a), (b), or a complement thereof, and a reference standard indicating a reference level of a corresponding biomarker, wherein a level of the at least one biomarker measured in the first sample is statistically substantially similar to the reference level is indicative of whether the subject has one of the conditions.

23. The kit of claim 22, wherein the at least one biomarker comprises two or more biomarkers wherein the second or subsequent biomarker is not the same as the first biomarker and is selected from a group consisting of: (a) a polynucleotide comprising a nucleotide sequence set forth in any one of SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, SEQ ID NO: 10, SEQ ID NO: 11, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 14, SEQ ID NO: 15, SEQ ID NO: 16, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, SEQ ID NO: 20, SEQ ID NO: 21, SEQ ID NO: 22, SEQ ID NO: 23, SEQ ID NO: 24, SEQ ID NO: 25, SEQ ID NO: 26, SEQ ID NO: 27, SEQ ID NO: 28, SEQ ID NO: 29, SEQ ID NO: 30, SEQ ID NO: 31, SEQ ID NO: 32, SEQ ID NO: 33, SEQ ID NO: 34, SEQ ID NO: 35, SEQ ID NO: 36, SEQ ID NO: 37, SEQ ID NO: 38, SEQ ID NO: 39, SEQ ID NO: 40, or a

fragment, homologue, variant or derivative thereof; (b) a polynucleotide comprising a nucleotide sequence set forth in any one of the sequences of (a), that encodes a polypeptide comprising the corresponding amino acid sequence; and (c) a polynucleotide comprising a nucleotide sequence capable of hybridising selectively to any one of the sequences of (a), (b), or a complement thereof.

~~18~~ 24. The kit of claim ~~17~~22 or 23, wherein the reference level is the level of a corresponding biomarker in a second sample isolated from at least one subject selected from a group consisting of: a control subject, an infection positive subject, a non-infected SIRS positive subject, a mild sepsis positive subject, a severe sepsis positive subject and a cryptic shock positive subject.

~~19~~ 25. An *in vitro* method of detecting or predicting sepsis in a subject, the method comprising:

measuring the level of at least one biomarker in a first sample isolated from the subject; and

comparing the level measured to a reference level of a corresponding biomarker,

wherein the at least one biomarker is selected from a group consisting of: (a) a polynucleotide comprising a nucleotide sequence set forth in any one or more, and in any combination, of ~~SEQ ID NO: 1, SEQ ID NO: 2,~~ SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, ~~SEQ ID NO: 10, SEQ ID NO: 11,~~ SEQ ID NO: 12, ~~SEQ ID NO: 13, SEQ ID NO: 14,~~ SEQ ID NO: 15, ~~SEQ ID NO: 16,~~ SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, ~~SEQ ID NO: 20, SEQ ID NO: 21, SEQ ID NO: 22, SEQ ID NO: 23, SEQ ID NO: 24, SEQ ID NO: 25, SEQ ID NO: 26, SEQ ID NO: 27, SEQ ID NO: 28, SEQ ID NO: 29, SEQ ID NO: 30, SEQ ID NO: 31, SEQ ID NO: 32, SEQ ID NO: 33,~~ SEQ ID NO: 34, ~~SEQ ID NO: 35,~~ SEQ ID NO: 36, SEQ ID NO: 37, ~~SEQ ID NO: 38, SEQ ID NO: 39,~~ SEQ ID NO: 40, or a fragment, homologue, variant or derivative thereof; (b) a polynucleotide comprising a nucleotide sequence set forth in any one or more, and

in any combination, of the sequences of (a), that encodes a polypeptide comprising the corresponding amino acid sequence; and (c) a polynucleotide comprising a nucleotide sequence capable of hybridising selectively to any one or more of the sequences of (a), (b), or a complement thereof,

wherein a difference between the level measured in the first sample and the reference level is indicative of sepsis being present in the first sample.

