

## **GUIDELINES FOR RESEARCH GRANT AND PILOT & FEASIBILITY AWARD LETTERS OF INTENT**

Cystic Fibrosis Foundation (CFF) requires that investigators who seek support from the Foundation for Research Grant or Pilot & Feasibility Award applications submit, in advance, a **BRIEF DESCRIPTION** of the research topic. The deadline for submitting Letters of Intent (LOI) is July 1<sup>st</sup>.

**Letters of Intent must be submitted at Proposal Central - <https://proposalcentral.altum.com/> - by 5:00pm (EDT) on July 1<sup>st</sup>.**

The signed, original cover sheet should be returned to CFF and postmarked by the same date. Late submissions will not be accepted and the deadline will not be waived. The Foundation reviews all LOIs electronically; therefore anything not submitted online will not be reviewed.

We have initiated this early review due to the high number of grant applications typically received and to reductions in CFF's medical/scientific budget as a result of the economy. Moreover, many grant applications duplicate or overlap previously funded topics, are unrealistic in scope, or are inappropriate for the goals of research currently of interest to CFF (see attached summary). By soliciting LOIs, we hope to avoid unnecessary time spent by both investigators preparing grants and CFF staff and reviewers examining these applications. Funding priority will be placed on those projects proposing to better understand the mechanisms behind disease pathophysiology and to develop strategies to prevent or treat it. Applicants will be notified in early August whether or not their LOI has been accepted for a full grant submission. If accepted, applications will be due by the first Wednesday of October.

Research Grant and Pilot & Feasibility applications must originate from independent investigators. In addition, the projects should focus on basic science research. Those proposals that include methodologies requiring sampling of materials from human subjects will be considered under this mechanism only if the sampling method constitutes minimal patient risk (e.g., venipuncture) and the sample will be utilized in bench research. All other projects utilizing human subjects must submit a Clinical Research Letter of Intent.

### **The brief description of the research project (maximum of 3 pages) should include:**

1. Project title;
2. Statement of hypothesis;
3. Goals of the research; and
4. Brief study design - must clearly state cell types or animal models to be used, aims to be addressed, and proposed methodology. Note: Research Grant budgets are limited to \$90,000/year (plus 8% indirect costs) for up to two years while Pilot & Feasibility Awards may receive up to \$40,000/year (plus 8% indirect costs) for up to two years.

All LOIs should be typed in Times New Roman 12 or Arial / Helvetica 11. Biosketches of key personnel will be required.

CFF's Research and Research Training Committee will review letters of intent and notify applicants as to the suitability of the study. Please contact the Grants and Contracts Office at [grants@cff.org](mailto:grants@cff.org) or (301) 951-4422 if you have any questions regarding the programs.

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## Goals of Research Currently of Interest to CFF

### *Background*

The majority of morbidity and mortality associated with cystic fibrosis (CF) today is due to lung disease. Within the endobronchial space mechanical, innate and acquired defenses work in a cooperative manner to maintain a “sterile” environment. In CF, one or more of these defenses are compromised and inhaled or aspirated pathogens are able to establish a chronic infection. However, cystic fibrosis is unique in that only a small subset of pathogens have been linked to disease progression and the infection remains, for the most part, compartmentalized. Containment of infection within the endobronchial space is highly likely due to exuberant inflammation. Unfortunately, the neutrophil dominant inflammatory response also causes tissue destruction compromising organ level function. Both the host and pathogen demonstrate adaptation as the initial infection evolves into an indolent, chronic infection punctuated by acute exacerbations.

Based upon a series of meetings and an examination of currently funded work, the Cystic Fibrosis Foundation has identified several areas of research focus that are presently underrepresented within its portfolio. Investigators are encouraged to consider these areas when crafting a Letter of Intent.

### *Areas of current interest:*

- Post secretory events that govern mucus maturation within the CF airway;
- Influence of CF airway milieu (infection and inflammation) on structure of secreted and tethered airway mucins;
- Nature of interaction between secreted and tethered airway mucins;
- Mechanism(s) of improved airway mucociliary clearance by osmotic agents;
- Improved agents for spatial and temporal resolution of airway mucociliary clearance;
- Quantity and quality of airway submucosal gland secretions in response to physiologic stimuli and whether these are compromised in CF;
- Relationship between killing and clearance (mechanical and phagocytic) of inhaled bacteria and the impact upon inflammatory signaling;
- Determination of what selective processes, whether they be of the host and/or pathogen, favor chronic infection by particular strains of *Pseudomonas aeruginosa*;
- Identification of advantage(s) conferred upon *P. aeruginosa* through mucoid conversion ;
- Rapid, minimally invasive means of detecting mucoid conversion of *P. aeruginosa*;
- Composition of *P. aeruginosa* biofilm matrix *in vivo*; and
- Development of more informative *in vitro* and *in vivo* models of chronic airways infection and inflammation.