CARRA-Arthritis Foundation Standard Advancing Biosample Collection Award

Award Project Period Length: 2 years
Total Grant Funding Amount per award: $50,000
Award Availability: up to 3 awards (1 focusing on JIA and up to 2 focusing on other disease areas)
Application Deadline: March 15, 2024
Estimated Project Period: July 1, 2024 – June 30, 2026

CARRA's mission is to conduct collaborative research to prevent, treat, and cure pediatric rheumatic diseases.

This funding opportunity supports biosample collection within the CARRA network to advance CARRA translational research. The goal is to collect biosamples from patients enrolled in the CARRA Registry, to be used by CARRA investigators for future hypothesis-based research. This mechanism funds the collection of biosamples at CARRA Registry sites utilizing the CARRA Registry biosample consent form.

- Biosamples may be collected only at CARRA Registry sites and from patients who are enrolled in the CARRA Registry.
- Only CARRA standard collection kits are permitted. See "Biosample Collection Options" below.
- Applications must include a hypothesis-based research plan for the future use of the proposed biosample collection.
- Funds will remain within CARRA to be used to pay biosample collection costs. Funds will be used to pay for biosample collection tubes/kits and shipping, CARRA Biobank fees, CARRA Registry site payments for biosample collections, DCRI support, and CARRA administrative support needed to manage the process.
- The following costs are not allowable for this award:
    - CARRA Registry data collection costs, including the enrollment of any patients that are not currently eligible for Registry enrollment
    - Investigator effort
    - Costs related to the future analysis of the biosamples
- The principal investigator(s) are expected to collaborate continuously with the TRC, DCRI, and CARRA Biobank to ensure the biosample collection is successful.

Up to 3 grants will be awarded. At least one of the awards must focus on juvenile arthritis and areas identified in the 2023-2025 CARRA-Arthritis Foundation Inflammatory Arthritis Research Agenda. Special consideration will be given to applications addressing the specific topics listed below, which were considered among patients, caregivers, and providers to be of critical importance:

- Precision medicine
    - Identifying diagnostic, prognostic, and predictive biomarkers
    - Uncovering factors that affect an individual's experience with starting and/or stopping medications
    - Identifying genetic, environmental, and/or lifestyle factors that impact overall safety and long-term medication use for individuals with juvenile inflammatory arthritis
- Long-term health outcomes
    - PROs, impact on health-related quality of life, health disparities, and other related issues
- Treatment related issues
    - Safety and the impact of specific medications

New or early-career investigators are encouraged to apply.

Eligibility

- The project PI must be a CARRA member in good standing (up to date on membership dues and membership information (location, contact information, and membership status) is current and accurate.
- Applicants must hold an advanced degree (MD [or equivalent], PhD, or MD/PhD) and must have a faculty or equivalent government appointment.
- All applications must be submitted by or include a pediatric rheumatologist named as a Co-Investigator.

Online Submission

CARRA uses an electronic grant submission process. All applicants must submit their full application packages through ProposalCentral online grants management system. Paper applications will not be accepted.

- All applicants must register as users on Proposal Central here.
- Click here for Proposal Central's guide on how to set up an account.
- Click here for Proposal Central's Frequently Asked Questions (FAQ's).
- Still need help with Proposal Central? Reach out to Proposal Central's Support Desk.

For more information, please email grants@carragroup.org.

Standard Biosample Collection within CARRA

In 2024, CARRA will only be accepting proposals that utilize the current CRFs and standard biosample collection kits. No proposals requesting supplemental data collection will be accepted.

Applicants must propose utilizing one of the two standard CARRA biosample collection kits ("Type I" and "Type II"). CARRA's Standard Biosample Collection kits must be used for the following reasons:

1. To ensure that multiple derivatives are obtained from each patient (plasma, serum, RNA, DNA, cells);
2. Because biosamples collected within CARRA using the same standard approach can be easily compared;
3. CARRA research coordinators are familiar with the Standard Collection kits;
4. Requests using the Standard CARRA Biosample Collection are relatively routine and easily expedited as there are established standard operating procedures (SOPs); and
5. CARRA has standardized the cost to collect samples with type I and II kits.

