STANDARD AWARD IN NATIONAL GLAUCOMA RESEARCH

A PROGRAM OF BRIGHTFOCUS FOUNDATION
AWARD APPLICATION INSTRUCTIONS
Due on the day of deadline by 5:00 PM EST (Washington, D.C.)

Award Overview

Standard Awards are open to tenure- and non-tenure track investigators of any career stage who are appropriately trained to lead an independent research study and are permitted by their organizations to manage grants and supervise key personnel.

Award Amount: $75,000 per year (total value $150,000)

Duration: up to 2 years

All applications must be submitted online through the application portal.

Please note that all deadlines are 5:00 PM East Coast Time (Washington, DC) on the day of the deadline.

Deadlines are posted at https://www.brightfocus.org/about/for-scientists/apply-for-a-research-grant/glaucoma-apply-for-grant/

If you have any questions regarding the program, please contact the BrightFocus scientific affairs department at researchgrants@brightfocus.org. If you have any difficulties with the application portal, please contact proposalCENTRAL at pcsupport@altum.com or during normal business hour (8:30am - 5:00pm Eastern Time, Monday through Friday) by phone (toll-free): 800 875 2562 (Toll-free U.S. and Canada) or +1 703 964 5840 (Direct Dial International).

The BrightFocus Foundation is a 501(c)(3) nonprofit charitable organization that seeks to save mind and sight by funding innovative research worldwide and by promoting better health through education.

GUIDELINES IN BRIEF

PROGRAM DESCRIPTION

The goal of the BrightFocus Foundation research grants program is to advance innovative research promoting advances in the etiology, prevention, and treatments of Alzheimer's disease, macular degeneration, and glaucoma. Our is to help people live free from diseases of mind and sight. The Foundation is interested in supporting high risk studies that illuminate areas for which there currently is little understanding, helping to bring to light crucial knowledge about these three devastating diseases.

This is accomplished by relatively small grants for investigator-initiated research that are designed to allow scientists the opportunity to develop the preliminary data necessary to be considered competitive for larger government or corporate types of sponsorship. The focus of the program is on projects that, although associated with high risks, will offer high yields in terms of growth of the field. More incremental proposals, or proposals that might be easily funded through existing resources, are discouraged. While prior awardees are welcome to submit new proposals following the conclusion of the previously-sponsored project, the new proposals should not be extensions of the prior project.

NOTES ON ELIGIBILITY

Standard Awards are open to tenure- and non-tenure track investigators of any career stage who are appropriately trained to lead an independent research study and are permitted by their organizations to manage grants and supervise key personnel.

Specific eligibility criteria include:

- Candidates must hold an MD, PhD, DVM, DO, OD or equivalent degree
- Postdoctoral fellows are eligible to apply as Co-Principal Investigator for the Standard Award.
- Applicant must serve as the Principal Investigator on the project and have independent laboratory space. The applicant should use the indicated space on the application forms to clarify any position that is not immediately recognizable as an independent research position.
- While some of the grant can be used to support salary for the PI, the percent requested should be limited to the lesser of 25% of the total grant request, or 25% of the individual's salary. Co-Principal Investigator (Co-PI) salaries are capped at the lesser of 15% of the total grant request, or 15% of the individual's salary.
- Applicants may currently be working in a non-profit, governmental, academic research institution, or at a for-profit including start-up and biotech institution

NOTES ON CERTAIN REAGENTS AND TECHNIQUES

PRIMARY CULTURES OF HUMAN TRABECULAR MESHWORK CELLS:
Primary cultures of human trabecular meshwork cells are now available commercially. Unfortunately, commercial sources do not follow standards already established in the glaucoma field for characterizing their cells. Thus, if a NGR applicant proposes to use commercially purchased trabecular meshwork cells in their proposed experiments, the applicant must provide data in their application demonstrating proper TM cell morphology (phase-contrast micrograph of confluent cells) and dexamethasone (100 nM for 5 days) induction of myocilin protein (by western blot analysis plus immunofluorescent microscopy, to determine magnitude and proportion of cells with myocilin induction, respectively).