26. The method of claim 25, wherein the at least one biomarker comprises two or more biomarkers wherein the second or subsequent biomarker is not the same as the first biomarker and is selected from a group consisting of: (a) a polynucleotide comprising a nucleotide sequence set forth in any one of SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, SEQ ID NO: 10, SEQ ID NO: 11, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 14, SEQ ID NO: 15, SEQ ID NO: 16, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, SEQ ID NO: 20, SEQ ID NO: 21, SEQ ID NO: 22, SEQ ID NO: 23, SEQ ID NO: 24, SEQ ID NO: 25, SEQ ID NO: 26, SEQ ID NO: 27, SEQ ID NO: 28, SEQ ID NO: 29, SEQ ID NO: 30, SEQ ID NO: 31, SEQ ID NO: 32, SEQ ID NO: 33, SEQ ID NO: 34, SEQ ID NO: 35, SEQ ID NO: 36, SEQ ID NO: 37, SEQ ID NO: 38, SEQ ID NO: 39, SEQ ID NO: 40, or a fragment, homologue, variant or derivative thereof; (b) a polynucleotide comprising a nucleotide sequence set forth in any one of the sequences of (a), that encodes a polypeptide comprising the corresponding amino acid sequence; and (c) a polynucleotide comprising a nucleotide sequence capable of hybridising selectively to any one of the sequences of (a), (b), or a complement thereof.

~~20~~ 27. An *in vitro* method of detecting or predicting whether a subject has one of a plurality of conditions selected from a group consisting of: control, infection, non-infected systemic inflammatory response syndrome (SIRS), mild sepsis, severe sepsis, septic shock and cryptic shock, the method comprising:

measuring the level of at least one biomarker in a first sample isolated from the subject; and

comparing the level measured to a reference level of a corresponding biomarker,

wherein the at least one biomarker is selected from a group consisting of: (a) a polynucleotide comprising a nucleotide sequence set forth in any one or more, and in any combination, of ~~SEQ ID NO: 1, SEQ ID NO: 2,~~ SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, ~~SEQ ID NO: 10, SEQ ID NO: 11,~~ SEQ ID NO: 12, ~~SEQ ID NO: 13, SEQ ID NO: 14,~~ SEQ ID NO: 15, ~~SEQ ID NO: 16,~~ SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, ~~SEQ ID NO: 20, SEQ ID NO: 21, SEQ ID NO: 22, SEQ ID NO: 23, SEQ ID NO: 24, SEQ ID NO: 25, SEQ ID NO: 26, SEQ ID NO: 27, SEQ ID NO: 28, SEQ ID NO: 29, SEQ ID NO: 30, SEQ ID NO: 31, SEQ ID NO: 32, SEQ ID NO: 33,~~ SEQ ID NO: 34, ~~SEQ ID NO: 35,~~ SEQ ID NO: 36, SEQ ID NO: 37, ~~SEQ ID NO: 38, SEQ ID NO: 39,~~ SEQ ID NO: 40, or a fragment, homologue, variant or derivative thereof; (b) a polynucleotide comprising a nucleotide sequence set forth in any one or more, and in any combination, of the sequences of (a), that encodes a polypeptide comprising the corresponding amino acid sequence; and (c) a polynucleotide comprising a nucleotide sequence capable of hybridising selectively to any one or more of the sequences of (a), (b), or a complement thereof,

wherein the level measured in the first sample is statistically substantially similar to the reference level is indicative of whether the subject has one of the conditions.

28. The method of claim 27, wherein the at least one biomarker comprises two or more biomarkers wherein the second or subsequent biomarker is not the same as the first biomarker and is selected from a group consisting of: (a) a polynucleotide comprising a nucleotide sequence set forth in any one of SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO:

6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, SEQ ID NO: 10, SEQ ID NO: 11, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 14, SEQ ID NO: 15, SEQ ID NO: 16, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, SEQ ID NO: 20, SEQ ID NO: 21, SEQ ID NO: 22, SEQ ID NO: 23, SEQ ID NO: 24, SEQ ID NO: 25, SEQ ID NO: 26, SEQ ID NO: 27, SEQ ID NO: 28, SEQ ID NO: 29, SEQ ID NO: 30, SEQ ID NO: 31, SEQ ID NO: 32, SEQ ID NO: 33, SEQ ID NO: 34, SEQ ID NO: 35, SEQ ID NO: 36, SEQ ID NO: 37, SEQ ID NO: 38, SEQ ID NO: 39, SEQ ID NO: 40, or a fragment, homologue, variant or derivative thereof; (b) a polynucleotide comprising a nucleotide sequence set forth in any one of the sequences of (a), that encodes a polypeptide comprising the corresponding amino acid sequence; and (c) a polynucleotide comprising a nucleotide sequence capable of hybridising selectively to any one of the sequences of (a), (b), or a complement thereof.

