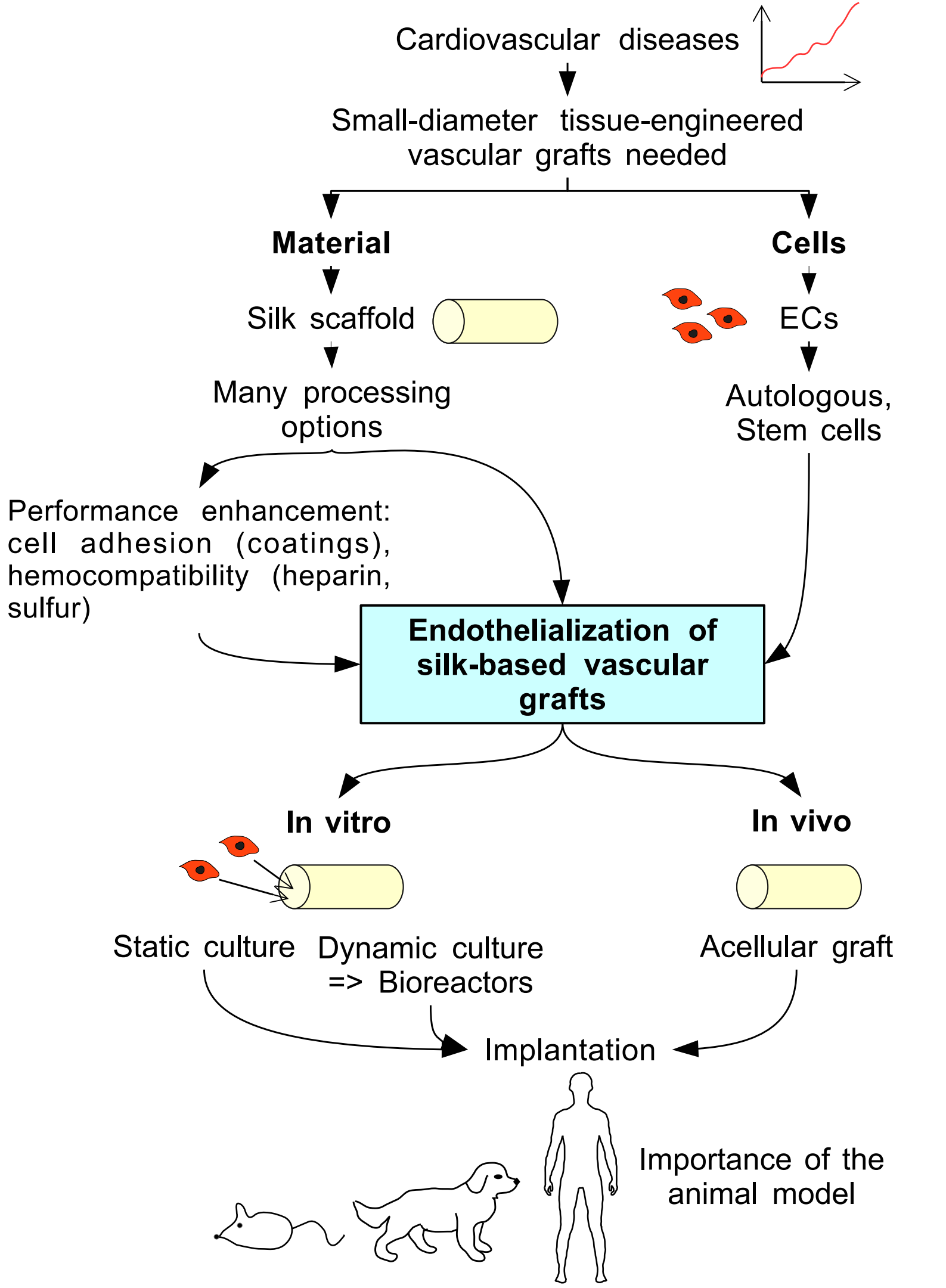
Cardiovascular diseases
Small-diameter tissue-engineered vascular grafts needed
Material
Cells
Silk scaffold
ECs
Many processing options
Autologous, Stem cells
Performance enhancement: cell adhesion (coatings), hemocompatibility (heparin, sulfur)
Endothelialization of silk-based vascular grafts
In vitro
In vivo
Static culture
Dynamic culture => Bioreactors
Acellular graft
Implantation
Importance of the animal model