

GFI Outcomes: Why GFI is a Superb Philanthropic Investment

Document Prepared for Animal Charity Evaluators

October 1, 2017

I believe that in 30 years or so we will no longer need to kill any animals and that all meat will either be clean or plant-based, taste the same and also be much healthier for everyone.

[Richard Branson](#)

I. Executive Summary

Every day, factory farming causes horrific suffering for billions of farm animals and devastating damage to the environment. Growing crops for farm animals is vastly inefficient, driving up the price of feed crops and entrenching global poverty. Consumption of meat, dairy, and eggs is linked to obesity, diabetes, heart disease, and cancer. Every year in the U.S. alone, contaminated meat causes more than 100,000 hospitalizations and thousands of deaths.

While education about the impacts of animal product consumption is important, studies consistently show that the primary factors in any consumer's eating choices are taste, price, and convenience. Thus, The Good Food Institute is laser-focused on accelerating the market expansion of affordable and appetizing clean and plant-based alternatives to conventional animal products. We are taking ethics off the table for consumers by making the sustainable and humane choice the default choice.

The entire GFI team is committed to ensuring that our organization is among the most impactful and cost-effective non-profit organizations in the world; that is, we strive to ensure that all donor dollars are focused on creating the most possible good. More specifically, we are focused on decreasing the number of animals farmed, and thereby making a positive impact on climate change, sustainability, global health, and animal protection. From an animal protection standpoint, GFI's goal is that no organization will have a better cost-benefit ratio.

In this document we discuss: 1) the theory behind GFI; 2) what we've accomplished since our founding in February 2016 within each of our core areas (Innovation, Science & Technology, Policy, Corporate Engagement, International Engagement, and Communications); and 3) significant outcomes in two other key areas: team building and influence. We also consider how GFI's mission and work relate to the core principles of effective altruism.

For a concise presentation of our accomplishments in 2016, please see our annual review, which is [available here](#).

II. GFI's Work: Our Theory of Change

Plant-based meats are in the early stages of a macro trend, similar to the way soy and almond milk changed the milk category.

Robert Gamgort, CEO, Pinnacle Foods

GFI promotes both plant-based and clean alternatives to conventionally-produced meat, dairy, and eggs. These products have received increasing attention in recent years. Bill Gates called Beyond Meat “the future of food”; Li Ka-shing (Asia’s richest man) has invested heavily in Hampton Creek, Perfect Day, and other plant-based and clean start-ups; Google founder Sergey Brin funded the first clean burger, which subsequently netted investments from DFJ, Cargill, Bill Gates, Richard Branson, Jack and Suzy Welch, and other notables; and Alphabet CEO Eric Schmidt declared that plant-based meat will improve life for humankind at least tenfold in the near future by mitigating climate change and global poverty.

But the plant-based and clean meat industries are still in their infancy, and both require significant public and private sector research and development.

While plant-based milk commands 10 percent of total milk sales (1/10th), plant-based meat weighs in at less than one-quarter of one percent (1/400th). Proportionately, that’s about one-fortieth the market share of plant-based milk. Simply closing that gap would create a \$20 billion market that does not currently exist, and it would have a significant positive impact on our environment, food security, global health, and animals. This change would save almost one billion land animals and even more sea animals annually.

Of course, the rise of plant-based milk had little to do with ethics; makers of alternative milks created products that taste great, are reasonably priced, and are sold alongside cow’s milk. By making plant-based and clean meat affordable and accessible, GFI can take ethics off the table, making the non-animal choices the default while also making it much easier for consumers to make choices that align with their values.

III. GFI's Six Programmatic Departments: Outcomes & Impact

The goal of GFI is to catalyze the success of all plant-based and clean meat, dairy, and egg alternatives to industrially produced animal products. GFI has formed six departments to accomplish this task: Innovation, Science & Technology, Policy, Corporate Engagement, International Engagement, and Communications.

What follows is an assessment of our six programmatic departments—how the work of each department aligns with our theory of change and mission, followed by a brief presentation of highlights and plans in each category. GFI prepares monthly highlights which offer significantly more detail than this document. If you would like to see any of our previous monthly highlights or be added to our highlights list, please email Bruce or Clare via www.gfi.org/our-team.

A. Innovation Department

So far, we've only explored about 8 percent of the world's plant proteins as potential meat alternatives... Remaking meat is one sector of the food industry that is ripe for innovation and growth.
Bill Gates

GFI's Innovation Department is one half of the core of GFI—the “markets” half of our focus on “markets and food technology.” Specifically, our Innovation Department has two primary focuses: inspiring the next generation of innovators to join and start companies and supporting the most innovative plant-based and clean meat companies; both activities remove animals from industrial animal agriculture.

Our innovation team includes Business Analyst Brianna Cameron, Innovation Coordinator Cameron Meyer Shorb, Business Innovation Specialist Aylon Steinhart, and Entrepreneur in Residence Chris Kerr. We are currently recruiting for our director of innovation and research analyst positions.

1. Inspiring the Next Generation of Innovators

GFI's Innovation Department is focused on moving the best and most successful entrepreneurs, tissue engineers, synthetic biologists, plant biologists, and others into plant-based and clean meat, dairy, and egg technologies—both as founders of new and transformative start-ups and as employees at plant-based and clean meat companies.

To this end, GFI has compiled a list of “white space” companies representing opportunities that have not been capitalized upon and for which we are actively recruiting founding teams. To recruit these founders, we reach out to tissue engineers who may have been planning to work in the medical field, synthetic biologists who may have been planning to work in chemicals, plant biologists who may have been planning a career focused on drought resistance, and so on. We then educate and encourage these individuals to use their skills on behalf of food technologies that will transform our food system away from conventional animal products and toward plant-based and clean alternatives.

GFI speaks regularly at premier schools for food science, synthetic biology, plant sciences, tissue engineering, and entrepreneurship. GFI staff present in classes, departmental symposia, and student forums with the goal of markedly increasing the number and caliber of food scientists, entrepreneurs, tissue engineers, and synthetic biologists working on plant-based and clean alternatives to animal products. Additionally, our scientists work to co-develop curricula for new courses dedicated to exploring topics surrounding plant-based and clean meat.

Highlights & Plans

GFI's innovation team researched and prepared several foundational resources to set the stage for success. We compiled a summary of research on the global plant-based meat, egg, dairy, and protein markets, including estimates of market size and predicted growth, as well as consumer purchasing trends and motivations. This summary helps us to keep track of what we know about the plant-based market domestically, internationally, and globally, so that we can leverage data to demonstrate market opportunities to key stakeholders. It also helps us to understand methodological limitations with the data that we have, as well as identify gaps in our knowledge that require further investigation. To fill one of

these gaps, we collaborated with the Plant Based Foods Association to define and obtain a custom data set from the prominent market research firm Nielsen, representing the most comprehensive and in-depth view of sales, growth, and distribution metrics within the retail sector of the plant-based food industry. We jointly published a [press release](#) with some preliminary insights, and plan to include further analysis in an upcoming white paper on the state of the plant-based food market.

The team also compiled the GFI Company Database, which is a list of companies in the plant-based and clean meat, dairy, and egg markets, as well as other companies with relevant applications. The database includes a brief profile of each company, as well as financial data, contact information, and relevance to GFI's work. This database serves both as a resource for GFI's in-house team of specialists and also for entrepreneurs and scientists seeking information on the key players already in the field.

