

# 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

UNIVERSITY OF CALIFORNIA  
Research & Innovation

# 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**

RFP Release

Thursday, January 18, 2024

Required Letter of  
Intent (LOI) Due Date

Thursday, February 29, 2024

Invitation to Submit  
Application

Thursday, March 14, 2024

**Invited Application  
Due Date**

**Thursday, June 13, 2024**  
*by 12:00 noon Pacific Time*

**Award Start Date**

**Sunday, December 1, 2024**

### **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

### 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.

# 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*)



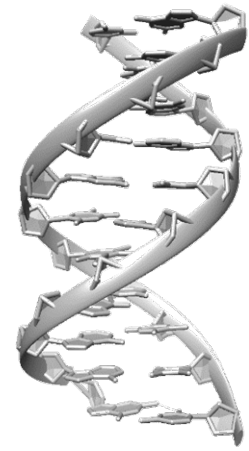
Cancer types with **sufficient evidence** for cancer in humans:



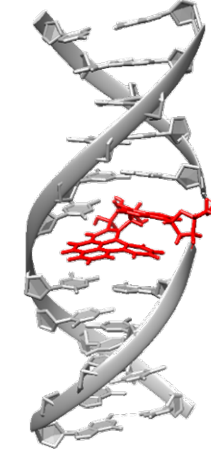
Cancer types with **limited evidence** for cancer in humans:



# IARC: Strong Evidence – Key Characteristics of Carcinogens



BEFORE



AFTER

GENOTOXICITY

- OXIDATIVE STRESS
- CHR. INFLAMMATION
- RECEPTOR MEDIATED CELL EFFECTS

EPIGENETIC ALTERATIONS

LOWER CANCER RISK

\*\* HIGHER CANCER RISK \*\*

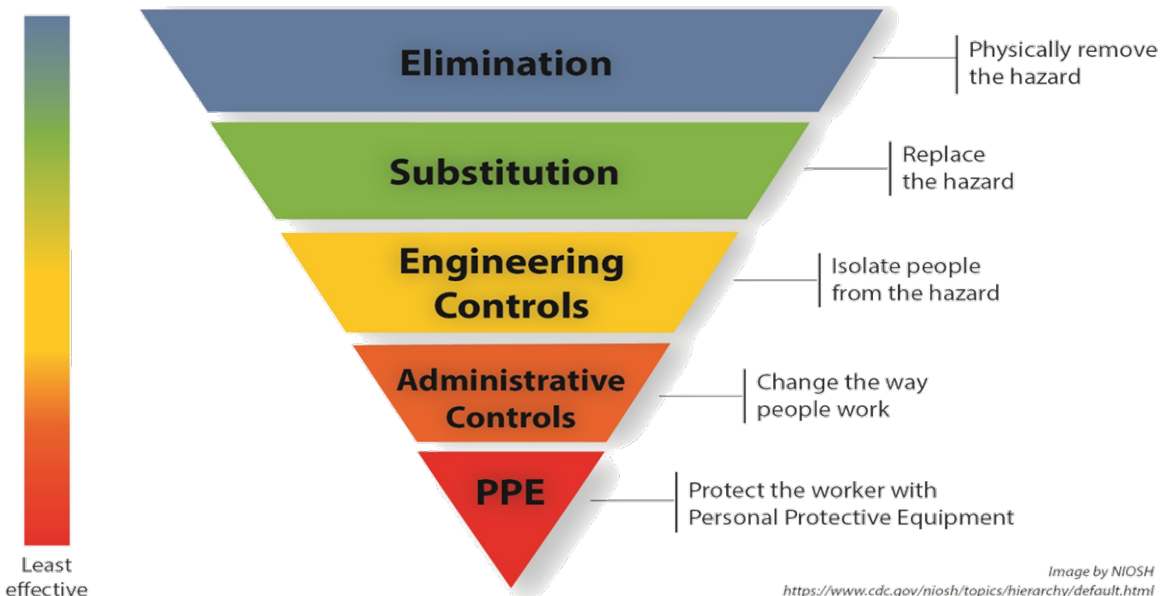
## Hallmarks of Cancer

- 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





# 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

## The CBPR Team



Fire Service Co-PI and Staff and Firefighters (broader community)