Consensus recommendations for isolation, culture and characterization of primary cultures of trabecular meshwork cells can be found in: KE Keller, SK Bhattacharya, T Borrás, TM Brunner, S Chansangpetch, AF Clark, WM Dismuke, Y Du, MH Elliott, CR Ethier, TF Freddo, R Fuchshofer, M Giovingo, H Gong, P Gonzalez, A Huang, MA Johnstone, PL Kaufman, MJ Kelley, PA Knepper, CC Kopczynski, JG Kuchtey, RW Kuchtey, MH Kuehn, RL Lieberman, SC Lin, P Liton, Y Liu, E Lütjen-Drecoll, W Mao, M Masis-Solano, F McDonnell, CM McDowell, DR Overby, PP Pattabiraman, VK Raghunathan, PV Rao, DJ Rhee, U Roy Chowdhury, P Russell, JR Samples, D Schwartz, EB Stubbs, ER Tamm, JC Tan, CB Toris, KY Torrejon, JA Vranka, MK Wirtz, T Yorio, J Zhang, GS Zode, MP Fautsch*, DM Peters*, TS Acott*, WD Stamer *. Consensus recommendations for trabecular meshwork cell isolation, characterization and culture. (2018), 171:164-173, Exp. Eye Res. PMID: 29526795.

In addition, applicants may visit the following web page (http://iclac.org/databases/cross-contaminations) maintained by the International Cell Line Authentication Committee, formed in 2012. They provide a database list of cell lines that are currently known to be cross-contaminated or misidentified.

RETINAL GANGLION CELLS (RGC5):
The RGC-5 cell line was originally reported as derived from postnatal day 1 rat retina cells, expressed markers specific to retinal cells, and was sensitive to trophic factor withdrawal and glutamate toxicity following treatment with differentiation factors [Krishnamoorthy et al. (2001) Brain Res Mol Brain Res.; 86(1-2):1-12]. Several research groups report that even cells obtained from the originating laboratories are not of rat origin and do not express genes and proteins specific to retinal ganglion cells, but instead have been identified as a transformed mouse photoreceptor line (661W) [Van Bergen et al. (2009) IOVS; 50:4267-4272, Krishnamoorthy et al. (2013) Invest Ophthal Vis Sci.; 54:5712-5719]. Thus, NGR applications proposing to use this cell line to model RGCs will likely not receive a score from the NGR SRC in the fundable range. Furthermore, if applicants have used RGC5 cells to generate preliminary data, they should not ascribe any finding to RGC specific biology.

HYDROSTATIC PRESSURE:
Responses of optic nerve head cells (e.g.: retinal ganglion cells, astrocytes, lamina cribrosa cells) to mechanical stress is important in glaucoma. Many studies have reported the biological effects of hydrostatic pressure on ONH cells cultured on a rigid substrate. This does not replicate the situation in vivo, where pressure acts to deform the connective tissues that ONH cells interact with. It appears that reported effects in many previous hydrostatic cell culture studies were a consequence of changes in oxygen tension rather than pressure itself [Invest Ophthalmol Vis Sci. 2011 Aug 11;52(9):6329-39]. Thus, unless extraordinary steps are taken to control for secondary effects of pressurization (e.g. oxygen and transport limitations), applications proposing to use the hydrostatic pressure model on rigid substrates will likely not receive a score from the NGR SRC in the fundable range.

EPISCLERAL VEIN CAUTERY RAT MODEL:
This method of producing elevated eye pressure relies on either cautery or ligation of episcleral veins. The only way that this successfully produces elevated pressure is if vortex veins, located beneath rectus muscles, rather than true episcleral veins, are cauterized or ligated, as this impedes venous outflow from the retina and entire uveal tract of the globe. This results in an immediate elevation in pressure (due to arterial filling of these intraocular tissues) that is now generally recognized to result from congestion of the eye. As this pressure elevation is fundamentally different from that produced by aqueous outflow obstruction, the episcleral vein cautery model is best used for proposals that study glaucoma resulting from ocular congestion, such as elevated episcleral venous pressure.