CLAIMS

1. An *in vitro* method of detecting or predicting sepsis in a subject, the method comprising:

    i. measuring the level of at least one biomarker in a first sample isolated from the subject; and

    ii. comparing the level measured to a reference level of a corresponding biomarker,

    wherein the at least one biomarker is selected from a group consisting of: (a) a polynucleotide comprising a nucleotide sequence set forth in any one of SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, SEQ ID NO: 12, SEQ ID NO: 15, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, SEQ ID NO: 34, SEQ ID NO: 36, SEQ ID NO: 37, SEQ ID NO: 40, or a fragment, homologue, variant or derivative thereof; (b) a polynucleotide comprising a nucleotide sequence set forth in any one of the sequences of (a), that encodes a polypeptide comprising the corresponding amino acid sequence; and (c) a polynucleotide comprising a nucleotide sequence capable of hybridising selectively to any one of the sequences of (a), (b), or a complement thereof,

    wherein a difference between the level measured in the first sample and the reference level is indicative of sepsis being present in the first sample.

2. The method of claim 1, wherein the at least one biomarker comprises two or more biomarkers wherein the second or subsequent biomarker is not the same as the first biomarker and is selected from a group consisting of: (a) a polynucleotide comprising a nucleotide sequence set forth in any one of SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, SEQ ID NO: 10, SEQ ID NO: 11, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 14, SEQ ID NO: 15, SEQ ID NO: 16, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID

NO: 19, SEQ ID NO: 20, SEQ ID NO: 21, SEQ ID NO: 22, SEQ ID NO: 23, SEQ ID NO: 24, SEQ ID NO: 25, SEQ ID NO: 26, SEQ ID NO: 27, SEQ ID NO: 28, SEQ ID NO: 29, SEQ ID NO: 30, SEQ ID NO: 31, SEQ ID NO: 32, SEQ ID NO: 33, SEQ ID NO: 34, SEQ ID NO: 35, SEQ ID NO: 36, SEQ ID NO: 37, SEQ ID NO: 38, SEQ ID NO: 39, SEQ ID NO: 40, or a fragment, homologue, variant or derivative thereof; (b) a polynucleotide comprising a nucleotide sequence set forth in any one of the sequences of (a), that encodes a polypeptide comprising the corresponding amino acid sequence; and (c) a polynucleotide comprising a nucleotide sequence capable of hybridising selectively to any one of the sequences of (a), (b), or a complement thereof.

3. The method of claim 1 or 2, wherein the presence of sepsis is determined by detecting in the subject an increase in the level of the at least one biomarker measured in the first sample, the at least one biomarker selected from a group consisting of: (a) a polynucleotide comprising a nucleotide sequence set forth in any one of SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, SEQ ID NO: 12, SEQ ID NO: 15, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, or a fragment, homologue, variant or derivative thereof; (b) a polynucleotide comprising a nucleotide sequence set forth in any one of the sequences of (a), that encodes a polypeptide comprising the corresponding amino acid sequence; and (c) a polynucleotide comprising a nucleotide sequence capable of hybridising selectively to any one of the sequences of (a), (b), or a complement thereof, as compared to the reference level of the corresponding biomarker.

4. The method of claim 2, wherein the second biomarker is selected from a group consisting of: (a) a polynucleotide comprising a nucleotide sequence set forth in any one of SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, SEQ ID NO: 10, SEQ ID NO: 11, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 14, SEQ ID NO: 15, SEQ ID NO: 16, SEQ ID NO: 17,

SEQ ID NO: 18, SEQ ID NO: 19, SEQ ID NO: 20, SEQ ID NO: 21, SEQ ID NO: 22, SEQ ID NO: 23, SEQ ID NO: 24, SEQ ID NO: 25, SEQ ID NO: 26, SEQ ID NO: 27, SEQ ID NO: 28, SEQ ID NO: 29, SEQ ID NO: 30, or a fragment, homologue, variant or derivative thereof; (b) a polynucleotide comprising a nucleotide sequence set forth in any one of the sequences of (a), that encodes a polypeptide comprising the corresponding amino acid sequence; and (c) a polynucleotide comprising a nucleotide sequence capable of hybridising selectively to any one of the sequences of (a), (b), or a complement thereof, as compared to the reference level of the corresponding biomarker.