Our innovation team also identified and connected innovative thinkers in food-tech and business who have sought GFI's expertise in helping them develop new plant-based and clean meat companies. Our [GFIdeas project](#) brings together 216 potential entrepreneurs and scientists, 117 of whom collaborate regularly via a GFI-facilitated Slack team, and many of whom join monthly GFI-led video calls to meet, discuss, brainstorm, and share updates.

From our support for entrepreneurs, at least two companies have launched, one of which is currently below radar, but it was accepted to the prestigious Y Combinator accelerator and has raised over \$2 million in capital. The other is focused on the distribution of plant-based entrées to schools. Many more are planned.

We also partnered with entrepreneurs to launch two food companies from scratch to address the greatest areas of need in animal-product replacement: first, Good Dot launched in the summer of 2017 and is bringing price-competitive plant-based chicken and mutton to India, where demand is skyrocketing; second, debuting in early 2018, SeaCo (maker of Good Catch brand products) will introduce delicious plant-based alternatives to fish such as tuna. SeaCo and Good Dot have already raised millions of dollars in venture capital; this is money that will go into competing with conventional animal products and that would not have otherwise been put at the service of meat-reduction efforts.

In the coming years, tens of millions of dollars will be directed into competing with conventional animal-based meat as a result of GFI's innovation efforts; our expectation is that as we form more and more companies, this impact will multiply exponentially.

In order to effectively foster a new generation of innovators, several additional resources were prepared by the team:

- A **battle plan for building a network of university faculty and leaders**, developing a detailed funnel model to turn students into clean and plant-based meat entrepreneurs, creating an MBA-facing presentation, and identifying KPIs for refining the presentation in future iterations.
- A **distributor database** to help GFI and the entrepreneurs we support understand the key players in retail and foodservice distribution, including distributors, redistributors, wholesalers, importer/exporters, and foodservice management companies.
- A [searchable global map](#) of **funding and scaling opportunities for start-ups**, including accelerators, incubators, pilot plants, networks, non-profits, conferences, expos, pitch

competitions, and other essential resources for entrepreneurs trying to start or grow their business.

- A guide to help plant-based meat manufacturers understand the process and considerations for **selling plant-based meat products through K-12 school foodservice**.
- A **referrals database**, which includes contacts for graphic/web designers, lawyers, programmers, marketers, consultants, and any contractor whom we would recommend to start-ups. The database also includes individuals who have volunteered their services or professional expertise to help plant-based or clean meat start-ups succeed.
- A **supplier database** to help startups source plant-based protein and flavoring ingredients for plant-based meat applications.

Our business analyst has also conducted interviews with dozens of industry experts and entrepreneurs from leading plant-based and clean alternatives companies to capture best practices, lessons learned, and advice for new entrepreneurs. Their input is being incorporated into GFI's entrepreneur start-up manual, which will provide step-by-step guidance for starting a plant-based or clean food tech company and will be posted at gfi.org/resources.

Finally, with no active university outreach program launched yet, we have been invited to speak repeatedly since February 2016 at many of the top schools for business and entrepreneurship, including multiple appearances at Harvard Business School, the Stanford School of Business, and MIT's Sloan School of Management. Attendance for these talks is consistently excellent, ranging from a low of 60 to a high of more than 200. On August 23, GFI's business innovation specialist Aylon Steinhart began preparing to focus specifically on arranging activities on top campuses for business and entrepreneurship.

2. Supporting the Most Innovative Plant-Based and Clean Meat, Dairy, and Egg Companies

GFI is committed to the success of good food companies already in the marketplace. For example, we work with both start-ups and established companies on all aspects of their progress, including reviewing business plans and pitch decks, conducting market research and branding exercises, recruiting top talent, and mentoring on all facets of starting and running a company. Our team of in-house specialists was purposefully recruited to help start-ups with regulatory issues, public relations, scientific questions, international expansion, and more.

Highlights & Plans

In addition to the activities detailed above, many of which are also of significant help to companies that already exist, we have built a syndicate of investors in the plant-based and clean alternatives space and have created relationships with more than a dozen of the largest and most influential VCs in the United States and abroad. We are already positioned so that we can facilitate bringing at least \$2-3 million in venture capital resources to any start-up company that passes our due diligence assessment, and likely much, much more. Again, this is money that is focused on competing with animal agriculture, and it is money that would have otherwise been spent on some other investment. When we first started thinking about this area of focus, our expectation was that it would take us at least five years to get where we are now, which bodes very well for the future.

We have developed excellent relationships with all of the start-ups in the plant-based and clean alternatives market sectors, which has led to our naming one key company and doing their media roll-out (which netted hundreds of thousands of dollars in free media). Multiple other start-ups have asked us for this sort of assistance, though we have not yet been able to offer it purely for reasons of in-house bandwidth. As we fully staff up in the next few months, we will be doing more and more of this. Right now, we are in the process of naming another clean meat company.

GFI also selected the name “clean meat” as a new and better way to discuss meat grown using cellular agriculture. In consumer survey after consumer survey, clean meat outperforms “cultured meat” in consumer acceptance by at least 20%. A focus group by New Harvest found a similar result. GFI undertook the first survey and then actively encouraged the cellular agriculture community and the media to embrace this nomenclature. To date, the following clean meat companies and advocates are on board, in addition to GFI: Memphis Meats, SuperMeat, Hampton Creek, Meat the Future, The Modern Agriculture Foundation, and Food Frontier. In multiple *Wall Street Journal* stories about Memphis Meats, the paper has discussed “clean meat.” So too with Hampton Creek’s announcement that it would be entering the field, [Cargill’s CEO on Fox Business](#), and [Richard Branson’s article](#) on his investment in clean meat.

GFI’s SciTech and innovation teams have also recruited a small army of interns and research fellows. Their projects include white papers on plant-based dairy alternatives and plant-based egg alternatives, developing an academic researcher database, and building a catalog of food products that use recombinant technology, as well as compiling resources like incubator and pilot facility opportunities. All of these projects will make it easier for entrepreneurs and researchers to identify areas of opportunity and appropriate resources for launching their projects.

We met with Hydrosol, a German supplier that produces stabilizing ingredients for plant-based food applications, including their new [plant-based chicken nugget system](#). They are currently working with companies all over Europe and Asia to provide formulation services and supply ingredients for plant-based meat and dairy products and are looking to establish similar working relationships with US companies. GFI is working with Hydrosol to host a webinar so that we can invite entrepreneurs as well as more established plant-based companies to learn about their technology, products, and trends within the plant-based market.

Finally, our entrepreneur in residence is in constant communication with companies, helping them to hone pitch decks, figure out housing contracts, find brand managers, and more. And our executive director and senior communications specialist have edited more than a dozen press releases and assisted with multiple media pitches through distribution of releases and introductions.

B. Science & Technology (SciTech) Department

The other half of our core mission—our focus on food technology—is represented by **GFI’s Science & Technology Department**, which develops and promotes the science of plant-based and clean meat, dairy, and egg technologies. GFI’s scientists are the global experts in this sector and work to ensure that the most delicious and cost-competitive alternatives to conventional animal products appear on the market as quickly as possible.

Our team is made up of Director of Science & Technology David Welch, Ph.D.; Senior Scientist Christie Lagally; Senior Scientist Liz Specht, Ph.D.; Scientific Foundations Liaison Erin Rees Clayton, Ph.D.; and Academic Research Advisor Allison Berke, Ph.D.

