California Firefighter Cancer Prevention and Research Program
Invited Applicant Informational Webinar

Research Grants Program Office
Research & Innovation
University of California Office of the President

Thursday, May 2, 2024
California Firefighter Cancer Prevention and Research Program

Welcome and Introductions
Competition Timeline and Key Dates
Program Overview and Research Priorities
Community-Based Participatory Research
Application Requirements
Budgets
Review Process
Working with SmartSimple
Questions & Answers
<table>
<thead>
<tr>
<th>Competition Timeline and Key Dates</th>
<th>California Firefighter Cancer Prevention and Research Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>RFP Release</td>
<td>Thursday, January 18, 2024</td>
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<tr>
<td>Required Letter of Intent (LOI)</td>
<td>Thursday, February 29, 2024</td>
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<tr>
<td>Due Date</td>
<td>Thursday, March 14, 2024</td>
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<tr>
<td>Invitation to Submit Application</td>
<td>Thursday, June 13, 2024</td>
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<tr>
<td>Accepted Application Due Date</td>
<td>Thursday, June 13, 2024, 12:00 noon Pacific Time</td>
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<tr>
<td>Award Start Date</td>
<td>Sunday, December 1, 2024</td>
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Purpose

- Competitive grant program funding community-based participatory research (CBPR) projects to reduce the incidence of cancer among California firefighters.
- Research conducted by community-academic partnerships among CA-based fire service organizations and UC campuses
- Research to prevent and reduce cancer among CA firefighters by examining the hallmarks of cancer and key characteristics of carcinogens related to firefighters’ occupational exposures, characterizing biomarkers of cancer susceptibility or risk in firefighters, understanding carcinogenic exposures among firefighters, and informing intervention strategies to lower risks of developing cancer in firefighters

Program Administration

- Administered by UCOP RGPO in consultation with FIRESCOPE
- Invited applications will be evaluated through a two-tiered process: peer review (outside experts) and programmatic review (FIRESCOPE)
- Substantial programmatic involvement in awards, including convening a FIRESCOPE advisory committee to provide firefighter expertise and leadership perspectives

Source: California Firefighter Cancer Prevention and Research Program, Request for Proposals, 1/18/24
Grant Program Overview and Priorities

All proposals must address the priority area of: Engaging in community-based participatory research (CBPR) model of research.

Plus one or more of the following priority areas:

- Examining at least one of the hallmarks of cancer or the key characteristics of carcinogens as it relates to firefighters’ occupational exposures and cancer risk.
- Identifying and/or examining biomarkers of known and suspected human carcinogen exposures in firefighters.
- Developing and/or testing methods to quantify occupational exposures and biological effects to carcinogens among CA firefighters.
- Examining the effect of exposures among CA firefighters to known and suspected human carcinogens.
- Developing and/or testing interventions to reduce occupational exposures to known and suspected human carcinogens among CA firefighters.
- Developing and/or testing systems-level interventions to reduce occupational exposures among CA firefighters. This includes, but is not limited to, policy and/or practice interventions at the department, organization, agency, and/or other type of group level.
- Developing and/or testing other methods for preventing or reducing the incidence of cancer in CA firefighters.

Source: California Firefighter Cancer Prevention and Research Program, Request for Proposals, 1/18/24, p. 7
Background

California Firefighter Cancer Prevention and Research Program

Daily Exposure to Carcinogens

- Vehicle Fires
- Diesel Exhaust
- Asbestos & PM 2.5
- Metals
- PFAS
- Flame Retardants

Firefighting = IARC Group 1 Carcinogen

IARC Monographs Vol. 132

Occupational exposure as a firefighter is carcinogenic to humans (Group 1) on the basis of sufficient evidence for cancer in humans.

The IARC Monographs classification indicates the level of certainty that an agent can cause cancer (hazard identification).

