UNIVERSITY OF GENOA
DEPARTMENT OF INFORMATICS, BIOENGINEERING, ROBOTICS AND SYSTEMS ENGINEERING
MASTER'S PROGRAM IN BIOENGINEERING

Thesis Project Form

Title (tentative): Biopolymeric hydrogels for advanced in vitro models of equine sarcoid tumors

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Description

Motivation and application domain

Development and characterization of a biopolymeric hydrogel able to recapitulate the main characteristics of the extracellular matrix of sarcoid tumors. The equine sarcoid fibroblastic skin tumor is the most common dermatological neoplasm reported in horses. There is no consistently effective therapy. Bovine papillomavirus are associated with the pathogenesis of sarcoid disease and thus equine tumors are an unvaluable model in comparative oncology.

General objectives and main activities

A biopolymeric hydrogel will be developed and characterized respect to its mechanical properties and cytocompatibility. Specifically, the ability to sustain tumor growth in 3D will be evaluated by immunocytochemistry and gene expression profiling.

Training Objectives (technical/analytical tools, experimental methodologies)

To gain practical experience in the development, engineerization and characterization of the formulation of hydrogels for tissue engineering.

Place(s) where the thesis work will be carried out: DIBRIS, University of Genova; Istituto Zooprofilattico Sperimentale Del Piemonte E Della Liguria.

Additional information

Maximum number of students: 1