MOUSE MODELS OF OCULAR HYPERTENSION (OHT):

Due to their similarities in anatomy, physiology, and pharmacology to humans, mice are a valuable model system to study the generation and mechanisms modulating conventional outflow resistance and thus intraocular pressure. In addition, mouse models are critical for understanding the complex nature of conventional outflow homeostasis and dysfunction that results in ocular hypertension. A recent consensus recommendation [Invest Ophthalmol Vis Sci. 2022 Feb 1;63(2):12; PMID: 35129590] describes a set of minimum acceptable standards for developing, characterizing, and utilizing mouse models of open-angle ocular hypertension. Applicants to the NGR program proposing to use a mouse model of OHT are expected to adhere to the set of standard practices for OHT or outflow facility phenotypes that is listed in this recommendation. This will increase scientific rigor and better enable researchers to replicate and build upon findings with this model.

VIEW SLIDESHARE VIDEOS FROM BRIGHTFOCUS GLAUCOMA FAST TRACKS:

Since 2017 BrightFocus has organized and sponsored three BrightFocus Glaucoma Fast Track workshops, an immersive learning opportunity specifically created for scientists starting or contemplating a career in glaucoma research. Please visit our website for the program and links to view recordings of the presentations, which include insights into the current state of glaucoma research, specifically in reference to animal models and techniques. Here are the links to access the recordings of the 2017, 2019 and 2022 Workshop presentations.

BRIGHTFOCUS FOUNDATION

INSTRUCTIONS FOR COMPLETION OF THE APPLICATION TEMPLATE AND ONLINE SUBMISSION

All applications must be completed through our online portal. To access the application portal, click the blue-encircled Apply Online/arrow on the BrightFocus website at: https://www.brightfocus.org/about/for-scientists/apply-for-a-research-grant/glaucoma-apply-for-grant/, where you will be taken to a registration and login page.

General Submission Guidelines

- Submit your application using the instructions provided in the application portal
- Use font at a size no less than 11 points
- Use margins no less than 3/4" on all sides
- The color of the narrative text should be black
- Applications must be legible and written in English
- Do not use jargons or unusual abbreviations
- Maximum character and/or word/page counts for individual sections will be enforced
- Text in the descriptive legends or captions of figures, tables, or photographs must be included within maximum limit

You MUST complete ALL of the sections in your application. Applications that are incomplete or fail to adhere to formatting instructions **will be DECLINED without review.**

Section 1
TITLE PAGE

Project Title
This section of the application asks for Project Title (maximum 150 characters)

Non-technical Title
Please provide a non-technical title for your project (maximum 75 characters)

Keywords
Please indicate 6-10 comma separated keywords or phrases related to your proposal.

Project Budget
Enter the total costs for the entire project period. Payments will be released on a quarterly basis, evenly distributed throughout the award duration. If you request funds for one year, you may only request a maximum of half of the award value.

Project Period
Enter the start and end dates for the entire proposed project period. **All awards should be listed to begin on July 1 of the year following the application deadline.**

Response to Prior Critiques/Changes from Prior Submission

Changes from Prior Submission (maximum 750 characters)
If you have submitted a proposal to BrightFocus in the past 5 years, please explain how this proposal is different from prior submissions.

Response to Prior Critiques
If you have received a detailed critique on prior submission, please upload a one-page detailed resubmission response to critique under Research plan and supporting Attachments.

Summary of Previous BrightFocus Support
Provide the grant title, years and amount of all grant support from the BrightFocus Foundation (this includes prior funding under our previous name, American Health Assistance Foundation (AHAF)). Provide a brief statement of research accomplishments and a reference to any publications resulting from the BrightFocus-sponsored research made under these award(s). If not applicable, please write "none" in the indicated space.

