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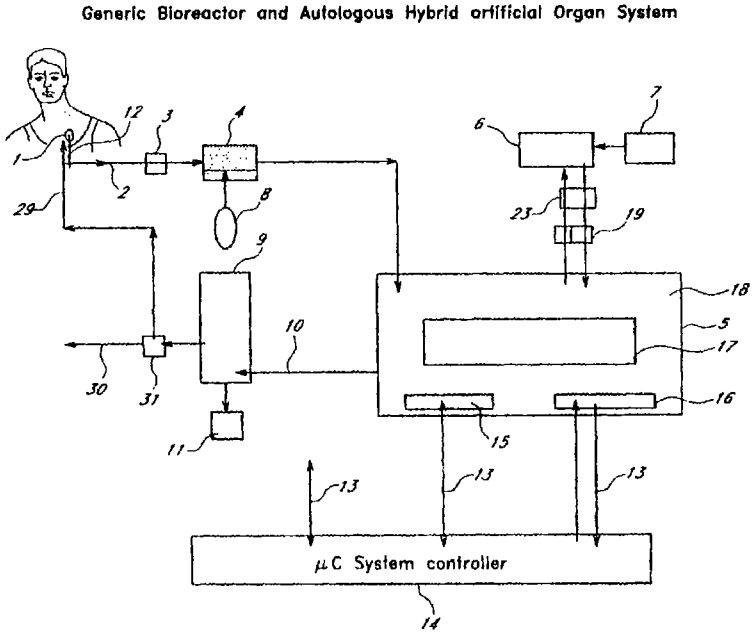
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(54) Title: PROCESS AND APPARATUS FOR UTILIZATION OF IN VIVO EXTRACTED PLASMA WITH TISSUE ENGINEERING DEVICES, BIOREACTORS, ARTIFICIAL ORGANS, AND CELL THERAPY APPLICATIONS



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(57) Abstract: The present invention is directed to a method of treating cells, tissues or organs using in vivo plasma separation by implanting a plasma separation filter device (1) within a blood vessel of a patient, or allogenic, or xenogenic donor, continuously separating blood plasma from whole blood in vivo, directing the plasma from the plasma separation filter device (1) to a bioreactor (15), and exposing the plasma to cells, tissue or an organ within the bioreactor utilizing immune separation membranes where necessary.

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