2026 Arnold O. Beckman Postdoctoral Fellowship in Chemical Sciences or Chemical Instrumentation Full Application Instructions

General Instructions for Uploads:
PDF format
Margins: 3/4 inch
Font size: 11 pt. or larger
Font type: no requirement
File size: 2 MB max

Page Limits:

Proposal: 6 pages total – 5 pages with figures and tables, plus 1 page budget
References: 3 pages
Applicant Inclusion Statement: 1 page
Applicant CV: No template; 3 pages max
Mentor & Co-Mentor CV: No template; 4 pages max per mentor. Uploaded individually.
Mentorship & Career Development Plan: 3 pages, if single mentor; 4 pages, if there is a co-mentor. If two mentors are selected, the plan should be written by both mentors together.
Two Letters of Recommendation: Institutional letterhead, 3 pages max; Choose Option 1 or Option 2 (see below for details)
Transcripts showing the date PhD was conferred or a letter from the institution indicating that the PhD will be completed by May 1, 2026. Transcripts may be unofficial.
Award Terms: Template provided; upload entire document after obtaining all three signatures. The Foundation will not accept revisions/strikethroughs. If an institution makes revisions to the Award Terms, the Foundation will not penalize the applicant's submittal, however, the revisions are not accepted and will not be considered by the Foundation.

Full Application Process
Submitting a full application is the second step in the application process. At this stage, your application materials will be viewed in their entirety.

1. **Applicant's Full Proposal:**
   Your full proposal is an expansion of the LOI previously submitted; you may not change the focus of your research proposal at this time.

File Naming: Last Name_Proposal

Please format your Research Proposal, as indicated below, based on the fellowship type you selected during the LOI stage (e.g., A. Chemical Sciences Fellowship or B. Chemical Instrumentation Fellowship). You may not change fellowship types at the point.

A. Chemical Sciences Fellowship

The research proposal should address the same research question as was outlined in the pre-proposal, while clearly articulating the significance of the research and must demonstrate the applicant's future potential for a career in the chemical sciences and as a leading innovator in science and technology. 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. However, the proposed research should clearly be driven by the applicant.

Applicants must describe, in narrative form, a well-defined chemistry-focused research project that is suited to their stage of career development. The focus of your research proposal must be the same as the pre-proposal that you submitted previously.

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

A. Specific Aims: Identify the aims of the proposed research;

B. Background: Describe the prior work that has led to the proposed research, providing a convincing argument for how the applicant developed the project idea and stating that the project is not already funded as part of the mentor's ongoing projects;

C. Significance of the research: Provide a discussion of the importance of your proposed research, including what would change if you were successful and why now is the right time to conduct this work (i.e., what major findings of yours or others have set the stage for what you are proposing)? Be sure to include major findings by you and/or others in relevant fields. At this stage, you can reveal the identity of you and your mentor, as well as institutional affiliations;

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 or alternative outcomes of the proposed studies;

E. Budget

B. Chemical Instrumentation Fellowship

The research proposal should address the same instrumentation need as was outlined in your pre-proposal, should clearly articulate the significance of the measurements or research that will be enabled by the new instrumentation, and must demonstrate the applicant's future potential for a career in the chemical sciences and as a leading innovator in science and technology. 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. However, the proposed research should be clearly driven by the applicant.

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

A. Specific Aims: Identify the aims of the instrument development as well as what studies will be conducted by the applicant to test, verify, and commission operation of the new instrumentation;

B. Background: Applicant should describe the prior work that has led to the proposed development and assembly of the instrument, making a convincing argument for how the applicant developed the instrumentation project idea, how the instrument will fill a substantive need, and show 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:

    i. How will 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

    ii. The disposition of the first instrument prototype at the conclusion of the postdoctoral fellowship; and

    iii. Anticipated new intellectual property and how that will be pursued and shared between the fellow, mentor, and institution; and

iv. Size of the potential market or impact of the new instrument, both within chemical sciences and the broader scientific community, if applicable.

E. Budget

2. References: Include the full author lists and titles of all citations or items referenced in the Research Proposal

File Naming: Last Name_References

3. Applicant's Inclusion Statement:

File Naming: Last Name_InclusionStatement

A. How have you worked to create a welcoming and respectful environment during the pursuit of your degree/research? How have the efforts of your current and previous mentors created a safe space that allowed you to thrive? Include any novel teaching/mentoring methods that you have observed or piloted that help to ensure that trainees of all levels and backgrounds flourish and succeed.