Section 2
DOWNLOAD TEMPLATES AND INSTRUCTIONS

This section contains Research Plan Document and Biographical Sketch that are required to complete, or which might be necessary for the full submission of your application. You MUST use the "Research Plan" template provided in this section for submission.

Section 3
ENABLE OTHER USERS TO ACCESS THIS PROPOSAL

This section is used specifically for providing access rights to other people whom you may wish to have access to your application. You may choose their access as "View" or "Edit." If you give someone "Edit" ability they can upload documents or add attachments in your absence.
If you mark an individual as "Auto Notify" this means each time an email is sent to you through proposalCENTRAL, that person will automatically receive a copy of the email.

Section 4
APPLICANT/PI

This section of the application asks for the Principal Investigator's information. All fields that are marked with asterisk (*) are required fields. If you already have a professional profile within proposalCENTRAL, these fields will be automatically populated and filled in. Please review them carefully to confirm the information is correct.

Justification for Non-traditional Track Faculties serving as Principal Investigator
Titles that are not intuitively identifiable as being that of a person who is trained and capable of leading an independent research effort should be clarified in the space provided. Traditionally, tenure track titles in the USA include Assistant, Associate, or Full Professor. Non-tenure track and other faculty titles vary significantly between institutions, but usually connote early-stage investigators who have completed have received their MD, PhD or equivalent degree within the past 10 years at the time of application and have significant independence to pursue original research.

Section 5

INSTITUTION AND CONTACTS

This section contains the information of the "Lead Institution." This page defaults to the institution of the Principal Investigator. If the institution is incorrect, you may click on the "Change Institution" button and search for the correct institution.

Institutional Official
Select from the list of officials supplied with the institution's profile and click the "Add" button. If the contact is not in the list, enter the contact's email address and click the "Add" button. The selected individual is authorized to act for the applicant organization and to assume the obligations imposed by the conditions for this award. The signature of this person will be required.

Financial Official
Select from the list of officials supplied with the institution's profile and click the "Add" button. If the contact is not in the list, enter the contact's email address and click the "Add" button. The selected person will be to whom correspondence related to the financial matters will be addressed. Please note that international organizations will receive payments by wire transfer, while U.S. domestic payments are made via electronic Automated Clearinghouse (ACH) payments. BrightFocus cannot wire transfer payments domestically.

Section 6
KEY PERSONNEL

ALL personnel working, collaborating, over-seeing or coordinating on the project MUST be listed in this section. This section should also include all collaborators and consultants. You will need to insert their email address in the space provided and click "Add." Complete all required fields and click "Save" when completed. This person will now appear in the "Key Personnel" window.

IMPORTANT: Each Co-PI, Collaborator or Consultant identified should provide a signed Letter of Support summarizing their role in the proposed research and their compliance with all appropriate animal welfare and human subject requirements. This letter should certify that they have agreed to their role as proposed in the version of the application received by BrightFocus.

Section 7
ABSTRACTS AND NON-TECHNICAL INFORMATION

Non-technical Summary
Please provide a general audience summary below. Please limit your response to 400 characters including spaces. Text only. No special characters or formatting.

> **NOTE:** BrightFocus is a publicly-supported charitable organization funded by donor contributions and has an active public education program that informs donors and other interested individuals about the research we sponsor. This Non-technical Summary is considered **NON-CONFIDENTIAL** and will be used for public educational purposes if your proposal is selected for funding.

Technical Abstract
State the objectives, hypotheses, and specific aims of the proposed research, along with a summary of the proposed research methods. This abstract is meant to serve as a succinct and accurate description of the proposed research

when separated from the proposal. Please limit your response to 2400 characters including spaces. Text only. No special characters or formatting.

> **REMINDER: This abstract is considered CONFIDENTIAL and will only be released for purposes of administration and peer-review.**

Research Category
Please select the Research Category appropriate to the proposed project. BrightFocus does not weight its funding preferentially towards or against any of the listed categories. Your choices will not influence the likelihood of funding. Responses to the fields are used to aid in the selection of appropriate reviewers for the proposal.

