Researchers develop promising stem cell-based regenerative therapy for heart disease

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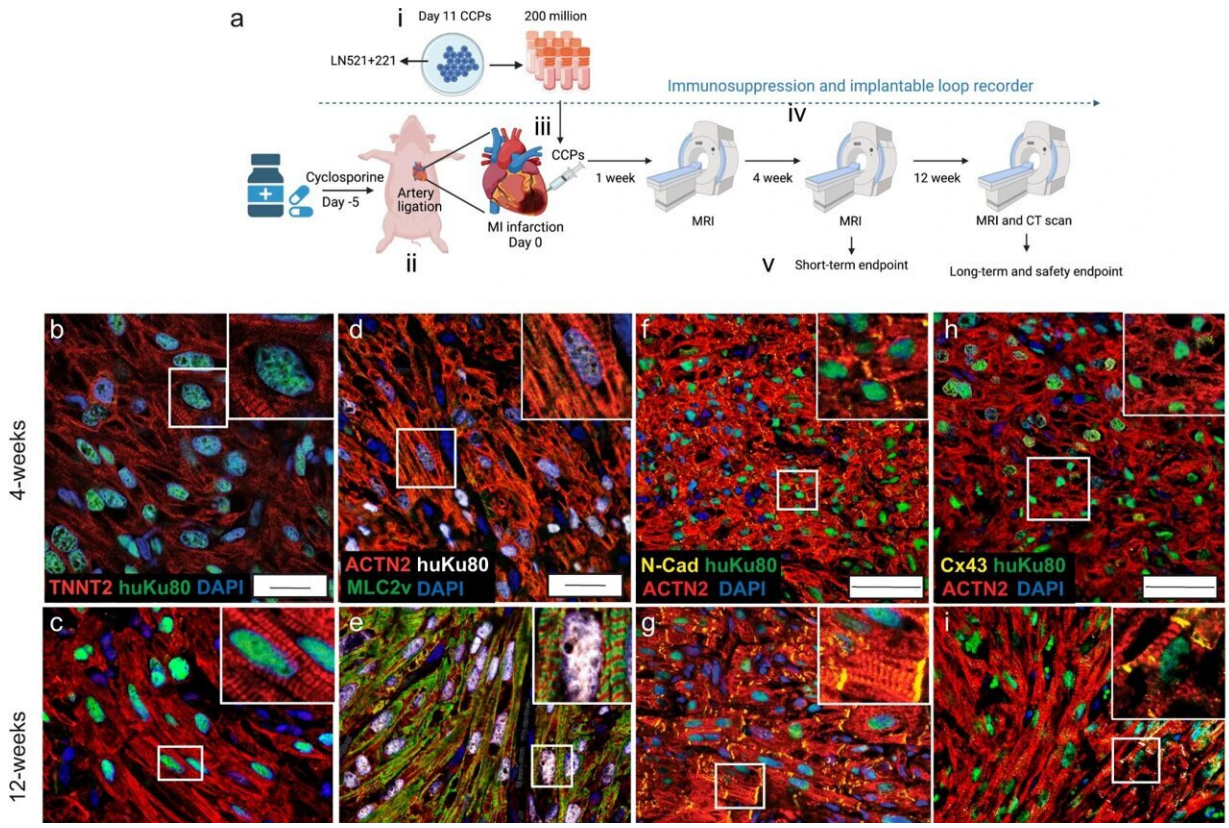

Vascularization of human muscle grafts. **a** Schematic illustration of: (i) CCP generation; (ii) permanent MI infarction; (iii) intramyocardial transplantation of CCP; (iv) post-transplantation MRI and CT scans, and (v) euthanization at 4 or 12 weeks post-transplantation. At 4 weeks, the human grafts showed disorganized staining of **b** TNNT2 (red) Scale bar = 20 μm, **d** ACTN2 (red) and MLC2v (green) Scale bar = 20 μm, **f** N-Cadherin (N-cad, yellow), and ACTN2 (red) scale bar = 50 μm and **h** connexin-43 (Cx43, yellow) and ACTN2 (red) Scale bar = 50 μm. At 12- weeks, human grafts show highly organized staining

of **c** TNNT2 (red) scale bar = 20 μm, **e** ACTN2 (red) and MLC2v (green) scale bar = 20 μm, **g** N-Cad (yellow), and ACTN2 (red) Scale bar = 50 μm, and **i** Cx43 (yellow) and ACTN2 (red) Scale bar = 50 μm. **j** Quantifications of gap junction protein (Cx43) at the remote, infarct, and graft areas at 12 weeks. (***p-value