CYSTIC FIBROSIS FOUNDATION THERAPEUTICS, INC.

Therapeutics Development Award
LOI and Full Application

POLICIES AND GUIDELINES

Updated August 3, 2017
I. MISSION
The mission of the Cystic Fibrosis Foundation (CFF) is to cure cystic fibrosis (CF) and to provide all people with the disease the opportunity to lead full, productive lives by funding research and drug development, promoting individualized treatment, and ensuring access to high-quality, specialized care.

To meet this mission, various types of grants and awards are offered to support meritorious research in CF.

Established in 2000, Cystic Fibrosis Foundation Therapeutics, Inc. (CFFT) is the non-profit drug discovery and development affiliate of the Cystic Fibrosis Foundation. CFFT supports and governs activities related to cystic fibrosis (CF) drug discovery through the many stages of drug development and clinical evaluation.

II. RESEARCH OBJECTIVES AND AWARD OVERVIEW
In an effort to stimulate development of new pharmaceutical products for cystic fibrosis (CF) patients, Cystic Fibrosis Foundation Therapeutics, Inc. (CFFT), the non-profit drug discovery and development affiliate of the Cystic Fibrosis Foundation, developed the "Therapeutics Development Awards Program". The purpose of this program is to provide funds to companies that will develop commercial products to benefit individuals with CF. Structured as a matching award program, funds will be awarded only if they are matched by the recipient (CFFT will not provide funds for travel of employees of applicant institution; however, travel of key personnel to CF-related scientific meetings can be considered as matching funds).

III. PROGRAM DESCRIPTION
With the increasing pressure on biotechnology companies to assure a return on investment to their shareholders, funds that would be spent to initiate new exploratory research products have become severely limited. Much of the funding currently available to the companies is already committed to products in the late stage of development. Concurrently, there has been an explosion of new knowledge about CF; therefore, new funds from CFFT will spur companies on to explore the feasibility of new therapeutic approaches to CF care.

The wide availability of this program will affirm that new product candidates are explored to their fullest potential. It completes the last stage in the spectrum of the CFF research mechanisms that foster the rapid development of new knowledge through basic research, coupled with the strong network of CF care centers that insure new products are tested in the patient population. This mechanism, in effect, fills the gap between basic research knowledge and clinical trial testing. It supports pre-clinical testing and provides funding to evaluate safety and preliminary efficacy. Once pre-clinical and clinical testing stages are completed, companies are expected to obtain financial support necessary to conduct the pivotal Phase III efficacy clinical trials necessary for regulatory approval.

Structure
Awards will be made for either discovery (CFTR focused) or preclinical and initial clinical development activities (all therapeutic areas relevant to CF). Please note that CFFT support may not be used for API manufacture or other chemistry, manufacturing and controls activities nor for
support of senior company personnel engaged in administrative roles.

**Component I – Discovery and/or Preclinical Development Phase:** The objective of this phase may be to either apply platform technology to the discovery of compounds which have the potential to be developed into candidate CFTR targeted drugs or establish the technical merit and feasibility of a new therapeutic intervention. For discovery efforts, qualifying activities include assay development, screening, secondary assay analysis, medicinal chemistry and preliminary compound testing for pharmacokinetics and bioavailability, as well as specificity and determination of mechanism of action.

When a lead compound has already been identified, Component I funding may be used for animal studies, toxicology, pharmacokinetics, and studies determining a potential new agent’s delivery. Funds during this phase will be US$300,000 per annum for a maximum of two years of support. It is required that the awardee provide at least a matching amount in order to adequately conduct the necessary activities.

**Component II – Clinical Phase:** The objective of this phase is to provide support for the continuation of pre-clinical studies and clinical assessment of new interventions, including safety and dose determination studies in CF patients. Funding will not be provided for studies in normal human volunteers. The award will be up to a maximum of US$1,200,000 per annum for up to two years. Funds must be matched by the awardee and cannot be “in-kind”. Funds will not be provided for Phase III multi-center clinical trials.

These mechanisms will be applied for and funded sequentially. First, the awardee will examine the scientific potential of new products under Component I. Component II studies will involve support for the continuation of Component I developments and the initiation of patient clinical studies.

No funding for Component II will be considered until the feasibility of a new approach has been successfully generated. However, applicant does not have to receive Component I money prior to applying for Component II, as long as feasibility has been determined.