Rigor and Reproducibility
BrightFocus has partnered with the Alzheimer's Disease Preclinical Efficacy Database (AlzPED), in their mission to promote efficient, transparent, reproducible and accurate research aimed at preclinical therapy development for Alzheimer's Disease. We are implementing the same standard across all our disease programs. Use the drop down menu to indicate the elements of rigor and reproducibility that are addressed in your proposal. While some of these elements may not pertain to more basic research studies, they help provide a framework for how to approach comprehensive preclinical and clinical research design.

Data Sharing
BrightFocus requires that applicants provide a summary of their data sharing plan and how they propose to make the research data generated from the proposed project available to the scientific community. Description of research data will be in accordance with the NIH policy.
General data sharing resources: https://data-repository-finder.ll.mit.edu/
For data sharing resources in vision sciences: https://neidatacommons.nei.nih.gov/
In neurosciences: https://www.nia.nih.gov/research/data-sharing-resources-researchers

Information on the database proposed in your application
If you are considering using electronic records or a database (public or private), please explain how the database is relevant to the specific aims proposed in your application. Additionally, provide a link to the database site and outline the key features that make it an ideal source.

Innovative Aspects
State briefly and concisely what you consider to be most innovative about the proposed research or methodology. Limit your response to 750 characters including spaces. Text only. No special characters or formatting.

Translational Plan
The generosity of BrightFocus' donors comes from a desire to eliminate human suffering. For some lines of research, this may imply progress towards clinical goals. For other lines, the human impact may be felt through influence on the academic field, policy guidance, or other more indirect outcomes. Assuming that your research aims are successful, what is your general administrative and experimental plan for advancing this line of inquiry to a point of relevance to sufferers of this disease? Limit your response to 1500 characters including spaces. Text only. No special characters or formatting.

Specific Aims and Benchmark Accomplishments

State the objectives and the hypotheses to be tested and describe concisely and realistically what the specific research described in this application is intended to accomplish. Please include the milestone or benchmark accomplishments that you will use to assess progress on this project. Limit your response to 4200 characters including spaces. Text only. No special characters or formatting. Specific Aims do not need to be reiterated in the research plan document.

> **NOTE:** You may attach a schematic of Specific Aims and Benchmark Accomplishments in Section 13 (Research plan and supporting Attachments).

Relevance of Proposed Research to Glaucoma
State briefly and concisely how the proposed research is relevant to determining the causes of or possible treatment or cure for Glaucoma. Limit your response to 1200 characters including spaces. Text only. No special characters or formatting.

Research Tool Development
Applicants to the NGR program are encouraged to apply for funding to create tools that would benefit all investigators in the field, including animal models of disease, or cell lines. Please select yes if this application involves creating tools for glaucoma research.

Section 8
FACILITIES AND ENVIRONMENT

Briefly document the suitability of the available research facilities and academic environment for the execution of the proposed research. Do not list facilities that are irrelevant to the proposed research. Exceptional resources should be noted, but more common resources should be omitted or summarized generically. Limit your response to 5000 characters including spaces.

Section 9
BUDGET PERIOD DETAILS

Prepare separate budgets for each year for which funding is requested. The total funds in the budget must not exceed the amount requested. **The budget may not contain administrative overhead or indirect costs (or other prohibited items)** and should be prepared in U.S. dollars. BrightFocus budgets are divided into the following categories:

Personnel Costs
The Principal Investigator and any support personnel (usually Postdoctoral Fellows, Graduate Students, or Technicians) actively involved in research may request salary and benefits. Such requests should be justified and include indications of the percentage of time the personnel will devote to the proposed project (percent effort). If your salary is already paid for by the grantee institution, then do not request any dollar amount in the salary portion of the budget. You must, however, list percent effort that you will devote to the proposed project.