B. How have you encouraged diverse scientific collaborations during the pursuit of your degree/research?

C. Provide an open-ended statement about (1) career progression; (2) past service and efforts to support inclusion in chemistry; and (3) future aspirations as a scientist and service activities they hope to pursue.

3. Applicant's CV

File Naming: Last Name_CV

5. Mentor's CV and Co-Mentor's (if applicable) CV

File Naming: Last Name_MentorCV; and, if you have a Co-mentor,
File Naming: Last Name_CoMentorCV

4. Mentorship and Career Development Plan:

File Naming: Last Name_MentorPlan

The Arnold O. Beckman Postdoctoral Fellow program supports mentored research training from outstanding faculty mentors. The Mentorship and Career Development Plan or "training plan" should be specific to the applicant, keeping in mind the applicant's strengths and any gaps in needed skills. The training plan should be coordinated with the applicant's research strategy, outlining and justifying new training opportunities, relevant coursework, and professional development activities that will enhance the Fellow's research training. Professional development opportunities, such as grant-writing, presentation skills, and lab management, are strongly encouraged. The training plan should help to facilitate the applicant's transition to the next stage of their career and prepare them to be a leader in scientific research and innovation.

If a team of mentors is proposed, this training plan should describe the role of each mentor, the percentage of time each commits to the Applicant, and how they will communicate and coordinate their efforts to mentor the Applicant effectively. The mentor is not expected to meet all of the Fellow's career development need personally but should provide an overall framework to ensure that the Fellow has access to a broader academic network to support their work.

Mentoring and Career Development Plans should speak to:

A. The research environment and the availability and quality of needed research facilities and research resources (e.g., equipment, laboratory space, computing resources, subject populations);

B. The current laboratory staffing and management, including, but not limited to, how lab meetings are organized, the chain of command and expectations of postdocs in the lab, and opportunities for developing collaborations.

C. The role of the mentor in the integrated research and training, supervision, and counseling of the Applicant. This should include how the mentor will guide the Applicant in securing experiences outside of the research environment. Components of this can include, but are not limited to:

    i Effective communication, including participation in national conferences and preparing publications;

    ii Effective grant management, including proposal construction, technology transfer, entrepreneurship, intellectual property, royalties, and patents;

    iii Effective group management, including laboratory management, conflict resolution, student mentoring, and negotiation skills;

iv Effective job performance, including faculty governance issues, ethics, classroom teaching, and growth of the fellow's professional network.

D. A contingency plan for how the Applicant's research training will be supported should there be a gap in the mentor's research funding and/or the mentor leaves the institution during the proposed award period.

E. Other aspects of the program, both formal and informal, that will contribute to the total training environment, such as: interaction with senior professionals, participation in conferences, teaching, collaborations, outreach, etc.

8. Two Confidential Letters of Recommendation

Two (2) confidential letters of recommendation on behalf of the Applicant must be submitted using the online Grant Application System.

File Naming: Last Name_LOR1, LOR2

- Letters must be on official institutional letterhead, with appropriate signatures.
- Each letter should assess and discuss:
  - Scientific abilities and potential;
  - History of applicant's independent research and creativity;
  - Future potential as an independent investigator; and
  - Justification for supporting the applicant.
- Associates of the Arnold and Mabel Beckman Foundation, including the Board of Directors, Scientific Advisory Council, Executive Committee, Beckman Institute Directors, and/or employees, may not submit a letter of recommendation on behalf of an Applicant.
  - If your Mentor or PhD Advisor is an Associate of the Arnold and Mabel Beckman Foundation, please reach out to aobpostdoc@beckman-foundation.org for guidance.
- Applicants should coordinate with their letter writers to ensure that all letters are received by the application deadline. Letters will not be accepted after the close of the application period, and applications without both letters will be deemed incomplete and will be rejected.

These confidential letters of recommendation will not be released or in any way accessible to the applicant.

Only two letters will be accepted: Choose either Option 1 or Option 2

Option 1: If your current/sponsoring Postdoc Mentor **IS NOT your PhD Advisor,** submit 2 letters as follows:

- Letter 1: Current or Sponsoring Postdoctoral Mentor

- Letter 2: PhD Advisor

Option 2: If your current/Sponsoring Postdoc Mentor **IS your PhD Advisor**, submit 2 letters as follows:

- Letter 1: Current Sponsoring Postdoctoral Mentor (i.e., the PhD Advisor)
- Letter 2: Additional collaborator, co-advisor, or an expert in the field of the proposed research

9. Transcripts or Letter from Institution (PDF format)

File Naming: Last Name_Transcripts

- Submit an official or unofficial transcript showing the date your PhD was conferred; or
- Submit a letter, on institutional letterhead, signed by your PhD mentor or other authorized signatory, stating the date the Applicant is scheduled to defend or has defended their thesis. Official documentation showing that the PhD has been granted/conferred will be required by May 1, 2026.