The two CARRA Standard CARRA Biosample Collection kits

- Type I kit = spin kit = centrifuged kit (total cost per sample collected is $520)
  - Tempus (RNA)
  - SST (serum)
  - P100 (plasma and DNA)
  - CPT (peripheral blood mononuclear cells)
- Type II kit = non-spin/no-spin kit = non-centrifuged kit (total cost per sample collected is $297)
  - EDTA tube (DNA)
  - Tempus tube (RNA)

Additional Information

The CARRA Manual of Operations for Biosample Collection, located on the wiki, describes the standard operating procedures for collecting biosamples in the CARRA network: https://wiki.carragroup.org/display/CRSSM/Biospecimen+Collection#BiospecimenCollection-MOOP(ManualofOperations)

Collected samples will be shipped to and stored in the CARRA Biobanks in Cincinnati and Toronto. If future research is approved by the CARRA Data and Sample Publications Committee (DSPC), the designated portion of the biosamples will be reserved for the applicant's research team for up to 2 years after the completion of the biosample collection. The remaining portion of the biosamples will be made available to other CARRA investigators to access through the Data Sample Share process (typically after the primary study is complete and the primary manuscript has been published).

CARRA-Arthritis Foundation Standard Advancing Biosample Collection Award Application Required Information:

Title Page:

- Provide the Title of the project
- CARRA Registry & Data Use Assurances
  Grant applicants who intend to utilize the CARRA Registry or CARRA-related data and/or samples must receive approval from the CARRA Data, Sample, and Publications Committee (DSPC) prior to submitting their grant applications. Applicants will be required to provide documentation of DSPC approval. The request must match the intended use outlined in the grant proposal. Failure to receive approval of the data and/or sample request before submission of the grant application will result in the administrative decline of the application.

  Data and sample requests take approximately 4-6 weeks for review and approval. If you would like to know more about who can access CARRA data and biosamples, conditions of use, and the review process, please review our data and sample share policy on the CARRA website (https://carragroup.org/membership/policies/).

  For more information on requesting CARRA data and/or samples and to access the request form, please visit the Data and Sample
  Request page on the CARRA wiki.
  (https://wiki.carragroup.org/display/DSSC/CARRA+Data+and+Sample+Requests).

  For most ABC Award applications, selecting "samples only" under the Data Sample Share Request will be sufficient.

  Please review the CARRA Registry active cohort flyer
  (https://wiki.carragroup.org/display/CRSSM/Biospecimen+Collection#BiospecimenCollection-ActiveCARRABiosampleCollectionCohorts)

Enable Other Users to Access this Proposal

This section allows the PI to give other users access to the grant application. If electronic signatures are required for submission, signatories will need at least Edit access on this screen.

Applicant/PI:

- The applicant information will be automatically populated by Proposal Central. Please ensure that all information is accurate and updated.
- Indicate whether the PI is a new or early investigator

Institution & Contacts

The institution information will be automatically populated by Proposal Central. Please ensure that the institution information is correct.

- Enter the email address for Institution contacts:

Other Key Personnel

Add information for Key Personnel participating in the project

References & Recommendations

Please provide information on references used in the application

Abstract

- Lay Summary: Please provide a general audience lay summary below. Text only. No special characters or formatting. (up to 900 characters)
- Scientific Discovery Continuum: see menus on PC
- Scientific Discovery Theme: see menus on PC
- Disease Area: see menus on PC
- Program Area: see menus on PC

