



Thesis Project Form

Title (tentative): Design, development and verification of a dynamometer to evaluate a tissue level human intestine cells contraction.

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Description

Motivation and application domain

The motivation and application domain is clinically referred as the disease intestinal pseudo-obstruction of muscular origin (no of neurological etiology). Such a disease (quite an orphan disease) needs bioengineering support techniques for diagnosis and follow-up.

General objectives and main activities

The general objective of the thesis is the design, development and experimental verification at tissue level (tissues of suspected dignosed patient with pseudo-obstruction of muscular nature) of an instrument to evaluate in a quantitative way the force of contraction of the tissues taken from bioptic material from the patient.

Training Objectives (technical/analytical tools, experimental methodologies)

Metheodologies include technical construction of a dynamometer and adequate manipulation of experimental setup to perform the measuements of the bioptic material.

Place(s) where the thesis work will be carried out: Biophysics Institute of the National Research Council in
Genoa

Additional information

Maximum number of students: 1