Academic Co-PI and Staff

# Community-Based Participatory Research (CBPR)

Community-based Participatory Research	
<b>Philosophy</b>	The orientation is towards social justice, social determinants of health and advancement of equity and <b>empowerment of community as part of the research team.</b>
<b>Context</b>	Essential to the identification of <b>need for the intervention, as identified by community stakeholders.</b> Context informs and acknowledges the culture, history, orientation and power of the community.
<b>Patient, Community, Stakeholder Engagement</b>	<b>Community members are viewed as collaborators (co-designers, co-producers) from start to finish of the research project, with recognition that they are experts</b> given culture, history and lived experiences. Research may include engagement to identify or document a phenomenon or need through data and shared interpretation.
<b>Data Collection</b>	Methods can be mixed <b>methods</b> and often <b>informed and approved by a community advisory board</b> or community representatives.
<b>Formulation of hypotheses and research questions</b>	<b>Community driven with partnership with researchers. Any changes made have to be approved by the community stakeholders.</b>
<b>Iterative process during intervention development</b>	<b>All partners must determine there is an issue and what the action or intervention will be.</b> 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.
<b>Implementation of intervention</b>	<b>Implementation of the intervention may not be the explicit aim of the research,</b> unless the researcher and community identify it and mutually agree on this data collection and emphasis. The <b>intervention developed would also belong to the community.</b>

# Community-Based Participatory Research (CBPR)



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 loss 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)

## Additional Information on Collaborative Agreements

Template Form	Description
<b>Collaborative Agreements</b>	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.
<b>Collaborative Agreements Attachments</b>	<i>Fire Service:</i> 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.

### **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.

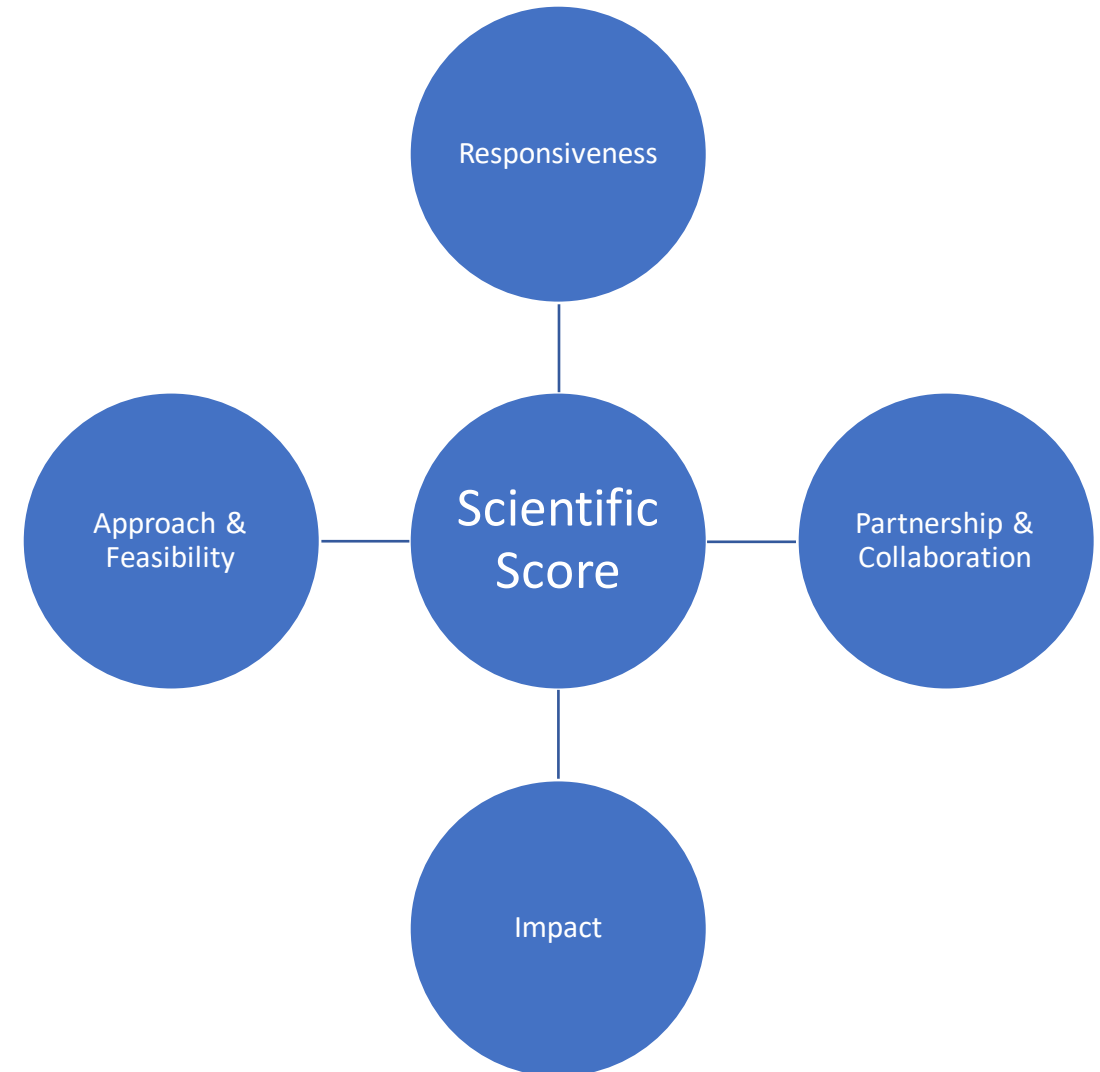
*Funding:* \$750,000 in direct costs for a three-year project (plus indirect costs)

