

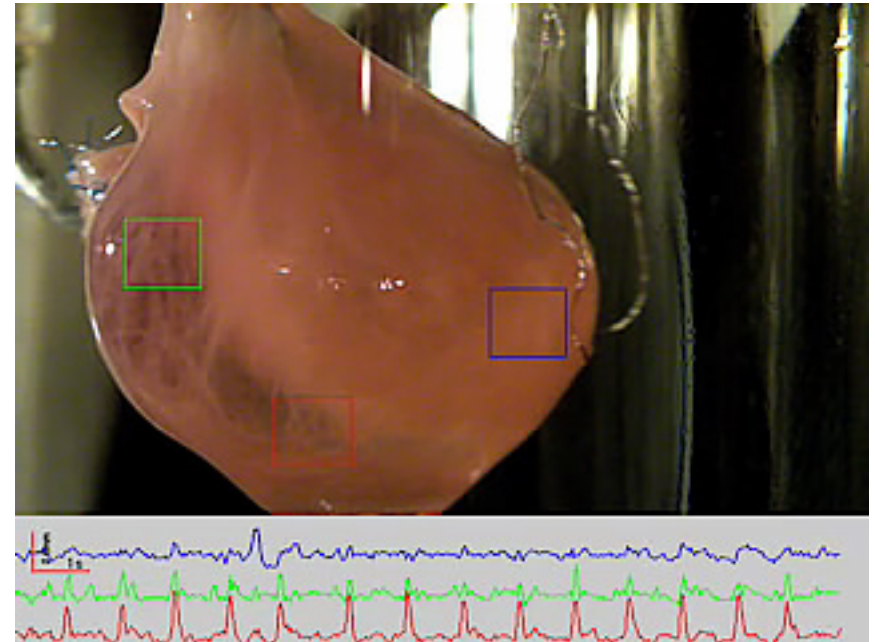
# Perfusion-decellularized Matrix: Using Nature's Platform to Engineer a Bioartificial Heart

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NNIN Facility utilized: Characterization Facility

- THE PRODUCTION OF A BIOARTIFICIAL HEART FROM DECELLULARIZED EXTRA CELLULAR MATRIX (E.C.M.) AND CULTURED CELLS
  - ◆ E.C.M. obtained from cadaveric organs can be stripped of cells and used as a scaffold to engineer tissue
  - ◆ Cultured cells can be used to grow complex tissues that can function as an organ.
  - ◆ The cultured constructs are transplantable and could serve as a source of replacement organs.
  - ◆ The CharFac facility provided expert T.E.M. service which helped characterize the muscle produced.

- MAJOR OBSERVATIONS

- ◆ The structure of organ E.C.M. Is preserved after perfusion decellularization.
- ◆ The matrix is a biocompatible scaffold for cell culture



- PUBLICATIONS

- ◆ Nat Med. 2008 Feb;14(2):213-21. Epub 2008 Jan 13