WHAT IS CLAIMED IS:

1. A bioprocessing system, comprising:

a first fluid assembly having a first fluid assembly line connected to a first port of a first bioreactor vessel though a first bioreactor line of a first bioreactor vessel, the first bioreactor line of the first bioreactor vessel including a first bioreactor line valve for providing selective fluid communication between the first fluid assembly and the first port of the first bioreactor vessel;

a second fluid assembly having a second fluid assembly line connected to a second port of the first bioreactor vessel through a second bioreactor line of the first bioreactor vessel, the second bioreactor line of the first bioreactor vessel including a second bioreactor line valve for providing selective fluid communication between the second fluid assembly and the second port of the first bioreactor vessel; and

an interconnect line providing for fluid communication between the first fluid assembly and the second fluid assembly, and for fluid communication between the second bioreactor line of the first bioreactor vessel and the first bioreactor line of the first bioreactor vessel.

2. The bioprocessing system of claim 1, wherein:

the interconnect line is connected to the second bioreactor line of the first bioreactor vessel, and the first bioreactor line and the first fluid assembly line; and

wherein the interconnect line includes an interconnect line valve for providing selective fluid communication between at least the second bioreactor line of the first bioreactor vessel and the second fluid assembly.

3. The bioprocessing system of claim 1, wherein:

the first fluid assembly comprises a plurality tubing tails, each tubing tail of the first fluid assembly being configured for connection to one of a plurality of first reservoirs; and

the second fluid assembly includes a plurality tubing tails, each tubing tail of the second fluid assembly being configured for connection to one of a plurality of second reservoirs.

4. The bioprocessing system of claim 3, wherein:

each tubing tail of the first fluid assembly includes a tubing tail valve for controlling a flow of fluid to or from a respective one of the plurality of first reservoirs; and

each tubing tail of the second fluid assembly includes a tubing tail valve for controlling a flow of fluid to or from a respective one of the plurality of second reservoirs.

5. The bioprocessing system of claim 1, further comprising:

a sampling assembly connected to at least one of the first fluid assembly, the second fluid assembly, the interconnect line and/or a fluid flowpath intermediate the second bioreactor line valve and the first bioreactor line valve, the sampling assembly including a sampling assembly line providing for fluid communication between the sampling assembly and the second port of the first bioreactor vessel.

6. The bioprocessing system of claim 5, wherein:

the sampling assembly is connected to the interconnect line intermediate the second bioreactor line valve and the first bioreactor line valve.

7. The bioprocessing assembly of claim 5, wherein:

the sampling assembly includes at least one tubing tail configuration for connection to a sampling terminus.

8. The bioprocessing system of claim 1, further comprising:

a bidirectional first pump located along the first fluid assembly line and configured to initiate a flow of fluid between the first fluid assembly and the first bioreactor vessel, and between the first fluid assembly and the second fluid assembly.

9. The bioprocessing system of claim 8, further comprising:

a bidirectional second pump configured to initiate a flow of fluid between the second fluid assembly and the first bioreactor vessel.

10. The bioreactor system of claim 9, wherein:

the bidirectional second pump is configured to initiate a flow of fluid between the first bioreactor vessel and a second bioreactor vessel.

11. The bioprocessing system of claim 9, wherein:
the first pump and the second pump are high dynamic range pumps

12. The bioprocessing system of claim 2, further comprising:
a filtration line in fluid communication with the interconnect line and the first bioreactor line of the first bioreactor vessel; and
a filter positioned along the filtration line.

13. The bioprocessing system of claim 12, wherein:
the filtration line surrounds the interconnect line valve of the interconnect line so that a flow of fluid through the interconnect line can be forced through the filtration line.

14. The bioprocessing system of claim 13, further comprising:
a permeate waste line providing fluid communication between the filter and a waste reservoir connected to the second fluid assembly for conveying the waste removed from the fluid to the waste reservoir.

15. The bioprocessing system of claim 14, further comprising:
a permeate waste pump configured to pump the waste from the filter to the waste reservoir.

16. The bioprocessing system of claim 13, wherein:
the filter is one of a hollow fiber filter and a flat sheet membrane.

17. The bioprocessing system of claim 5, further comprising:
a sterile air source line connected to at least one of the first fluid assembly, the second fluid assembly, the interconnect line and/or the fluid flowpath intermediate the second bioreactor line valve and the first bioreactor line valve, the sterile air source line including a sterile air

source line valve for selectively controlling a flow of sterile air from a sterile air source to at least one of the first fluid assembly, the second fluid assembly and/or the interconnect line.

18. The bioprocessing system of claim 1, wherein:

the first fluid assembly line of the first fluid assembly is further connected to a first port of a second bioreactor vessel through a first bioreactor line of the second bioreactor vessel, the first bioreactor line of the second bioreactor vessel including a first bioreactor line valve for providing selective fluid communication between the first fluid assembly and the first port of the second bioreactor vessel; and

wherein the second fluid assembly line of the second fluid assembly is connected to a second port of the second bioreactor vessel through a second bioreactor line of the second bioreactor vessel, the second bioreactor line of the second bioreactor vessel include a second bioreactor line valve for providing selective fluid communication between the second fluid assembly and the second port of the second bioreactor vessel.

19. The bioprocessing system of claim 18, wherein:

the interconnect line provides for fluid communication between the second bioreactor line of the second bioreactor vessel and the first bioreactor line of the second bioreactor vessel.

