WHAT IS CLAIMED IS:

1. A method of isolating disease-related extracellular microvesicles from a biological fluid, wherein said disease-related extracellular microvesicles have negatively-charged phosphatidylserine on their surface; said method comprising contacting a sample of said biological fluid with an acetate buffer at a pH and concentration effective to precipitate disease-related extracellular microvesicles from said biological fluid and collecting disease-related extracellular microvesicles from the precipitate, thereby isolating said disease-related extracellular microvesicles.

2. The method of claim 1, wherein the phosphatidylserine on the surface of said disease-related extracellular microvesicles is present in association with non-lipid membrane components, and wherein said non-lipid membrane components comprise membrane proteins.

3. The method of claim 1 or 2, wherein said acetate buffer neutralizes the surface charge of the phosphatidylserine on said disease-related extracellular microvesicles, thereby precipitating said disease-related extracellular microvesicles from said biological fluid.

4. The method of any preceding claim, wherein said biological fluid contains a mixed population of extracellular microvesicles comprising disease-related and normal extracellular microvesicles, and wherein said method selectively precipitates said disease-related extracellular microvesicles from said mixed population, as opposed to said normal extracellular microvesicles.

5. The method of any preceding claim, wherein said disease-related extracellular microvesicles are isolated without substantially damaging their morphological or functional properties or cell surface antigens.

6. The method of any preceding claim, wherein said extracellular microvesicles are exosomes.

7. The method of any one of claims 1 to 6, wherein said disease-related extracellular microvesicles are derived from a cell infected with an intracellular parasite.

8. The method of any one of claims 1 to 6, wherein said disease-related extracellular microvesicles are derived from a virally-infected cell.

9. The method of claim 8, wherein said method isolates disease-related extracellular microvesicles from a virally-infected cell substantially free from infectious virus.

10. The method of any one of claims 1 to 6, wherein said disease-related extracellular microvesicles are tumor-derived extracellular microvesicles.

11. The method of claim 10, wherein said tumor-derived extracellular microvesicles are derived from melanoma, colorectal cancer, lung cancer, pancreatic cancer, liver cancer, prostate cancer, breast cancer or ovarian cancer.

12. The method of claim 10 or 11, wherein said tumor-derived extracellular microvesicles are tumor-derived exosomes.

13. The method of any preceding claim, wherein said disease-related extracellular microvesicles are human extracellular microvesicles.

14. The method of any preceding claim, wherein said acetate buffer has a pH of between about 4.25 and about 5.25.

15. The method of claim 14, wherein said acetate buffer has a pH of between about 4.5 and about 5.0.

16. The method of claim 15, wherein said acetate buffer has a pH of about 4.75.

17. The method of any preceding claim, wherein said acetate buffer has a final concentration in said sample of between about 0.05M and about 0.25M.

18. The method of claim 17, wherein said acetate buffer has a final concentration in said sample of between about 0.05M and about 0.1M.

19. The method of claim 17, wherein 1/10th volume of 1.0M acetate buffer is added to said sample.

20. The method of any preceding claim, wherein said acetate buffer has a pH of between about 4.25 and about 5.25 and a final concentration in said sample of between about 0.05M and about 0.25M.

21. The method of any preceding claim, wherein said acetate buffer has a pH of between about 4.5 and about 5.0 and a final concentration in said sample of between about 0.05M and about 0.1M.

22. The method of any preceding claim, wherein said acetate buffer has a pH of about 4.75 and a final concentration in said sample of about 0.1M.

23. The method of any preceding claim, wherein said acetate buffer comprises sodium acetate.

24. The method of any preceding claim, wherein said acetate buffer comprises potassium acetate.

25. The method of any preceding claim, wherein said acetate buffer is essentially free from volume excluding polymers.

26. The method of any preceding claim, wherein said acetate buffer is essentially free from polyethylene glycol.

27. The method of any preceding claim, wherein said acetate buffer is sodium acetate with a pH of about 4.75 and a final concentration in said sample of about 0.1M.