The SciTech team is focused on six principal areas:

1. Creating and Maintaining Comprehensive Documentation Related to the Fields of Plant-Based and Clean Meat, Dairy, and Egg Technologies

Before GFI started creating one, there was no one-stop source for the latest information on any aspect of plant-based or clean alternatives. This meant that anyone interested in these fields had to dig through volumes of literature—much of it of dubious quality, outdated, or paywall-restricted—and could not access a comprehensive, reliable overview of the science. Therefore, GFI is creating white papers and industry overviews that are the definitive work in this space.

Highlights & Plans

GFI created a Clean Meat Mind Map white paper that is titled “[Mapping emerging industries: opportunities in clean meat](#)” and held a webinar for interested media ([available here](#)). We have been told by the key scientific researchers at multiple companies as well as the director of research at the nonprofit cellular agriculture institute New Harvest that this document is the only comprehensive introduction to the field that is open source and that they are sharing it with anyone who comes to them seeking an introduction to the technology.

We also created a plant-based version: “[Plant-Based Meat Mind Maps: An Exploration of Options, Ideas, and Industry](#),” which was presented publicly in late September.

All of GFI’s white papers are published as open-source resources on our website, heavily publicized, and will be continually updated. As noted above, we host monthly calls for entrepreneurs, and we present to those entrepreneurs every white paper that we produce and also introduce them to all resources that we create.

We will also publish and vigorously promote papers on the state of animal-free media for clean meat and on the expansion opportunities for utilizing more types of plant-based proteins. We are continuously contacting researchers—both in academia and in industry—who are doing relevant work in order to gain deeper insight into the fields of synthetic biology, tissue engineering, and food science to assess the landscape of opportunity.

The SciTech team also developed a spreadsheet for altering ingredient pricing and media formulation concentrations to determine how various technology development scenarios can affect media cost and to identify the predominant pricing bottlenecks. This is the first time that anyone has ever done a cost calculation for public consumption that will help us to understand how to lower production costs for clean meat, and overall, the results are extremely encouraging.

We also developed a spreadsheet calculating the cost of the main inputs for hybrid clean meat/alternative protein products on a per-pound basis. This informs targets for clean meat price points to achieve economic viability in blends of various compositions.

2. Evaluating Plant-Based and Clean Technologies and the R&D Needs for Industry Development

Both the plant-based meat and clean meat market sectors are tiny, as noted above. Consequently, very little analysis has been undertaken on either of these market sectors. In order to better understand them so that we can publish a document that offers authoritative information, our SciTech Department has been working over the past 18 months to better understand the science of plant-based and clean meat.

Highlights & Plans

The SciTech Department is currently working on industry-level evaluations of technologies and research projects needed to support the clean and plant-based product industries. These Technology Readiness Assessments (TRAs) provide information on the product-level maturity or readiness (i.e., Technology Readiness Levels, or TRLs) to launch a company, as well as industry-level information on new technologies, research, and companies needed to support the market as a whole. Opportunities for industry-focused, university-based research also emerge from TRA and TRL evaluations. As these research needs are identified, the SciTech Department will provide strategic input for catalyzing funding for these projects. Their goal is to connect the most qualified researchers with the financial support they need to conduct the research necessary to bring new and improved plant-based and clean alternatives products to market.

These efforts will allow both GFI and the rest of the world to fully understand the state of the science and engineering with regard to plant-based and clean alternatives to animal products and direct further research and development accordingly. This work will ensure that more scientists get involved in these fields and that duplicative work is minimized.

The SciTech team has been working on these documents for more than a year, and we expect to have first versions completed soon. The clean meat mindmap and the plant-based meat mindmap were preliminary documents that will be incorporated into these larger analyses. As with all GFI work, they will be posted in the resources section of our website and be heavily promoted.

In early 2017, we launched the world's first courses on plant-based meat and plant-based fish, which GFI co-designed in collaboration with the UC-Berkeley Sutardja Center for Entrepreneurship and Technology, where GFI's Christie Lagally is a fellow. In this class, students brought their fresh perspectives to some of the biggest challenges facing plant-based meat production. These classes were so successful at generating interest in—and potential real-world solutions for—advancing plant-based foods that in August 2017 UC-Berkeley launched an entire, permanent “Program for Meat Alternatives” that will expand their efforts to explore this field, starting with a class entitled “Plant-based Meat 2.0.”

Our SciTech team also completed phase 1 of the “Power Plant” project: over the summer of 2017, seven interns researched 46 plant proteins for use in plant-based meat. With this project, we started to get a handle on which plant proteins are most promising for use as plant-based meat and compile an open-source database of papers and research on plant-based proteins.

We also performed preliminary calculations on serum-free media costs and factored in pricing implications associated with a handful of technology advancement scenarios for growth factor

requirements. This is a critical exercise for addressing concerns about the economic feasibility of clean meat and helps to guide scientific strategy in research prioritization.

3. Supporting Entrepreneurial Efforts

GFI offers entrepreneurs and start-ups guidance, direct expertise, and access to external experts to aid in the scientific development of their products. GFI scientists support entrepreneurs in early stages of company development with technical information and direction. For example, the SciTech Department assists entrepreneurs in formulating and articulating the scientific aspects of their company proposals to make them suitable for approaching potential scientific co-founders and venture capitalists.

Highlights & Plans

GFI scientists assist company-based scientists by connecting them with technical experts and with grant funding opportunities. As an example, our scientific foundations liaison has training in the federal government's Small Business Innovation Research (SBIR) program, which provides approximately \$2 billion annually to small businesses focusing on innovative research with commercialization potential. She ensures that entrepreneurs are aware of these and other grant opportunities, creates and disseminates resources detailing the process for applying to the solicitations, and advises entrepreneurs throughout the grant application processes.

GFI's scientists also work closely with technology incubators and with leading food industry partners to scout technologies that address barriers in bringing plant-based and clean alternatives products to market. And the SciTech Department is developing relationships with major food manufacturers and ingredient suppliers to determine these needs, and thus serves as a bridge to food technology and biotechnology incubators with unique insight into plant protein and clean alternatives technologies.

GFI's scientists have consulted with dozens of plant-based meat, clean meat, and other alternatives companies to refine their scientific strategy. We have been instrumental in changing the focus to a more scientifically valid method for a small handful of companies that have subsequently raised millions of dollars. We have also made critical connections to both tissue engineering and food science experts that have changed the scientific paths of multiple companies in a more effective direction.

Finally, the SciTech team drafted preliminary guidelines for the development of a clean meat consortium. We then facilitated the first meeting with nearly all of the clean meat companies from around the world to explore collaborative research opportunities, identify research questions to pitch to academics or established companies, and discuss IP pool or patent pledge opportunities in the clean meat industry. Based on positive feedback from a follow-up survey to determine next steps for facilitating communication among the clean meat industry players, GFI will be hosting these calls quarterly and developing a communication platform for continued discussion in between the calls. We're excited to be adding value to the clean meat market sector by facilitating this engagement between the leading players.

4. Mobilizing Funding for Academic Research and Early-Stage Commercialization

The SciTech Department works to generate additional scientific work in plant-based and clean alternatives among academic research institutes and small businesses by seeking out funding

opportunities to support these endeavors. Specifically, our scientific foundations liaison identifies funding opportunities from top governmental grant-making agencies (National Science Foundation, U.S. Department of Agriculture, Department of Energy, etc.) and private foundations (Gates Foundation, Packard Foundation, Foundation for Food and Agriculture Research, etc.). Because our scientists are focused on creating connections at top universities for plant sciences, synthetic biology, and tissue engineering, they are able to handpick the best possible scientists to apply for these funding opportunities—moving beyond scientists who happen to be interested in this market sector and ensuring that the best possible minds are working on the questions we want answered and the research we want done. Our scientists are deeply immersed in plant-based and clean technology. Thus, the research questions we encourage academic scientists and small businesses to pursue focus on the most critical areas of research for advancing plant-based and clean technologies.

