



# GFI Research Program 2021 Request for Proposals (RFP)

Phase 1 Applications Due: March 10, 2021  
Phase 2 Applications Due: April 23, 2021  
(Phase 2 applications are by invitation only)

Find an editable proposal template [HERE](#).  
Submit your completed proposal [HERE](#).  
Review our FAQs [HERE](#).



## Introduction

Protecting our environment, feeding the world, and revitalizing economies require a healthy, sustainable, and just food system. A strong open-access research environment and talent pipeline are essential to fostering good food innovation.

As a nonprofit, the Good Food Institute (GFI) is uniquely positioned to empower high-quality research that will build the scientific foundation of the cultivated, plant-based, and fermentation-derived meat industries. Our philanthropically-funded research program answers fundamental questions that can spin off entire industries, inspiring additional research and creating new opportunities to feed the world.

Now in its third year, our annual Competitive Research Grant request for proposals (RFP) will serve as the next strategic step for advancing the science of alternative proteins. [This RFP focuses on addressing the scientific and technical bottlenecks facing the production of whole-cut alternative protein products with the taste and price consumers demand.](#) While the alternative protein industry has made significant scientific strides in recent years, there still exist several key barriers facing the production of larger three-dimensional meat and seafood products. Addressing these scientific white spaces will catalyze the development of “next generation” alternative protein meat and seafood, seeding our future food system.

For additional information on GFI and the alternative protein industries we support, please visit: <https://www.gfi.org/essentials>

For additional information on GFI’s Research Grant Program and to view past grant recipients, please visit: <https://www.gfi.org/researchgrants>

To provide feedback on this RFP or to clarify any of the information presented within, please contact GFI’s grant management team at [research\\_grants@gfi.org](mailto:research_grants@gfi.org).

This program is made possible by a select group of donors who have chosen to direct their philanthropic support to open-access research. Philanthropic support is vital to our mission. To discuss how you can be part of this transformative work with your gift or grant, please contact [philanthropy@gfi.org](mailto:philanthropy@gfi.org).

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## Background

The problems of industrialized animal agriculture are well known, with many well-documented examples of negative environmental, nutritional, public health, and animal welfare outcomes. Animal agriculture is a major contributor to many global issues, including climate change, deforestation, pollution, biodiversity loss, soil erosion and degradation, antibiotic resistance, water overuse, and zoonotic diseases. Alternative proteins sourced from [plants](#), microbial fermentation, and [animal cell culture](#) have the potential to create food products that are healthier and more ecologically sustainable.

GFI's Research Grant Program seeks research proposals that will address the [organoleptic](#) properties, cost, and scale-up of production processes for alternative proteins. Specifically, we aim to fund research focused on plant-based meat (meat produced entirely from plant sources), cultivated meat (meat derived from animal cell cultures), and microbial fermentation. For an overview of the top companies, investments, and opportunities in the plant-based food, cultivated meat, and fermentation industries, please see GFI's [State of the Industry Reports](#).

Despite exciting advancements in the alternative protein industry, the ultimate success of this sector depends heavily on continued research and technological development. GFI's [Advancing Solutions for Alternative Proteins \(ASAP\) Initiative](#) identifies the highest priority "white spaces"—unanswered questions and unmet technological needs—for plant-based, cultivated, and fermentation-derived proteins.

## Funding Opportunity Priority Areas

One of the biggest white spaces across all three alternative protein pillars (plant-based, cultivated, and fermentation) is the knowledge and technology to produce thicker, three-dimensional meat products that biomimic animal products like chicken breasts, pork chops, and tuna steaks. In order for alternative proteins to reach their full potential, we need to develop these whole-cut meat products. The market for these products is vast and currently underserved. Open-access research can enable the alternative protein industry to meet this demand faster than would happen with conventional market forces and siloed research efforts.

This RFP seeks proposals that develop data, materials, and/or processes to enable production of whole-cut meat and seafood products made from alternative proteins. Projects may focus on the development of novel ingredients, methods, tools, and technologies that enable production of whole-cut alternative protein products. All funded projects will have primary applications to meat and seafood products that biomimic animal-based meat and are intended for human consumption.