5. The method of claim 1 or 2, wherein the presence of sepsis is determined by detecting in the subject a decrease in the level of the at least one biomarker measured in the first sample, the at least one biomarker selected from a group consisting of: (a) a polynucleotide comprising a nucleotide sequence set forth in any one of SEQ ID NO: 34, SEQ ID NO: 36, SEQ ID NO: 37, SEQ ID NO: 40, or a fragment, homologue, variant or derivative thereof; (b) a polynucleotide comprising a nucleotide sequence set forth in any one of the sequences of (a), that encodes a polypeptide comprising the corresponding amino acid sequence; and (c) a polynucleotide comprising a nucleotide sequence capable of hybridising selectively to any one of the sequences of (a), (b), or a complement thereof, as compared to the reference level of the corresponding biomarker.

6. The method of claim 2, wherein the second biomarker is selected from a group consisting of: (a) a polynucleotide comprising a nucleotide sequence set forth in any one of SEQ ID NO: 31, SEQ ID NO: 32, SEQ ID NO: 33, SEQ ID NO: 34, SEQ ID NO: 35, SEQ ID NO: 36, SEQ ID NO: 37, SEQ ID NO: 38, SEQ ID NO: 39, SEQ ID NO: 40, or a fragment, homologue, variant or derivative thereof; (b) a polynucleotide comprising a nucleotide sequence set forth in any one of the sequences of (a), that encodes a polypeptide comprising the corresponding amino acid sequence; and (c) a polynucleotide comprising a nucleotide sequence capable of hybridising

selectively to any one of the sequences of (a), (b), or a complement thereof, as compared to the reference level of the corresponding biomarker.

7. The method of any one of the preceding claim, wherein the reference level is the level of the corresponding biomarker in a second sample isolated from at least one subject with no sepsis.

8. The method of any one of the preceding claims, wherein the comparing step comprises applying a decision rule to determine or predict the presence or absence of sepsis in the subject.

9. An *in vitro* method of detecting or predicting whether a subject has one of a plurality of conditions selected from a group consisting of: control, infection, non-infected systemic inflammatory response syndrome (SIRS), mild sepsis, severe sepsis, septic shock and cryptic shock, the method comprising:

    i. measuring the level of at least one biomarker in a first sample isolated from the subject; and
    ii. comparing the level measured to a reference level of a corresponding biomarker,

wherein the at least one biomarker is selected from a group consisting of: (a) a polynucleotide comprising a nucleotide sequence set forth in any one of SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, SEQ ID NO: 12, SEQ ID NO: 15, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, SEQ ID NO: 34, SEQ ID NO: 36, SEQ ID NO: 37, SEQ ID NO: 40, or a fragment, homologue, variant or derivative thereof; (b) a polynucleotide comprising a nucleotide sequence set forth in any one of the sequences of (a), that encodes a polypeptide comprising the corresponding amino acid sequence; and (c) a polynucleotide comprising a nucleotide sequence capable of hybridising selectively to any one of the sequences of (a), (b), or a complement thereof,

wherein the level measured in the first sample is statistically substantially similar to the reference level is indicative of whether the subject has one of the conditions.

10. The method of claim 9, wherein the at least one biomarker comprises two or more biomarkers wherein the second or subsequent biomarker is not the same as the first biomarker and is selected from a group consisting of: (a) a polynucleotide comprising a nucleotide sequence set forth in any one of SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, SEQ ID NO: 10, SEQ ID NO: 11, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 14, SEQ ID NO: 15, SEQ ID NO: 16, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, SEQ ID NO: 20, SEQ ID NO: 21, SEQ ID NO: 22, SEQ ID NO: 23, SEQ ID NO: 24, SEQ ID NO: 25, SEQ ID NO: 26, SEQ ID NO: 27, SEQ ID NO: 28, SEQ ID NO: 29, SEQ ID NO: 30, SEQ ID NO: 31, SEQ ID NO: 32, SEQ ID NO: 33, SEQ ID NO: 34, SEQ ID NO: 35, SEQ ID NO: 36, SEQ ID NO: 37, SEQ ID NO: 38, SEQ ID NO: 39, SEQ ID NO: 40, or a fragment, homologue, variant or derivative thereof; (b) a polynucleotide comprising a nucleotide sequence set forth in any one of the sequences of (a), that encodes a polypeptide comprising the corresponding amino acid sequence; and (c) a polynucleotide comprising a nucleotide sequence capable of hybridising selectively to any one of the sequences of (a), (b), or a complement thereof.