Additionally, the SciTech Department identifies public and private funding organizations whose missions align with one or more of GFI's goals to reduce global poverty, combat climate change, and improve human and farm animal health and well-being. Our scientific foundations liaison develops relationships with these organizations to provide education on the direct positive impacts of plant-based and clean alternatives to animal agriculture and the critical need for additional research and development in these fields. The goal of these activities is to increase the number of funding agencies providing grant opportunities focused on advancing plant-based and clean technologies.

Finally, led by our scientific foundations liaison, GFI aims to mobilize funding to launch two novel research centers: one for clean meat research and one for plant-based product innovation. The locations of these centers will be selected based on the research portfolios of top U.S. research universities and their commitment to innovation and sustainability. We also developed the initial draft of GFI's plant-based meat research portfolio, a comprehensive document summarizing the research projects we have identified as having significant potential to advance the plant-based meat industry.

Highlights & Plans

GFI senior scientist Liz Specht met with more than 25 venture capital firms and investors to deliver her presentation about the economic viability of clean meat, in advance of the fundraising round for Memphis Meats. She met with most of the top investors that made up the company's \$19 million fundraising in 2017, including DFJ (the lead investor), the Gates Foundation, Jack and Suzy Welch, KBW Investments, Kyle Vogt, and many more. In addition to providing third-party verification for the viability of clean meat with regard to this specific investment, we also primed the pump for future investments in other plant-based and clean meat companies.

We have registered GFI in the federal grant system so that we are eligible to apply for federal funding for the plant-based and clean meat projects we want to work with researchers to complete. This is a non-trivial administrative task that will save several steps and lots of time for any future federal grant submission for which GFI wants to serve as the lead. We then developed research ideas for both plant-based and clean meat proposals to submit to USDA and NSF funding opportunities in late summer/fall of 2017.

We compiled a Research Funding Database which includes several open-funding opportunities, relevant for potential plant-based or clean meat research projects. Our goal is to facilitate the submission of clean meat or plant-based meat research proposals to several of these RFPs.

We identified the 13 institutions that seem most promising for housing an academic plant-based meat research center. Criteria considered included strength of plant science programs, geographic proximity to relevant industry players, etc. We also completed the first stage of analysis toward identifying the most promising universities to consider for an academic clean meat research center. This resulted in narrowing the list of 115 top-tier US research universities to 14 institutions, based on criteria such as strength of engineering programs, presence of a dedicated stem cell research facility, etc.

We worked with Dr. Girish Ganjyal from the University of Washington to draft, finalize, and submit a pre-proposal and later a full proposal entitled, “*Cultivating the Dry Pea Protein Industry from Farm to Table: Determining baseline fundamental information of pea protein processing functionality and linking it to texturization performance*” to the [Foundation for Food and Agriculture Research \(FFAR\)](#). Although ultimately not selected for funding within this program, the public-private partnership built by bringing together leaders from academia, plant-based companies, and ingredient suppliers continues to seek research funding for this important research.

5. Creating Relationships with Academic and Industry Researchers

Right now, there is limited information on and discussion of plant-based and clean technologies at the top schools for food science, tissue engineering, and synthetic biology. While thousands of students and researchers work in these fields, they are not yet aware of the potential to use their expertise to address global problems by creating affordable and sustainable alternatives to conventional animal products.

Highlights & Plans

GFI is performing thorough literature reviews on an ongoing basis in order to remain entirely up-to-date on all publications related to plant-based and clean technologies, as both are directly related to food and work in other fields that are applicable for our purposes, such as advances in biomedicine that can be translated to clean meat.

We are also working to increase the number and quality of academic researchers focusing on plant-based and clean agriculture research through the creation of a comprehensive academic researcher database. The database will contain faculty from all 115 R1 (denoting highest research activity) universities in the U.S. whose technical experience and expertise are relevant to the plant-based and clean agriculture fields. GFI’s Innovation Department will systematically reach out to the most promising of these academic scientists to introduce GFI, explain how their current research expertise could be beneficial for the advancement of plant-based and clean meat research, and inform them of funding opportunities to support this research.

The SciTech Department, in collaboration with the Innovation Department, will also work closely with university departments focusing on entrepreneurship and innovation on projects and competitions in the plant-based and clean alternatives spaces.

GFI will invite professionals from industry (medical biotech, chemical engineering, etc.) to learn about the opportunities presented through GFI via networking events for scientific professionals, LinkedIn invitations to learn more from GFI’s website, and webinars on scientific and entrepreneurial opportunities.

This area will involve moving tens of millions of dollars (and ultimately far more) from governments, large grant-making foundations, and corporations into research and development (R&D) and merger and acquisition (M&A) activity focused on plant-based and clean alternatives to animal products. Basically, any entity that has as a part of its mission climate change or the environment generally, global poverty or sustainability generally, and/or global health (e.g., chronic disease, antibiotics, zoonotic pandemics), we will educate about the value of R&D and/or M&A focused on creating plant-based and clean products.

Already, the team submitted GFI's clean meat and plant-based meat contributions to identify top priorities for the [Science Breakthroughs 2030: A Strategy for Food and Agriculture Research](#) project. This is a project being carried out by the National Academies of Sciences, Engineering, and Medicine with support from the Foundation for Food and Agriculture Research and the Supporters of Agricultural Research (SoAR) Foundation.

We also submitted GFI's first paper for peer review, entitled "Opportunities for Applying Biomedical Production and Manufacturing Methods to the Development of the Clean Meat Industry." This is being considered for a special issue of the *Biochemical Engineering Journal* on the Scale-up and Manufacturing of Cell-Based Therapies. The readership of this issue will include scientists in both academia and industry who are developing large-scale cell culture technology—the ideal audience for making the case that clean meat is a highly worthwhile application for such technology.

6. Creating Relationships and Excitement in the Science & Technology Media

The scientific media, like everyone else, loves food. Newsworthy information related to technological innovation in food has captured the imagination of both the science and the business media, even without significant effort on the part of the plant-based and clean community.

The SciTech team will work with our Communications Department to generate contacts in science media that will create a better understanding of the need for the alternatives to animal agriculture that we are promoting, while generating more and higher-quality stories about plant-based and clean alternatives to meat, dairy, and eggs. Our scientists help translate the scientific aspects of these emerging technologies into accessible vernacular to address and alleviate public concerns.

In combination with the rest of our efforts, this media coverage will heighten the visibility of the work of scientists who are creating the best and most affordable plant-based and clean alternatives to conventional meat, dairy, and eggs.

We have not yet meaningfully worked on this goal, although we are hiring a media relations specialist who will focus on this task. Nevertheless, we were quoted extensively in an article in the journal *Nature*, which is one of the most influential science journals in the world and one of our scientists was selected for a feature by [Amy Poehler's Smart Girls Blog](#). Our extensive mainstream media coverage has, of course, also reached many scientists (see below).

C. GFI's Policy Department

The statutory and regulatory landscape remains unclear for clean alternatives to conventional animal products, and current statutes and regulations put plant-based and clean products at a disadvantage in the

marketplace. Our **Policy Department** is focused on creating a clear pathway to commercialization of clean products and a level playing field for plant-based and clean alternatives to conventional animal products.

