

Job Description: Senior Lead Engineer

Reference: CON20100708

Reporting to the Director, Cuff Design and Patient Interface Mechanisms, the employee will be a key member of the Cuff and Patient Interface Design group. (S)he will act as Senior Lead Engineer generating innovative ideas, responsible for characterization of existing implantable biosensor/stimulator, improving the current system and creating next generation platforms from development to implementation.

More specifically, the Senior Lead Engineer will:

- A) Translate high-level product concepts and research requirements into specific designs that emphasize optimal interaction with the biological environment;
- B) Assume technical ownership of Cuff and Patient Interface Mechanism projects from concept through product release, including the major development deliverables (product specifications, design verification testing, preclinical testing, etc.);
- C) Assist in mechanical design of components and products on CAD software, material selection and Design for Manufacturing (DFM);
- D) Perform materials and device interface modeling/characterization with their environment (biological tissue) using multi-physics simulation approach (FEM);
- E) Define and execute tests and material characterization supporting the qualification of components and products such as material joining, mechanical strength, electrical performance, physicochemical behavior for metal, polymer and biomaterial using techniques such as SEM, TEM, XPS and others in support of design activity in the group;
- F) Design and execute evaluation protocols in-vitro and in pre-clinical environment;
- G) Enhance intellectual property position of the Company through the conception and filing of design and process patents;
- H) Maintain continual awareness of new and advancing technologies in the field of Applied Physics related to the field of biomedical engineering by attending scientific meetings, meetings with suppliers and collaborators;
- I) Work with healthcare professionals to develop a concept into a successful product;
- J) Apply design control processes;
- K) Document his/her work properly as per FDA and ISO 13485 requirements.

Only qualified applicants will be contacted.

Required Skills

Technical Expertise

1	Essential	Strong analytical engineering capacity
2	Essential	Fundamental understanding of biomaterials, mechanical and electrical systems, micro-/nanofabrication processes applied to implantable devices
3	Essential	In dept knowledge of human anatomy, physiological tissue property and biological material interface
4	Essential	Knowledge of surgical procedures and tools used in pre-clinical and clinical environment
5	Important	Expert at applying engineering analysis techniques and tools for multi-physics simulation/modeling of the device within its environment: e.g., finite element method (COMSOL, MATLAB)
6	Important	Understand and has experience with FDA's Design Control and regulatory processes, CE mark process, and ISO requirements

General Criteria

1	Essential	Bachelor of science in mechanical engineering or related technical discipline with a minimum of 10 years of experience in product development and 5 years in design of medical devices. Desired requirements include as master of science.
2	Essential	Work and communicate effectively with other engineers, designers, scientists, surgeons and suppliers to develop products from concept through commercialization
3	Essential	Concise, organized, able to multi-task with the ability to prioritize. Will drive projects to completion
4	Essential	Hands-on and comfortable in a preclinical environment
5	Important	English; preferred bilingual (English-French)