- 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





# 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](mailto:RGPOgrants@ucop.edu)

# Accessing SmartSimple

Login to SmartSimple: <https://rgpogrants.ucop.edu/>

The screenshot shows the SmartSimple login interface. At the top left, the University of California logo is visible. The main content area is titled "Welcome to Research Grants Program Office | UCOP" and contains introductory text about the RGPO and the SmartSimple system. On the right side, there is a "Login to SmartSimple" form with fields for "Email:" and "Password:" (with a placeholder "Enter Password"), a "Login" button, and a "Forgot Password?" link. A red oval highlights the "Email:" and "Password:" fields and the "Login" button. A red arrow points from a text box above to the "Email:" field. At the bottom left, there is a "Principal Investigator Registration" section with a "Register Here" button, which is also circled in red. A red arrow points from a text box to the "Register Here" button. The background of the page features a blurred image of a woman's face and a starry pattern.

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**Returning users login here**

**Welcome to Research Grants Program Office | UCOP**

The Research Grants Program Office (RGPO) oversees a broad grantmaking portfolio of over \$100 million a year to support research that is critical to California, the nation and the world. RGPO programs enhance University of California's research capacity and excellence, which helps attract top faculty, graduate students, government funding and companies to our state.

The SmartSimple Grants Management System is now accepting letters of intent (LOIs) and applications for the Tobacco-Related Disease Research Program (TRDRP). For information regarding the 2019 call for applications, please visit TRDRP's website at [www.trdrp.org](http://www.trdrp.org)

**Principal Investigator Registration**

**Register Here**

**First-time users register here**

**Login to SmartSimple**

Email:

Password:

**Login**

[Forgot Password?](#)

Security

# Creating an Account on SmartSimple

<https://rgpogrants.ucop.edu>

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.”**

### Institution Information

**Instructions**  
Please start typing the name of your institution. A dropdown list will appear, in order to select your institution. If the name does not exist, [search the IRS database](#).

\* **Institution Name**

### Contact Information

\* **Email**

\* **First Name**

\* **Last Name**

\* **Address**

\* **City**

\* **Country**

\* **State / Province**

\* **Zip / Postal Code**

\* **Telephone Number**

I'm not a robot

reCAPTCHA  
Privacy - Terms

**Submit**

# 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.

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Home Available Funding Opportunities Historical Applications

Jane Doe

1

My Applications

3 In Progress Applications

0 Submitted / Under Review Applications

0 Awarded Applications

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Privacy & Security Jane Doe

Home Available Funding Opportunities Historical Applications

In Progress Applications

# RFA	Application ID	Project Title	Type	PI Name	My Role	LOI Deadline Date	FA Deadline Date	Status
1	T29IR0228	STOY Test 2	High Impact Research Project	Jane Doe	Principal Investigator	08/16/2018	09/27/2018	Invited to Full Application <span>Open</span>

2

# From Approved LOI to Invited Application

3. Click on the “Continue to Full Application” button at the bottom of the screen to access the Full Application materials.