GFI's policy team includes Policy Director Jessica Almy and Senior Policy Specialist (i.e., lobbyist) Joanna Grossman, Ph.D. We are currently recruiting for the third member of the team, an environmental scientist.

1. Creating a Clear Path to Commercialization of Clean Meat, Dairy, and Eggs

The current statutory and regulatory framework for meat production is ill-suited to oversee clean products. Our Policy Department works with industry experts and regulators to map the precise path forward for clean meat, dairy, and eggs, to ensure a clear regulatory pathway to introduction of these products. Our Policy Department is collaborating with preeminent food law professors to co-author law review articles and working with legal interns and our growing network of superb pro bono attorneys to delineate the regulatory pathway for clean meat in the U.S. and abroad. All memos will be thoroughly vetted and posted online as white papers.

Highlights & Plans

We have completed a regulatory analysis of the pathway for clean meat in the United States. We are actively coordinating with all of the clean meat companies and should be coming to a consensus understanding fairly soon. We also drafted memos that outline the regulatory landscape for clean meat, dairy, and eggs in Australia, New Zealand, Brazil, China, Singapore, Israel, Taiwan, and South Korea.

We built and strengthened relationships with colleagues from food organizations (Center for Science in the Public Interest, Healthy Lawyers, and National Sustainable Agriculture Coalition), animal protection organizations (Compassion Over Killing, Mercy for Animals, Humane Society of the United States, and Physicians Committee for Responsible Medicine), environmental organizations (Environmental Working Group and Interfaith Moral Action on Climate), industry (Impossible Foods, Plant Based Foods Association, and United Fresh), a wide range of NGOs (Center for Biological Diversity, Center for Science in the Public Interest, and Organization for Competitive Markets), and others (International Monetary Fund and Public Justice).

2. Leveling the Playing Field for Clean and Plant-Based Products

Our Policy Department meets with congressional offices to communicate the vital need for federal agencies to direct discretionary funding into research and development for plant-based and clean meat alternatives (e.g., characterizing underutilized plant proteins for functionality, optimizing cell culture media, developing agriculturally relevant cell lines).

The U.S. government spends billions of dollars each year on a wide range of scientific pursuits; unfortunately, in the agriculture and food sphere, much of that money currently goes toward perpetuating the status quo—e.g., researching livestock production and animal disease. Very little goes into food science and innovation despite the urgent need to reform our food system. Federal agencies such as the National Institute of Food and Agriculture and the National Science Foundation, which award millions of dollars in competitive grants each year to scientists, academics, and research

institutions, are particularly well-positioned to ensure that taxpayer money is being wisely invested in areas that will improve and safeguard our food supply, in addition to promoting sustainability and global health.

Our Policy Department also works with the FDA and supportive members of Congress to ensure that plant-based meat, dairy, and eggs are competing on a level regulatory playing field, both with one another and with their animal-based counterparts. For example, we are focused on ensuring that plant-based products can be labeled using terms like “milk” and “cheese”—as long as these labels are clear and unambiguous to consumers. To that end, we filed extensive FOIA requests focused on finding out the nature of FDA oversight of these labels and then sued the FDA for inadequate production. Subsequently, we filed a [40-page petition for rulemaking under the Food Drug & Cosmetics Act and the Administrative Procedure Act](#), asking the agency to issue a regulation clarifying that commonly used compound names such as “almond milk,” “cashew cheese,” and “soy yogurt” are acceptable and permissible statements of identity. If they deny our petition, we will pursue litigation.

Additionally, we:

- Officially registered as a lobbying organization. We believe we have the first ever full-time lobbyist on behalf of plant-based and clean alternatives to animal agriculture, anywhere in the world. Note that the Plant Based Food Associations (PBFA) does have a part-time contract lobbyist who focuses on protecting the interests of PBFA members. GFI is an affiliate member of PBFA, and we work closely with them on areas of overlapping interest.
- Coordinated our inaugural and very successful [reception on Capitol Hill](#). The event’s hosts were Senator Cory Booker and Representatives Tulsi Gabbard, Ted Deutch, Jamie Raskin, Earl Blumenauer, and Brendan Boyle. The speakers included Representatives Boyle and Raskin, Congressional Vegetarian Staff Association president Adam Sarvana, Beyond Meat founder Ethan Brown and executive chair Seth Goldman, and GFI executive director Bruce Friedrich.
- Submitted GFI’s written testimony to the House Agriculture Appropriations Subcommittee for FY18. We provided an overview of the problems associated with industrial animal agriculture, highlighted the lack of federal funding going towards food innovation research, and explained why USDA should direct existing federal dollars (e.g., competitive grant initiatives) towards plant-based meat research.
- Secured appropriations report language urging the USDA to prioritize research into plant proteins. The Senate Agriculture Appropriations report urged USDA to support research focused on optimizing a variety of specific plant proteins that we want to have optimized for plant-based meat. We will be citing the precise language when we write funding proposals for plant-based meat research at top schools for plant biology.
- Delivered our [Change.org petition](#), complete with more than 47,000 signatures from citizens opposing the Dairy Pride Act, to the offices of the Members of Congress who introduced the bill.
- Sent our tailored factsheet on the Dairy Pride Act to all 535 congressional offices, winning positive media coverage in [Organic Authority](#). We also had many very positive meetings with staff for both Republicans and Democrats who appreciated our factsheet and oppose the legislation.
- [Supplemented](#) the docket of our 40-page [regulatory petition to the FDA](#) on compound naming conventions (such as soy milk, cashew cheese, and rice noodles) with three cases decided since the petition was filed. We are deeply flattered that the industry orchestrated a write-in campaign among dairies opposing our petition.

- Had an op-ed published in [The Hill](#) (a vital political site read by more lawmakers than any other policy news site) that discusses the need for USDA to invest in plant-based and clean meat research through the lens of the Trump Administration's Fiscal Year 2018 budget. The budget calls for sweeping cuts across government agencies, but—interestingly enough—emphasizes the need to stay strong on agricultural research pertaining to sustainability, food safety/security, nutrition, and conserving natural resources.
- Submitted testimony to the Senate Agriculture Appropriations Committee describing our FY18 funding priorities. Our testimony laid out for legislators and their staff the key problems associated with industrial animal agriculture, and promoted the case for USDA to fund plant-based meat research.

The team's bandwidth has been augmented by a strong cadre of legal fellows and interns whose projects include:

- A comprehensive research project that outlines all the requirements of school nutrition programs and organizations working to increase availability of plant-based foods in schools.
- A memo summarizing the recent updates to the Coordinated Framework for the Regulation of Biotechnology and analyzing how these updates may affect the regulation of cellular and acellular food products.
- A list of biotechnology food experts and NGOs focusing on food security, food safety, environmental issues, global hunger, and animal welfare to join a coalition in support of clean meat regulatory approval. Our next steps include developing an outreach strategy to invite these experts and NGOs to join the coalition.
- Research into regulatory pathways for clean meat in China, Australia, and New Zealand.

D. GFI's Corporate Engagement Department

The animal protection community has been wildly successful in convincing restaurant and grocery chains to make positive strides related to animal welfare. **GFI's Corporate Engagement Department** works to replicate that success with plant-based alternatives to animal products by developing relationships with top executives at the most successful chain restaurants and grocery stores as well as with major food companies and key manufacturers of plant-based alternatives to conventional meat, dairy, and eggs. Our goal in all cases is to increase the quality and quantity of plant-based meats that are available in the marketplace.

