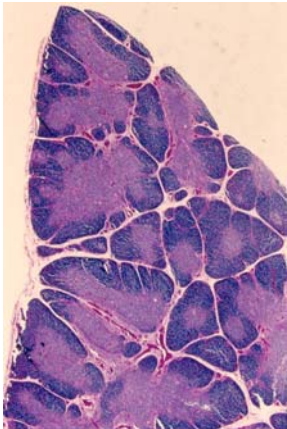


Rebuilding the immune system from stem cells

The thymus shrinks as we age



Fewer new T cells are made



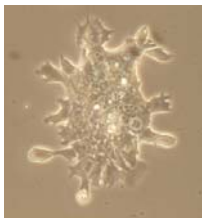
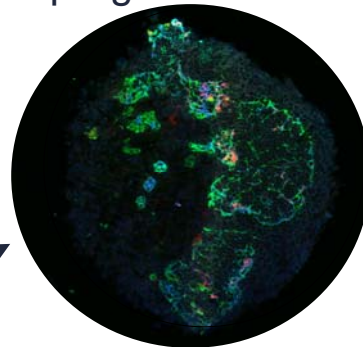
Higher rates of infection
Decreased response to vaccines
Increased autoimmunity

Growing a thymus from stem cells

Donor tissue

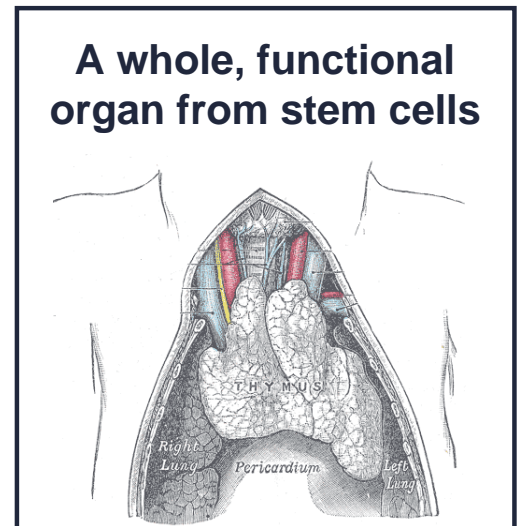


Thymic epithelial progenitor cells



Supply problems....
Can we grow them?
or make from ES cells?

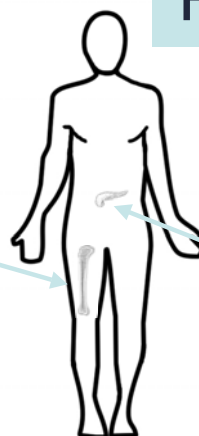
A whole, functional organ from stem cells



Potential clinical benefits

Immune reconstitution after bone marrow transplant

Transplant tolerance



Vaccine responses

Reprogramming autoimmunity (e.g diabetes)