Higher level of certainty

Lower level of certainty

Cancer types with sufficient evidence for cancer in humans:
- Mesothelioma
- Bladder cancer

Cancer types with limited evidence for cancer in humans:
- Colon cancer
- Prostate cancer
- Testicular cancer
- Melanoma of the skin
- Non-Hodgkin lymphoma
IARC: Strong Evidence – Key Characteristics of Carcinogens

- Genotoxicity
- Oxidative stress
- Chromosomal inflammation
- Receptor mediated cell effects
- Epigenetic alterations

Background
California Firefighter Cancer Prevention and Research Program

Before

Lower cancer risk

AFTER

** Higher cancer risk **
Hallmarks of Cancer

- Self-sufficiency/insensitivity growth signals
- Evading programmed cell death
- Deregulated metabolism
- Evading immune system
- Genome instability

Key Characteristics

- Electrophilic (metabolically activated to...)
- Alters DNA repair
- Immunosuppressive
- Alters cell proliferation

Data Driven Interventions to Reduce Firefighters’ Cancer Risk

- Elimination: Physically remove the hazard
- Substitution: Replace the hazard
- Engineering Controls: Isolate people from the hazard
- Administrative Controls: Change the way people work
- PPE: Protect the worker with Personal Protective Equipment
Community-Based Participatory Research (CBPR)

• **Definition:** A collaborative approach to research where scientific *researchers* and *firefighters* collaborate as **equal partners** on all aspects of a research project:
  - Developing research questions and specific aims
  - Study design and research methodology/approach
  - Proposal writing
  - Budget development and sharing
  - Implementation of research approach
  - Data gathering and analysis
  - Design of interventions to reduce cancer risk
  - Dissemination of findings to the fire service community (NOT JUST PUBLISHING PAPERS)

• Useful in projects ranging from biomarker characterization to population-wide interventions
• Requires an authentic and comprehensive partnership
• Results in integration of perspectives from fire service personnel and academics
• Ensures that research and interventions meant to reduce cancer risk are scientifically sound while being responsive to firefighter’s needs and **compatible with public safety duties**

Source: California Firefighter Cancer Prevention and Research Program, Request for Proposals, 1/18/24, p. 6
Community-Based Participatory Research (CBPR)

<table>
<thead>
<tr>
<th>Philosophy</th>
<th>The orientation is towards social justice, social determinants of health and advancement of equity and empowerment of community as part of the research team.</th>
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<tbody>
<tr>
<td>Context</td>
<td>Essential to the identification of need for the intervention, as identified by community stakeholders. Context informs and acknowledges the culture, history, orientation and power of the community.</td>
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<tr>
<td>Patient, Community, Stakeholder Engagement</td>
<td>Community members are viewed as collaborators (co-designers, co-producers) from start to finish of the research project, with recognition that they are experts given culture, history and lived experiences. Research may include engagement to identify or document a phenomenon or need through data and shared interpretation.</td>
</tr>
<tr>
<td>Data Collection</td>
<td>Methods can be mixed methods and often informed and approved by a community advisory board or community representatives.</td>
</tr>
<tr>
<td>Formulation of hypotheses and research questions</td>
<td>Community driven with partnership with researchers. Any changes made have to be approved by the community stakeholders.</td>
</tr>
<tr>
<td>Iterative process during intervention development</td>
<td>All partners must determine there is an issue and what the action or intervention will be. The iterative process may not happen with community partners unless explicitly part of the study design. However, it could happen with co-creation before the intervention is created. The distinguishing characteristic is likely that it may not be as nimble in human centered design approaches.</td>
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<tr>
<td>Implementation of intervention</td>
<td>Implementation of the intervention may not be the explicit aim of the research, unless the researcher and community identify it and mutually agree on this data collection and emphasis. The intervention developed would also belong to the community.</td>
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Adapted from - https://cancercontrol.cancer.gov/is/blog/dispatches-from-is-at-nci-blog-september-2018
There is a long-standing tension in biomedical research arising from a conflict in core values—the desire to respect the interests and desires of research participants by communicating results contrasted with the responsibility to protect participants from uncertain, perhaps poorly validated information. Traditionally, the balance has been tipped toward the latter resulting in what has been termed "helicopter research." The notion here is that investigators drop into communities or people’s lives, engage with them in often very personal ways, and then take off, never to be heard from again.