Our program formally launched in March 2017 with the hire of Alison Rabschnuk as director of corporate engagement. The team now comprises Alison along with Zak Weston, corporate engagement specialist, assisted by several interns.

1. Food Processor Outreach

GFI has been encouraged by the response of the meat industry to the introduction of plant-based and clean meat alternatives. One key goal of our Corporate Engagement Department is to develop relationships with top executives at all of the top food companies in the world.

Already, we have good working relationships with Tyson Foods, ADM, Cargill, Pinnacle, General Mills, Nestle, Pepsi, Campbell's, and many other major food conglomerates. We were very pleased to

see the equity stake that Tyson Foods purchased in Beyond Meat and that Cargill purchased in Memphis Meats, as well as the outright purchase of Sweet Earth Foods by Nestle and Light Life by Maple Leaf Foods. GFI has excellent connections at all four of these massive food companies and many more; we do not know for certain what impact we had on any of these developments, but we have been encouraging all of these companies to diversify away from industrial animal agriculture and toward alternatives. Additional companies—such as Johnsonville, the largest sausage manufacturer in the U.S.—have reached out to GFI to provide educational seminars to their key technical and business strategy decision-makers.

2. Restaurant Outreach

When one chain restaurant with 1,000 locations adds a plant-based entrée where previously there was none, that is a significant victory for the environment, sustainability, global public health, and animals.

Our Corporate Engagement Department will develop relationships with corporate executives at the top restaurants across the country in order to increase the quality, quantity, and promotion of their plant-based entrées. We will engage in direct outreach and attend conferences for restaurant professionals.

Of the top 100 chains, more than half do not have a single plant-based entrée, and 12 have nothing but fried potatoes and/or a side salad. We intend to engage all 100 to ensure that as many as possible have an excellent plant-based entrée as quickly as possible.

As an initial project, we have secured the relevant domain name and will prepare a “Restaurant Report Card” that ranks the top 100 chain restaurants. We will appeal to top chains to improve their offerings of plant-based options and we will promote the chains that excel in this area. In furtherance of this project, so far we have:

- Compiled an extensive database of the top 100 restaurants, capturing relevant menu data, promotional methods, contact information for the top decision-makers, and recommendations for ways the restaurants can improve their offerings.
- Created a rubric for the Good Food Restaurant Report Card, in order to grade the menus of the top 100 restaurant chains on their selection of plant-based entrées.
- Completed in-depth data collection of the top 100 U.S. restaurants’ plant-based offerings, so that the record card rubric could be applied to their menus and in-store images for evaluation.
- Developed a greater understanding of some of the challenges and opportunities that plant-based manufacturers face in regards to product distribution, in-store promotion, and marketing. This will enable the corporate engagement team to tailor their discussions with restaurants and grocery chains more specifically to incorporate these insights.
- Completed the Good Food Restaurant Report Card rankings. These rankings are broken out by Breakfast, Lunch/Dinner, a composite of the two, and by segment (e.g. quick-service (QSR), limited-service (LSR), etc.).
- Created documents to support meetings with restaurants to discuss their ranking on the Restaurant Report Card. These support the business case for plant-based foods and answer questions including: Why you should care about plant-based foods; What is plant-based meat; How does plant-based protein compare to animal protein; Plant-based entrée ideas; How to market plant-based foods.

- Compiled a database of all plant-based meat, seafood and dairy products that are available for restaurant distribution. This will be a resource for restaurants looking to add plant-based meat, dairy and seafood to their menus.

3. Manufacturer Outreach

Our Corporate Engagement Department is cultivating relationships with all established manufacturers of plant-based meat, dairy, and eggs to stay abreast of the best options for product availability and distribution networks at all times. We have excellent relationships with all of the exclusively plant-based manufacturers, and it is exceedingly valuable to have one central contact—our director of corporate engagement—for all of these relationships.

Through these relationships, GFI’s corporate engagement and SciTech teams are working closely to evaluate opportunities to replace conventional meat, dairy, and egg ingredients in pre-made or processed foods. This strategy has the potential to place plant-based meats in schools, prisons, and hospitals via foods such as lasagna, enchiladas, sloppy joes, pulled “pork,” and macaroni and “cheese,” and plant-based milk and eggs via cookies, crackers, and snacks that may contain milk or eggs as standard ingredients.

When GFI is approached by companies overseas that are interested in importing products from U.S. plant-based manufacturers, our corporate engagement department identifies the companies with the greatest opportunities and facilitates the introductions.

4. Grocery Outreach (not likely before 2018)

Right now, plant-based meat is where plant-based milk was 15 years ago: Most grocery chains in the U.S. have acceptable plant-based meat options, but they are inevitably placed in their own—often secluded—section of the store, and they are rarely promoted. As a result, only customers who are specifically seeking them out find plant-based meat.

We will work with grocery stores to ensure they carry the best plant-based options and they promote those options as effectively as possible by improving placement as well as in-store and online marketing for these products.

E. GFI’s International Engagement Department

The U.S. represents less than 5 percent of the global population, and meat consumption is accelerating outside of its borders, particularly in the developing world. **GFI’s International Engagement Department** is focused on reversing that acceleration by building on the most successful work from our innovation, science and technology, policy, and communications teams.

GFI’s international engagement program was formally launched in March 2017 with the hire of Gustavo Guadagnini as managing director of GFI Brazil. In July 2017, Nicole Rawling Roth, Esq., joined the team as director of international engagement, focusing immediately on how best to tailor and propagate GFI’s work in science and technology, policy, innovation, and corporate engagement to advance the plant-based and clean alternatives fields globally.

Preliminarily, Nicole has:

- Crafted the blueprint for GFI's global expansion, including our International Engagement Department's organization chart and reporting structure, job descriptions, and a compensation plan for our international managing directors.
- Reached out to leaders of animal protection organizations all over the globe to establish connections, gain insight into their experiences, and set up potential partnerships or mutually beneficial relationships.
- Drafted two SWOT analysis templates. The first will be used to evaluate potential new international markets for importing, licensing, or the establishment of new plant-based or clean meat products and/or companies. The second will be used to evaluate current plant-based and clean meat companies' capacities and willingness to export or license their products abroad.
- Finalized the legal requirements, process, and position descriptions for hiring independent contractors abroad.
- Drafted project descriptions for interns or volunteers for mapping the business and legal landscape in Europe, Latin America, and Asia and hired 5 interns to conduct this work.
- Gathered information on the new Chinese nonprofit registration law, how different organizations are interpreting it and responding to it, and making connections in China with experts who can give us a reliable legal interpretation. China is, of course, a vast market so a strong presence there is vital to our mission.

What follows is our success to date in each of our programmatic categories internationally; our theory of change for each of them is explained above.

1. International Innovation

GFI's International Engagement Department will focus on helping internationally located plant-based and clean meat companies be successful by providing guidance and research support, by working with GFI's other departments to assist these companies with scientific and regulatory questions and media support, and by working to foster a start-up culture in as many additional countries as possible.

So far we:

- Have met with various investment funds in Brazil to create a solid network of investors excited about and willing to invest in plant-based companies.
- Have analyzed how we can achieve maximum market exposure in Brazil for plant-based foods. Options include launching and fostering companies to focus on local production of plant-based foods as well as distribution companies that will focus on importing plant-based foods.
- Built strong relationships with Brazil's existing plant-based companies, who are seeking our expertise in addressing their business and operational challenges. To support these companies in successful product enhancements and building growth in market share, the SciTech team has provided expertise on some product development challenges, and we are also connecting them with potential venture capital sources.
- Are working with entrepreneurs in India, South Korea, Mexico, and Brazil to help them launch plant-based meat companies. We expect to be working with entrepreneurs in Australia to launch a clean meat company in the very near future.

