Opportunity Title: FDA Postdoctoral Fellowship - Improving Biological Product Quality Using State-of-the-Art Analytics
Opportunity Reference Code: FDA-CBER-2026-0061

Organization U.S. Food and Drug Administration (FDA)

Reference Code FDA-CBER-2026-0061

How to Apply ***To submit your application, scroll to the bottom of this opportunity and click APPLY.***

A complete application consists of:

- An application
- Transcripts – Click here for detailed information about acceptable transcripts
- A current resume/CV, including academic history, employment history, relevant experiences, and publication list
- One educational or professional recommendation

All documents must be in English or include an official English translation.

If you have questions, send an email to ORISE.FDA.CBER@orau.org. Please include the reference code for this opportunity in your email.

Application Deadline 9/25/2026 3:00:00 PM Eastern Time Zone

Description ***Applications will be reviewed on a rolling-basis.**

FDA Office and Location: A research opportunity is currently available at the Center for Biologics Evaluation and Research (CBER), Food and Drug Administration (FDA) located in Silver Spring, Maryland.

The Center for Biologics Evaluation and Research (CBER) is one Center within the Food and Drug Administration, an Agency within the United States Government's Department of Health and Human Services. CBER's mission is to protect and enhance the public health through the regulation of biological and related products including blood, vaccines, allergenics, tissues, and cellular and gene therapies.

Research Project: The Structural Biology section of the Laboratory of Bacterial Polysaccharides (PS) is searching for a postdoctoral fellow for NMR studies of glycans, glycopeptides and glycoproteins. Possible projects include on-cell NMR, glycan-antibody interactions and glycoconjugate vaccine structure and dynamics. Experience with in-cell NMR, nuclear relaxation/dynamics and quantitative analysis are pluses.

Glycans form the basis of glycoconjugate vaccines, yet their mechanisms of action are poorly understood. This is because glycans structure-function relationships are poorly understood. Nuclear magnetic resonance (NMR) spectroscopy is an excellent tool for obtaining detailed structural data at the atomic level. Therefore, projects in the group are aimed at improving our understanding of oligo- and polysaccharide structure and dynamics. Projects will focus on using NMR in novel ways to deepen and refine our insight into glycan structures, the equilibrium amongst multiple

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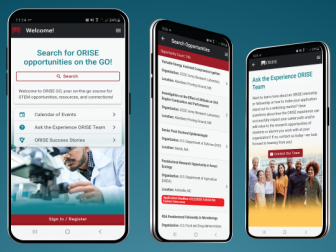
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conformations and delineate details of the averaging we typically observe by NMR. Using these methods, we will analyze glycan structure of pneumococcal and meningococcal oligo- and polysaccharides both free and when conjugated to peptides and compare them to better understand their similarities and differences.

Currently, characterization of PS-conjugate vaccines is hampered by the complexity of PS-conjugates. This research aims to improve FDA-regulated product quality, safety, and efficacy for PS-conjugate vaccines. This project is designed to link three-dimensional oligo- and PS three-dimensional structure with function, will advance our understanding of oligo- and PS structure-function relationships. Through NMR structural studies, method development and the identification and quantification of key structural characteristics, the project will generate evidence that supports improved evaluation of PS-conjugate vaccines.

Learning Objectives: You will gain experience in state-of-the-art NMR methods used to characterize oligo- and polysaccharides and their three-dimensional structure and dynamics. You will also have access to multiple other biophysical characterization methods that will aid in further detailing three-dimensional oligo- and polysaccharide structure. There will be opportunities for you to learn and develop methods to isotopically label polysaccharides and characterize the polysaccharides in biological systems.

This professional development experience will offer you opportunities to contribute to scholarly publications, present at meetings, and gain valuable exposure to FDA operations and regulatory decision-making.

Mentor: The mentor for this opportunity is Daron I. Freedberg (Daron.Freedberg@fda.hhs.gov). If you have questions about the nature of the research, please contact the mentor.

Anticipated Appointment Start Date: May 1, 2026. Start date is flexible and will depend on a variety of factors.

Appointment Length: The appointment will initially be for one year, but may be renewed upon recommendation of FDA and is contingent on the availability of funds.

Level of Participation: The appointment is full time.

Participant Stipend: The participant will receive a monthly stipend commensurate with educational level and experience.

Citizenship Requirements: This opportunity is available to U.S. citizens, Lawful Permanent Residents (LPR), and foreign nationals. Non-U.S. citizen applicants should refer to the Guidelines for Non-U.S. Citizens Details page of the program website for information about the valid immigration statuses that are acceptable for program participation.

This program, administered by ORAU through its contract with the U.S. Department of Energy to manage the Oak Ridge Institute for Science and Education, was established through an interagency agreement between

DOE and FDA. The participant will receive a monthly stipend commensurate with educational level and experience. Proof of health insurance is required for participation in this program. Participants do not become employees of FDA, DOE or the program administrator, and there are no employment-related benefits.

Completion of a successful background investigation by the Office of Personnel Management is required for an applicant to be on-boarded at FDA. OPM can complete a background investigation only for individuals, including non-US Citizens, who have resided in the US for a total of three of the past five years.

FDA Ethics Requirements

If an ORISE Fellow, to include their spouse and minor children, reports what is identified as a Significantly Regulated Organization (SRO) or prohibited investment fund financial interest in any amount, or a relationship with an SRO, except for spousal employment with an SRO, and the individual will not voluntarily divest the financial interest or terminate the relationship, then the individual is not placed at FDA. For additional requirements, see FDA Ethics for Nonemployee Scientists.

FDA requires ORISE participants to read and sign their FDA Education and Training Agreement within 30 days of his/her start date, setting forth the conditions and expectations for his/her educational appointment at the agency. This agreement covers such topics as the following:

- Non-employee nature of the ORISE appointment;
- Prohibition on ORISE Fellows performing inherently governmental functions;
- Obligation of ORISE Fellows to convey all necessary rights to the FDA regarding intellectual property conceived or first reduced to practice during their fellowship;
- The fact that research materials and laboratory notebooks are the property of the FDA;
- ORISE fellow's obligation to protect and not to further disclose or use non-public information.

Qualifications The qualified candidate should be currently pursuing or have received a doctoral degree in the one of the relevant fields. Degree must have been received within the past five years, or be currently pursuing and anticipated to receive by September 30, 2026.

Preferred skills:

- Experience with solution NMR of biomolecules
- A background in quantitative analysis, biophysics and computers (Linux).

Point of Contact Ashley

Eligibility

- **Degree:** Doctoral Degree received within the last 60 months or

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Requirements

anticipated to be received by 9/30/2026 11:59:00 PM.

- **Discipline(s):**
  - **Chemistry and Materials Sciences** (6 👁)
  - **Life Health and Medical Sciences** (5 👁)

Affirmation

I am a U.S. citizen, or I have lived in the United States for at least 36 out of the past 60 months. (36 months do not have to be consecutive.)
and
I have read the FDA Ethics Requirements.