Milestones and Deliverables

- Provide a brief description of at least one milestone for the biosample cohort (a timepoint that delineates a key phase in a project schedule) and at least one deliverable (final outputs) that may result from collecting the biosamples. Deliverables may include, but are not limited to, the development of new models, knowledge generation, publications and other knowledge mobilization activities, technical advancements, provisional patents filed etc.
- Use the dropdown box to select a milestone/deliverable and then add the targeted start and completion date for each milestone/deliverable. Input a brief description (one or two sentences) for each milestone/deliverable. Click the + icon to add rows for each additional milestone/deliverable.
- When entering dates, please use the date format "MM/DD/YYYY" (e.g., 04/01/2023 for April 1, 2023)

Budget Period Detail

The budget provided must indicate how funds are to be allocated for each year

- The funding limit of this award is $50,000. Requests above this amount will be considered case-by-case and must present a detailed justification for the increased award.
- The budget should include sample costs, potential DCRI costs (if any), and CARRA admin time.
- As of March 2021, the Type I Kit is $520 per collection, and the Type II Kit is $297 per collection. These fees include the tubes and kit materials, shipping to/from Biobank, payments to sites for collecting samples, and Biobank fees for processing and storage. These fees are subject to change without notice.

- These fees do **not** include future lab processing and/or shipping costs related to sending samples from the Biobank to an institution (or other labs) for conducting the future research project, CARRA time required to manage the project and internal budget, if needed.

Budget Summary & Justification

- Present items in the same order as they are in the budget. Explain how the cost of items was arithmetically determined.
- Please contact Leslie Hanrahan, CARRA Sr. Director, Research Operations, for further budget support and justification - lhanrahan@carragroup.org

Research Plan (can be uploaded as an attachment)

- Importance of the Proposed Biosample Collection:
  Describe the significance of the proposed biosample collection. Why should biosamples be collected from the study population? How will this project advance the CARRA mission? How will studying the proposed biosamples impact patients?

- The ABC Award is designed to allow the collection of biosamples in the CARRA network that will be used immediately for hypothesis-generating research or enable investigators to apply for non-CARRA funding to conduct ongoing research. The applicant must provide evidence of feasibility that the research team is able and qualified to conduct the proposed translational research.

  Please describe the future study that will use the collected biosamples:
  - Background, significance/innovation
  - Any supporting preliminary data
  - Research methods (including sample size and statistical plan)
  - Expected outcomes
  - Timeline- Include a proposed timeline for the recruitment and sample collection.

- Provide the number, type(s), and volume of samples that the research team would like to be reserved for your research project.

Future Funding:

Please describe how future research activities will be funded. How will obtaining these biosamples impact the research team's ability to acquire funding from other sources?

Application Attachments

NIH Biosketch

- The applicant can upload documents for the application. NIH-formatted Biosketches for all Principal Investigator(s), Co-Principal Investigator(s), and all Co-Investigator(s) (limit 5 pages per biosketch; please combine all biosketches into one PDF with the PI(s) biosketch listed first.).

Letters of Support

- **Investigator(s) are encouraged to contact TRC Chair,** Lauren Henderson **and Vice Chair,** Anna Patrick **to review the proposed project before beginning an application. The TRC Chair and Vice Chair can provide a Letter of Support to the investigator, although this is not required.** Please use the current Letter of Support Request Process located at the link below and on the CARRA wiki. Complete and submit this request form via this online link: https://app.smartsheet.com/b/form/fad05d8dd4194c83aeaa1a3409426f6d

    - Please provide a draft letter of support with your request.
    - Applicants must include a letter of support from the appropriate CARRA disease-specific research committee chair.
    - Letters of support from collaborators, mentors, and institutions are highly recommended.
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PI Demographic Info.

The applicant should provide basic demographic information in this section:

- Gender
- Race
- Primary Race
- Ethnicity
- Citizenship

Required Signature Page

Here, the applicant and Institutional Signature Official can sign the application. The application must be signed before it can be submitted.

CARRA staff is available to assist with the application process and answer questions. Contact us by emailing grants@carragroup.org.