11. The method of claim 9 or 10, wherein the reference level is the level of a corresponding biomarker in a second sample isolated from at least one subject selected from a group consisting of: a control subject, an infection positive subject, a non-infected SIRS positive subject, a mild sepsis positive subject, a severe sepsis positive subject and a cryptic shock positive subject.

12. The method of any one of claims 9-11, wherein the comparing step comprises applying a decision rule to determine or predict whether the subject has one of the conditions.

13. A kit for performing the method of any one of claims 1 to 8, the kit comprising:
    i. at least one reagent capable of specifically binding to the at least one biomarker to quantify the level of the biomarker in the first sample of a subject; and
    ii. a reference standard indicating the reference level of the corresponding biomarker.

14. The kit of claim 13, wherein the at least one reagent comprises at least one antibody capable of specifically binding to the at least one biomarker.

15. The kit of claim 13 or 14, further comprising at least one additional reagent capable of specifically binding at least one additional biomarker in the first sample, and a reference standard indicating a reference level of a corresponding at least one additional biomarker.

16. A kit for performing the method of any one of claims 9 to 12, the kit comprising:
    i. at least one reagent capable of specifically binding to the at least one biomarker to quantify the level of the biomarker in the first sample of a subject; and
    ii. a reference standard indicating the reference level of the corresponding biomarker.

17. The kit of claim 16, wherein the at least one reagent comprises at least one antibody capable of specifically binding to the at least one biomarker.

18. The kit of claim 16 or 17, further comprising at least one additional reagent capable of specifically binding at least one additional biomarker in the first

sample, and a reference standard indicating a reference level of a corresponding at least one additional biomarker.

19. A kit for detecting or predicting sepsis in a subject, comprising an antibody capable of binding selectively to at least one biomarker in a first sample isolated from the subject and reagents for detection of a complex formed between the antibody and complement component of the at least one biomarker, wherein the at least one biomarker is selected from a group consisting of: (a) a polynucleotide comprising a nucleotide sequence set forth in any one of SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, SEQ ID NO: 12, SEQ ID NO: 15, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, SEQ ID NO: 34, SEQ ID NO: 36, SEQ ID NO: 37, SEQ ID NO: 40, or a fragment, homologue, variant or derivative thereof; (b) a polynucleotide comprising a nucleotide sequence set forth in any one of the sequences of (a), that encodes a polypeptide comprising the corresponding amino acid sequence; and (c) a polynucleotide comprising a nucleotide sequence capable of hybridising selectively to any one of the sequences of (a), (b), or a complement thereof, and a reference standard indicating a reference level of a corresponding biomarker, wherein a difference between a level of the at least one biomarker measured in the first sample and the reference level is indicative of sepsis being present in the first sample.

20. The kit of claim 19, wherein the at least one biomarker comprises two or more biomarkers wherein the second or subsequent biomarker is not the same as the first biomarker and is selected from a group consisting of: (a) a polynucleotide comprising a nucleotide sequence set forth in any one of SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, SEQ ID NO: 10, SEQ ID NO: 11, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 14, SEQ ID NO: 15, SEQ ID NO: 16, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, SEQ ID NO: 20, SEQ ID NO: 21, SEQ ID NO: 22, SEQ ID NO: 23, SEQ ID NO: 24, SEQ ID NO: 25, SEQ ID NO: 26, SEQ ID NO: 27, SEQ ID

NO: 28, SEQ ID NO: 29, SEQ ID NO: 30, SEQ ID NO: 31, SEQ ID NO: 32, SEQ ID NO: 33, SEQ ID NO: 34, SEQ ID NO: 35, SEQ ID NO: 36, SEQ ID NO: 37, SEQ ID NO: 38, SEQ ID NO: 39, SEQ ID NO: 40, or a fragment, homologue, variant or derivative thereof; (b) a polynucleotide comprising a nucleotide sequence set forth in any one of the sequences of (a), that encodes a polypeptide comprising the corresponding amino acid sequence; and (c) a polynucleotide comprising a nucleotide sequence capable of hybridising selectively to any one of the sequences of (a), (b), or a complement thereof.

