

AUXILIARY REQUEST 1

1. A method for generating alveolar-like macrophages from hemangioblasts comprising the steps of: i) culturing the hemangioblasts in hematopoietic-inducing medium comprising vascular endothelial growth factor (VEGF), stem cell factor (SCF), interleukin-3 (IL-3) and interleukin-6 (IL-6), for a sufficient period of time to generate macrophages, and ii) culturing the macrophages in an alveolar macrophage-inducing medium comprising granulocyte macrophage colony stimulating factor (GM-CSF), macrophage colony stimulating factor (M-CSF), SCF, and IL-3, under suitable conditions and for a sufficient period of time to yield alveolar-like macrophages, such that the alveolar-like macrophages generated are *Myb*-independent.
2. The method of claim 1, wherein the hematopoietic-inducing medium comprises: VEGF in an amount ranging from about 5 - 50 ng/ml; an amount of IL-3 in the range of about 10-100 ng/ml; SCF in an amount ranging from about 10-100 ng/ml; and IL-6 in the range of about 1-10 ng/ml.
3. The method of claims 1-2, wherein the macrophages are cultured for a period of time sufficient to generate cells expressing the alveolar macrophage markers, F4/80 /EMR1, SiglecF and CD11c; or cells expressing CD68 and CD11c, and having a capacity to uptake AcLDL.
4. The method of claims 1-3, wherein the hemangioblasts are obtained by incubating pluripotent stem cells in a first serum-free differentiation medium to induce differentiation of the pluripotent stem cells into embryoid bodies which are then cultured in a second differentiation medium comprising BMP4, Wnt3a, VEGF and Activin-A for a period of time sufficient to yield cells expressing a hemangioblast mesoderm marker.
5. A method for differentiating pluripotent stem cells into alveolar-like macrophages comprising the steps of:
 - i) incubating the pluripotent stem cells in a first differentiation medium, wherein the first differentiation medium is serum-free, to induce differentiation of the pluripotent stem cells into embryoid bodies;
 - ii) culturing the embryoid bodies in second differentiation medium, comprising at least BMP4, Wnt3a, VEGF and Activin-A, for a period of time sufficient to generate hemangioblasts;
 - iii) culturing the hemangioblasts in a hematopoietic-inducing medium comprising VEGF, IL-3, SCF, and IL-6, for a sufficient period of time to generate macrophages; and
 - iv) culturing the macrophages in an alveolar macrophage-inducing medium comprising GM-CSF, M-CSF, IL-3 and SCF under suitable conditions and for a sufficient period of time to yield alveolar-like macrophages,such that the alveolar-like macrophages generated are *Myb*-independent.