

Abigail Conner

Prof. Yim

Polymeric nanoparticle delivery of microRNA on nanotopographical platform for vascular tissue engineering purposes.

A major focus of vascular tissue engineering is to improve the endothelialization of vascular grafts by nanotopographical surface modifications and gene delivery. The objective of this project is to develop a polymeric nanoparticle (NP) system to deliver microRNA from a nanotopographical platform to endothelial cells. It is hypothesised that the nanotopography enhances NP-mediated microRNA delivery, thereby increasing the therapeutic efficacy and inducing the desired endothelial cell response.