28. The method of any preceding claim, wherein said biological fluid is a murine, bovine or human biological fluid.

29. The method of any preceding claim, wherein said biological fluid is a cell culture supernatant, whole blood, serum, plasma, ascites fluid, cerebrospinal fluid, bone marrow

aspirate, bronco-alveolar washing, urine, semen, vaginal fluid, mucous, saliva, sputum or a clarified lysate from a biological tissue sample.

30. The method of claim 29, wherein said biological fluid is a cell culture supernatant, serum, plasma or ascites fluid.

31. The method of claim 29, wherein said biological fluid is a cleared cell culture supernatant that has already been subjected to low-speed centrifugation.

32. The method of claim 29, wherein said biological fluid is a cell culture supernatant obtained from tumor cells cultured in the presence of serum that contains non-tumor extracellular microvesicles.

33. The method of claim 29, wherein said biological fluid is a cell culture supernatant obtained from human tumor cells cultured in the presence of non-human serum.

34. The method of claim 29, wherein said biological fluid is a cell culture supernatant obtained from mouse or human tumor cells cultured in the presence of bovine or fetal bovine serum.

35. The method of any preceding claim, further comprising the step of subjecting said biological fluid to low-speed centrifugation to remove cells, cell debris and large membrane vesicles prior to contact with said acetate buffer.

36. The method of any preceding claim, wherein the precipitate that contains said disease-related extracellular microvesicles after contact with said acetate buffer is collected by low-speed centrifugation.

37. The method of any preceding claim, further comprising re-suspending the collected precipitate containing said disease-related extracellular microvesicles in a substantially acetate-free buffer at about neutral pH to provide an isolated population of disease-related extracellular microvesicles.

38. The method of claim 37, further comprising centrifuging said isolated population of disease-related extracellular microvesicles to remove contaminating components, thereby providing an essentially pure composition of disease-related extracellular microvesicles.

39. The method of claim 12, wherein said method comprises:

(a) obtaining a biological fluid containing a mixed population of exosomes that includes tumor-derived exosomes and non-tumor exosomes;

(b) contacting said biological fluid with an acetate buffer at a pH and concentration effective to selectively precipitate tumor-derived exosomes, but not non-tumor exosomes, from said biological fluid;

(c) collecting the precipitate from step (b); wherein said precipitate selectively contains said tumor-derived exosomes; and

(d) re-suspending said precipitate in a substantially acetate-free buffer at about neutral pH, thereby providing a purified population of tumor-derived exosomes essentially free from non-tumor exosomes.

40. The method of claim 39, wherein said method comprises:

(a) obtaining a biological fluid containing a mixed population of exosomes that includes tumor-derived exosomes and non-tumor exosomes;

(b) performing a first low-speed centrifugation on said biological fluid to provide a clarified fluid essentially free from cells, cell debris and large membrane vesicles;

(c) incubating said clarified fluid with an acetate buffer at a pH and concentration effective, and for a time effective, to provide a turbid suspension comprising selectively precipitated tumor-derived exosomes, but substantially no precipitated non-tumor exosomes;

(d) subjecting said turbid suspension to a low-speed centrifugation to provide a precipitate and a supernatant; wherein said precipitate selectively comprises said tumor-derived exosomes;

(e) collecting said precipitate comprising said tumor-derived exosomes;

(f) re-suspending said precipitate in a substantially acetate-free buffer at about neutral pH, thereby providing a purified exosome population that comprises tumor-derived exosomes and is essentially free from non-tumor exosomes; and, optionally

(g) subjecting said purified exosome population to a further centrifugation to provide a pellet comprising non-exosome components and removing said pellet, thereby providing an essentially pure composition of tumor-derived exosomes that is substantially free from both non-tumor exosomes and non-exosome components.

41. The method of any preceding claim, further comprising identifying or quantifying at least a first biomarker in said disease-related extracellular microvesicles.

