



MONTREAL, Senior Experimental Design Engineer, full-time, in-person

Puzzle Medical Devices® Inc. is developing a percutaneous heart pump for patients with advanced heart failure. The device's modular design allows for safe percutaneous implantation to support both renal and cardiac function through 4mm-pumps implanted in the descending aorta, allowing patient mobility. To date, Puzzle Medical Devices® Inc. has successfully:

- Completed 3 financing rounds in [2022](#), [2023](#), and [2025](#);
- Completed its [first-in-human study](#) with all patients experiencing improvements in cardiac and kidney function from 2022 - 2024;
- Grew its [team](#) to ~50 people;
- Received U.S. Food and Drug Administration (FDA) [Breakthrough Device Designation](#) in 2021.

Position Summary

Puzzle Medical Devices® Inc. is currently seeking a Senior Experimental Design Engineer with a strong background in experimental engineering, data analysis, and fluid dynamics to support the development, verification and validation of our heart pump. The ideal candidate will combine a strong foundation in fluid dynamics and biological fluids. At Puzzle Medical Devices® Inc., we value individuals who are highly analytical, self-driven, meticulous, and passionate about advancing healthcare through innovation.

Role And Responsibilities

- **Experimental Design, Execution & Analysis**
 - Design, develop and conduct customized experimental setups to test various parameters and validate performance criteria aligned with regulatory requirements.
 - Build protocols, document process.
 - Build report & analyze experimental data to assess performance, identify trends, and validate design hypotheses.
 - Work with biological liquids and create mixtures tailored to specific experimental needs.
 - Ensure precision and reliability in experimental configurations.
- **Mechanical Design**
 - Utilize SolidWorks to design mechanical components and assemblies for experimental setups.
- **Collaboration & Problem-Solving**
 - Work closely with the R&D teams to refine experiments and troubleshoot issues.
 - Propose innovative solutions to improve experimental efficiency and effectiveness.



Qualifications

- Bachelor's in Mechanical Engineering or a related field.
- Proven experience in experimental design and setup, including work with precise and complex systems.
- Proficiency in SolidWorks or similar CAD tools, with a focus on mechanical design for experimental setups.
- Strong manual dexterity and attention to detail, with the ability to handle delicate and intricate tasks.
- Analytical mindset with experience interpreting experimental data and troubleshooting setups.

Note: This job description is intended to provide a general overview of the position. It is not an exhaustive list of responsibilities, qualifications, or requirements. The employer reserves the right to modify the duties or requirements of the position as needed.