10. Award Terms and Conditions: After obtaining the signatures of the Institutional Contact, mentor, and Applicant, upload the entire document as a PDF. The Foundation will NOT accept modifications to the Award terms.

File Naming: Last Name_AwardTerms

2026 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 has two tracks:

- **Postdoctoral Fellowship in Chemical Sciences** allows chemists to pursue advanced research within fundamental chemistry, such as chemical physics, chemical engineering, or the chemistry of materials. The underlying proposed research and innovation must be chemistry-focused, although the project can have applications in other fields such as biology or physics.

- **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 the chemistry of materials science. Instrumentation projects must be suitable to the two-year fellowship timeframe, be driven by a need in the listed chemical sciences, be innovative in method, speed or process, or represent a wholly new instrument for technological advancement in chemistry. Future potential use to the broader scientific community is a benefit.

It is the Foundation's intent that the Arnold O. Beckman Postdoctoral Fellowship will catalyze the Fellow's transition into 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 payment of up to $200,000 for material/development costs. The Fellowship may be extended for an optional third year, with $118,000 in funding for salary, fringe, and research expenditures, dependent upon review of research progress and a renewal application, which is 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 research proposed for this fellowship must be unique and currently unfunded** within the mentor's lab. During the term of the award, Fellows may secure additional funding (e.g., NIH K99-R00), but must continue to work full-time on the proposed AOB Postdoctoral Fellowship research direction and may not secure an additional named fellowship.

- Fellows who accept an academic faculty or full-time research position at an academic US research institution will be allowed to transition their current program year funding to their new institution.

Arnold O. Beckman Postdoctoral Fellows Award Annual Funding: 2026 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 2026 Program will run from July 1 – June 30:

Year 1: July 1, 2026 – June 30, 2027

Year 2: July 1, 2027 – June 30, 2028

(Optional) Year 3: July 1, 2028 – June 30, 2029

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. The Foundation will review requests in cases where the Fellow would like to change mentor, or institution, or both, during the term of the Fellowship 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. Candidates who already have funding for their independent careers tend to be reviewed more favorably by hiring committees, often increasing the candidates value on the job market.

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 <u>at time of Letter of Intent due date:</u>

- 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, 2026, 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, or the chemistry of materials. All applications should

propose research and innovations that are chemistry-focused, although the project can have applications in other fields such as biology or physics; 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; and
- Applicant must confirm with Sponsoring Mentor that they have committed to sponsoring only said applicant during this program cycle.

Eligibility Criteria for Sponsoring Mentors: These criteria must be me <u>at the time of Letter of Intent due date:</u>

- PhD or MD/PhD; and
- Full-time tenured or tenure track with at least a 25% appointment in a department affiliated with chemistry, chemical engineering, or the chemistry of materials science at their Institution; and
    - If mentor does not possess a 25% appointment, as noted above, this eligibility requirement may be met by a co-mentor that carries a minimum 25% appt in chemistry.
    - If the co-mentor is at the same institution as the sponsoring mentor, then the Institutional Letter must specifically note that the mentor does not meet the appointment criteria, but the co-mentor does.
    - If the co-mentor is at a different institution, then the applicant needs an additional Institutional Letter (instructions on pg. 11-12) addressing that they meet point 3 of the appointment criteria from the Institutional Letter requirements.
- 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 LOI 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 2026.
- If, by May 1, 2026, a potential awardee has not successfully completed their PhD, the award will be rescinded by the Foundation. The Foundation will accept unofficial transcripts or an official letter from the granting institution that the applicant has successfully defended and completed their PhD requirements by this deadline.

Using AI Tools:

The Arnold and Mabel Beckman Foundation supports the use of AI tools as supplementary resources. However, while their use in your application is at your discretion, we expect that you will use these AI tools in an ethical and responsible manner. As the applicant, you are expected to comply with best practices in research and publishing ethics, take full responsibility for any errors made by an AI tool, and to cooperate by responding to any questions that may arise relating to the accuracy or integrity of any part of your work, including data analyses and representation. *If AI tools are used in producing any parts of your application or in assisting with the writing process, a brief statement describing this use must be included with the references*.

If you have any additional questions about the program, please reach out to aobpostdoc@beckman-foundation.org for guidance.