42. The method of claim 41, wherein said biomarker is an RNA, micro RNA, DNA or protein biomarker.

43. A method to obtain disease-related extracellular microvesicles from the supernatant of diseased cells cultured in the presence of serum that contains normal extracellular microvesicles, wherein said disease-related extracellular microvesicles have negatively-charged phosphatidylserine on their surface; said method comprising contacting said supernatant with an acetate buffer at a pH and concentration effective to selectively precipitate disease-related extracellular microvesicles from said supernatant and collecting the precipitate, thereby obtaining disease-related extracellular microvesicles from said supernatant without substantial contamination from normal extracellular microvesicles in said serum.

44. The method of claim 43, wherein said diseased cells are mouse or human tumor cells cultured in the presence of bovine or fetal bovine serum.

45. A method to prepare serum that is substantially free from disease-related extracellular microvesicles, wherein said disease-related extracellular microvesicles have negatively-charged phosphatidylserine on their surface; said method comprising:

(a) obtaining serum suspected of containing disease-related extracellular microvesicles;

(b) contacting said serum with an acetate buffer at a pH and concentration effective to precipitate disease-related extracellular microvesicles from said serum; and

(c) removing from the serum the precipitate formed in step (b), wherein said precipitate contains said disease-related extracellular microvesicles, thereby providing a serum that is substantially free from disease-related extracellular microvesicles.

46. The method of claim 43 or 45, wherein said disease-related extracellular microvesicles are derived from virally-infected cells.

47. The method of claim 43 or 45, wherein said disease-related extracellular microvesicles are tumor-derived exosomes.

48. A method to prepare blood, serum or plasma that is substantially free from infectious virus and extracellular microvesicles derived from virally-infected cells, comprising:

(a) obtaining blood, serum or plasma suspected of containing infectious virus and extracellular microvesicles derived from virally-infected cells;

(b) contacting said blood, serum or plasma with an acetate buffer at a pH and concentration effective to inactivate or precipitate said infectious virus and to precipitate said extracellular microvesicles from said blood, serum or plasma; and

(c) removing from the blood, serum or plasma the precipitate formed in step (b), wherein said precipitate contains the inactivated or precipitated virus and the precipitated extracellular microvesicles, thereby providing blood, serum or plasma that is substantially free from infectious virus and extracellular microvesicles derived from virally-infected cells.

49. The method of claim 48, wherein said method is performed prior to a blood transfusion.

50. A method to detect disease-related extracellular microvesicles in a clarified biological fluid, wherein said disease-related extracellular microvesicles have negatively-charged phosphatidylserine on their surface; said method comprising contacting said clarified biological fluid with an acetate buffer at a pH and concentration effective to selectively precipitate disease-related extracellular microvesicles from said clarified biological fluid and determining the presence of turbidity in the resultant biological fluid; wherein the presence of turbidity in the resultant biological fluid indicates the detection of disease-related extracellular microvesicles.

51. The method of claim 50, wherein the presence of turbidity in the resultant biological fluid is detected visually.

52. The method of claim 50, wherein said disease-related extracellular microvesicles are tumor-derived exosomes.

53. The method of claim 52, further comprising isolating said tumor-derived exosomes from the resultant biological fluid with detectable turbidity.

54. The method of claim 53, wherein said tumor-derived exosomes are isolated from the resultant biological fluid with detectable turbidity by collecting the precipitate using low-speed centrifugation.

55. A method to diagnose a patient having a first disease characterized by the presence of disease-related extracellular microvesicles that have negatively-charged phosphatidylserine on their surface; said method comprising detecting the presence of said disease-related

extracellular microvesicles in a biological fluid from said patient, thereby diagnosing said patient as having said first disease; wherein said disease-related extracellular microvesicles are detected by a method comprising:

(a) contacting said biological fluid with an acetate buffer at a pH and concentration effective to selectively precipitate said disease-related extracellular microvesicles from said biological fluid; and

(b) determining the presence of said precipitate in the resultant biological fluid; wherein the presence of said precipitate in the resultant biological fluid indicates the detection of said disease-related extracellular microvesicles.