**IV. REVIEW AND AWARD**

Applications will be evaluated based on the following:

- The soundness and technical merit of the proposed approach;
- The qualifications of the Principal Investigator, supporting staff and CF collaborators;
- The relative importance of the proposed intervention to CF care;
- The potential of the proposed research for commercial application;
- The appropriateness of the budget requested;
- The adequacy and suitability of the facilities and research environment;
- The adequacy of milestones to assess overall performance of the project;
- The importance of the new intervention in controlling cystic fibrosis.

All successful awardees will be required to execute an agreement specifying the Terms & Conditions of an award before funds are made available.

All projects must be conducted in consultation with a CF-identified investigator representing a
funded CF clinical center, CF research center, other funded mechanism of the CFF, or other funding agencies, and subject to approval by CFFT.

**Project Advisory Group** - Each approved award may be subject to an oversight review by a Project Advisory Group (PAG). If applicable, the PAG will determine overall performance of the project. They will report, in writing, to CFFT on a periodic basis not less than once every three months. Continued support of each project will be subject to achievement of milestones and recommendations of the Project Advisory Group. CFFT can, at its option, elect to terminate the award and only be subject to the reimbursement of the portion of the award corresponding to the current milestone at the time of termination. Please include nominees to the PAG in your Opportunity Summary Form template in the LOI section (refer to section “V. 6. Attachments” below).

**Milestones** - Each application must contain "milestones” that are objective achievements demonstrating forward progress for the therapeutic approach and the appropriate timetable for completion of each. Continued funding for the project will be, in part, based upon milestone attainment.

**Payback** - If a Therapeutics Development Award leads to the marketing of a new intervention, CFFT will receive reimbursement for its support. Terms will be negotiated prior to finalizing the award, and will typically include reimbursement plus a multiple following successful regulatory marketing approval, and/or a percentage of net sales. CFFT may also require certain rights to take the product forward in the event that the awardee elects not to advance the product within a reasonable period of time.

V. LETTER OF INTENT SUBMISSION GUIDELINES

Letters of Intent Submissions accepted: January 5th through October 31st, 2017 by 5:00 PM EST

CFFT requires that investigators who seek support from the Foundation for Therapeutics Development Award (TDA) applications submit a Letter of Intent (LOI) in advance of a full proposal.

Letters of Intent (LOI) must be submitted at proposalCENTRAL: [https://proposalcentral.altum.com/](https://proposalcentral.altum.com/)

An LOI will be considered incomplete if it fails to comply with instructions, or if the submitted material is insufficient to permit adequate review. CFFT reviews all LOI’s electronically, and only the documents submitted online will be reviewed. All required templates are available for download at proposalCENTRAL.

Documents should be typed using:
- Font: Times New Roman 12 or Arial 11.
- Margins: No less than a half inch on each side.

If you are a first-time user of the online application system at proposalCENTRAL, register at: [https://proposalCENTRAL.altum.com/](https://proposalCENTRAL.altum.com/). You must create an account and a profile before applying. If you have registered and cannot remember your password, click on the “Forgot Your
Username/Password?" link located below the “Application Login” fields.  *Note:* Use the Customer Service link on the top right of each screen as needed.

Grant and award opportunities, including this, are listed on the opening screen, but you must be logged in first to see them.

Select the gray tab labeled “Grant Opportunities” found in the upper right hand side of the page.

Click on the light blue “Filter by Grant Maker” button to the left and scroll down to locate Cystic Fibrosis Foundation Therapeutics in the list.

Locate “Therapeutics Development Award with LOI (Rolling Deadline) 2017.” Click on the “Apply Now” button that appears on the far right in the “Apply” column to open the application.

Applicants may stop and exit at any point, but must click the “Save” button before exiting in order to save their work. When logging in again to continue, click on the blue tab, “Manage Proposals”, and then the “Edit” button.

The following sections will be displayed in the navigation menu to the left of the application screen (see picture below). Please click on each section and follow the directions.

1. **Title Page:** Complete online. Enter Project title and required fields.

2. **Download Templates & Instructions:** Download the available templates applicable to the project, fill them out and upload them when completed in Section #8. Templates available include: Biographical Sketch and Opportunity Summary Form.

3. **Enable Other User to Access this Proposal:** complete this section online if you wish to designate access to another individual, such as an assistant such as an assistant who has registered on proposalCENTRAL. Enter the email address of the individual and in the “Permissions” column, use the pulldown menu to select the type of access you wish to give. Please note that only delegates who are granted “Administrator” rights can submit applications on behalf of the applicant. Click on “Accept Changes”.

4. **Applicant/PI:** If a profile was completed upon registration, the fields in this section will already be populated with the information entered in your Professional Profile. If you need to make any changes, click the “Edit Professional Profile” button and follow the instructions. If a profile was not completed, enter the information in the required fields and click “Save”.