Yet, people are curious about themselves, particularly about their health and their family’s health, leaving a sense of frustration and lost when investigators take but do not share. Studies show that many participants want and expect their personal results. They often have these expectations regardless of what the consent discussion promised. Experimental results are often uncertain and disclosure of unvalidated results can, in some circumstances, lead to harmful medical or life decisions. But, of course, investigators are confident enough in experimental results to publish their work, suggesting that individual data points are sufficiently meaningful to contribute to generalizable knowledge. A participant might ask, “If the findings are good enough to publish, why can’t my results be shared with me?” This conflict in values is central to this report. In struggling with the complex and competing considerations, we have attempted to achieve a new balance, one that leans toward communication of results while seeking to enhance the quality of results emerging from research laboratories. Our push toward more disclosure, we believe, is part and parcel of the larger cultural transition toward more engagement, collaboration, and transparency between investigators and research participants.
CHALLENGE: COMPATIBILITY WITH FIREFIGHTERS’ PUBLIC SAFETY DUTIES
Application Content

Research Plan is limited to 10 pages for a pilot project and up to 15 pages for a full project, excluding references cited.

The following sections must be included within the application for both grant types:

- Lay Abstract/Project Summary (2,400 characters)
- Responsiveness to Program and Award Type
- Project Personnel Table and Biosketch/CVs
- Program Responsiveness
- Collaborative Agreements
- Additional Criteria: Research Team and Mutual Benefit
- Itemized Budget and Justification
- Appendix: Letters of Commitment, Letter(s) of Collaboration, Supporting Documents
- Assurances (Human participants, animal use, or biohazard issues and the approach to compliance)

Source: California Firefighter Cancer Prevention and Research Program, Draft Request for Proposals, v. 2023-12-14, Pages 8 -11
### Additional Information on Collaborative Agreements

<table>
<thead>
<tr>
<th>Template Form</th>
<th>Description</th>
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<tbody>
<tr>
<td>Collaborative</td>
<td><strong>Agreements</strong> Address how the project team will manage ownership of data, handling disagreements, plans for broader fire service involvement, plans for dissemination of findings, and plans for turnover of personnel.</td>
</tr>
<tr>
<td>Collaborative</td>
<td><strong>Agreements Attachments</strong> <em>Fire Service:</em> Provide a signed letter of commitment indicating that the partner fire service organization has reviewed and agreed to the details outlined on the Collaborative Agreements form.</td>
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CA Firefighter Cancer Prevention Pilot Award

Supports the initial phase of the project, including strengthening collaborations, development of tools and methods, testing feasibility, and collecting pilot data.

*Funding*: $300,000 in direct costs for a two-year project (plus indirect costs)

CA Firefighter Cancer Prevention Full Award

Projects with a fully developed research plan with supporting preliminary data, carried out by a well-integrated team of scientific and fire service members with demonstrated record of success conducting research.

*Funding*: $750,000 in direct costs for a three-year project (plus indirect costs)

Source: California Firefighter Cancer Prevention and Research Program, Request for Proposals, 1/18/24, p. 2
Each application will have two or more budgets
- Each institution that is a partner in the project must complete a budget, that includes line-item budget justification related to activities.
- 10% minimum effort is required for each Co-PI
- Equitable distribution of total budget across applicant institutions
  - Informed by input, discussion, agreement from both Co-PIs
  - Defined by project scope, activities, and the work that is taking place at each organization
- For fire service, discuss FEMA award history, and whether your department has a grant section that administers
  - Fiscal sponsors are an option for prime award to fire service; contact us with questions
  - Percent effort refers to funding from grants
  - Consult with department on how to set up payment
• Scientific peer review conducted by researchers and fire service members recruited from outside of California
  • Scored, comments, discussion, final scoring and comments
• Programmatic review conducted by CA-based FIRESCOPE Committee
  • Proposals scored, discussed, and final scoring
• Funding recommendations made by CA-based FIRESCOPE Committee
• Funding recommendation finalized by RGPO Executive Director
• Reviewer scores and comments will be sent to all Co-PIs
• Each application reviewed by non-CA based reviewers
• 2-3 scientific reviewers from relevant disciplines, including scientists who are experts in CBPR, and fire service members / firefighter representatives
Programmatic Review