56. The method of claim 55, wherein said biological fluid is a clarified biological fluid and wherein the presence of said precipitate in the resultant biological fluid is determined by the presence of turbidity in the resultant biological fluid.

57. The method of claim 55, wherein the amount of said disease-related extracellular microvesicles is quantified.

58. A method to monitor the disease burden of a patient having a first disease characterized by the amount of disease-related extracellular microvesicles that have negatively-charged phosphatidylserine on their surface; said method comprising measuring the amount of said disease-related extracellular microvesicles in a biological fluid from said patient; wherein the amount of said disease-related extracellular microvesicles is measured by a method comprising:

(a) contacting said biological fluid with an acetate buffer at a pH and concentration effective to selectively precipitate said disease-related extracellular microvesicles from said biological fluid; and

(b) measuring the amount of said disease-related extracellular microvesicles in the precipitate.

59. The method of claim 55 or 58, wherein the identity of said first disease is confirmed by testing for a biomarker or clinical sign of said first disease.

60. The method of claim 55 or 58, wherein said first disease is a viral infection.

61. The method of claim 55 or 58, wherein said first disease is cancer and wherein said disease-related extracellular microvesicles are tumor-derived exosomes.

62. The method of claim 61, wherein the amount of tumor-derived exosomes is measured in a series of biological fluid samples obtained from said patient at a plurality of time points; and wherein an increase in the amount of tumor-derived exosomes is indicative of an increased tumor-burden and a decrease in the amount of said tumor-derived exosomes is indicative of a decreased tumor-burden.

63. An acetate buffer with a pH and concentration effective for use in diagnosis by precipitating disease-related extracellular microvesicles that have negatively-charged phosphatidylserine on their surface from a biological fluid.

64. An acetate buffer with a pH and concentration effective for use in therapy by precipitating disease-related extracellular microvesicles that have negatively-charged phosphatidylserine on their surface from a biological fluid.

65. A kit for isolating disease-related extracellular microvesicles from a biological fluid, wherein said disease-related extracellular microvesicles have negatively-charged phosphatidylserine on their surface; said kit comprising an acetate buffer at a pH and concentration effective to precipitate said disease-related extracellular microvesicles from a biological fluid and instructions for use.

66. The kit of claim 65, wherein said kit further comprises at least a first reagent for use in identifying or quantifying one or more biomarkers in a disease-related extracellular microvesicle.

CLAIMS

1. A method of isolating disease-related extracellular microvesicles from a biological fluid, in which the disease-related extracellular microvesicles have negatively-charged phosphatidylserine on their surface; the method comprising contacting a sample of the biological fluid with an acetate buffer at a pH and concentration effective to precipitate disease-related extracellular microvesicles from the biological fluid and collecting disease-related extracellular microvesicles from the precipitate, thereby isolating the disease-related extracellular microvesicles.

2. A method according to Claim 1, in which the phosphatidylserine on the surface of the disease-related extracellular microvesicles is present in association with non-lipid membrane components, and in which the non-lipid membrane components comprise membrane proteins.

3. A method according to Claim 1 or 2, in which the acetate buffer neutralizes the surface charge of the phosphatidylserine on the disease-related extracellular microvesicles, thereby precipitating the disease-related extracellular microvesicles from the biological fluid.

4. A method according to any preceding claim, in which the biological fluid contains a mixed population of extracellular microvesicles comprising disease-related and normal extracellular microvesicles, and in which the method selectively precipitates the disease-related extracellular microvesicles from the mixed population, as opposed to the normal extracellular microvesicles.

5. A method according to any preceding claim, in which the disease-related extracellular microvesicles are isolated without substantially damaging their morphological or functional properties or cell surface antigens.

6. A method according to any preceding claim, in which the extracellular microvesicles are exosomes.

7. A method according to any of Claims 1 to 6, in which the disease-related extracellular microvesicles are derived from a cell infected with an intracellular parasite.

