

2025 Arnold O. Beckman Postdoctoral Fellowship in Chemical Sciences or Chemical Instrumentation

PROGRAM OVERVIEW

BACKGROUND

Following in the footsteps of our Founder, Dr. Arnold O. Beckman, himself a photochemist and instrument developer, the Arnold and Mabel Beckman Foundation recognizes the clear need for more support for postdoctoral training opportunities in the chemical sciences. The purpose of the Arnold O. Beckman Postdoctoral Fellows Award is to support postdoctoral fellows at nonprofit research institutions across the United States who are judged to have the highest potential for success in a career in chemistry and who will become the next generation of leaders and innovators in science, engineering, and technology.

The Fellowships will be in two tracks:

A. Postdoctoral Fellowship in Chemical Sciences will allow chemists to pursue advanced research within the core areas of fundamental chemistry, such as chemical physics, chemical engineering, and chemistry of materials research. This fellowship is not intended to fund proposals in the fields of medicinal chemistry, chemical biology, or biochemistry.

B. Postdoctoral Fellowship in Chemical Instrumentation will allow researchers in chemistry to conceptualize, develop and build instrumentation suitable to advanced research in chemistry, chemical physics, chemical engineering, and chemistry of materials science. Instrumentation projects must be suitable to the two-year fellowship time-frame, be driven by a need in the chemical sciences listed above, be innovative in method, speed or process or represent a wholly new instrument for technological advancement in chemistry, and may potentially be used for future research in the broader scientific community.

It is the Foundation's intent that the Arnold O. Beckman Postdoctoral Fellowship will be the catalyst to aid in the fellow's transition to an outstanding, independent academic research career or a research career in industry/governmental laboratories.

AWARD AMOUNT

The Fellowship award amount is \$224,000 over 2 years for salary, fringe benefits, and research expenditures; instrumentation fellowships will receive an additional one-time amount of up to \$200,000 for material/development costs. The Fellowship may be extended to an optional third year with \$118,000 in funding for salary, fringe and research expenditures, dependent upon review of research progress and renewal application submitted during the second year of the Fellowship.

- Fringe Benefits (allowable costs): individual/family health insurance (any combination of medical, vision, and/or dental) whether purchased as a group or individual plan, disability insurance, retirement savings, and dependent or elder care.

- Research Expenditures: these may include, but are not limited to, lab supplies and equipment, travel to scientific meetings, journal subscriptions, books, computers, personnel and training courses.
- The Arnold and Mabel Beckman Foundation does not provide for overhead or indirect costs. **Institutions are to provide funding for overhead and administrative costs.**
- Award recipients or mentors may have existing funding in similar areas of research, however **the new research proposed for this fellowship must be unique and currently unfunded.** During the term of the award, fellows may secure additional funding, but may not secure an additional named fellowship and must continue to work full-time on the research direction proposed.

Arnold O. Beckman Postdoctoral Fellows Award Annual Funding: 2025 Program

Award Year Funding	Stipend	Research Expenditures	Fringe	Total: Stipend, Research Expenditures, & Fringe	Chemical Instrument ONLY: Additional One-Time Research Expenditure Supply Funding
1	\$80,000	\$10,000	\$20,000	\$110,000	\$200,000
2	\$83,000	\$10,000	\$21,000	\$114,000	Not applicable
3	\$86,000	\$10,000	\$22,000	\$118,000	Not applicable

NAMING

Recipients of the award shall carry the title "Arnold O. Beckman Postdoctoral Fellowship in Chemical Sciences" or "Arnold O. Beckman Postdoctoral Fellowship in Chemical Instrumentation" alone and not in conjunction with any other name. Recipients may not hold any other named fellowship during the award period.

PROGRAM YEAR

The Arnold O. Beckman Postdoctoral Fellows are funded annually in June. Funding for the award term will be contingent upon the timely receipt of all required reports.

Each year of the 2025 Program will run from July 1 – June 30:

Year 1: July 1, 2025 – June 30, 2026

Year 2: July 1, 2026 – June 30, 2027

(Optional) Year 3: July 1, 2027 – June 30, 2028

LEVEL OF COMMITMENT

Postdoctoral Fellows are required to pursue their research and professional training during the award term on a full-time basis.

