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## **The temperature-responsive hydroxybutyl chitosan hydrogels with Polydopamine Coating for cell sheet transplantation**

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### **Abstract**

The aim of this study was to develop an effective cell sheet translocation method using a cell adhesive and temperature-responsive hydroxybutyl chitosan hydrogel (HBC). The polydopamine (PD)-coated HBC hydrogels were prepared by the dopamine self-polymerization on the surface of HBC hydrogel with different coating time, termed as P30, P60 and P120, respectively. Gelling property of HBC was not affected by PD coating. The PD-coated HBC hydrogels promoted the attachment and proliferation of mouse fibroblast cells (L929) and human umbilical vein endothelial cells (HUVECs), and allowed formation of monolayer cell sheet. In vitro translocation of HUVECs sheet

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