8. A method according to any of Claims 1 to 6, in which the disease-related extracellular microvesicles are derived from a virally-infected cell.

9. A method according to Claim 8, in which the method isolates disease-related extracellular microvesicles from a virally-infected cell substantially free from infectious virus.

10. A method according to any of Claims 1 to 6, in which the disease-related extracellular microvesicles are tumor-derived extracellular microvesicles.

11. A method according to Claim 10, in which the tumor-derived extracellular microvesicles are derived from melanoma, colorectal cancer, lung cancer, pancreatic cancer, liver cancer, prostate cancer, breast cancer or ovarian cancer.

12. A method according to Claim 10 or 11, in which the tumor-derived extracellular microvesicles are tumor-derived exosomes.

13. A method according to any preceding claim, in which the disease-related extracellular microvesicles are human extracellular microvesicles.

14. A method according to any preceding claim, in which the acetate buffer has a pH of between about 4.25 and about 5.25.

15. A method according to Claim 14, in which the acetate buffer has a pH of between about 4.5 and about 5.0.

16. A method according to Claim 15, in which the acetate buffer has a pH of about 4.75.

17. A method according to any preceding claim, in which the acetate buffer has a final concentration in the sample of between about 0.05M and about 0.25M.

18. A method according to Claim 17, in which the acetate buffer has a final concentration in the sample of between about 0.05M and about 0.1M.

19. A method according to Claim 17, in which 1/10th volume of 1.0M acetate buffer is added to the sample.

20. A method according to any preceding claim, in which the acetate buffer has a pH of between about 4.25 and about 5.25 and a final concentration in the sample of between about 0.05M and about 0.25M.

21. A method according to any preceding claim, in which the acetate buffer has a pH of between about 4.5 and about 5.0 and a final concentration in the sample of between about 0.05M and about 0.1M.

22. A method according to any preceding claim, in which the acetate buffer has a pH of about 4.75 and a final concentration in the sample of about 0.1M.

23. A method according to any preceding claim, in which the acetate buffer comprises sodium acetate.

24. A method according to any preceding claim, in which the acetate buffer comprises potassium acetate.

25. A method according to any preceding claim, in which the acetate buffer is essentially free from volume excluding polymers.

26. A method according to preceding claim, in which the acetate buffer is essentially free from polyethylene glycol.

27. A method according to any preceding claim, in which the acetate buffer is sodium acetate with a pH of about 4.75 and a final concentration in the sample of about 0.1M.

28. A method according to any preceding claim, in which the biological fluid is a murine, bovine or human biological fluid.

29. A method according to any preceding claim, in which the biological fluid is a cell culture supernatant, whole blood, serum, plasma, ascites fluid, cerebrospinal fluid, bone marrow aspirate, bronco-alveolar washing, urine, semen, vaginal fluid, mucous, saliva, sputum or a clarified lysate from a biological tissue sample.

30. A method according to Claim 29, in which the biological fluid is a cell culture supernatant, serum, plasma or ascites fluid.

31. A method according to Claim 29, in which the biological fluid is a cleared cell culture supernatant that has already been subjected to low-speed centrifugation.

32. A method according to Claim 29, in which the biological fluid is a cell culture supernatant obtained from tumor cells cultured in the presence of serum that contains non-tumor extracellular microvesicles.

33. A method according to Claim 29, in which the biological fluid is a cell culture supernatant obtained from human tumor cells cultured in the presence of non-human serum.

34. A method according to Claim 29, in which the biological fluid is a cell culture supernatant obtained from mouse or human tumor cells cultured in the presence of bovine or fetal bovine serum.

35. A method according to any preceding claim, further comprising the step of subjecting the biological fluid to low-speed centrifugation to remove cells, cell debris and large membrane vesicles prior to contact with the acetate buffer.

36. A method according to any preceding claim, in which the precipitate that contains the disease-related extracellular microvesicles after contact with the acetate buffer is collected by low-speed centrifugation.

