

Title (en)

PRODUCTION OF FUNCTIONAL PROTEINS: BALANCE OF SHEAR STRESS AND GRAVITY

Title (de)

HERSTELLUNG FUNKTIONELLER PROTEINE: BALANCE VON SCHERBELASTUNG UND SCHWERKRAFT

Title (fr)

ELABORATION DE PROTEINES FONCTIONNELLES : EQUILIBRE ENTRE CONTRAINTE TANGENTIELLE ET GRAVITE

Publication

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Application

EP 98915320 A 19980407

Priority

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- US 4320597 P 19970408

Abstract (en)

[origin: WO9845468A1] The present invention provides a method for production of functional proteins including hormones by renal cells in a three dimensional co-culture process responsive to shear stress using a rotating wall vessel. Natural mixture of renal cells expresses the enzyme 1- α -hydroxylase which can be used to generate the active form of vitamin D:1,25-diOH vitamin D3. The fibroblast cultures and co-culture of renal cortical cells express the gene for erythropoietin and secrete erythropoietin into the culture supernatant. Other shear stress response genes are also modulated by shear stress, such as toxin receptors megalin and cubulin (gp280). Also provided is a method of treating in-need individual with the functional proteins produced in a three dimensional co-culture process responsive to shear stress using a rotating wall vessel.

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