

## Advances in separation and concentration of blood and bone marrow aspirate

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### Abstract

#### What problems/unmet customer needs/market gaps does FlexSep technology address?

Cell separation technology using centrifugation is broadly employed in many fields of biomedical and biological research, diagnostics and clinical therapy. Each application brings its own specific requirements so versatility in cell separators is desired particularly in regard to input and output of the device. Current devices for preparing PRP or buffy coats have essentially plateaued in terms of time, complexity, cost and control of cell compositions produced with a common inability to deplete RBCs from leukocytes. FlexSep is a new sterile, non-pyrogenic, biocompatible disposable intended for preparation of cell concentrates from 10 to 120 mL volumes of peripheral blood, cord blood, bone marrow, lipoaspirate or tissue digests. FlexSep can also be used for cell washing including DMSO removal and for stem cell transport/storage/point of care delivery.

#### Why is FlexSep disruptive and capable of establishing a new state-of-play on the market?

FlexSep is unlike existing cell separators both in design and means of extracting targeted cells after centrifugation. Its simplicity in design and operation enables it to have greater versatility in the laboratory than other separators currently marketed. For example, it enables preparation of red cell depleted buffy coats from 60 ml of blood within 15 minutes of phlebotomy without the need for a biological safety cabinet or use of chemical additives. We expect scientists and clinicians will be able to improve their productivity in research and patient care by adoption of FlexSep technology.



### Biography:

John Chapman is the President of Stem Cell Partners LLC. Before founding Stem Cell Partners in 2010, Dr. Chapman was employed in senior positions of R&D at Baxter Healthcare's Fenwal Division, Vitex and ThermoGenesis. Dr. Chapman is a serial inventor and has been awarded more than 20 patents in the

field of blood processing. He has also published more than 30 articles in peer reviewed journals regarding blood processing. Dr. Chapman received his PhD at the University of Arkansas for Medical Sciences in Interdisciplinary Toxicology in 1982.



### Speaker Publications:

1. Exposure of hematopoietic stem cells to ethylene oxide during processing represents a potential carcinogenic risk for transplant recipients; Research gate- Jan 2008
2. Pathogen inactivation of RBCs: PEN110 reproductive toxicology studies; Research gate- Nov 2003
3. COLLAPSIBLE CENTRIFUGATION VIAL SYSTEM AND METHOD; Publication number: 20200215533

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