20. The bioartificial kidney device according to any one of claims 13 to 19, wherein the bioreactor device has a smaller volume than the haemofiltration device.

~~21. A method of providing renal function to a subject comprising:~~

~~connecting the bioartificial kidney device as defined in claim 13 to 20 to a subject in need of renal replacement therapy.~~

~~22. The method according to claim 21, wherein the method provides blood haemofiltration to the subject.~~

~~23. The method according to claim 21 or 22, wherein the subject is a human.~~

~~24. The method according to claim 21 or 22, wherein the subject is a non-human animal.~~

~~25. The method according to any one of claims 21 to 24, wherein said connecting comprises connecting the bioartificial kidney device as defined in any one of claims 14 to 17 to the subject via said first fluid line and said third fluid line so that blood flows from said subject into said first fluid line, through said bioartificial kidney device and into said subject via said third fluid line.~~

~~26. The method according to any one of claims 21 to 25, wherein said first pump controls blood flow from said subject into said blood inlet port of said haemofiltration device at a flow rate of from about 100 ml/min to about 200 ml/min.~~

~~27. The method according to any one of claims 21 to 26, wherein said second pump controls haemofiltrate flow from the first reservoir into said haemofiltrate inlet port of said bioreactor device at a flow rate of from about 10 ml/min to about 100 ml/min.~~

~~28. The method according to any one of claims 21 to 26, wherein said second pump controls haemofiltrate flow from the first reservoir into said haemofiltrate inlet port of said bioreactor device at a flow rate of from about 10 ml/min to about 30 ml/min.~~

~~29. The method according to any one of claims 21 to 28,~~
~~blood flow into said blood inlet port of said bioreacto~~
~~10 ml/min to about 100 ml/min.~~

~~30.~~ ~~The method according to claim 29, wherein said thir~~
~~blood inlet port of said bioreactor device at a flow rat~~
~~30 ml/min.~~

20. The bioartificial kidney device according to any one of claims 13 to 19, wherein the bioreactor device has a smaller volume than the haemofiltration device.