37. A method according to any preceding claim, further comprising re-suspending the collected precipitate containing the disease-related extracellular microvesicles in a substantially acetate-free buffer at about neutral pH to provide an isolated population of disease-related extracellular microvesicles.

38. A method according to Claim 37, further comprising centrifuging the isolated population of disease-related extracellular microvesicles to remove contaminating components, thereby providing an essentially pure composition of disease-related extracellular microvesicles.

39. A method according to Claim 12, in which the method comprises:

obtaining a biological fluid containing a mixed population of exosomes that includes tumor-derived exosomes and non-tumor exosomes;

contacting the biological fluid with an acetate buffer at a pH and concentration effective to selectively precipitate tumor-derived exosomes, but not non-tumor exosomes, from the biological fluid;

collecting the precipitate from step (b); in which the precipitate selectively contains the tumor-derived exosomes; and

re-suspending the precipitate in a substantially acetate-free buffer at about neutral pH, thereby providing a purified population of tumor-derived exosomes essentially free from non-tumor exosomes.

40. A method according to Claim 39, in which the method comprises:

obtaining a biological fluid containing a mixed population of exosomes that includes tumor-derived exosomes and non-tumor exosomes;

performing a first low-speed centrifugation on the biological fluid to provide a clarified fluid essentially free from cells, cell debris and large membrane vesicles;

incubating the clarified fluid with an acetate buffer at a pH and concentration effective, and for a time effective, to provide a turbid suspension comprising selectively precipitated tumor-derived exosomes, but substantially no precipitated non-tumor exosomes;

subjecting the turbid suspension to a low-speed centrifugation to provide a precipitate and a supernatant; in which the precipitate selectively comprises the tumor-derived exosomes;

collecting the precipitate comprising the tumor-derived exosomes;

re-suspending the precipitate in a substantially acetate-free buffer at about neutral pH, thereby providing a purified exosome population that comprises tumor-derived exosomes and is essentially free from non-tumor exosomes; and, optionally

subjecting the purified exosome population to a further centrifugation to provide a pellet comprising non-exosome components and removing the pellet, thereby providing an essentially pure composition of tumor-derived exosomes that is substantially free from both non-tumor exosomes and non-exosome components.

41. A method according to any preceding claim, further comprising identifying or quantifying at least a first biomarker in the disease-related extracellular microvesicles.

42. A method according to Claim 41, in which the biomarker is an RNA, micro RNA, DNA or protein biomarker.

43. A method to obtain disease-related extracellular microvesicles from the supernatant of diseased cells cultured in the presence of serum that contains normal extracellular

microvesicles, in which the disease-related extracellular microvesicles have negatively-charged phosphatidylserine on their surface; the method comprising contacting the supernatant with an acetate buffer at a pH and concentration effective to selectively precipitate disease-related extracellular microvesicles from the supernatant and collecting the precipitate, thereby obtaining disease-related extracellular microvesicles from the supernatant without substantial contamination from normal extracellular microvesicles in the serum.

44. A method according to Claim 43, in which the diseased cells are mouse or human tumor cells cultured in the presence of bovine or fetal bovine serum.

45. A method to prepare serum that is substantially free from disease-related extracellular microvesicles, in which the disease-related extracellular microvesicles have negatively-charged phosphatidylserine on their surface; the method comprising:

obtaining serum suspected of containing disease-related extracellular microvesicles;

contacting the serum with an acetate buffer at a pH and concentration effective to precipitate disease-related extracellular microvesicles from the serum; and

removing from the serum the precipitate formed in step (b), in which the precipitate contains the disease-related extracellular microvesicles, thereby providing a serum that is substantially free from disease-related extracellular microvesicles.

46. A method according to Claim 43 or 45, in which the disease-related extracellular microvesicles are derived from virally-infected cells.

47. A method according to Claim 43 or 45, in which the disease-related extracellular microvesicles are tumor-derived exosomes.