Non-Personnel Costs
Supplies: The amount of money requested for supplies should be divided into major research supply categories (e.g., cell biology reagents, test fees, etc.). If animals are to be involved, the justification should state how many are to be used, their unit purchase price, and their unit care cost.

Equipment: Any major item of equipment valued over US$1,000 should be specifically named in the budget. BrightFocus will not fund the purchase of large capital equipment. Requested equipment must be directly related to, and enabling of, the proposed research.

Contractual Services: The Budget should specify any major support services required under the proposed research, such as preparation or laboratory testing of biological materials. The justification should indicate the period of contractual service.

Travel: Travel must be relevant to the accomplishment of the project or dissemination of results of the supported research. The purpose of the travel and destination should be clearly indicated, justified, and may not include premium ticketing packages (i.e., first class or other luxury travel).

Other: Itemize any other expenses by category. This category is often used by investigators seeking funding to defray costs of publication or registration at conferences where the results of the proposed research are to be presented. Please note that tuition reimbursement for undergraduate and graduate students is an allowable budget item, but tuition remission is not an allowable budget item.

> **Note Regarding Budget Cuts:** When awards are offered, most budgets are approved as requested. However, in some cases BrightFocus may elect to make awards for only a portion of the requested budget. These decisions are made on the recommendations of peer reviewers and may manifest as an elimination of specific budget items, proposal aims, or percentage cuts off of the total award value.
>
> **Note Regarding Open Access Publications:** BrightFocus does not require publication in specific journals or attendance at specific conferences. However, as a publicly-supported charity, BrightFocus recognizes the contribution of open-access model journals to the scientific community. BrightFocus grant applicants may request reasonable funds to allow publication in such journals.

Section 10
BUDGET SUMMARY AND JUSTIFICATION

Budget Summary
The Budget Summary summarizes the budget details entered for each budget period in the Budget Period Detail section. Budget period dates, budget amounts and budget justification information should be provided in the Budget Period Detail section.

Budget Justification
Provide justification for all salary requests, equipment purchases over $1,000, animals, and supply categories. Provide a brief explanation of how the budget adequately supports the project described. Limit your response to 5000 characters including spaces.

Section 11
OTHER SUPPORT/ CERTIFICATION OF FUNDING OVERLAP

BrightFocus defines funding overlap as a circumstance under which the proposed budget or scientific aims of a proposal is duplicative of the budget or scientific aims of a project funded by another source and led by the individuals responsible for the BrightFocus proposal. This overlap may be scientific, in which the duplication occurs

in the specific aims of the research project, or financial, in which another funding source commits money for items documented in the BrightFocus proposed budget.

For each of the Principal Investigator and any Co-Principal Investigator(s) add all the currently active support, all applications and proposals pending review or funding, and applications and proposals planned or being prepared for submission. Include all federal, non-federal, and institutional research, training, and other grant, contract, or fellowship support at the applicant organization and elsewhere. If part of a larger project, identify the Principal Investigator/Program Director and provide data for both the parent project and subproject. For each support, give the source of the support, title, project status, award number, dates of entire project period, annual direct costs, a brief description of the major goals of the project. Using the dropdown explicitly identify any grants that might scientifically or financially overlap with the BrightFocus proposal. If the requested support overlaps, describe and justify the nature and extent of any scientific and/or budgetary overlaps. Further describe any modifications that will be made should the present application be funded. Please save that data in order to complete the support entry for submission.

To add your entries, please click the "+" link and add all entries previously saved in your Professional Profile will show. Please select the applicable support and save. All Collaborators should supply currently active and pending support only if that support might be considered to be overlapping the research being proposed to BrightFocus and if they have granted you at least View access to their profile, you can select Other Support from their profile as well.

To add new Other Support entries, click the "Create New Other Support" button. By default, this entry will be added to your profile, unless the option "Add to Profile" is not selected. If you have Edit or Admin access to your Key Personnel's profile, you can add new Other Support entries on their behalf to this application and update their profile as well.