POSTDOCTORAL TRANSFER

The Arnold O. Beckman Postdoctoral Fellowship is transferable to other academic US research institutions that carry 501c3 or equivalent status when transfer is due to the Fellow's Mentor moving institutions. In cases where the Fellow would like to change mentor, or institution, or both, during the term of the Fellowship, the Foundation will review those requests on a case-by-case basis.

TRANSITION TO ACADEMIC POSITION

Fellows who accept an academic faculty or full-time research position at an academic US research institution that carries 501c3 or equivalent status during the term of their award will be allowed to transition their remaining funding, from that program year, to their new institution.

EARLY TERMINATION OF AWARD

Fellows who accept a position in industry, a government laboratory, or other non-qualified institution, during their award term will forfeit the remainder of the funding. The Fellow's postdoctoral institution will be required to return the unexpended funds to the Foundation.

ELIGIBILITY CRITERIA FOR POSTDOCTORAL APPLICANTS AT TIME OF LETTER OF INTENT (LOI) DUE DATE:

- U.S. Citizen or permanent resident of the United States or its possessions, or hold Deferred Action for Childhood Arrivals (DACA) recipient status; and
- Current graduate student anticipated to complete a PhD in the chemical sciences by May 1, 2025, or current postdoctoral researcher with a granted/conferred PhD in the chemical sciences with no more than 18 months of cumulative postdoctoral research experience; and
- Must pursue postdoctoral training within the core areas of fundamental chemistry, such as: chemical physics, chemical engineering, and chemistry of materials research and, in an area of the chemical sciences. While bio related applications will be considered, the fellowship is not intended to fund proposals that are supported by traditional NIH mechanisms; and
- Must have identified a mentor in the chemical sciences at a qualified US nonprofit institution with appropriate laboratory facilities to support their postdoctoral research proposal.
- Applicant must confirm with Sponsoring Mentor that they have committed to sponsoring only said applicant.

ELIGIBILITY CRITERIA FOR SPONSORING MENTORS AT THE TIME OF LETTER OF INTENT (LOI) DUE DATE:

- PhD or MD/PhD; and
- Full-time tenured or tenure track with at least a 25% appointment in a chemistry, chemical engineering, or materials chemistry department at their Institution; and
- Active investigator in the applicant's area of research; and

- Mentors must confirm sponsorship of only one applicant per year for consideration.

ELIGIBILITY CRITERIA FOR COLLEGES, UNIVERSITIES AND/OR INSTITUTIONS:

- The Arnold O. Beckman Postdoctoral Fellowship is open to applicants at all U.S. colleges, universities or institutions which offer postdoctoral fellowship and hold a 501c3 designation or similarly qualifying IRS designation.
- Government Laboratories, such as NIH or federally funded national laboratories, are not considered eligible institutions.

ANY OF THE FOLLOWING CONDITIONS WILL RENDER AN APPLICANT INELIGIBLE.

- At the time of application due date, applicants with more than 18 months of cumulative postdoctoral experience in a research lab or who are more than 3 years from their PhD, are not eligible to apply.
 - Applicants who are more than 3 years from their PhD but have a documented Leave of Absence/Stop the Clock disruption from their academic careers due to military service, child-rearing, or other institutionally recognized leave of absence will be considered eligible.
- Applicants may not submit applications to both the "Chemical Sciences" and the "Chemical Instrumentation" fellowships in a single program year.
- Visa holders are not eligible to apply.
- Applicants may not have full-time faculty appointments.
- Sponsoring mentors may not support more than one applicant for program year 2025.
- If, by May 1, 2025, a potential awardee has not successfully completed his/her PhD, the award will be rescinded by the Foundation. The Foundation will accept official transcripts or an official letter from the granting institution that the applicant has successfully defended and completed their PhD requirements by this deadline.