California Firefighter Cancer Prevention and Research Program

Relevance & Impact to Fire Service

Programmatic Score

Diversity & Portfolio Distribution

Fire Service Partnership
How to submit a proposal (Invited Application) in SmartSimple

presented by
Research Grants Program Office (RGPO)
Contracts & Grants Unit (C&G)

• C&G works in collaboration with California Firefighter Cancer Prevention and Research Program, serving as interface on administrative and procedural aspects of your application and the submission and review process.

• Contact: RGPOgrants@ucop.edu
Accessing SmartSimple

Login to SmartSimple: [https://rgpogrants.ucop.edu/](https://rgpogrants.ucop.edu/)

 Returning users login here

First-time users register here
Enter your institution and complete your applicant contact information.

If you receive a message that an account with your email address already exists, return to the main login page and click “Forgot Password.”
From Approved LOI to Invited Application

1. Click on “In Progress Applications.”
2. Locate the row for your submitted LOI. Confirm approval of your LOI under the “Status” Column. Click “Open” to begin full application and access instructions and templates.
3. Click on the “Continue to Full Application” button at the bottom of the screen to access the Full Application materials.
Application Submission

Complete each section of the application. ("Save Draft" frequently to save entered information; review & edit as needed.)

Download templates and upload required attachments in the Documentation section.

When finished, click "Submit to Signing Official."
Invited Application: Inviting Personnel

1. Click on “Invite Personnel” in the left sidebar.

1. Click on “Invite Personnel”
Invited Application: Inviting Personnel

2. Click the “+” button to provide access to the following roles on the SmartSimple application:
   - **PI Assistant:** can edit and submit a completed application
   - **Co-Investigator:** View only

3. Enter the individual’s name and email address.
4. Repeat as needed.
5. Click ‘Invite’ to send out invitation emails.
Click the Budget tab

Click “Open” to start entering information
Budget tab – Adding Institution Contacts

Start typing the name of your signing official into the field and select from the list that populates.

If you cannot find their name in the list, click “Can’t find Signing Official.” Then click “Add Signing Official.”
Click “Budget Complete” once you have entered all the necessary budget figures and justification notes.
Budget tab – Editing the budget

Scroll down to “Personnel Costs.”
Click “+” to add a new row.

Entries will populate in the budget summary at the top of the page.

Enter budget justification.

Repeat for all budget categories.
Submit to Signing Official – Co-PI

B26BB1411 RGPO Test CBCRP CRC Pilot

Templates and Instructions:
- CBCRP_Submission_Instructions_by_Award_Type.pdf
  21.3 KB - 10/18/2019 3:56pm

Total Files: 1

SIGNATURE PAGE

* Co-PI Institution Signature Documents

Download the [Signature Page for Non-Submitting Institutions](#). Obtain the required ink signatures and upload a scanned copy here. A separate signed Signature Page must be uploaded for each non-submitting institution.
Submit to Signing Official
Contacts

**Programmatic guidance:** firefighter-cancer@ucop.edu including questions about partnership matching, proposal preparation, fiscal sponsorship, or other areas

**SmartSimple guidance:** RGPOgrants@ucop.edu

Visit UCOP Research Initiatives website for the 2024 Call for Applications and related information ([https://ucop.edu/research-initiatives/programs/initiatives-spfunds/firefighter-cancer.html](https://ucop.edu/research-initiatives/programs/initiatives-spfunds/firefighter-cancer.html))

Log in to SmartSimple ([https://rgpogrants.ucop.edu](https://rgpogrants.ucop.edu)) to download detailed submission instructions.
Questions & Answers

California Firefighter Cancer Prevention and Research Program