



**Department of Health and Human Services (HHS)
Food and Drug Administration (FDA)
Center for Devices and Radiological Health (CDRH)
Office of Science and Engineering Laboratories (OSEL)**

Position Title: Engineering Researcher, Orthopaedic Devices (Staff Fellow)

Location: Silver Spring, Maryland

Application Period: September 20, 2021 through October 20, 2021

Salary Range: \$72,750 - \$159,286 (commensurate with education and experience)

Position Information: Full-Time – appointment term of 3 years, with possibility of being extended.

Who may be considered: US Citizens; Permanent Residents; and Non-Citizens

Introduction: The Food and Drug Administration ([FDA](#)) is the regulatory, scientific, public health and consumer protection agency responsible for ensuring all human and animal drugs, medical devices, cosmetics, foods, food additives, drugs and medicated feeds for food producing animals, tobacco and radiation emitting devices safe, and effective. The mission of [CDRH](#) is to protect and promote the public health by performing essential public health tasks by making sure that medical devices and radiological health products are safe for people in the United States. [OSEL](#) is dedicated to promoting patient access to innovation, safe and effective medical devices through best-in-the-world regulatory science. The Division of Applied Mechanics ([DAM](#)) within CDRH's OSEL, identifies and uses applied mechanics to investigate interactions between the human body and medical devices or radiation-emitting products.

Position Summary: The DAM has an opening for a staff fellow/engineering researcher in the Orthopaedic Devices Program, to study the biomechanical performance of orthopaedic medical devices. In this position, the staff fellow will be an integral part of a team conducting cutting-edge regulatory science that directly impacts public health and promotes medical device safety and innovation. Specifically, the primary duties for this position will be to perform laboratory research to develop standardized test methods to characterize the mechanical performance of a variety of orthopaedic devices such as joint arthroplasty implants and spinal instrumentation. The candidate will develop original research projects that advance science surrounding orthopaedic devices. They will promote findings through conferences, meetings, publications, and workshops. The staff fellow will also gain experience in the regulatory process through review of medical device submissions. They will provide subject matter expertise and regulatory support in the form of consulting reviews of new medical devices and accompanying test reports. The candidate should have extensive hands-on and modeling biomechanical research experience of orthopaedic medical materials and devices. Experience in the following research areas/techniques is desirable: mechanical bench testing (load frame operation), computational modeling (finite element analysis), failure analysis, cadaveric preparation and testing, sensors or instrumentation technology (SMART devices), advanced manufacturing, materials analysis, optical and electronic microscopy, and/or motion capture analysis. Excellent speaking and writing skills in English are required.

Educational Requirements: Applicants must possess a Ph.D., M.S., or equivalent degree in biomedical engineering, mechanical engineering, or a relevant scientific field. The applicant must be able to demonstrate mastery of principles and practices in biomechanics, biomaterials, and biomedical engineering. This will enable the staff fellow to serve as a technical authority in the scientific analysis of the safety and effectiveness of medical devices, develop new and innovative approaches to scientific testing required for medical device reviews by FDA, and provide an authoritative analysis of scientific data submitted to FDA. Applicants who have completed part or all of their education outside the U.S. must have their foreign education evaluated by an accredited organization to ensure the foreign education is comparable to



education received in accredited educational institutions in the U.S. This evaluation must also be provided by midnight Eastern Time on the closing date of this vacancy announcement. For more information on Foreign Education verification, visit the U.S. Department of Education. Another listing of services that can perform this evaluation is available at the National Association of Credential Evaluation Services (NACES) website.

Qualifications: Please document knowledge, skills, and abilities relevant to each area described below:

- At least 3 years of experience after Ph.D./M.S. education with leading, planning, and conducting biomechanical research of orthopaedic medical devices and materials (e.g., mechanical bench testing, failure analysis, and computational modeling). Demonstration of a track record of independent and collaborative research work is required.
- Experience in reviewing, analyzing, and using scientific data or other information to advance and convey understanding of biomedical materials, processes, and medical devices.
- Ability to participate in and contribute to multi-disciplinary teams and work groups to resolve difficult or controversial research questions.
- A Ph.D. or M.S. from an accredited university in biomedical engineering, mechanical engineering, or a relevant scientific field.
- Excellent written and spoken English.

How to Apply: Prior to applying, please see the following instructions:

- Documents to submit: electronic resume or curriculum vitae, cover letter describing why you are uniquely qualified for this, and copy of transcripts
- Compile all applicant documents into one combined document (i.e., Adobe PDF)
- Include Job Reference code “**2020-OSEL-DAM-033**” in the email subject line.
- Email applicant package to CDRH-OSEL-Opportunities@fda.hhs.gov.

Additional Announcement Information

- 1. Security and Background Requirements:** All candidates must meet applicable security requirements which include a background check and a minimum of 3 out of the past 5 years’ residency status in the US. If not previously completed, a background security investigation will be required for all appointees. Appointment will be subject to the applicant’s successful completion of a background security investigation and favorable adjudication. Failure to successfully meet these requirements may be grounds for appropriate personnel action. In addition, if hired, a background security reinvestigation or supplemental investigation may be required at a later time. Applicants are also advised that all information concerning qualifications is subject to investigation. False representation may be grounds for non-consideration, non-selection, or appropriate disciplinary action.
- 2. Benefits:** The Federal Government offers a comprehensive benefits package. Explore the major benefits offered to most Federal employees at <https://www.usa.gov/benefits-for-federal-employees>
- 3.** For more information about Office of Science and Engineering Laboratories (OSEL) at FDA/CDRH: <https://www.fda.gov/about-fda/cdrh-offices/office-science-and-engineering-laboratories>.
- 4.** Travel, transportation and relocation expenses **will not** be paid.