*CFCT Therapeutics Development Award with LOI*

*Updated August 2017*
5. **Institution**: If a profile was completed upon registration, the Principal Investigator’s (PI) institution will be preloaded as Lead Institution. If a profile was not completed, enter the required information and click “**Save**”. Be sure to use the full legal name of the institution.

6. **Scientific & Lay Abstracts**: Complete online or cut and paste plain text (no scientific notations, bold, underline, etc.). Two different abstracts statements of no more than 250 words (up to 2,000 characters max, including spaces) are required as follows:
   - **Lay Abstract**: This statement will be used to inform the non-scientific departments of CFF and the general public of the nature of this work. Applicants should not include any confidential or proprietary information, including intellectual property, in the lay abstract.
   - **Scientific Abstract**: This statement will be used to inform the scientific community.

   **Keywords**: From the lists of options provided in this section, select all applicable research type, research topics, and keywords for the proposed project. A minimum of one (1) option must be selected per category. Click each keyword you want to select, then the arrow tab, until you have all applicable keywords selected on the list to the right.

7. **Budget summary**: Budget estimate not to exceed US$300,000/year (direct costs only) for Discovery and/or Preclinical Development Phase (Component I) applications; and US$1,200,000/year (direct costs only) for late preclinical activities and clinical studies in CF patients (Component II). All Therapeutics Development awards are awarded for a maximum of two years. **Note**: Matching funds are required.

8. **Attachments**: Completed the templates downloaded from Section #2 above, and upload them here as PDF documents. Below are instructions specific to each template:

   **A. BIOGRAPHICAL SKETCHES OF KEY PERSONNEL**
   A biographical sketch should be completed for all key project personnel. CFFT defines “key personnel” as any individual with an advanced degree that will play an instrumental role in the accomplishment of the research project. Biosketches should not exceed five (5) pages. NIH Biographical Sketch forms are acceptable.

   **B. OPPORTUNITY SUMMARY FORM**
   A brief non-confidential summary of your potential CF opportunity should be completed using the “Opportunity Summary Form Template” available for download on proposalCENTRAL. There is a 5-page limit to your summary; please do not exceed the limit.

9. **Validate**: Upon completing your LOI, click on the “**Validate**” button on the main screen. Attend to any omissions/errors as prompted onscreen, and then click **“Validate”** again.

10. **Signature Page(s)**: Signature pages (a.k.a “Face Pages”) are not required for an LOI. Continue to Section #11.

11. **Submit**: Click on the gray button with blue lettering. **Submit** CFFT will not receive your application until and unless the submit button is clicked.
**Confirmation:** Applicants will receive an e-mail confirmation from proposalCENTRAL (not from CFFT) that the Letter of Intent was successfully submitted. This e-mail will be your only acknowledgement. If you do not receive this confirmation, please contact proposalCENTRAL immediately to ensure the application was submitted and processed.

An appropriately constituted CFFT Committee will review Letters of Intent and notify applicants as to the suitability of the proposal.

**VI. FULL APPLICATION GUIDELINES**

**Applications accepted:** January 5th through October 31st, 2017 by 5:00 PM EST

Applications for support of these projects will only be accepted if the applicant has an approved* Letter of Intent (LOI) on file with CFFT. Applicants without an approved LOI must first go to proposalCENTRAL at https://proposalcentral.altum.com/ to initiate an LOI. Applications received without an approved LOI will not be reviewed.

* Applicants with a previously approved LOI (from a prior application cycle) must submit an LOI Bypass Request to awards@cfft.org. The request should include a copy of the LOI approval notice, as well as the email address associated with the Principal Investigator’s account on proposalCENTRAL. Once approved, the LOI Bypass will allow applicants to access the full application form on proposalCENTRAL.

Documents should be typed using:
- Font: Times New Roman 12 or Arial 11 font.
- Margins: No less than half an inch on each side.

**Note:** When all the documents have been uploaded to proposalCENTRAL, the system will compile them into a single PDF file in the correct sequence.

Log-in at proposalCENTRAL: https://proposalcentral.altum.com/. If you have registered and cannot remember your password, click on the “Forgot Your Username/Password?” link below the “Application Login” fields. **Note:** Use the Customer Service link on the top right of each screen as needed.

Select the gray tab labeled “Grant Opportunities” found in the upper right hand side of the page. Click on the light blue “Filter by Grant Maker” button to the left and scroll down to locate Cystic Fibrosis Foundation Therapeutics in the list.

