



**Cure CF Columbus Research & Development Program (C3RDP)  
 Training Grant Award  
 Request for Applications  
 Spring 2021**

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## **C3RDP Overview**

Cure CF Columbus (C3) Research Development Program (RDP) supports and promotes groundbreaking research and clinical cystic fibrosis-related activities with individuals located at The Ohio State University and Nationwide Children's Hospital, and subsequently applies this knowledge for the development of new therapeutic strategies to better arm host defense that combat infection.

### **Mission Statement:**

Excessive inflammation and recurrent infections are a hallmark of Cystic Fibrosis pathophysiology. The C3RDP mission is to develop treatments that prevent this pathophysiology. The C3RDP will pursue its mission through investigation of the cellular and molecular mechanisms that underlie inflammation and infection in Cystic Fibrosis patients.

Our goals for the C3RDP are:

1. To facilitate new collaborations among CF researchers
2. To foster a strong network of CF and non-CF researchers worldwide
3. To expand the C3 RDP community through recruitment of new investigators and trainees/future investigators

The values of diversity, equity and inclusion are integral to the success of the C3 community. The C3RDP commits to fostering diversity in research by recruiting investigators of different scientific disciplines but also of diverse social backgrounds.

## **C3RDP Training Program**

The mission of the Training Program is to provide superbly integrated, high quality, and formative scientific training to individuals committed to careers in CF research. The immediate goals are to support trainees who will develop and test new hypotheses and methods and apply existing methods to CF for the first time. In the long term, the goal is to enable trainees to collect data that are relevant to CF and to recruit and train the next generations of CF researchers and physicians.

Training Program objectives:

1. To provide continued support for our state-of-the-art laboratory-based training in our established focus areas (CF immune dysfunction, microbial pathogenesis, the interface of macrophages and neutrophils with CF pathogens, and CF airway epithelial physiology).
2. To enhance training in our emerging focus areas (Cystic Fibrosis Transmembrane Conductance Regulator (CFTR) modifier effects on immune cell function, progenitor cell biology and therapy, CFTR channel function and dysfunction, adaptive immune cell dysfunction in CF, and therapeutics aimed at managing infection and inflammation).
3. To make available partial financial stipend and tuition support (cost share agreement) for one graduate student and one post-doctoral trainee.
4. To provide potential biomedical research career trainees with a strong foundation in basic sciences and the direct lab experience needed to conduct research in our established and emerging focus areas.
5. To support our core C3 trainee enhancement programs.

Trainee grant applications should focus on basic or translational research. Studies that incorporate use of clinical specimens that are recovered from human subjects (e.g. airway cells, immune cells, bronchioalveolar lavage (BAL), serum, etc.) are highly encouraged. Special consideration will be given to projects that: 1) propose innovative and creative approaches to the problems of CF disease; 2) focus on areas of special and emerging interest to the C3RDP research; and 3) utilize the C3 research cores.

## **Funding**

The grant includes **two trainee fellowships**. The purpose of this RFA is to support highly meritorious **trainee projects**. These applications can be an extension of prior funded C3 Research projects or new proposals from any eligible OSU or NCH trainee.

- Up to **\$25,000** can be used for partial stipend support, supplies, core services, animal costs, travel, etc.
- For trainees with prior C3 support, a second year of funding is contingent on demonstration of satisfactory progress and approval by the C3 Research Internal Advisory Boards. A separate budget and justification will be required at this stage.
- No indirect costs will be provided.

## **Eligibility**

### **General eligibility criteria:**

1. Applicants should be currently enrolled in an OSU or NCH training program. These typically include individuals who are at the predoctoral, postdoctoral, or fellow phase of their education.
2. Applicants cannot hold an existing fellowship award (e.g. T32, CFF postdoctoral, F31/F32 or equivalent) that supports their stipend.
3. Current C3 trainees supported by C3 funds may apply for a 2nd year of support.
4. U.S residents and applicants from outside the U.S are welcome to apply.
5. International applicants and institutions are required to submit additional information in accordance with U.S. anti-terrorist restrictions.
6. Relevant approvals from the Institutional Animal Care and Use Committee, Institutional Biosafety Committee, and Institutional Review Board must be in place at the time that the trainee grant is awarded.

