

MSc project

Title: Electric therapy in wound healing

Introduction:

Chronic wounds are dangerous, care intensive and expensive. Millions of diabetics/ heart patients suffer from chronic wounds, which can take months/ years to heal. They are painful, ruin lives and cost society millions.

Vanquish Innovation is dedicated to raising the standard of wound care, using electric therapy to improve quality of life for patients and reduce cost of care. We are science based cooperating with Professor Colin McCaig, Institute of Medical Sciences, University of Aberdeen, Scotland - one of the foremost ES-experts in the world - as well as excellent technicians and designers.

Objectives:

You are to develop a mathematical model of the mechanisms of electric therapy in wound healing and implement this model in a simulation environment (e.g. Comsol). Simulation experiments are to be designed and executed to study and optimize the electrical characteristics of various electrode designs and placements.

Your profile:

You are a techie with a vast knowledge of electricity and electronics (electrodes, sensor technology, and programming of microcontrollers). You have experience with Comsol and can teach yourself new features. Likewise, you have detailed insight into the human body, cells, tissue and healing processes. You are ambitious, methodical, and document your work. You are street-smart, practical and have a positive can-do mentality. You are dedicated, dependable and respect deadlines.

Opportunities:

Depending your (team) profile and aptitude there are many possibilities for the right candidate(s) ranging from MA project, research assignments, internship or perhaps employment opportunities in this exciting venture.

Supervisors:

Associate professor, Kaj-Åge Henneberg, DTU Elektro.
CEO, Valdermar Siesbye, Vanquish Innovation.

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