Locate “Therapeutics Development Award with LOI (Rolling Deadline) 2017”. Click on the “Apply Now” button that appears on the far right to open the application form.

Applicants may stop at any point, but must click the “Save” button before exiting in order to save their work. When logging in to continue, click on the blue tab, “Manage Proposals,” and then the “Edit” button.
The following sections are listed in the navigation menu to the left of the application screen (see picture below). Click on each section and follow the directions.

1. **Title Page:** Complete online. Enter the Project Title and select the TDA Component for which you are applying. Answer the remaining questions on the page.

2. **Download Template & Instructions:** Download the available templates applicable to your project, fill them out and upload them when completed in Section #9. Templates available include: Research Plan, Budget Detail, Budget Justification, Biographical Sketch, Data Safety Monitoring Plan, Facilities Available, International Institution Form (if applicable) and Appendix (if applicable). (Once all documents are uploaded to proposalCENTRAL, the system will compile them into one PDF file in the correct order.)

3. **Enable Other Users to Access this Proposal:** Complete this section online if you wish to designate access to another individual, such as an assistant who has registered on proposalCENTRAL. Enter the email address of the individual and in the “Permissions” column, use the pulldown menu to select the type of access you wish to give. Please note that only delegates who are granted “Administrator” rights can submit applications on behalf of the applicant. Click on “Accept Changes”.

4. **Applicant/PI:** If a profile was completed upon registration, the fields in this section will already be populated with the information entered in your Professional Profile. If you need to make any changes, click the “Edit Professional Profile” button and follow the instructions. If a profile was not completed, enter the required information and click “Save”.

5. **Institution & Contacts:** If a profile was completed upon registration, the Principal Investigator’s (PI) institution will be preloaded as Lead Institution. If a profile was not completed, enter the required information and click “Save”. Be sure to use the full legal name of the institution.

6. **Scientific & Lay Abstracts:** Complete online or cut and paste plain text (no scientific notations, bold, underline, etc.). Two different abstracts statements of no more than 250 words (up to 2,000 characters max, including spaces) are required as follows:
   - **Lay Abstract:** This statement will be used to inform the non-scientific departments of CFF and the general public of the nature of this work. Applicants should not include any confidential or proprietary information, including intellectual property, in the lay abstract.
   - **Scientific Abstract:** This statement will be used to inform the scientific community.
Keywords: From the lists of options provided in this section, select all applicable research type, research topics, and keywords for the proposed project. A minimum of one (1) option must be selected per category. Click each keyword you want to select, then the arrow tab, until you have all applicable keywords selected on the list to the right.

7. Budget summary: Budget estimate not to exceed US$300,000/year (direct costs only) for Discovery and/or Preclinical Development Phase (Component I) applications; and US$1,200,000/year (direct costs only) for late preclinical activities and clinical studies in CF patients (Component II). All therapeutics development awards are awarded for a maximum of two years. (Note: Matching funds are required. CFFT will not provide funds for travel of employees of applicant institution; however, travel of key personnel to CF-related scientific meetings can be considered as matching funds). In section 2, you must also have downloaded a budget detail template and a budget justification template which you will upload in Section #9.

8. Organization Assurances: Refer to Section G in this document for a detailed description of the type of organization assurances that might be involved. On this online section, select the type of assurances that are applicable to your project and provide all applicable information (e.g.: Human subjects, animal welfare, recombinant DNA and status at the time of submitting your application).

9. Research Plan & Supporting Documents: In this section you will upload the completed templates you downloaded in Section #2. Fill out the fields describing the attachment, select the attachment type from the pulldown menu, choose the file to be uploaded, and click the “Upload Attachment” button to upload the file. Do this for each attachment.

Below are instructions specific to each template as well as additional information regarding other application components.

A. RESEARCH PLAN (template available for download)
   - Maximum length: thirty (30) single-sided pages, including the Literature Cited. Applications exceeding this page limit will not be reviewed.
   - Number the pages at the bottom, and write the PI’s name at the top of the page.
   - Each Component must be clearly identified within the Research Plan.
   - Applications with a Clinical Phase must include a Data Safety Monitoring Plan (DSMP). See section D for details.