GFI's [ASAP Initiative](#) has identified pressing scientific and technological challenges facing the alternative protein industry, and many of the [solutions](#) identified therein directly contribute to our ability to produce whole-cut alternative meat products. We encourage applicants to integrate these solutions into their research proposals where possible. Examples of potential projects that would improve our ability to produce thicker, three-dimensional meat and seafood include but are not limited to:



- Development of cell lines that are amenable to co-culture for production of whole-cut cultivated meat and seafood products comprised of multiple cell types;
- Creation of scaffolding or 3D microenvironments enabling thicker cuts of structured alternative protein-based meat products, including scaffolds specifically tailored for seafood products;
- Novel manufacturing and texturization methods for scalably producing fibrous, meat-like structures from plant or fungal proteins;
- Processes to grow, structure, or formulate mixtures of cells, proteins, fats, or other cellular and molecular components to biomimic whole-cut animal meat products;
- Data on the optimal structure and function of plant-based proteins and ingredients for whole-cut meat products that could inform future breeding efforts and ingredient processing specifically for manufacturing of whole-cut products;
- Methods for differentiating stem cells from seafood species into meat-relevant cell types including but not limited to mature myofibers and adipocytes using food-safe reagents;
- Mechanisms for encapsulating fats and integrating fatty tissues into protein-rich tissues for scalably manufacturing heterogeneous whole-cut meat products.

We recommend that researchers explore the [Innovation Priorities](#) and [Solutions Database](#) developed by the [Advancing Solutions for Alternative Proteins](#) initiative for more details on barriers facing the industry and potential research opportunities.

### What makes a strong proposal?

Strong proposals will develop tools and manufacturing technologies that reduce costs, increase scalability, and improve the sensory attributes (e.g., taste, texture, appearance, aroma) of whole-cut alternative protein meat products. Research proposals that fall outside the scope of the bullets listed above are welcome should they still address this priority.

The strongest proposals will have a clear path towards advancing the commercialization of alternative proteins while also contributing to the scientific community. GFI is interested in developing research tools that advance the entire industry. Our funding seeks to create the open-access research foundation upon which proprietary R&D efforts can build.

We are especially enthusiastic about tailored solutions for whole-cut chicken and seafood products, though research on other species is welcome. We are not able to fund work specific to dairy or egg alternatives at this time.

The following types of projects will NOT be considered:

- Research involving animal subjects
- Human research and/or clinical trials
- Consumer acceptance and/or market research studies
- Research focused on the development of animal-based products blended with alternative proteins (for example, adding mushrooms to a beef burger), unless the animal-based components are produced through animal cell culture or fermentation
- Research focused on dairy or eggs
- Research focused on pet foods

- Research on snack foods
- Research on insect protein
- Research that solely benefits one specific company or organization with no applicability to the overall alternative protein industry
- Research exclusively generating proprietary findings that cannot be openly shared

Please review our [Frequently Asked Questions](#) for more information about what types of research GFI seeks to fund, as well as what research GFI will not fund.

## Eligibility Information

Applications submitted from any sector (academia, government, industry, or nonprofits) and from around the world will be considered. Based on GFI's foundational mission to support the entire alternative protein industry, the purpose of this program is to support research that will be made available and accessible to benefit the industries and global society as a whole. Grantees shall make any data and results arising out of the work performed in connection with the project available to the public via a public webpage, presentation, or publication in an open-access peer-reviewed journal. Exceptions to this standard approach will be limited and accepted only in special cases where alternative terms are negotiated and agreed upon by GFI and the applicant in writing prior to the release of any grant funds. Specific terms related to confidential information and intellectual property will be negotiated during the execution of the research agreement prior to the disbursement of any grant funds.

See our [Frequently Asked Questions](#) for more details on Intellectual Property Rights and other contract terms. While the creation of intellectual property is not prohibited, GFI reserves the right to withdraw acceptance of a proposal if the potential grantee insists on intellectual property rights in the research that are not acceptable to GFI.

Graduate students or postdoctoral researchers may serve as the lead investigator on a project proposal. If invited to submit a Phase 2 application, GFI will ask for a brief letter of support signed by a faculty member at the student or postdoc's institution. The letter of support should state the faculty member's commitment to serve as a project collaborator and advisor and to allow the proposed research to be carried out in their laboratory.

