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(54) Title: HUMAN LIVER PROGENITORS

(57) Abstract

Methods of isolating and cryopreserving progenitors from human liver are disclosed which include processing human liver tissue to provide a substantially single cell suspension comprising progenitors and non-progenitors of one or more cell lineages found in human liver, subjecting the suspension to a debulking step, which reduces substantially the number of non-progenitors in the suspension, and which provides a debulked suspension enriched in progenitors exhibiting one or more markers associated with at least one of the one or more cell lineages; and selecting from said debulked suspension those cells, which themselves, their progeny, or more mature forms thereof expess one or more markers associated with at least one of the one or more cell lineages. Among these markers are CD14, CD34, CD38, CD45, and ICAM. Hepatic progenitors are characterized as being 6-15 $\mu$ in diameter, diploid, glycophorin A$^-$, CD45$^-$, AFP$^{+++}$, ALB$^+$, ICAM$^+$ and with subpopulations varying in expression of CD 14$^+$, CD34$^{++}$, CD38$^{++}$, CD117$^+$. These progenitor subpopulations have characteristics expected for cells that are particularly useful in liver cell and gene therapies and for extablishing bioartificial organs.



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