In the Research Plan, include sufficient information to permit effective review without reference to previous applications. Information should be presented in a clear, concise manner, while being specific and informative.

a. Hypothesis, Specific Aims and Milestones Outline: State concisely and realistically the intent of the proposed research and the hypothesis to be tested. Milestones must be outlined and a time table for the completion based upon the requested period of support must be outlined.

b. Significance: Briefly describe the background of the present proposal. Critically evaluate
existing knowledge and specifically identify the gaps which the project is intended to fill. Specifically, discuss the unmet need the therapeutic intends to fill and its projected impact on CF patient survival, pulmonary exacerbations (duration and/or frequency and CF patient quality of life in the context of existing and emerging CF therapies). Concisely state the importance and rationale of this research by relating the specific aims to longer-term objectives. This section should also show the potential importance of the proposed work to the development of new therapies for CF patients.

c. **Experimental Design, Methods and Milestones:** Describe the protocols, including methods for new techniques, and explain potential advantages over existing methodologies as they apply to each milestone attained. Discuss the data expected to be obtained and the means by which data will be analyzed and interpreted. If clinical studies are involved, provide details of the methods for patient selection and care.

Discuss potential difficulties and/or limitations of the proposed procedures and alternative approaches to achieve aims. Point out any procedures, situations or materials that may be hazardous to personnel or patients and the precautions to be exercised. Applications will be reviewed and evaluated based upon the experimental design and methods used to achieve the milestones outlined above (A). All applications will be reviewed based upon the appropriateness of the milestones, the time table for the completion of milestones, and the approaches outlined to achieve milestones to achieve the development of new therapies for CF patients.

d. **Consultant Arrangements:** If the proposed project includes consultant arrangements and/or collaboration with other individuals outside the applicant's group, describe the working relationships and support this description by letter(s) of intent signed by collaborating individual(s). In addition to letters of collaboration, curricula vitae must also be provided. If clinical material required by this award is to be furnished by other individuals, include a statement from these individuals agreeing to their participation.

All applications must include the name, biosketch, and a letter of a CF-identified investigator and investigator representing a CFF accredited/funded Clinical Care Center, CF supported research center, or other funded mechanism by the CFF. Individual will be subject to approval by CFFT.

e. **Literature Cited:** References should be numbered in the sequence that they appear in the text and listed at the end of the Research Plan. Each citation must include the names of authors, the name of the journal or book, volume number, page number and year of publication (titles are optional).

B. **BUDGET DETAIL AND BUDGET JUSTIFICATION** (separate templates available for download)

Fill out the Budget Detail and Budget Justification templates for all years of support requested. In the space provided on each page, indicate whether the proposed budget is for the first or second year of support and whether it is for Component I (up to US$300,000/year) or Component II (up to US$1,200,000/year). The budgets for both Component I and Component II must include a plan that utilizes both CFFT and awardee funds. The CFFT dollars must be matched at least one-to-one; however, greater contributions of company funds are acceptable.
• **Budget Detail – Direct costs**

**Personnel** - List the names and positions of all professional and non-professional personnel involved in the project, whether or not salaries are requested. Indicate the percent effort on the project for professional personnel. For each individual, list dollar amounts separately for institutional base salary and fringe benefits. In accordance with National Institutes of Health (NIH) policy, salary requests may not use an institutional base salary in excess of the current federal salary cap of US$187,000; when calculating salary requests, the NIH cap must be adhered to. Fringe benefits may be requested if they are treated consistently by the applicant institution as a direct cost to all funding agencies and foundations.

**Consultant Costs** - Give the name and institutional affiliation of any consultant who has agreed to serve in this capacity, including statisticians and physicians in connection with patient care if they are not listed under personnel. Under budget justification, briefly describe services to be performed, the number of days, rate of compensation, per diem and any other associated costs.

**Equipment** - List all items of equipment requested and the cost of each item. If funds are requested to purchase equipment that is equivalent to items listed under Facilities Available, justify the duplication. Justify any item of equipment for which the need may not be obvious.

**Supplies** - Itemize supplies, such as glassware, chemicals, animals, etc., in separate categories and give the estimated cost of each category. If animals are involved, state the number, unit purchase cost, and unit care cost.

**Patient Research Costs** - Funds may be requested for patient research costs specifically related to the proposed research. The basis for estimating funds requested in this category should be justified. The scientific need for patient research costs will be considered in the review of the application. Funding will not be provided for studies in normal human volunteers. Please note that research participant reimbursement and compensation should be listed in "Other Expenses;" and consulting physician charges should be listed under "Consultant Costs."

**Other Expenses** - Itemize other expenses by major categories, such as duplication costs, publication costs, Data Safety Monitoring Plan (DSMP) related-expenses (if applicable), computer charges, equipment maintenance, etc. Justify all items.

• **Budget Justification**

Use this template to describe the nature of costs listed in the “Budget Detail.” Use major categories, such as Personnel, Consultant Costs, Equipment, etc. Please note that indirect costs are not allowable on this award program.