APPLICATION PROCESS

The Foundation will use a 2-step application process, beginning with a Letter of Intent (LOI) that is focused on the research proposal and references, and if invited, the process will conclude with submittal of a Full Application.

In an effort to avoid/reduce bias in the review process, the Foundation has asked applicants to omit any identifying information regarding themselves, their institution affiliations and mentors or co-mentors from the LOI Proposal and References. Additionally, the Foundation will blind information submitted in the online portal pertaining to applicant's name, gender, ethnicity, citizenship status and institutional information from all reviewers during the preliminary review of the submitted LOIs. Only the Proposal and Reference sections will be visible to reviewers at this stage. The other required documents and information will be used internally by the Foundation to verify program eligibility.

If the Foundation or the reviewers determine that you intentionally included information to identify yourself, your mentor, or institutional affiliations your application will be determined to be ineligible, at the sole discretion of the Foundation and review committee.

If you are invited to submit a Full Application, additional information and documentation will be required, details will be provided at that time.

Applicant may only submit one Letter of Intent (LOI) per year, and Sponsoring Mentor may only support one applicant, choose one track: A. Chemical Sciences Fellowship, or B. Chemical Instrumentation Fellowship

GENERAL INFORMATION

Applicant:

- Applicant may apply to either the Chemical Sciences program or the Chemical Instrumentation Program.
- The applicant must have identified a sponsoring mentor who will supervise the fellow during the proposed mentored training and research experience.
- Applicant must verify that sponsoring mentor has committed to sponsoring only said applicant.

Sponsoring Mentor:

- **The sponsoring mentor may only support one applicant; confirm with the mentor prior to submittal.**
- The sponsoring mentor must have at least a 25% appointment within a chemistry, chemical engineering, or materials chemistry department.
- The proposed research direction may have existing support within the mentor's laboratory, however the specific research aims and tasks proposed for this fellowship must be clearly delineated from existing support.

GENERAL INSTRUCTIONS FOR UPLOADS:

PDF format

Margins: 3/4 inch

Font size: 11 pt or larger

Font type: no requirement

File Naming: For the appropriate document, identify simply as, Proposal, References, Institution Letter, or Citizenship; do not include any identifying information

Page Limits are as follows:

Proposal Chem Sciences: 3 pages with figures and tables

Proposal Chem Instruments: 4 pages with figures and tables

References: 3 pages

Institutional Letter: 2 pages; on institutional letterhead

Citizenship: 1 page per document

General Instruction for Blinding for Proposal and References:

To assist in the blind review process, please follow the below instructions for your proposal and references:

- DO NOT include your name, gender, gender identifying pronouns or institutional information in the proposal.
- If you include references to your own publications in the proposal, do not use any formatting markings (asterisk, bolding, italics, etc.) to identify yourself within the list of authors.
- Suggested wording: "The applicant proposes", or "I propose"
- Do not use phrasing or sentences like this: "In my mentor's lab we developed "special technique" that is now widely used" or "in my mentor's lab and then cite the reference"; it is a small community and reviewers will be able to identify the technique, lab, mentor and/or institution.

LETTER OF INTENT (LOI):

1. Applicant, Institution, Mentor information online form.

Applicant must provide general information (name, address, contact information) for self, current and proposed institution, and sponsoring mentor and co-mentor, if applicable, and list of regularly attended conferences. The form is available in the online application system.

Identifying information on this form will be used by the Foundation and will not be provided to the reviewer during the LOI stage.

2. Applicant's Proposal - Choose either: A. Chemical Sciences Fellowship or B. Chemical Instrumentation Fellowship

A. Chemical Sciences Fellowship - Applicant's Independent Research Proposal

The research proposal should address a specific and substantive research question, should clearly articulate the significance of the research, and must meet the purpose of the Arnold O. Beckman Postdoctoral Fellows Award. Extensive discussion between the applicant and the proposed mentor is expected in order to

identify an appropriate independent research project – one that is relevant, instructive and suited to a two-year fellowship period.

Applicants must describe in narrative a well-defined research project that is suited to his/her stage of career development.