## **Current C3RDP Research Interests**

### *C3 Established Focus Areas:*

- Studies on CF innate immune cell dysfunction
- Microbial pathogenesis in CF (*Pseudomonas*, *Burkholderia*, *Staphylococcus*, *Haemophilus*, NTM and respiratory viruses including rhinovirus, RSV, influenza)
- Interactions at the interface of macrophage and neutrophils with CF pathogens
- Defects in CF airway epithelial cell defenses that predispose to infection

### *Emerging Focus Areas and Opportunities for Expansion:*

- Immune function and dysfunction in T and B cells
- Effects of CFTR modifiers on immune cell function
- Progenitor cell biology and therapy

- Critical factors that support CFTR channel activity in immune and epithelial cells
- Development of new therapeutics aimed at managing infection and inflammation
- Airway epithelial innate immune cell responses to bacterial and viral infections

## Key Dates

RFA Release date	February 3, 2021
<b>Grant Application Deadline</b>	<b>April 1, at 5pm 2021</b>
Award Notifications	May-June 2021
Earliest Project Start Date	July 1, 2021
Award Period	July 1, 2021—June 30, 2022

## Application Guidelines

- a. Application components
  - a. The grant application is to be submitted as a single PDF. All application attachments (links) are below and can be found on our website. The pages must be in the following order:
    - i. Scope of Work (SOW) (encompassing a one year project period)
    - ii. Face page
    - iii. NIH Biosketch: Maximum 5 pages per biosketch; one for trainee and one for primary mentor
    - iv. Detailed budget
    - v. Budget justification
    - vi. Research plan: Page limit of 6 pages. References are not counted in the 6-page limit.
      1. Describe the aims of the project, the hypothesis to be tested and supporting preliminary data, approach (research design), anticipated results, and outcomes/alternative approaches. Include the relevance of the project to the CFF and research missions and an indication of how C3 core resources will be utilized.
      2. Trainees with prior support from C3 (second year) must include a summary of progress towards the aims of their prior proposal (maximum of 2-pages) that includes presentations, manuscripts, or other publication communications of progress. These individuals do not need to complete full research plan for the second year.
    - vii. Mentor’s Letter of Support and Training plan (2 page limit), which includes:
      1. The merits of the trainee
      2. Discussion of how the mentor will develop trainees’ capabilities for CF and C3 RDP-related research or clinical activity
      3. Training environment
      4. Relationship between the current application and the trainees’ long-term career goals.
    - viii. As a note, the C3RDP strongly encourages that trainees enlist a CF clinical mentor. This would likely be a physician who is involved in CF clinical activities and is knowledgeable about research related to CF.
  - b. NIH formatting must be followed.
  - c. Appendices are not allowed.

- d. [Application attachments](#) and the [descriptions of the C3RDP Cores](#) can be found on our C3 website.
- e. Applicants planning on getting specimens through the Translational Core should submit a [Specimen Request Form](#) by **April 1, 2021**
- f. Grant applications must be submitted as a single PDF file due on **April 1, 2021** to [PulmonaryGrants@nationwidechildrens.org](mailto:PulmonaryGrants@nationwidechildrens.org).

## Grant Review Process

1. Review will be conducted by members of the C3 RDP Research Internal Advisory Board.
2. Each reviewer will submit a written review
3. Each grant reviewer will provide 4 scores:
  - i. Applicant
  - ii. Training Plan and Environment
  - iii. Scientific Merit
  - iv. Relevance to CFF and C3 missions
4. Grants needing clarification or improvement will be returned to the applicant and revisions will be due by **May 17, 2021**. Revisions, if needed, must be submitted via email to [PulmonaryGrants@nationwidechildrens.org](mailto:PulmonaryGrants@nationwidechildrens.org).
5. Grant awards will be announced on May-June, 2021

## Full Application Checklist

Please use provided templates/attachments to complete the full application:

- Face Page
- NIH Biographical Sketch
- Detailed Budget
- Budget Justification
- Research Plan
- Mentor's Letter of Support and Training Plan

## Contact Information and Other Resources

Title	Name	Phone #	Email
Program Director	Luanne Hall-Stoodley	614-292-7851	<a href="mailto:Luanne.Hall-Stoodley@osumc.edu">Luanne.Hall-Stoodley@osumc.edu</a>
C3 Administrator	Hanh Pham	614-722-5122	<a href="mailto:Hanh.Pham@nationwidechildrens.org">Hanh.Pham@nationwidechildrens.org</a>

Please visit our Cure CF Columbus website for more information and resources: <http://www.curecfcolumbus.org/>