

## **New Technologies - Bionic Model and Tissue Repair**

### **Expanded potential stem cell for xenotransplantation**

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Expanded Potential Stem Cells (EPSCs) are a new type of stem cells derived from preimplantation embryos of several mammalian species including human, pig and bovine. They possess potent developmental potential to all cell types of extraembryonic and embryonic cell lineages. Importantly they are genetically and epigenetically stable in long term cultures and permit efficient precision genome editing. We have inactivated several genes in porcine EPSCs to minimize human immune responses and subsequently engineered expression of human cDNAs. These engineered EPSCs provide a basis for generating genome-edited pigs as xenotransplantation donors.