Lead researchers from projects that have previously been awarded a grant from GFI are eligible to apply to this RFP. Proposals from labs that are currently receiving GFI grant funding are allowed if the lead researcher of the new submission is different from the lead researcher of the previously funded project.

## Award Information

Proposals should include research goals that can be achieved in two years or less from the funding start date. The earliest anticipated start date for projects funded through this RFP is July 1, 2021. Ideally, projects will begin no later than September 1, 2021, although in special circumstances researchers may obtain approval to begin projects at a later date. The latest

acceptable start date is October 1, 2021. Total budgets (including indirect costs) should be less than or equal to \$250,000. Indirect costs can be no more than 10% of the requested direct costs for projects submitted by researchers at academic institutions, government labs, and nonprofit organizations. No indirect costs may be included in project budgets from researchers at for-profit companies.

In special cases, GFI may permit project durations longer than two years and/or budgets greater than \$250,000. Applicants who want to propose a project requiring an extended timeframe and/or increased budget must contact GFI's grant management team at [research\\_grants@gfi.org](mailto:research_grants@gfi.org) before submitting their Phase 1 proposal to discuss the need for additional time and/or funding. GFI will then decide whether or not to allow an exception to the 2-year, \$250,000 limits and will inform the applicant in writing of the decision.

## How to Apply

The application process involves two steps. Phase 1 applications can be completed by any eligible applicant. Phase 2 applications are by invitation only.

To complete a Phase 1 application, please follow these steps:

1. Complete your research proposal using the editable proposal template found [HERE](#).

*Please save your proposal as a PDF and use the following naming convention:  
PIFamilyName-Date(mm/yyyy).pdf*

2. Submit your completed proposal [HERE](#).

*Alongside your research proposal, you may choose to submit optional Letters of Support. These Letters of Support can be from either industry or academia, but should focus on your unique ability to deliver on the specific objectives outlined in your research proposal. If you choose to submit Letters of Support, please include no more than two, and save them as one single PDF using the following naming convention:  
GFI-LoS-PIFamilyName-Date(mm/yyyy).pdf*

Applications are accepted until the March 10, 2021 deadline listed on the front page of this RFP and are reviewed following that deadline.

Specific instructions for completing a Phase 2 application will be provided to successful Phase 1 applicants at the time they are invited to participate in Phase 2. In general, the Phase 2 application will require additional detail related to the research methods, the project timeline and deliverables, the roles and responsibilities of project team members, and the budget.

## Submission and Award Notification Timeline

All eligible applicants are invited to submit a Phase 1 application on or before 5:00 pm EDT on March 10, 2021. No Phase 1 applications will be accepted after this time for any reason.

Applicants will be notified of the outcome of their Phase 1 application no later than three weeks from the submission deadline.

Invited Phase 2 applicants must submit their Phase 2 application on or before 5:00 pm EDT on April 23, 2021. No Phase 2 applications will be accepted after this time for any reason. Phase 2 applicants will be notified of the outcome of their submission no later than May 28, 2021.

## Review Process and Evaluation Criteria

All submitted Phase 1 proposals will undergo scientific review to determine their suitability for the scope and purpose of this RFP. A review committee composed of GFI scientists will evaluate Phase 1 proposals and determine whether each project proposal will be invited to Phase 2.

Phase 2 proposals will be evaluated by at least three reviewers. A review committee comprised of GFI scientists and external reviewers (scientists not employed by GFI and not considered for funding under this RFP) will participate in the evaluation of Phase 2 proposals and determination of awards based upon the following evaluation criteria:

- **Scientific alignment**  
Anticipated likelihood of addressing a knowledge gap or technical barrier facing the production of whole-cut meat or seafood products from alternative proteins.
- **Expected impact**  
Anticipated likelihood of positive impact on the sensory characteristics, price points, or production capacity of whole-cut plant-based, fermentation-derived, or cultivated meat.
- **Contribution to the scientific community**  
Plan for sharing project protocols, data, results, and/or research tools and materials with the larger scientific community and alternative protein industry.
- **Project planning**  
Feasibility of project goals (including realistic timeline and budget as well as clarity, soundness, and logic of research plan) and suitability of project team to successfully carry out project goals
- **Commercial relevance**  
Ability to outline a path for research outcomes to meaningfully advance the alternative protein industry. This includes the potential commercial applicability of research and relevance to industry.