C. **BIOGRAPHICAL SKETCHES OF KEY PERSONNEL (template available for download)**

Complete and upload a biographical sketch for all key project personnel, beginning with the Principal Investigator. (CFFT defines “key project personnel” as any individual with an
advanced degree that will play an instrumental role in the accomplishment of the research project.) Each individual’s complete biographical sketch should not exceed five (5) pages. Clearly identify the results of past CFF/CFFT support (i.e., subsequent funding from other sources, journal articles, and invited presentations.) Prior publications relevant to the present application should be also clearly identified. **CFFT will also accept NIH Biographical Sketches, and a sample is available for download and provided online.**

D. **DATA SAFETY MONITORING PLAN (template available for download, if applicable)**

In compliance with Federal regulations, all applicants must submit a general description of the Data Safety Monitoring Plan (DSMP) for any proposed study that places human subjects at more than minimal risk. A DSMP helps to ensure subject safety, as well the validity and integrity of the data. Furthermore, a DSMP allows for the monitoring of study data to assess whether or not an early termination is necessary for safety or efficacy reasons.

The extent of monitoring required for a study is dependent on the level of risk involved for the subjects, as well as the size and complexity of the study. Large, multi-center CFFT-funded interventional clinical trials must utilize the CFFT Data Safety and Monitoring Board (DSMB). In addition, CFFT may require that investigators utilize the CFFT DSMB for any other interventional CF clinical trial that meets one or more of the following criteria:

- Multi-center;
- Randomized;
- Conducted in an emergency setting;
- Use high-risk interventions, such as gene therapy or gene transfer; or
- Include particularly vulnerable study populations, such as pediatric patients.

**Address the following areas in the DSMP:**

**Assessment of Risk** — Describe the level of risk the proposed research presents to subject participants and provide a detailed justification for the level of risk. Discuss who will monitor the study.

**Level of Risk**

- **Minimal Risk**
  - Study poses no more risk than expected in daily life (blood draw, physical exam, etc.)
  - Observational studies
  - Survey or questionnaire studies
- **Low Risk**
  - Post-marketing study Phase IV drug or device, as defined by FDA
- **Moderate Risk**
  - Substantial risk (>5%) of a Serious Adverse Event (SAE) originating from the underlying condition of the enrolled subject
  - Phase I or II study with available safety data in humans
- **High Risk**
  - Involves an intervention or invasive procedure with substantial risk
Involves the use of a new chemical or drug for which there is little or no toxicology data in humans
- A gene therapy study or research involving recombinant DNA molecules (gene transfer)
- Involves vulnerable populations (pediatric, pregnant, etc.)

**Anticipated Adverse Events and Grading Scale** – Describe anticipated adverse events (AEs), including expected frequency and the grading scale to be used. Discuss plans for addressing AEs.

**Reporting of AEs** – Detail the plan for reporting AEs, including who shall be notified in the event an AE should occur.

**Safety Monitoring Plan** – Describe all tests, evaluations, and exclusion criteria that will be implemented to ensure and monitor the safety of human subjects. Discuss plans for stopping the study if necessary.

**Safety Reviews** – Describe the process for monitoring and reviewing subject safety data, including the frequency of such reviews. Include details as to who will perform the monitoring and plans for reporting. If utilizing the CFFT DSMB, provide the frequency of meetings, the reporting requirements, including AEs, and the procedure for interim reporting as necessary. If this information is not available at the time of submission of the application, note that CFFT will not release awarded payments until it is provided.

**Registrations for clinical trials:**
- **Clinicaltrials.gov (United States):** Applicants are required to register all non-exempt human subject studies in the ClinicalTrials.gov database to ensure information is freely available on CFF-funded trials within the community. The registration should be no later than twenty-one (21) days after the first subject is enrolled. CFFT requires copies of documentation confirming this registration, when applicable.
- **EudraCT Registration (European Union):** For interventional clinical trials with medicinal products conducted in the European Union, the Institution must provide documentation to CFFT confirming registration of the clinical trial when applicable.

**E. FACILITIES AVAILABLE (template available for download)**
Describe the facilities and equipment available at the applicant’s organization that will be used for this project. Describe their pertinent capabilities, proximity and anticipated extent of use. If facilities or equipment at a consultant’s or collaborative site will be used, they should be identified and clearly described. Use continuation pages, if necessary. Relevant areas, such as laboratory, clinical, animal, computer, office. Provide any additional information about the environment, including support services available to be utilized for this project.