20. The bioprocessing system of claim 19, wherein:

the interconnect line provides for fluid communication between the second bioreactor line of the second bioreactor vessel and the second fluid assembly.

21. A method of bioprocessing, comprising the steps of:

providing a first fluid assembly having a first fluid assembly line connected to a first port of a first bioreactor vessel through a first bioreactor line of the first bioreactor vessel;

providing a second fluid assembly having a second fluid assembly line connected to a second port of the first bioreactor vessel through a second bioreactor line of the first bioreactor vessel; and

providing an interconnect line between the second bioreactor line of the first bioreactor vessel and the first bioreactor line of the first bioreactor vessel, the interconnecting line allowing

for fluid communication between the first fluid assembly and the second fluid assembly, and for fluid communication between the second bioreactor line of the first bioreactor vessel and the first bioreactor line of the first bioreactor vessel.

22. The method according to claim 21, further comprising the step of:

providing a filtration line in fluid communication with the interconnect line, and a filter positioned along the filtration line.

23. The method according to claim 22, further comprising the step of:

actuating a circulation pump along the interconnect line to circulate a fluid from one of the first port or the second port of the first bioreactor vessel through the filtration line and the filter, and to the other of the first port or the second port of the first bioreactor; and

actuating a permeate pump to pump waste separated from the fluid by the filter to a waste reservoir connected to the second fluid assembly.

24. The method according to claim 23, further comprising the step of:

running the circulation pump and the permeate pump until a volume of fluid removed from the first bioreactor vessel reaches a predetermined volume.

25. The method according to claim 23, further comprising the step of:

sensing at least one of a volume or a weight of the waste reservoir; and

running the circulation pump and the permeate pump until the volume or the weight of the waste reservoir reaches a predetermined value.

26. The method according to claim 23, further comprising the step of:

actuating a pump along the first fluid assembly line to add a replacement fluid to the first bioreactor vessel to maintain a substantially constant volume in the first bioreactor vessel.

27. The method according to claim 23, wherein:

a rate of addition of the replacement fluid to the first bioreactor is substantially equivalent to a rate or removal of the waste by the permeate filter pump.

28, The method according to claim 21, further comprising the step of:

actuating a circulation pump along the interconnect line to pump used cell culture medium from the first bioreactor vessel to a waste reservoir; and

actuating a pump along the first fluid assembly line to introduce additional cell culture medium to the first bioreactor vessel.

29. The method according to claim 28, wherein:

the circulation pump and the pump along the first fluid assembly line are run at the same rate.

30. The method according to claim 28, wherein:

one of the circulation pump and the pump along the first fluid assembly line is run at a set rate, and the other of the circulation pump and the pump along the first assembly line is run at an adjusted rate based on a mass or volume of at least one of the first bioreactor vessel, the waste reservoir and/or a media source reservoir from which the additional cell culture medium is pumped.

31. The method according to claim 28, wherein:

the circulation pump and the pump along the first fluid assembly line are run at least one of continuously or intermittently together, or sequentially, to maintain a generally constant volume and/or mass in the first bioreactor vessel.

32. The method according to claim 28, further comprising the steps of:

running the circulation pump and the pump along the first fluid assembly line to perfuse cells within the first bioreactor vessel;

ceasing perfusion of the cells within the first bioreactor vessel; and

running the circulation pump and the pump along the first fluid assembly line to perfuse cells within a second bioreactor in fluid communication with the circulation pump, the pump along the first fluid assembly line and the waste reservoir.

33. The method according to claim 28, further comprising the step of:

running the circulation pump and the pump along the first fluid assembly line at a rate sufficient to achieve a perfusion rate greater than about 20 volumes per day.

34. The method according to claim 21, further comprising the step of:

rinsing a first reservoir connected to the first fluid assembly by pumping rinse media from a second reservoir connected to the second fluid assembly to the first reservoir using a pump along the first fluid assembly line.

35 The method according to claim 21, further comprising the step of:

introducing sterile air from a sterile air source into at least one of the first fluid assembly line, the first bioreactor line of the first bioreactor vessel, the second fluid assembly line, the second bioreactor line of the first bioreactor vessel and/or the interconnect line to clear at least one of the first fluid assembly line, the first bioreactor line of the first bioreactor vessel, the second fluid assembly line, the second bioreactor line of the first bioreactor vessel and/or the interconnect line.

36. The method according to claim 21, further comprising the steps of:

agitating the first bioreactor vessel;

actuating a circulation pump along the interconnect line to pump fluid from the first bioreactor vessel; and

withdrawing a sample from the fluid through a sampling assembly connected to the interconnect line.

37. The method according to claim 36, wherein:

the step of agitating the first bioreactor vessel includes agitating only non-bead-bound cells in the first bioreactor vessel.

38. The method according to claim 21, further comprising the step of:

collecting cells from the first bioreactor vessel, including actuating a circulation pump along the interconnect line to pump cells from the first bioreactor to a reservoir connected to one of the first fluid assembly and the second fluid assembly.

39. The method according to claim 22, further comprising the step of:

circulating a fluid from one of the first port or the second port of the first bioreactor vessel through the filtration line and the filter, and to the other of the first port or the second port of the first bioreactor

40. The method according to claim 21, further comprising the steps of:

sensing a parameter in the bioreactor vessel using a sensor positioned along a fluid flow path; and

controlling a perfusion rate and scheduling a harvest time in dependence upon the parameter.

41. The method according to claim 40, wherein:

the parameter includes at least one of cell density, cell viability, media pH, dissolved oxygen, lactate, or glucose.