48. A method to prepare blood, serum or plasma that is substantially free from infectious virus and extracellular microvesicles derived from virally-infected cells, comprising:

obtaining blood, serum or plasma suspected of containing infectious virus and extracellular microvesicles derived from virally-infected cells;

contacting the blood, serum or plasma with an acetate buffer at a pH and concentration effective to inactivate or precipitate the infectious virus and to precipitate the extracellular microvesicles from the blood, serum or plasma; and

removing from the blood, serum or plasma the precipitate formed in step (b), in which the precipitate contains the inactivated or precipitated virus and the precipitated extracellular microvesicles, thereby providing blood, serum or plasma that is substantially free from infectious virus and extracellular microvesicles derived from virally-infected cells.

49. A method according to Claim 48, in which the method is performed prior to a blood transfusion.

50. A method to detect disease-related extracellular microvesicles in a clarified biological fluid, in which the disease-related extracellular microvesicles have negatively-charged phosphatidylserine on their surface; the method comprising contacting the clarified biological fluid with an acetate buffer at a pH and concentration effective to selectively precipitate disease-related extracellular microvesicles from the clarified biological fluid and determining the presence of turbidity in the resultant biological fluid; in which the presence of turbidity in the resultant biological fluid indicates the detection of disease-related extracellular microvesicles.

51. A method according to Claim 50, in which the presence of turbidity in the resultant biological fluid is detected visually.

52. A method according to Claim 50, in which the disease-related extracellular microvesicles are tumor-derived exosomes.

53. A method according to Claim 52, further comprising isolating the tumor-derived exosomes from the resultant biological fluid with detectable turbidity.

54. A method according to Claim 53, in which the tumor-derived exosomes are isolated from the resultant biological fluid with detectable turbidity by collecting the precipitate using low-speed centrifugation.

55. A method to diagnose a patient having a first disease characterized by the presence of disease-related extracellular microvesicles that have negatively-charged phosphatidylserine on their surface; the method comprising detecting the presence of the disease-related extracellular microvesicles in a biological fluid from the patient, thereby diagnosing the patient as having the first disease; in which the disease-related extracellular microvesicles are detected by a method comprising:

contacting the biological fluid with an acetate buffer at a pH and concentration effective to selectively precipitate the disease-related extracellular microvesicles from the biological fluid; and

determining the presence of the precipitate in the resultant biological fluid; in which the presence of the precipitate in the resultant biological fluid indicates the detection of the disease-related extracellular microvesicles.

56. A method according to Claim 55, in which the biological fluid is a clarified biological fluid and in which the presence of the precipitate in the resultant biological fluid is determined by the presence of turbidity in the resultant biological fluid.

57. A method according to Claim 55, in which the amount of the disease-related extracellular microvesicles is quantified.

58. A method to monitor the disease burden of a patient having a first disease characterized by the amount of disease-related extracellular microvesicles that have negatively-charged phosphatidylserine on their surface; the method comprising measuring the amount of the disease-related extracellular microvesicles in a biological fluid from the patient; in which the amount of the disease-related extracellular microvesicles is measured by a method comprising:

contacting the biological fluid with an acetate buffer at a pH and concentration effective to selectively precipitate the disease-related extracellular microvesicles from the biological fluid; and

measuring the amount of the disease-related extracellular microvesicles in the precipitate.

59. A method according to Claim 55 or 58, in which the identity of the first disease is confirmed by testing for a biomarker or clinical sign of the first disease.

60. A method according to Claim 55 or 58, in which the first disease is a viral infection.

61. A method according to Claim 55 or 58, in which the first disease is cancer and in which the disease-related extracellular microvesicles are tumor-derived exosomes.

62. A method according to Claim 61, in which the amount of tumor-derived exosomes is measured in a series of biological fluid samples obtained from the patient at a plurality of time

points; and in which an increase in the amount of tumor-derived exosomes is indicative of an increased tumor-burden and a decrease in the amount of the tumor-derived exosomes is indicative of a decreased tumor-burden.