

GelMEDIX Job Description  
Biomedical Engineer  
April 2021

GelMEDIX an exciting, stealth-stage biomedical startup developing novel hydrogels to address major unmet needs in ophthalmology and other fields to improve treatment outcomes and patient compliance. GelMEDIX's core technologies were born out of a multi-year collaboration between Dr. Reza Dana (Mass Eye and Ear, Harvard Medical School) and Dr. Nasim Annabi (UCLA), who co-founded the company in early 2020. The company has seed funding from leading investors as well as funding from the military for treating ocular injuries on the battlefield

GelMEDIX is looking to recruit a Biomedical Engineer/Bioengineer to join the R&D team and support the development of novel ocular products for both civilian and military applications.

GelMEDIX's proprietary platforms allow for great breadth and opportunity in various disease areas, and the candidate may work on multiple programs in parallel at various stages of development.

The candidate will have strong, hands-on, bench-oriented laboratory experience in biomaterial/hydrogel synthesis, prototype development, and drug delivery. S/he will be comfortable working independently in a fast-paced environment, thinking broadly and innovatively beyond his/her own discipline. This is a unique opportunity to be an important early contributor to the success of a well-positioned, exciting and entrepreneurial biopharmaceutical/biomaterial company.

**Role and Responsibilities:**

- Generate hydrogel libraries with focus on optimizing physical properties for various product requirements
- Test and evaluate various hydrogel synthesis processes and crosslinking chemistries for use in product development
- Characterize physico-chemical properties of hydrogel formulations including <sup>1</sup>HNMR, mechanical testing, degradation, swelling, and adhesion.
- Design and develop devices to apply hydrogels in a variety of settings, both civilian and military
- Design and execute *in vitro* cell studies and *ex vivo* tests to assess the cytotoxicity and efficacy of the hydrogels
- Encapsulate drugs into hydrogels using a variety of approaches, including nanoparticles, micelles, and liposomes

- Work closely and collaboratively with academic founders, outside expert consultants, and internal team members
- Write scientific study plans and reports
- Present findings to senior leadership
- Represent GelMEDIX at various scientific conferences
- Participate in program team activities including regulatory, CMC, and fundraising as needed

**Qualifications:**

The Biomedical Engineer/bioengineer will be a skilled hands-on scientist with a passion for research and product development who can both carefully implement existing protocols and play a role in innovating new ones. S/he will have a mix of the follow personal and professional characteristics:

- PhD in Biomedical Engineering, bioengineering, material engineering, or similar discipline from a leading academic program
- Industry experience preferred, but not required
- Experience with polymer synthesis and hydrogel crosslinking
- Experience with hydrogel physical characterization including mechanical, adhesion, burst pressure, wound closure, swelling and degradation tests.
- Experience with hydrogel chemical characterization, including analytical techniques (NMR, spectroscopy techniques and HPLC)
- Experience with device fabrication for hydrogel delivery
- Familiarity with using CAD software
- Experience with drug encapsulation techniques and drug release testing
- Ability and willingness to travel as necessary to meet essential initiatives
- Effective written and oral communication skills
- Collaborative working style
- Creative scientist who can work closely at the interface of engineering, chemistry, and biology
- Adaptability, flexibility, independence and resourcefulness - willing to roll-up-sleeves and multi-task in order to thrive in a growing environment
- Visibility and involvement in biotech/biopharma/biomaterials community
- Ability to successfully function in a dynamic, entrepreneurial, startup organization

GelMEDIX is based in Massachusetts with its R&D laboratory at LabCentral. GelMEDIX is an equal opportunity employer and strictly prohibits unlawful discrimination based upon an individual's race, color, religion, gender, sexual orientation, gender identity/expression, national origin/ancestry, age, mental/physical disability, medical condition, marital status, veteran status, or any other characteristic protected by law.

For more information, or to apply now, please email a resume and cover letter to [hr@gelmedix.com](mailto:hr@gelmedix.com)