The screenshot displays the University of California application portal interface. At the top, the header includes the University of California logo, navigation links for Home, Available Funding Opportunities, Historical Applications, and Open Calls (Testing), and user information for Jane Doe 4. The main content area is titled 'L22CR4382 RGPOTest CRT STOY3' and contains a 'Call for Application Details' section with the name 'LFRP 2022 Collaborative Research and Training Awards' and a deadline of '08/05/2021 12:00:00'. Below this is a 'Templates and Instructions' section with a PDF file named 'UC\_Lab\_Fees\_2022\_-\_CRT\_-\_LOI\_instructions.pdf'. A 'Preview' button is visible. A navigation bar at the bottom of the content area includes 'TITLE PAGE', 'APPLICANT / PRINCIPAL INVESTIGATOR', 'PROJECT INFORMATION', 'PROJECT CONTACTS', 'BUDGET', and 'SIGNATURE PAGE'. The 'TITLE PAGE' section shows the 'Application ID: L22CR4382', a required 'Project Title' field containing 'RGPOTest CRT STOY3' (with 82 characters left), and a required 'Project Duration (year)' dropdown set to '3'. At the bottom right, a 'NEXT >' button is present. The 'Continue to Full Application' button at the very bottom is circled in red, with a red circle containing the number '3' next to it, indicating the step described in the text.




# Application Submission

Instructions can always be downloaded at the top of each page.


Type: Hormone in Well Water Initiative  
Deadline: 12/05/2019 12:00:00

**Templates and Instructions:**

 [CBCRP\\_Submission\\_Instructions\\_by\\_Award\\_Type.pdf](#)  
20.6 KB - 08/27/2019 12:49pm

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

Total Files: 1

 Preview

**< TITLE PAGE**   APPLICANT / PRINCIPAL INVESTIGATOR   PROJECT INFORMATION   PROJECT CONTACTS   BUDGET   ASSURANCES   DOCUMENTATION   SIGNATURE PAGE >

Application ID: B26PW1210

\* Project Title: RGPOTest - CBCRP Water STOY1

72 characters left


\* Project Duration (year):

\* Pn  
\* P When finished, click "Submit to Signing Official."

Download templates and upload required attachments in the Documentation section.

NEXT >

Save Draft

 Withdraw

Submit to Signing Official

# Invited Application: Inviting Personnel

1. In the Full Application, click on "Invite Personnel" in the left sidebar.

Call for Application Details  
Name: RGPOTest CRCC C  
Type: Faculty Seed Grants  
Deadline: 04/02/2020 12:00:00

Templates and Instructions:

[2020CRCC-LOinstrux-20181212.pdf](#)  
240.2 KB - 10/29/2019 2:30pm

Total Files: 1

Preview

< TITLE PAGE APPLICANT / PRINCIPAL INVESTIGATOR PROJECT INFORMATION PROJECT CONTACTS BUDGET ASSURANCES >

1. Click on "Invite Personnel"

# Invited Application: Inviting Personnel

C21CR1535 RGPOTest CRCC v1

**Add Personnel**  
Please input basic contact information First Name, Last Name, and Email. The Status column is triggered allowing the invited contact to accept or decline the invitation. The Status column is used to track the invitation. Once accepted personnel will be granted access (Roles and access are defined below).

**PI Assistant:** User can View/Edit/Submit the application.

Prefix	First Name	Last Name	Email	Role	Status
+					

Save Invite

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.

# Budget tab

Templates and Instructions:

