

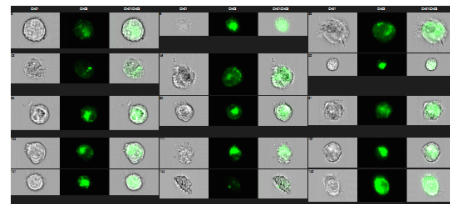
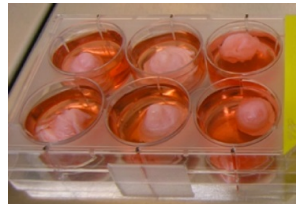
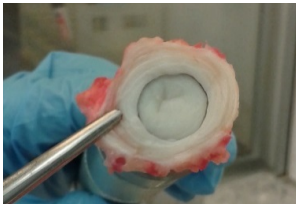
## Lab Session Topic B

### Assessment of anti-inflammatory nanoparticles internalization in a pro-inflammatory/degenerative bovine intervertebral disc organ culture

#### Introduction

Intervertebral disc (IVD) degeneration is the main cause of low back pain and one of the most frequent health problems in western countries. Resolution of disc degeneration associated inflammation is a pre-requisite for regeneration. Intradiscal therapeutic strategies could improve patient's life quality, while avoiding side/low effects related with systemic administration of therapeutic drugs.

In this module, a therapy with nanoparticles of Chitosan (Ch) and Poly-( $\gamma$ -glutamic acid) ( $\gamma$ -PGA) with an anti-inflammatory drug (Diclofenac) incorporated will be injected in a pro-inflammatory/degenerated IVD ex vivo model. Imaging flow cytometry (ImageStream, Amnis) will be used to assess nanoparticles internalization. This technology allows the quantitative analysis of the intensity, specific location and distribution of fluorescent signals within each cell.



#### Lab-assistants



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