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3186 (AU). **TROUNSON, Alan** [AU/AU]; 25 Beatty
Crescent, Ashburton, Victoria 3147 (AU). **DENHAM,**
Mark [AU/AU]; 6 Mungari Street, Dingley, Victoria 3172
(AU).

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(74) Agent: **PHILLIPS ORMONDE & FITZPATRICK**; 367
Collins Street, Melbourne, Victoria 3000 (AU).

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(71) Applicant (*for all designated States except US*):
MONASH UNIVERSITY [AU/AU]; Clayton Road,
Clayton, Victoria 3168 (AU).

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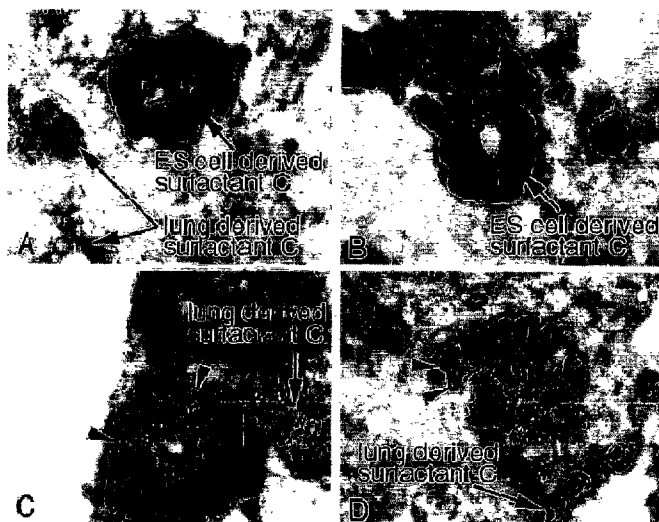
(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **MOLLARD,**
Richard [AU/AU]; 25 Albert Street, Brighton, Victoria

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(54) Title: METHODS OF INDUCING DIFFERENTIATION OF STEM CELLS INTO A SPECIFIC CELL LINEAGE

Six days
in culture



Twelve days
in culture

(57) Abstract: The present invention relates to methods of inducing differentiation of stem cells into a specific cell lineage, preferably lung cells. In particular, the invention relates to *in vitro* methods of inducing differentiation of stem cells into a specific cell lineage. The invention also relates to methods of producing and recovering differentiated stem cells of a specific cell lineage. The invention also includes differentiated stem cells and cell lineages produced by the methods of the present invention. In one aspect of the present invention there is provided a method of inducing differentiation of a stem cell into a specific cell lineage, preferably lung cells, the method including: culturing a stem cell *in vitro* in the presence of a tissue sample and/or extracellular medium of a tissue sample, under conditions that induce differentiation of the stem cell into a specific cell lineage, wherein the differentiated stem cell is the same cell type as the tissue sample.



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