Click the Budget tab

Click "Open" to start entering information

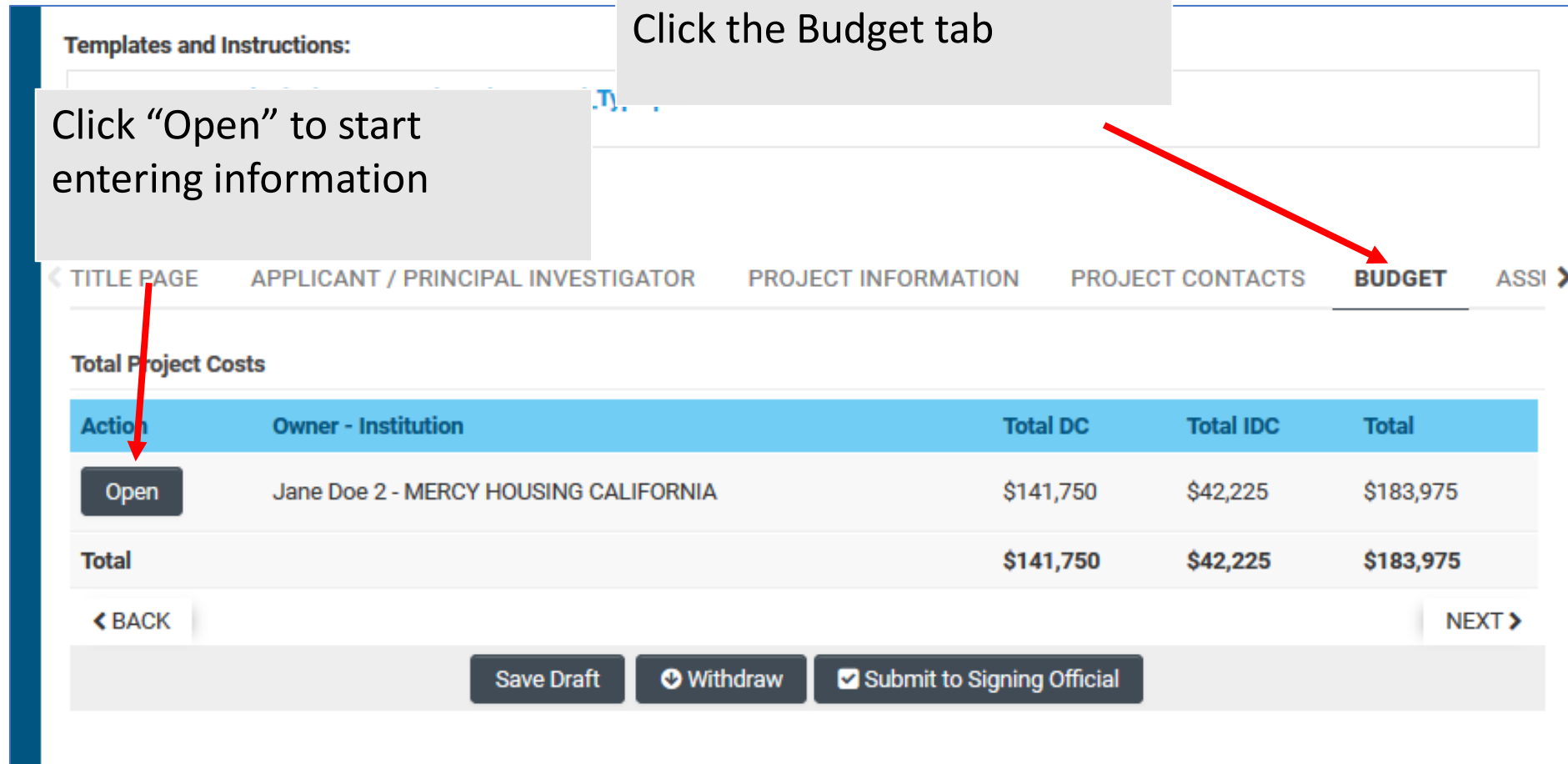
← TITLE PAGE   APPLICANT / PRINCIPAL INVESTIGATOR   PROJECT INFORMATION   PROJECT CONTACTS   **BUDGET**   ASSI >

**Total Project Costs**

Action	Owner - Institution	Total DC	Total IDC	Total
<b>Open</b>	Jane Doe 2 - MERCY HOUSING CALIFORNIA	\$141,750	\$42,225	\$183,975
<b>Total</b>		<b>\$141,750</b>	<b>\$42,225</b>	<b>\$183,975</b>

← BACK   NEXT >

Save Draft   Withdraw    Submit to Signing Official



# 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.”

**INSTITUTION CONTACTS**   BUDGET SUMMARY   BUDGET DETAILS   SUBCONTRACTS

---

**\* Signing Official**

This should identify the individual who is authorized to act for the Applicant Organization, and w conditions for any grant, including the applicable grantor regulations.

Search and select  ?

**\* Fiscal Contact**

This should identify the individual at the Applicant Organization who will serve as the authorized

Search and select  ?

**\* Contracts and Grants Contact**

This should identify the individual in the Applicant Organization’s Contracts and Grants Office, o an award be made, and who will serve as the liaison to the grantor on official grant administrati

Search and select  ?