**F. INTERNATIONAL INSTITUTION FORM (template available for download, upload if applicable)**
Applicants whose awardee institution is not based in the United States must complete the
International Institution Form. **Upload a PDF version of the completed and signed form, together with the following documents:**

- A copy of the institution’s most recent Mission Statement.
- A copy of the institution’s Tax Exemption Letter or equivalent, if institution is a nonprofit
- A brief description of other sources of support, such as official grants, private endowments, and commercial activities, received by the institution.
- A copy of the institution’s Standard Operating Procedure(s) or relevant policy to ensure that funds provided are neither distributed to terrorists or their support networks, nor are funds used for activities that support terrorism or terrorist organizations.
- For-profit institutions must submit a complete list of key employees, members of the governing board, and/or other senior management.

Any documents that cannot be uploaded to proposalCENTRAL must be submitted to CFFT Grants and Contracts Office via email to awards@cfft.org.

* Applicants must provide English translations for all non-English documents, including material provided in support of the Research Plan.

G. **ORGANIZATION ASSURANCES & CERTIFICATIONS** (if applicable and available, upload as PDF documents as Appendices)

**Research Involving Human Subjects:** CFFT policy pertaining to the protection of individuals as research subjects requires that for each proposal submitted, the applicant institution certify in writing that an Institutional Review Board (IRB) has reviewed and approved the procedures for the use of human subjects, or human organs, tissues and body fluids, in the proposed research, in accordance with Department of Health and Human Services policies. This certification should accompany the application and must be received before activation of any award. If approval does not accompany the application, there should be a statement in the application indicating that such approval is pending and the date when such approval is expected. **Applications for IRB approval must be made before applying for CFFT funding.** The approved certification should be submitted as soon as it is available.

**Research Involving Recombinant DNA:** All research involving recombinant deoxyribonucleic acid (DNA) techniques and human gene transfer supported by CFFT must meet the requirements contained in the document *NIH Guidelines for Research Involving Recombinant DNA Molecules* (updated April 2016). This publication and announcements of modifications and changes to the *NIH Guidelines* are available from the Office of Biotechnology Activities, National Institutes of Health, 6705 Rockledge Drive, Ste 750, MSC 7985, Bethesda, MD, 20892-7985 or on-line at [http://osp.od.nih.gov/office-biotechnology-activities/biosafety/nih-guidelines](http://osp.od.nih.gov/office-biotechnology-activities/biosafety/nih-guidelines). The purpose of the *NIH Guidelines* is to specify practices for the construction and handling of: (i) molecules that a) are constructed by joining nucleic acid molecules and b) that can replicate in a living cell, i.e., recombinant nucleic acids; (ii) nucleic acid molecules that are chemically or by other means synthesized or amplified, including those that are chemically or otherwise modified but can base pair with naturally occurring nucleic acid molecules, i.e., synthetic nucleic acids, or (iii) molecules that result from the replication of those described in (i) or (ii) above.
Many types of studies involving recombinant DNA are exempt from the NIH Guidelines while others are prohibited. The applicant organization is required to establish and implement policies that provide for the safe conduct of the research in full conformity with the NIH Guidelines. This responsibility includes establishing an Institutional Biosafety Committee (IBC) to review all recombinant DNA research to be conducted at or sponsored by the applicant organization, and to approve those projects it finds are in conformity with the Guidelines.

CFFT policy pertaining to recombinant DNA research requires that the applicant institution certify in writing that an institutional committee has reviewed and approved the procedures involving recombinant DNA in accordance with the NIH Guidelines. Applications for IACUC or equivalent committee approval of planned animal work must be submitted prior to the CFFT application deadline. Applicants that do not have institutional biosafety committee approval must comply to federal and state regulations for recombinant DNA. Certifications do not need to accompany the application; however, applicants must provide copies of all required certifications upon request by CFFT.

Research Involving Animals: Award applications submitted to CFFT involving the use of animals must meet the guidelines of the National Institutes of Health, U.S. Public Health Service, which require that all proposed studies be reviewed and approved by an Institutional Animal Care and Use Committee (IACUC). In addition, CFFT awardee institutions and laboratories must be accredited by the American Association for Accreditation of Laboratory Animal Care (AAALAC) and/or have other verifiable assurances that the institution and laboratory meet appropriate standards. Applications for IACUC or equivalent committee approval of planned animal work must be submitted prior to the CFFT application deadline. Certifications do not need to accompany the application; however, applicants must provide copies of all required certifications upon request by CFFT.

