

Research group: Meshes and Biologics (B. Braun Surgical, S.A.)

Leader of the group: Dr. Christine Weis

Positions available: 1

Offer description: The main research lines of our R&D laboratory focus on the development of medical devices for wound closure and are related to sutures, meshes for reinforcement of tissue, tissue adhesives or hemostats. B. Braun Surgical has a long term research agreement with VHIR, particularly with the General Surgery Research Group.

The General Surgery Research Group (coordinator Dr. Manuel Armengol) was officially established in June 2011 at VHIR with the mission to contribute to advances that help to improve high quality general surgical care and outcomes. Subsequently, the "Abdominal Wall, Biomaterials and Bioengineering" laboratory (coordinator Dr. M^a Antònia Arbós), focuses on understanding the role of the extracellular matrix and inflammation in abdominal wall defects to deeply characterize correlates with local (human) fibroblasts function. In addition, this lab seeks to develop collaborative studies in biomaterials research from multidisciplinary backgrounds, all aimed at understanding the underlying events associated to soft tissue repair and (smart) biomaterials integration to impact on the development of new tailored implants. The studies are based on patient-derived tissue samples and primary fibroblasts, as well as on surgically-induced experimental models.

B. Braun Surgical is offering one position for a student that should be working on a project related to the development of meshes with enhanced properties under the co-direction of Dr. Arbós (IRVH) and Dr. Weis (BBS), being located the main tasks at VHIR. It is one of the main goals of the project to improve the understanding of the interaction between an implanted foreign body with the tissue through *in vitro* tests, mimicking biological scenery and the use of animal models and subsequent analytical techniques. As a research fellow, the duties will include to carry out (independently) routine and non-routine experiments and activities of the laboratory such as:

- (Primary) cell cultures and cell functional assays
- Protein and RNA tissue and cellular extractions

- Protein and gene expression analyses
- Histological analyses and (confocal) microscopy
- Animals models of biomaterials-based soft tissue repair
- Detailed documentation of experimental work

Requirements:

- This position is ideal for someone who is interested in pursuing a professional career in the field of translational research
- B.S. in Biology, Biotechnology, Biomedicine or similar
- Strong understanding of cellular and molecular biology and a strong interest in the field of biomaterial-based new therapies
- Good English speaking and writing skills
- Ability to work independently and ability to perform as a team member
- Computer experience in common Microsoft applications