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(54) Title: MULTILAYER ENGINEERED HEART MUSCLE

(57) Abstract: The application describes a method for manufacturing a multilayer engineered heart muscle. Specifically, the method relates to (i) providing a liquid reconstitution mixture in a mould and (ii) culturing said mixture. The method is characterized by a sequential addition of one or more further liquid reconstitution mixtures in order to obtain a multilayer engineered heart muscle. Said muscle ideally has the form of a patch, a pouch, or a cylinder. Furthermore, the application relates to a multilayer engineered heart muscle comprising collagen, cardiac myocytes and non-myocytes originating from at least 2 layers. Said multilayer engineered heart muscle forms the basis for several in vitro and in vivo applications such as the production of a multilayer engineered heart muscle for use in a patient, for example for use in heart repair.



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