H. VERIFICATION OF APPLICANT INSTITUTION’S TAX STATUS (no template available; upload as PDF documents)
CFFT Grants and Contracts Office must have a copy of the applicant institution’s current W-9 and 501(c)3 letter, or other documentation verifying its Federal tax status, on file. CFFT Grants and Contracts Office will not issue Award Letters to Awardees if these documents are not received and on file.
- Applicants from for-profit organizations must submit a copy of the applicant institution’s W-9 and IRS Form 147C, or other documentation verifying the organization’s Federal tax status. Awards are not issued prior to having these documents on file with CFFT Grants and Contracts Office.
- Non-U.S. applicants must provide a copy of the W-8BEN-E form (required). In addition, a tax equivalency letter should be uploaded, if available. If a tax equivalency letter is not available, applicants must upload a letter stating this documentation is not available.

I. APPENDIX (template available online, upload as PDF documents when applicable)
- Up to four (4) reprints of the applicant’s work relating to the general area of research in the proposal may be uploaded in PDF format.
- Letters of reference, support, and/or collaboration.
• Other materials pertinent to the proposal, not already described. Please upload only the most relevant documents, as excessive materials may not be reviewed (e.g. IRB/IACUC/IBC Approval Letters).


11. Validate: Upon completing your application, click on the “Validate” button on the main screen. Attend to any omissions/errors as prompted onscreen, and then click “Validate” again.

12. Print Face Pages: Follow the prompts on the screen to generate and print a face page. The Face Page will be populated automatically with data entered in the online application (applicant’s name, institution, title of application, etc.). The Face Page must be signed by the Principal Investigator and Authorized Institutional Official. Co-Principal Investigators, if any, are not expected to sign the Face Page. Scan and email the signed Face Page to awards@cfft.org in conjunction with the application submission on proposalCENTRAL. No hardcopy is required.

13. Submit: click on the gray button with blue lettering. Submit CFFT will not receive your application unless the “Submit” button is clicked.

For technical support with the online application:

proposalCENTRAL at pcsupport@altum.com or 800-875-2562 on weekdays, 8:00 a.m. to 5:00 p.m. (Eastern)

For program/content information:

CFFT Grants and Contracts at awards@cfft.org or 301-841-2614
VII. ELECTRONIC APPLICATION CHECKLIST FOR FULL APPLICATION

Applications will be accepted between January 5th and October 31st at 5:00 PM EST via https://proposalcentral.altum.com/.

A PDF copy of the signed “Face Page” should be emailed to awards@cfft.org in conjunction with the application submission on proposalCENTRAL.

- **Face pages which include:**
  - Signatures
  - Applicant/PI information
  - Complete Company and PI Contact information, including correct mailing address
  - Organization Assurances (check those that apply)
    - Human Subjects Certification
    - Recombinant DNA Biosafety information
    - Institutional Animal Care and Use Committee information

- **Research Plan, Supporting Documents and Appendix**
  - Scientific & Lay Abstracts (complete online)
  - Research Plan (30-page max) (download template, upload as PDF document)
    - Hypothesis, Specific Aims and Milestones Outline
    - Significance
    - Experimental Design, Methods and Milestones
    - Consultant/Collaborative Arrangements
    - Literature Cited
  - Budget Detail for each year (download template, upload as PDF document)
  - Budget Justification for each year (download template, upload as PDF document)
  - Biosketches of Key Personnel (download template, upload as PDF document)
  - Data Safety Monitoring Plan (download template for applications with a Clinical Phase, upload as PDF document)
  - Facilities Available (download template, upload as PDF document)
  - International Institution Form (if applicable, download template and upload as PDF documents)
    - Institution’s most recent Mission Statement
    - Institution’s Tax Exemption Letter or equivalent, if institution is nonprofit
    - Description of other sources of support, such as official grants, private endowments, and commercial activities, received by institution
    - Institution’s Standard Operating Procedure(s) or relevant policy to ensure that funds provided are neither distributed to terrorists or their support networks, nor used for activities that support terrorism or terrorist organizations
    - For-profit institution must submit a complete list of key employees, members of the governing board, and/or other senior management
  - Verification of Institution’s Tax Status
    - W-9 (US applicants) or W-8BEN-E (non-US applicants)
    - 501(c)3, IRS Form 147C or equivalent tax status letter
  - Appendix (upload as PDF documents)
    - Up to four reprints of the applicant’s work relating to the general area of research in the proposal (if applicable)
    - Letters of reference, support, and/or collaboration
    - Other materials pertinent to the proposal, not already described (e.g. IRB/IACUC/IBC Approval Letters, Clinical trials registration)