Important Information for Standard Advancing Biosample Collection Award Submissions

- Application deadline for the CARRA-Arthritis Foundation Standard Advancing Biosample Collection Award: March 15, 2024.
- Applicants will be notified of funding decisions in June 2024.
- For projects requesting budget support to cover Registry and Biorepository costs, requested funds will be held by CARRA and paid to the appropriate vendor.
- If the PI is unable to complete the project, any unexpended balance must be returned to CARRA.
- Awardees are expected to submit an abstract and attend the CARRA Annual Meeting(s) until the project is complete/final results have been presented.
- This funding mechanism is not intended for projects that are already eligible/appropriate for extramural funding.
- If the project is not completed within the project period, the award recipient may request 1 no-cost extension (NCE) for up to 12 months. Requests for NCEs must be made up to 90 days prior, but no less than 30 days prior to the project period end date. An interim progress report must be submitted with the NCE Request Form. Please use grants@carragroup.org to submit the no-cost extension request.
- Awardees must submit a year-1 progress report 30 days prior to the end of the first year of the project period to request the release of year two funds.
- Awardees must submit a final progress report no later than 45 days after the end date of the project period. A late submission may impact an applicant's eligibility for future CARRA grants.
- Timely provision of progress reports is required to be eligible for future CARRA-Arthritis Foundation grants.
- All awardees of CARRA-Arthritis Foundation funding must abide by the procedures outlined in the current CARRA Authorship, Publication, and Presentation Guidelines when presenting/publishing findings from their projects. This includes submitting all abstracts and manuscripts to the CARRA Publications Committee for approval prior to submission and acknowledging the support of CARRA

and the Arthritis Foundation by including the following language: “The authors wish to acknowledge CARRA, and the ongoing Arthritis Foundation financial support of CARRA.”

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Grant Application Review Criteria For Background

CARRA has procedures for assessing the technical and scientific merit of applications to provide for an objective review and to assist you in understanding the standards against which your application will be reviewed. CARRA has indicators for each review criterion to assist you in presenting pertinent information related to that. Generally, at least 2 scientific reviewers and one caregiver reviewer will assess every application that passes the initial administrative review. Below are the criteria that reviewers use to assess applications.

Criteria used by scientific reviewers

CARRA
Childhood Arthritis and Rheumatology Research Alliance

Scientific Review Committee Grant Scoring Criteria

Score	Descriptor	Additional Guidance on Strengths/Weaknesses
1	Exceptional	Exceptionally strong with essentially no weaknesses
2	Outstanding	Extremely strong with negligible weaknesses
3	Excellent	Very strong with only some minor weaknesses
4	Very Good	Strong but with numerous minor weaknesses
5	Good	Strong but with at least one moderate weakness
6	Satisfactory	Some strengths but also some moderate weaknesses
7	Fair	Some strengths but with at least one major weakness
8	Marginal	A few strengths and a few major weaknesses
9	Poor	Very few strengths and numerous major weaknesses

This funding opportunity supports biosample collection within the CARRA network to advance CARRA translational research. The goal is to collect biosamples from patients enrolled in the CARRA Registry, to be used by CARRA investigators for future hypothesis-based research.

ABC grants should be **primarily** scored based on the importance and feasibility of the biosample collection. Review of the proposed future science project is secondary. Further, the proposed scientific project may be preliminary as it is being proposed for future research after the biosamples are obtained and will be funded by the investigator through a different mechanism (not the ABC grant).

Review the proposal and provide a score and comment on each section below.

Review Criteria:

1. Overall rating of the proposed biosample collection: Your response represents a global impression of the proposal and need not reflect the average of all the categories. Please provide additional explanation for scores of 8 or 9.
2. Significance, originality, and scientific merit of collecting the proposed biosamples from the proposed study population.
3. Feasibility to collect biosample from the CARRA Registry patients within the allotted time frame.
4. Likelihood that the collected biosamples will lead to new translational research projects, additional funding, or operational success within CARRA

5. Feasibility that the study team has the experience and capabilities to perform the proposed future research project with the collected biosamples.
6. Likelihood that the study team has or will be able to obtain funding for the future research project that will be performed with the collected biosamples.
7. How well does this proposal meet the goals of the RFA?
8. Budget Justification
9. Would you fund this grant if you were responsible for CARRA funding decisions? Yes No
10. Should this applicant be assigned a mentor by the Scientific Review Committee? Yes No

Strengths and Weaknesses of the Proposal

- Please provide comments regarding any strengths of this proposal.