We recognize that our requirement for proposals to be written in English means that many researchers may be writing in a non-native language. This will be taken into consideration when we are evaluating the proposals, and we will not penalize researchers who may be writing in a second or third language.

GFI reserves the right to negotiate with project leaders regarding any of the content within their proposal including project aims and scope, budget, and timeline prior to making any final funding decisions. All decisions made related to funding, project duration extensions, and



budget increases shall be made at the GFI review committee's sole discretion and may not be appealed.

For more detailed information about our proposal review process, please refer to our [Frequently Asked Questions](#).

## Award Administration

Prior to disbursement of any funding, the lead researcher, faculty advisor (if lead researcher is a graduate student or postdoc), and university official (if required) must sign an award agreement with GFI to ensure that both parties are in agreement regarding the use of the grant award. The award agreement will detail the award specifics as well as the requirements for award recipients (see below), and must be signed within 12 weeks of receipt or GFI reserves the right to withdraw the award offer. GFI's standard grant agreement can be found [here](#).

For projects that will be completed in 12 months or less, the entire project budget will be disbursed within three weeks from receipt of the signed award agreement. For projects that will be completed in more than 12 months, the budget required for the first 12 months will be disbursed within three weeks from receipt of the signed award agreement. The remaining budget will be disbursed once the awardee has successfully completed any midterm reporting requirements (see below).

Proposals that are accepted by GFI and that result in the granting of funds will have the following information made public: the project title; project summary; project team members' names, titles, and affiliations; and other information deemed relevant by GFI, such as a description of the proposed project scope, purpose, and grant amount. Information within a proposal that applicants wish to remain confidential must be clearly marked as confidential, privileged, or proprietary within the proposal. GFI will hold this information in confidence to the extent permitted by U.S. law, but reserves the right to require removal of such confidentiality requirements as part of accepting the proposal and awarding funds if the proposal is otherwise accepted. For proposals that do not receive funding, GFI will release no details about the researchers involved or the content within the proposals. We may release anonymized aggregated statistics regarding the number of proposals received, the types of institutions they came from (i.e., public vs. private), and the countries of the researchers' institutions, but no identifying information will be included in these statistics. Applicants have the right to withdraw applications at any time by sending a request indicating their desire to do so to [research\\_grants@gfi.org](mailto:research_grants@gfi.org).

## Requirements for Award Recipients

Expectations of and specific requirements for award recipients will be explained in the award letter that must be signed by authorized officials from both GFI and the grantee's organization prior to receipt of any funding. Please find GFI's standard grant agreement and terms [here](#).

The basic requirements include but are not limited to:

- Publishing project results in a peer-reviewed scientific journal.
- Consent to be featured on GFI's website, blog, and social media with a short description of your project goal(s).
- Attendance at virtual meetings with other GFI grantees as needed throughout the year.
- Timely response to a phone call or email from a GFI scientist about every 3 months to provide brief information regarding project progress, results, and any technical challenges that have arisen.
- A brief written update on project progress at least every six months for projects that are 12 months or longer. For projects that are less than 12 months, a brief written update will be required at least halfway through the project's duration.
- A written Midterm Report halfway through the project's duration. GFI will distribute the template for this progress report.
- A written summary outlining the project outcomes, potential next steps, and final expense report for how funds were utilized must be submitted within 30 days after the conclusion of the project. This summary should also include instructions for accessing data or obtaining research materials generated from the project. For example, if the project resulted in a newly-sequenced crop genome, where was that genetic data deposited and how can it be accessed online? If a new protocol was developed, where can it be accessed (or have the researchers shared it directly with GFI)? If a new technology or research tool was created, how can other researchers find and utilize it?

Thank you for your interest in the GFI Research Program. Please email any questions related to the Program or this RFP to [research\\_grants@gfi.org](mailto:research_grants@gfi.org).