

# *In situ* tissue engineering for cell transplantation in Parkinson's disease



UK Regenerative  
Medicine Platform

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## What is it?

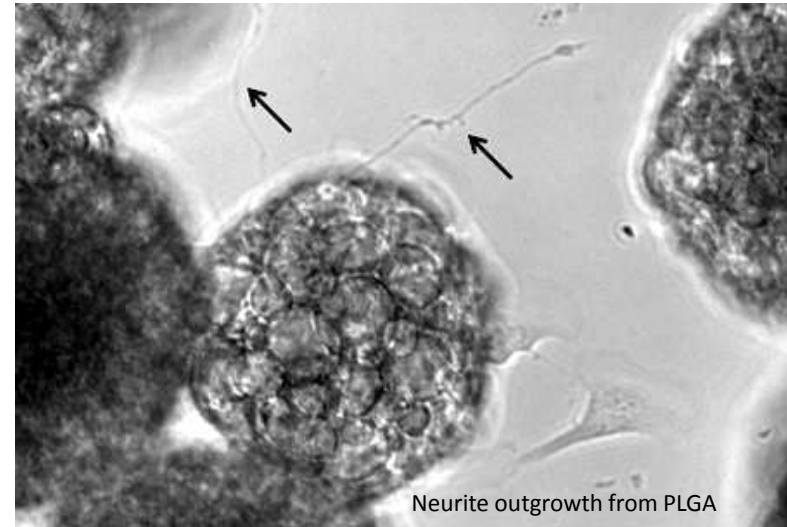
Promoting graft survival and graft-to-host interaction and connectivity

## How do you propose to tackle this?

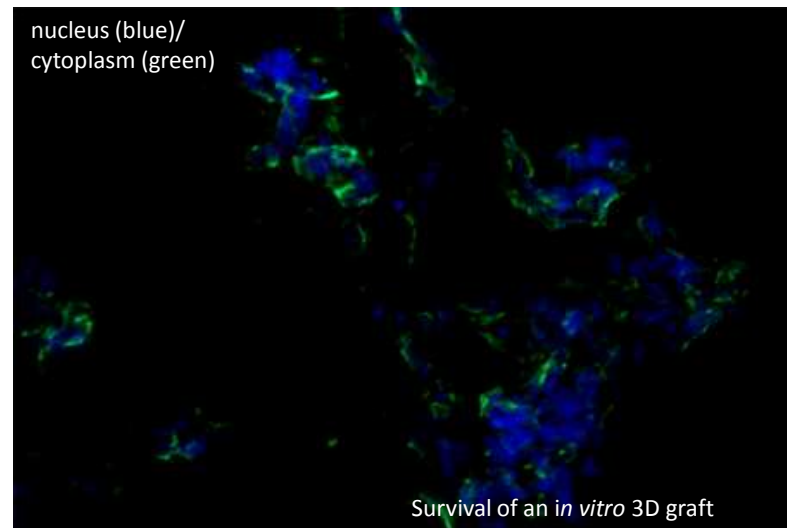
- By incorporating neurotrophic factors into the transplant to promote cell survival
- By applying ECM-like substrates to enhance neural outgrowth

## Difficult Challenges

- Optimising seeding efficacy of cells to biopolymer
- Defining optimal characteristics of the biopolymer to encourage neuronal differentiation and maturation



Neurite outgrowth from PLGA



Survival of an *in vitro* 3D graft