- Please provide comments regarding any weaknesses in this proposal. If you have identified any major weaknesses, please make a suggestion to aid the proposal.

Caregiver Reviews

Caregiver reviewers use the same scoring as the scientific reviewers and review the aspects of the grant applications as outlined below:

Overall
Your response represents a global impression of the application and need not reflect the average of all the categories.

Feasibility
Will patient families be overly burdened by participating? As you evaluate, consider whether patient families were consulted and if there is patient family oversight. Will patient families be willing to enroll in this biosample cohort? What barriers or concerns might prevent family participation? Will patient families understand the purpose of the study? Is there consideration for health literacy for all communications to patient families? Enter "N/A" if the study will not be enrolling patients.

Relevance
Does the application address an important priority for patient families? As you evaluate, consider whether patient families were involved in selecting the topic or if the topic is based on an issue widely known to be of importance to patient families. Will collecting the biosamples proposed in the application be helpful in the future to study important questions for patients and families? k

Patient Centeredness Strengths
Include “patient centeredness” in your strengths and weaknesses comments. Was the study designed with patients and families? Are patients and families on the study team?

Patient Centeredness Weaknesses
Include “patient centeredness” in your strengths and weaknesses comments. Was the study designed with patients and families? Are patients and families on the study team?

Appendix A

Biosample Collection Form

1. Principal Investigator Name (Last, First):
2. Principal Investigator's Institution:
3. Address:
4. Phone Number:
5. Email:
6. Collaborators:
7. Study Title:
8. Study design.
    a. Briefly describe your study population (e.g., JIA, SLE, male/female) and visit type (e.g., disease onset, flare, treatment start, 6 months post treatment)
    b. Include a proposed timeline for the recruitment and sample collection.

9. Please provide details about the samples that will be collected using the table below.

Disease/Cohort and Eligibility	# Patients	Sample Type	Kit Type (see kit types described below) or Tubes	Spin Requirements (e.g., spin/no spin)	Time points

CARRA Standard Kits

Type I Kits

Type II Kits

CARRA Study Sites that are <u>able</u> to centrifuge prior to shipping to the CARRA Central Biobank	CARRA Study Sites that are <u>unable</u> to centrifuge prior to shipping to the CARRA Central Biobank
P100 (8.5cc)	EDTA (6.0cc)
SST (3.5cc)	Tempus (3.0cc)
aCPT (8.0cc)	
Tempus (3.0cc)	

Appendix B

Budget Table

The funding limit of this grant mechanism is $50,000. Requests above this amount will be considered case-by-case and must present a detailed justification for the increased award.

The budget should include sample costs, potential DCRI costs (if any), and CARRA admin time.

As of March 2021, the Type I Kit is $520 per collection, and the Type II Kit is $297 per collection. These fees include the tubes and kit materials, shipping to/from Biobank, payments to sites for collecting samples, and Biobank fees for processing and storage. These fees are subject to change without notice.
These fees do **not** include future lab processing and/or shipping costs related to sending samples from the Biobank to an institution (or other labs) for conducting the future research project, CARRA time required to manage the project and internal budget, if needed.

Please contact Leslie Hanrahan, CARRA Sr. Director, Research Operations for further budget support and justification.

Total # of Kits/Sample collections	Kit Type (I or II)	Cost per Kit/Collection	Subtotal
Total Kit Fees			

Category	Justification	Subtotal
Total Kit fees	(Explained by above table)	

Other anticipated expenses		
Total		