21. The kit of claim 20, wherein the reference level is the level of the corresponding biomarker in a second sample isolated from at least one subject with no sepsis.

22. A kit for detecting or predicting whether a subject has one of a plurality of conditions selected from a group consisting of: control, infection, non-infected systemic inflammatory response syndrome (SIRS), mild sepsis, severe sepsis, septic shock and cryptic shock, comprising an antibody capable of binding selectively to at least one biomarker in a first sample isolated from the subject and reagents for detection of a complex formed between the antibody and complement component of the at least one biomarker, wherein the at least one biomarker is selected from a group consisting of: (a) a polynucleotide comprising a nucleotide sequence set forth in any one of SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, SEQ ID NO: 12, SEQ ID NO: 15, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, SEQ ID NO: 34, SEQ ID NO: 36, SEQ ID NO: 37, SEQ ID NO: 40, or a fragment, homologue, variant or derivative thereof; (b) a polynucleotide comprising a nucleotide sequence set forth in any one of the sequences of (a), that encodes a polypeptide comprising the corresponding amino acid sequence; and (c) a polynucleotide comprising a nucleotide sequence capable of hybridising selectively to any one of the sequences of (a), (b), or a complement thereof, and a reference standard indicating a reference level

of a corresponding biomarker, wherein a level of the at least one biomarker measured in the first sample is statistically substantially similar to the reference level is indicative of whether the subject has one of the conditions.

23. The kit of claim 22, wherein the at least one biomarker comprises two or more biomarkers wherein the second or subsequent biomarker is not the same as the first biomarker and is selected from a group consisting of: (a) a polynucleotide comprising a nucleotide sequence set forth in any one of SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, SEQ ID NO: 10, SEQ ID NO: 11, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 14, SEQ ID NO: 15, SEQ ID NO: 16, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, SEQ ID NO: 20, SEQ ID NO: 21, SEQ ID NO: 22, SEQ ID NO: 23, SEQ ID NO: 24, SEQ ID NO: 25, SEQ ID NO: 26, SEQ ID NO: 27, SEQ ID NO: 28, SEQ ID NO: 29, SEQ ID NO: 30, SEQ ID NO: 31, SEQ ID NO: 32, SEQ ID NO: 33, SEQ ID NO: 34, SEQ ID NO: 35, SEQ ID NO: 36, SEQ ID NO: 37, SEQ ID NO: 38, SEQ ID NO: 39, SEQ ID NO: 40, or a fragment, homologue, variant or derivative thereof; (b) a polynucleotide comprising a nucleotide sequence set forth in any one of the sequences of (a), that encodes a polypeptide comprising the corresponding amino acid sequence; and (c) a polynucleotide comprising a nucleotide sequence capable of hybridising selectively to any one of the sequences of (a), (b), or a complement thereof.

24. The kit of claim 22 or 23, wherein the reference level is the level of a corresponding biomarker in a second sample isolated from at least one subject selected from a group consisting of: a control subject, an infection positive subject, a non-infected SIRS positive subject, a mild sepsis positive subject, a severe sepsis positive subject and a cryptic shock positive subject.

25. An *in vitro* method of detecting or predicting sepsis in a subject, the method comprising:

    i. measuring the level of at least one biomarker in a first sample isolated from the subject; and

    ii. comparing the level measured to a reference level of a corresponding biomarker,

    wherein the at least one biomarker is selected from a group consisting of: (a) a polynucleotide comprising a nucleotide sequence set forth in any one or more, and in any combination, of SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, SEQ ID NO: 12, SEQ ID NO: 15, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, SEQ ID NO: 34, SEQ ID NO: 36, SEQ ID NO: 37, SEQ ID NO: 40, or a fragment, homologue, variant or derivative thereof; (b) a polynucleotide comprising a nucleotide sequence set forth in any one or more, and in any combination, of the sequences of (a), that encodes a polypeptide comprising the corresponding amino acid sequence; and (c) a polynucleotide comprising a nucleotide sequence capable of hybridising selectively to any one or more of the sequences of (a), (b), or a complement thereof,

    wherein a difference between the level measured in the first sample and the reference level is indicative of sepsis being present in the first sample.