2. International Science and Technology

Although GFI's SciTech Department will remain the primary contact for scientists, our International Engagement Department will be able to meet in person with scientists overseas more regularly than our U.S.-based scientists, creating deeper relationships for GFI and ensuring a deeper involvement in plant-based and clean alternatives to conventional animal products worldwide.

So far we have:

- Connected with agencies interested in establishing plant-based or clean meat research centers in Singapore, Brazil, Israel, the Czech Republic, the UAE, and France. From initial conversations, all projects sound promising. GFI's international and SciTech teams are working together to request additional information on their proposed projects to determine viability.
- Met with representatives from Minas Gerais Federal University to discuss a possible partnership in Brazil, modeled on our plant-based meat challenge lab initiative with UC-Berkeley. Located in Belo Horizonte, in the state of Minas Gerais, this is one of Brazil's five largest universities, and the largest federal university.
- Developed a questionnaire to evaluate the viability of new international SciTech projects and the viability of the science team and equipment for new companies.

3. International Policy

GFI has met with government leaders in the United Kingdom and New Zealand who would like to help with regulatory questions related to both clean and plant-based meat, and we are meeting with entrepreneurs who have similar connections in India and South Korea.

We are also working with pro bono attorneys who are helping with regulatory analysis in other parts of the world, and we are actively seeking additional similar assistance elsewhere. GFI's international team will oversee these relationships, meet with our advocates and volunteers, and proactively cultivate more of both—something we are currently unable to do.

We have also made connections in the governments of Australia, Singapore, and the UAE and we have a line into the Chinese government through our friends at WildAid and a line into the Indian government through our contacts at PETA.

Finally, we are also working with Compassion in World Farming and Humane Society International to co-host a conference on the future of food at the EU Parliament in the Spring of 2018.

4. International Corporate Engagement

The purchase of WhiteWave by the French company Danone for \$10 billion and Quorn by Philippines-based Monde Nissin for \$832 million is an indication of how global the plant-based market has become. Although we will initially do much less corporate engagement work overseas than innovation, science and technology, policy, and communications work, there will nevertheless be significant value to our international team's capacity to meet with the corporations that create the most innovative products, wherever they happen to be based. These relationships may well serve our Innovation Department when companies we support enter into acquisition talks with some of these companies. If so, these relationships will prove invaluable to accelerating the plant-based and clean meat market sectors.

So far we have:

- Developed an excellent relationship with the 12th largest egg producer in the world (#1 in Brazil) after the company's director of strategy and innovation read about GFI in Brazil's largest business weekly. They want to diversify some of their operations toward plant-based eggs, so we introduced them to key suppliers, including ADM and Hampton Creek. After being so impressed with the opportunities in plant-based eggs, the company has also decided to transition some of their meat business into plant-based meat.
- Met with a group of executives from a major European meat distribution company about the multi-billion dollar market opportunity that is plant-based and clean meat and followed up to facilitate next steps in adding plant-based meat, and later clean meat, to their product offerings.
- Mapped the landscape of the major food companies in Brazil with a view toward encouraging R&D and product development in the plant-based meat space. These companies are already exploring the markets for healthier food and considering animal welfare, in part because the meat industry experienced a [major crisis](#) in early 2017.
- Spoken with one of the largest Brazilian meat producers about transitioning some of their products into plant-based meats and developing a plant-based research center.

5. International Communications

GFI has already fielded media inquiries from across Europe, Brazil, China, South Korea, India, and Israel, and such media interest will increase as our visibility grows. Although most media work can be done online, relationships with media representatives can be the difference between a story and no story—as well as inclusion or non-inclusion in a story—and large stories are worth hundreds of thousands of dollars each in earned media. So far, our major international hits have included:

- GFI's international work made major headlines with a lead feature in [UOL](#), a site so popular its page views in Brazil are only surpassed by Google portals (like YouTube) and Facebook.
- Our executive director was also featured in Brazil's leading business magazine, [Exame](#), in both the print and online editions, which was then [shared with the magazine's 4 million Facebook followers](#) and [2.15 million Twitter followers](#).
- The *Time Magazine* of France, [L'Express Magazine](#) (circulation ~568,000) ran a feature about clean meat, which quoted our executive director and discussed significant developments in the field since the first clean meat hamburger debuted in 2013.
- The massive German weekly magazine, *Der Spiegel* (essentially, the *Time Magazine* of Germany), published a cover story on alternatives to animal meat, which quoted our executive director throughout. It's behind a paywall, but we have a PDF—if you read German and would like to see it, please let us know.

F. GFI's Communications Department

Media attention is a critical ingredient in all efforts to accelerate change in society. **GFI's Communications Department** works to secure media attention for mission-aligned companies, for the science of plant-based and clean products generally, for GFI's regulatory and statutory work, and for our corporate engagement efforts—thereby supporting the work of our entire organization and bringing maximum exposure to world-changing food technology.

GFI's communications team comprises Director of Communications Annie Cull, who started at GFI on August 14, 2017, and Senior Communications Specialist Emily Byrd. We are currently recruiting for a public relations specialist, a graphic designer, and a video production specialist.

1. Traditional Media

Traditional media coverage is critical to all of our goals since it creates excitement among key GFI target communities, reaches potential donors who are not yet following us on social media, can influence investors to put more money into key companies that we support, pressures legislators and regulators to take action, influences corporations to add and promote plant-based products, and provides excellent social media content. In short, one good story in the media can be worth hundreds of thousands of dollars in earned media value for our cause.

GFI's communications team has introduced GFI to every single reporter for a major outlet who covers clean meat or plant-based meat, turning GFI into a go-to resource for both reporters in search of expertise and people in search of the latest future-food news and opportunities. As a result, GFI's work to date has been covered in more than 480 different newspapers, podcasts, radio shows, news sites, and blogs. For example, GFI's work was prominently featured in the *Wall Street Journal* repeatedly, *New York Times* repeatedly, *Los Angeles Times* repeatedly, *Washington Post* repeatedly, *Wired*, Ezra Klein's podcast, Rich Roll's podcast, Amy Poehler's "Smart Girls," Vox.com, and much, much more. The highlights of GFI's media coverage in 2016 and 2017 are provided in Appendices A and B.

2. Start-up Support

In the early stages of operation, many of the companies GFI supports do not have the bandwidth for adequate in-house media promotion and branding efforts. Our Communications Department serves as a consulting arm for these start-ups as they hone their messaging, begin engaging in promotional efforts, and identify the appropriate media channels. In addition to providing this programmatic support, GFI uses its influence on social media to highlight the work of start-up companies and assist with sending out press advisories to relevant contacts in traditional media outlets.

One of our larger successes was the media launch of Memphis Meats; we drafted their press release, drafted soundbites, and placed the story in the *Wall Street Journal*. We also organized a video shoot to accompany their launch into the world. However, since that time, although we have been repeatedly asked for this sort of support, we have been unable to do more than provide strategic guidance and edit press releases, which we have done multiple times. This is because until August 14, we had only one communications staff member, and she was responsible for all of our social media, e-news, fielding media requests, pitching GFI stories, and so on.