Section 12
ORGANIZATION ASSURANCES

Please indicate if the proposed research will involve the use of human or vertebrate animal subjects. A signed release from the appropriate committee of the Grantee Institution must be provided to BrightFocus, to demonstrate approval of the proposed research protocol(s) before Grant Award funds are released.

Human Subjects
If activities involving human subjects are not planned at any time during the proposed project period, select "No" and select "Not Applicable" for status of approval.

If activities involving human subjects, whether or not exempt from Public Health Service (PHS) regulations, are planned at any time during the proposed project period, check the box beside "Yes." Indicate the status of Institutional Review Board (IRB) approval, insert the date of approval by the IRB of the proposed involvement of human subjects. If IRB review is delayed beyond the submission of the application, enter "pending." If the planned activities involving human subjects are exempt, insert the exemption number(s) corresponding to one or more of the eight exemption categories recognized by the PHS. The Assurance of Compliance number will appear as entered in the institution profile (for the institution you selected in the institution section of the proposal). Should the application be approved for funding, verification of the exemption or IRB approval will be required before funding begins.

All supported research, including that of collaborators, must comply with U.S. Federal, and any applicable local, regulations regarding the use of human subjects in research.

Vertebrate Animals
If activities involving vertebrate animals are not planned at any time during the proposed project period, check the box beside "No" and select “Not Applicable” for status of approval.

If activities involving vertebrate animals are planned at any time during the proposed project period, check the box beside "Yes." In the space indicated, insert the date of approval by the Institutional Animal Care and Use Committee (IACUC) of the proposed use of vertebrate animals and the Animal Welfare Assurance Number. If IACUC review is delayed beyond the submission of the application, enter "pending." Should the application be approved for funding, verification of IACUC approval will be required before funding begins.

All supported research, including that of collaborators, must comply with U.S. Federal, and any applicable local, regulations regarding the use of vertebrate animals in research.

Section 13
RESEARCH PLAN AND SUPPORTING ATTACHMENTS

Research Plan (required): Limit **(***A-C) (6 pages)*

A. Background and Significance. Briefly summarize the background to the present proposal, critically evaluate existing knowledge, and specifically identify the gaps that the project is intended to fill. Concisely describe the importance of the proposed research by relating the specific aims to the objectives.

B. Preliminary Studies. Use this section to provide an account of the principal investigator's preliminary studies pertinent to the application and/or any other information that will help to establish the experience and competence of the investigator to pursue the proposed project.

C. Experimental Design and Methods. Outline the experimental design and the procedures that will be used to accomplish the specific aims of the project. Include the means by which the data will be collected, analyzed, and interpreted, power calculations, and account for gender-based differences in the disease, if applicable. Describe any new methodology and its advantage over existing methodologies. Discuss the potential difficulties and limitations of the proposed procedures and alternative approaches to achieve the aims. Provide a tentative sequence or timetable for the investigation and detail the duties of each collaborator. Point out any procedures, situations, or materials that may be hazardous to personnel and precautions to be exercised. Note that applicants to the NGR program are encouraged to apply for funding to create tools that would benefit all investigators in the field, including animal models of disease, or cell lines. In addition, please visit the “Notes On Certain Reagents And Techniques” section of this proposal instruction document before finalizing your research plan.

> **IMPORTANT** After completing please convert your Research Plan to a text-accessible pdf file format, save it as “lastname_NGR_Standard_FY26.pdf” where ‘lastname’ is the surname of the Principal Investigator, and upload onto the online portal. **Text in the descriptive legends or captions of figures,**

tables, or photographs must be included within limit. Be sure to remove the cover page so you do not exceed the page count limit of 6 pages.

Literature Cited (required)
Please list all the literature cited in the proposal and upload it as a single pdf document separate from the Research Plan. Each literature citation must include the names of all significant authors, the name of the book or journal, volume number, page numbers, and year of publication. Article titles should be provided. The use of "et al." in place of listing all authors of a publication is acceptable. If a publication is public, please include its NIH PubMed Central identification number (PMID) in the text.