26. The method of claim 25, wherein the at least one biomarker comprises two or more biomarkers wherein the second or subsequent biomarker is not the same as the first biomarker and is selected from a group consisting of: (a) a polynucleotide comprising a nucleotide sequence set forth in any one of SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, SEQ ID NO: 10, SEQ ID NO: 11, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 14, SEQ ID NO: 15, SEQ ID NO: 16, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, SEQ ID NO: 20, SEQ ID NO: 21, SEQ ID NO: 22, SEQ ID NO: 23, SEQ ID NO: 24, SEQ ID NO: 25, SEQ ID NO: 26, SEQ ID NO: 27, SEQ ID

NO: 28, SEQ ID NO: 29, SEQ ID NO: 30, SEQ ID NO: 31, SEQ ID NO: 32, SEQ ID NO: 33, SEQ ID NO: 34, SEQ ID NO: 35, SEQ ID NO: 36, SEQ ID NO: 37, SEQ ID NO: 38, SEQ ID NO: 39, SEQ ID NO: 40, or a fragment, homologue, variant or derivative thereof; (b) a polynucleotide comprising a nucleotide sequence set forth in any one of the sequences of (a), that encodes a polypeptide comprising the corresponding amino acid sequence; and (c) a polynucleotide comprising a nucleotide sequence capable of hybridising selectively to any one of the sequences of (a), (b), or a complement thereof.

27. An *in vitro* method of detecting or predicting whether a subject has one of a plurality of conditions selected from a group consisting of: control, infection, non-infected systemic inflammatory response syndrome (SIRS), mild sepsis, severe sepsis, septic shock and cryptic shock, the method comprising:

    i. measuring the level of at least one biomarker in a first sample isolated from the subject; and

    ii. comparing the level measured to a reference level of a corresponding biomarker,

wherein the at least one biomarker is selected from a group consisting of: (a) a polynucleotide comprising a nucleotide sequence set forth in any one or more, and in any combination, of SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, SEQ ID NO: 12, SEQ ID NO: 15, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, SEQ ID NO: 34, SEQ ID NO: 36, SEQ ID NO: 37, SEQ ID NO: 40, or a fragment, homologue, variant or derivative thereof; (b) a polynucleotide comprising a nucleotide sequence set forth in any one or more, and in any combination, of the sequences of (a), that encodes a polypeptide comprising the corresponding amino acid sequence; and (c) a polynucleotide comprising a nucleotide sequence capable of hybridising selectively to any one or more of the sequences of (a), (b), or a complement thereof,

wherein the level measured in the first sample is statistically substantially similar to the reference level is indicative of whether the subject has one of the conditions.

28. The method of claim 27, wherein the at least one biomarker comprises two or more biomarkers wherein the second or subsequent biomarker is not the same as the first biomarker and is selected from a group consisting of: (a) a polynucleotide comprising a nucleotide sequence set forth in any one of SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, SEQ ID NO: 10, SEQ ID NO: 11, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 14, SEQ ID NO: 15, SEQ ID NO: 16, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, SEQ ID NO: 20, SEQ ID NO: 21, SEQ ID NO: 22, SEQ ID NO: 23, SEQ ID NO: 24, SEQ ID NO: 25, SEQ ID NO: 26, SEQ ID NO: 27, SEQ ID NO: 28, SEQ ID NO: 29, SEQ ID NO: 30, SEQ ID NO: 31, SEQ ID NO: 32, SEQ ID NO: 33, SEQ ID NO: 34, SEQ ID NO: 35, SEQ ID NO: 36, SEQ ID NO: 37, SEQ ID NO: 38, SEQ ID NO: 39, SEQ ID NO: 40, or a fragment, homologue, variant or derivative thereof; (b) a polynucleotide comprising a nucleotide sequence set forth in any one of the sequences of (a), that encodes a polypeptide comprising the corresponding amino acid sequence; and (c) a polynucleotide comprising a nucleotide sequence capable of hybridising selectively to any one of the sequences of (a), (b), or a complement thereof.