**Can't find the contact you're looking for?**

Can't find Signing Official  
 Can't find Fiscal Contact  
 Can't find Contracts and Grants Contact

**Add Signing Official**

# Budget tab – Editing the budget

Translational Research Award Application » **Budget**

 Back to Application



## Budget Instructions:

Please open the budget and carefully read the limits set on the call for applications. If exceeded, system will alert and user is required to adjust the numbers.


INSTITUTION CONTACTS

**BUDGET SUMMARY**

BUDGET DETAILS

SUBCONTRACT BUDGET DETAILS

Please click the Edit Budget button below to enter your budget information.

 Edit Budget

**Jane Doe 1 - MERCY HOUSING CALIFORNIA**

Budget Summary

Save Draft

Budget Complete

**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.

## Budget Detail Justification

The budget table on the top of this page is generated from expenses entered in the budget categories below. Please scroll down to the budget categories and click “+” to enter your expenses. Please note you must manually calculate and enter any indirect costs in the budget category section at the bottom of this page. For each budget category, provide all necessary justification. There is no character limit on the budget justification, though it should be concise.

The per year direct cost maximum is: \$250,000.00

The total direct cost maximum is: \$750,000.00

	Year 1	Total
Personnel Costs	\$2,000	\$2,000
Student Tuition Fees, Graduate Student Stipends	\$0	\$0
Other Project Expenses	\$0	\$0
Equipment	\$0	\$0
Travel Expenses	\$0	\$0
Subcontracts	\$0	\$0
Service Contracts and Consultants	\$0	\$0
<b>Direct Costs</b>	<b>\$2,000</b>	<b>\$2,000</b>
Modified Total Direct Costs (MTDC)	\$2,000	\$2,000
Indirect Costs (IDC)Total	\$0	\$0
<b>Total Expenses</b>	<b>\$2,000</b>	<b>\$2,000</b>

### 1. Personnel Costs (Salary and Fringe)

Salaries and Fringe Benefits	Year1	Total
Salary 1	\$2,000	\$2,000
	\$2,000	\$2,000

For each person supported by this grant, describe their contribution to the project.


Justification

Save Clear Close


# Submit to Signing Official – Co-PI

B26BB1411 RGPO Test CBCRP CRC Pilot i

Templates and Instructions:

 [CBCRP\\_Submission\\_Instructions\\_by\\_Award\\_Type.pdf](#)  
21.3 KB - 10/18/2019 3:56pm

Total Files: 1

 Preview

[←](#) [NT / PRINCIPAL INVESTIGATOR](#) [PROJECT INFORMATION](#) [PROJECT CONTACTS](#) [BUDGET](#) [ASSURANCES](#) [DOCUMENTATION](#) **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

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Privacy & Security Jane Doe

Home Available Funding Opportunities Historical Applications

7 of 12

Main

Notes

Invite Personnel

**Call for Application Details**  
Name: TRDRP 2019A - High Impact Pilot Award  
Type: High Impact Pilot Award  
Deadline: 09/27/2018 12:00:00

**Templates and Instructions:**

[IP\\_Application\\_Instructions.pdf](#)  
1,916 KB - 07/18/2018 6:32pm

Total Files: 1

Preview

TITLE PAGE APPLICANT / PRINCIPAL INVESTIGATOR PROJECT INFORMATION INSTITUTION CONTACTS BUDGET ASSURANCES DOCUMENTATION **SIGNATURE PAGE**

**\* Applicant Signature**

Check the box to indicate that you acknowledge the statement below and type in your full legal name to serve as your electronic signature.

I certify that the statements herein are true, complete and accurate to the best of my knowledge. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. I agree to accept responsibility for the scientific conduct of the project and to provide the required progress reports if a grant is awarded as a result of this application.

**\* Applicant Electronic Signature (Type in your full legal name)**

Jane Doe

**\* Date**

07/19/2018

Save Draft Withdraw **Submit to Signing Official**

# Applicant Support

## Contacts

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

**SmartSimple guidance:** [RGPOgrants@ucop.edu](mailto: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>)

Log in to SmartSimple (<https://rgpogrants.ucop.edu>) to download detailed submission instructions.



# Questions & Answers

California Firefighter Cancer Prevention and Research Program