Biographical Sketches (required)
Prepare a National Institutes of Health (NIH) Biographical Sketch on the Principal Investigator, Co-Principal Investigator(s), Collaborators, Consultants, and the other key research staff/personnel involved in the study. List relevant training, professional experience, and publications. You may replace this section with a NIH Biosketch already in your possession. Please limit individual biosketches to 5 pages.

NOTE: All of the biosketches should be submitted as a single pdf document separate from the Research Plan.

Letters of Support (required)
Each Co-Principal Investigator (Co-PI), Collaborator or Consultant should provide a signed, single page Letter of Support summarizing their role in the proposed research. This letter should certify that they have agreed to their role, as proposed in the version of the application received by BrightFocus. These letters should also certify their compliance with any appropriate animal welfare or human subject regulations.

NOTE: All of the Letters should be submitted as a single pdf document separate from the Research Plan.

Resubmission Response to Critique (one-page limit):
If you have received a detailed critique in the prior submission, you can upload a one-page response. Please use the naming convention (LASTNAME_NGR_Standard_FY26_response_to_critique.PDF) for the file, where "LASTNAME" is replaced with the surname of the PI on the proposal.

Appendix
The Appendix file should be separate from the main proposal file and should be submitted as a SINGLE PDF file containing each of the included publications or manuscripts. Please use the naming convention (LASTNAME_NGR_Standard _FY26_appendix.PDF) for your appendix file, where "LASTNAME" is replaced with the surname of the PI on the proposal.

Up to five relevant papers or manuscripts *published or accepted for publication* in refereed journals may be included, if necessary. The papers or manuscripts should be the PI's own work or that of a Co-PI or Collaborator named on this proposal. Although up to 5 reprints are allowable, these should all be contained in a single PDF file for submission.

Reviewers are not required to consider appendix information. If the information that you wish to submit is essential to an evaluation of the application, incorporate it within the Research Proposal. **The Appendix is *not* to be used for circumventing the page limitations in the Research Proposal.**

Multimedia Files
Unpublished video or sound files representing data that can't be presented in static images and that is pertinent to the proposal may be submitted as a separate Multimedia file.

Section 14
CONFLICT OF INTEREST SELF-REPORT

Depending on the breadth of expertise required to review the applications received in the present review cycle, a subset of the listed researchers may serve on the review committee that evaluates your proposal. For the present review cycle, please note that additional reviewers may be brought onto the review committee if additional expertise is required. Referring to the list provided, please select any individuals with whom the PI or Co-PI of this proposal has any conflict (co-published within preceding 3 years, co-employed or a recent trainee).
If you declared conflicts on the preceding page, list each reviewer by last name and indicate the type of conflict (co-published within preceding 3 years, co-employed or a recent trainee).

Section 15
PI DATA SHEET

The information in this section is not mandatory and is only for the use of BrightFocus Foundation for applicant statistics.

Section 16
SIGNATURES AND PRINT

After you complete all the proposal sections, click one of the Print buttons to open and print the cover/signature pages and application files. Before printing, please use the 'Validate' section (in the navigation menu to the left) to verify that you have entered all the required information. You are required to sign the application electronically in the fields provided. Principal Investigator and Institutional Signing Official must be logged in using their own credentials to have access to the signature field.

Principal Investigator Signature
With this signature, the Principal Investigator agrees to accept the responsibility for the scientific conduct of the project and to provide the required scientific and financial progress reports if a grant is awarded as a result of this application.

Institutional Official Signature
With this signature, the institutional official accepts on behalf of the institution the obligations incurred by acceptance of a grant if one is awarded as a result of this application.

Section 17
VALIDATE

Please use the 'Validate' section to verify that you have entered all the required information. AFTER you have validated the document you MUST click "SUBMIT" for the application to be submitted. Validating the document

DOES NOT submit the application to BrightFocus Foundation. Proceed to Section 18 for Submitting the application.