The Applicant's research proposal must be organized as follows:

- A) Specific Aims: Identify the aims of the proposed research;
- B) Background: Applicant should describe the background leading to the proposed research, with a convincing argument for how the applicant developed the project idea and that the project is not already funded as part of the mentor's ongoing projects;
- C) Significance of the research: Include a brief historical background of the proposed research, including major findings by you and/or others in relevant fields;
- D) Proposed strategy and approach (research design and methods): Describe in detail the hypothesis, methodology, plans for achieving the specific aims, the rationale for the proposed approach, potential pitfalls and expected/alternative outcomes of the proposed studies.

B. Chemical Instrumentation Fellowship –The research proposal should address a specific and substantive instrumentation need, should clearly articulate the significance of the measurements or research that will be enabled by the new instrumentation, and must meet the purpose of the Arnold O. Beckman Postdoctoral Fellows Award. Extensive discussion between the applicant and the proposed mentor is expected in order to identify an appropriate independent research project – one that is relevant, instructive and suited to a two-year fellowship period.

The Applicant's research proposal must be organized as follows:

- A) Specific Aims: Identify the aims of the instrument development and first studies that will be conducted by the applicant to test, verify, or commission operation of the new instrumentation;
- B) Background: Applicant should describe the background leading to the proposed development and assembly of the instrument, with a convincing argument for how the applicant developed the instrumentation project idea, how the project will fill a substantive instrumentation need, and that the project is not already funded as part of the mentor's ongoing projects;
- C) Proposed strategy and approach (research design and methods): Describe in detail the technical approach, methodology, plans for achieving the specific aims, the rationale for the proposed approach,

potential pitfalls and expected/alternative outcomes of the proposed studies;

- D) Instrumentation Dissemination and Sustainment plan: Describe the following for the new instrumentation:
- a. How the new instrumentation technology and methodology will be disseminated to the larger scientific community, including the instrument design, operation, data format/provenance, and potential data analysis techniques; and
 - b. The disposition of the first instrument prototype at the conclusion of the postdoctoral fellowship; and
 - c. Anticipated new intellectual property and how that will be pursued and shared between the fellow, mentor and institution; and
 - d. Size of the potential market or impact of the new instrument, both within chemical sciences and the broader scientific community, if applicable.

3. References: include the full author lists and titles of all items referenced in the Proposal

If you include references to your own publications in the proposal, do not use any formatting markings (asterisk, bolding, italics, etc.) to identify yourself within the list of authors.

4. Institution's Letter of Support

The institution must commit to support the Fellow and Sponsoring Mentor throughout the award period through the provision of, but not limited to the following: lab facilities, equipment, consumables, clerical/office staff support, computing resources and access to facilities necessary to their research.

Format – Written by the Dean of the Department and/or Academic Unit/School that will be providing support to the Fellow. **The first four sentences must respond to the prompts shown below and must be in this order; additional information may be included after these responses:**

1. Institution must state that they will provide for overhead and administrative costs; the Foundation does not provide for overhead or indirect costs.
2. Institution must clearly state its support and provision of Fringe benefits for the fellow. The fellowship provides Fringe benefits (medical/dental/health benefits). However, if the Fringe amount provided by the Foundation does not cover the full annual cost, the institution must state how it will cover the remainder of the costs

in order to make the Fellow “whole” or “equivalent/equitable” of an Institutionally Supported Fellow (often designated an Employee of the Institution).

3. Institution must state that Sponsoring Mentor is full-time tenured or tenure track with at least a 25% appointment in a chemistry, chemical engineering, or materials chemistry department at said institution.
4. Institution must confirm that Sponsoring mentor has agreed to support only said applicant for Program Year 2025.

5. Applicant’s Verification of US Citizenship or Permanent Residency.

Provide one of the following valid documents:

1. U.S Passport; or
2. Certificate of Naturalization, or
3. Certificate of U.S. Citizenship; or
4. U.S. Driver’s License **AND** U.S. Birth Certificate (certified copy/not the one the hospital sends you home with); or
5. Green Card (Front and Back); or
6. DACA Employment Authorization Document.