We expect to hire a full-time public relations specialist soon, and that person will work both on behalf of GFI and on behalf of start-ups that are not yet ready to hire communications staff or consultants.

3. Website & E-News

GFI's website serves as a news hub for developments in plant-based and clean meat technology. Not only does our Communications Department collect and comment on relevant media; we also use our online space as a place to communicate the employment needs of companies we support along with

academic and funding opportunities for aspiring researchers. GFI's website is a one-stop shop for anyone interested in learning more about, or getting involved in, the success of these burgeoning market sectors. GFI offers resources such as [academic papers](#), [job openings](#), [funding opportunities](#), noteworthy [news](#) and [videos](#), and 100+ [blogs](#) about the range of issues related to plant-based and clean meat, including controversial issues not addressed anywhere else, including the use of [FBS in clean meat](#) and [novel ingredient testing on animals](#).

4. Social Media

Social media is critical to the success of both nonprofit and for-profit endeavors. First, social media is how companies and organizations communicate with their customers and supporters. Second, it is how they identify and cultivate new supporters. GFI's social media outreach is focused on creating followers who are 1) tissue engineers; 2) synthetic biologists; 3) plant biologists; 4) technology entrepreneurs; and 5) dietary influencers. Consequently, what we post is focused on generating excitement for plant-based and clean technology among experts in key fields. Our social media efforts promote plant-based and clean technology as both a vibrant field of study and a viable option for the dinner plate.

Already, we have established a robust social media presence with more than 130,000 Facebook followers and more than 9,500 Twitter followers. We have leveraged these powerful platforms to lead the conversation regarding the plant-based and clean meat industries.

IV. Organizational Stability, Influence, & Other EA Reflections

A. Organizational Stability: Team Building, Leadership, Transparency, and Strategy

1. Team Building (Sustainable Structure)

Understanding how to hire the best possible candidates and ensuring that they are happy in their work is a key and undervalued aspect of nonprofit success. Bruce oversaw a team of more than 50 people as a vice president at PETA and has an excellent track record of employee dedication and job satisfaction.

As an example of our commitment to both hiring the best possible employees and keeping them happy, we have not yet hired for some of the key positions because the best possible applicant has not yet applied; our hiring process is spelled out [in this document](#). You can [meet our entire team online here](#), including our impressive roster of interns and fellows.

Throughout 2016 and 2017, GFI continued to refine our recruitment process and hiring practices, including those targeted to increase our staff diversity. Staff recently spoke with Aryenish Birdie (executive director of Encompass, a new organization focused on increasing diversity in animal protection organizations), Lisa Fera (advisor to Encompass, CEO of Stray Dog Capital), and Keith Tucker (co-founder of Hip Hop Is Green) about ways to increase the diversity of our recruiting and the inclusivity of our organizational culture. Aryenish also recently presented on an all-staff call.

In August, we finalised a new applicant [FAQ](#) which provides comprehensive information as shared on our highly-praised bi-monthly applicant informational calls, continuing our commitment to transparency and two-way communication with all of our applicants.

2. Leadership (Healthy Culture)

Every new employee receives a new employee document which includes a variety of specific discussion points on GFI culture that Bruce has been using for the teams that he leads over the past few decades. Included in that document is Bruce's "Philosophy of Management." Here are a few excerpts, which are focused on building a healthy culture:

Please read the book [Drive, by Daniel Pink](#). Here's the short version: "Pink asserts that the secret to high performance and satisfaction—at work, at school, and at home—is the deeply human need to direct our own lives, to learn and create new things, and to do better by ourselves and our world. Drawing on four decades of scientific research on human motivation, Pink examines the three elements of true motivation—autonomy, mastery, and purpose." That's what I want for you—that every day you will feel that you have autonomy and purpose and are working toward mastery in your role; if you ever feel that GFI is (or I am) falling down, please let me know.

Project Days/Scheduling Project Time: I focus my Fridays on projects and strongly suggest that everyone do the same. If Fridays are not ideal for you, pick another day. This will be a day that is blocked off entirely on your calendar, and during which you are pushing big picture things forward and are not available on email or for meetings, other than emergencies. Ideally, you would figure out in advance what your high priority projects are and would focus on those.

Generally speaking, it is an excellent time management tip to schedule time into your calendar to work on projects and to turn off email and not reply to text messages during that time, unless they are urgent. Attempting to work on your most important projects while dealing with email and texts as they come in flips completely the way we should be thinking about what is and is not important.

Email: I highly recommend that you turn off email for most of the day and instead schedule times to deal with it (e.g., 9 a.m. and 5 p.m.). There is overwhelming evidence that each time you check email and take a moment to reply to something, it kills your productivity. No one can multi-task; every diversion requires multiple transfers of mental energy and is bad for productivity. If you are not sure if this can work for you or want to discuss it, please let me know; there is little that I feel more strongly about.

Headspace: If you meditate, great. If you do not and might like to start, please consider [headspace](#); if you do a 10 day trial and like it, we are happy to pay for an annual subscription. [This article](#) from the Harvard Business Review highlights while meditation is useful.

We are a remote team, so we make an extra effort to build in regular times to share updates, solicit advice, and bond. We start our week off with a Monday all-staff meeting to go over operational issues, discuss ways to improve our organization, and catch up on events in each other's non-work lives.

On Wednesdays, we convene again to listen to department-specific updates, with one or two departments presenting on a current project each week. This gives a chance to learn in depth about what everyone else is working on, ask questions, and see if there are ways we can help each other. Finally, on Fridays, we compile a weekly report consisting of three highlights (we try to keep this brief—the three

most exciting or interesting things from each staff member's week) and a step-back thought (What's working? What's not? What should we be doing that we're not? Blue sky ideas?) from each person.

How do we know our systems are working? One piece of evidence comes from a Monday call this spring. The discussion topic was "Is the remote system working for you?" The answer was a unanimous "yes," with plenty of ideas for how to improve it, which we've implemented.

Twice a year the whole team gathers in one place for a staff retreat, where we focus on bonding with our team and tackling big-picture questions. We meet in smaller groups more frequently when team members attend the same conference or simply cross paths while traveling.

3. Transparency

GFI is committed to transparency. Much of GFI's work is detailed in real time on our [blog](#) and in the resources section of our website. Additionally, everyone on GFI's staff creates monthly reports, and GFI's executive director creates and distributes monthly highlights to anyone who would like to receive them. By allowing for free and open access to all of our resources, including scientific white papers and industry data, we eliminate duplicative efforts and accelerate the work of new industry entrants.

Similarly, GFI has provided our strategic plan and all of our fundraising documents to nonprofit organizations in Israel and Australia, with the goal of helping them to set up robust organizations focused on promoting plant-based and clean meat in their areas of the world. Bruce sits on the advisory boards of both of these organizations, [The Modern Agriculture Foundation](#) and [Food Frontier](#).

4. Strategy (Robust Understanding of Success and Failure)

GFI was founded explicitly as an effective altruist organization. As such, we will not take on any project that we do not believe to be very high leverage; additionally, we look for activities that can have exponential impact, like helping organizations in other countries, producing documents that can serve as the foundation for many researchers and start-ups, and plotting the path to regulatory approval of new products.

Likewise, if one of our projects turns out to have low impact relative to GFI's investment in it, we would—of course—abandon it (some of our projects are based on hypotheses that may turn out to be false).

That is not to say our programs offer precisely equal impact, of course. Their diversity reflects two things. First, there is a wide margin of error around our best guesses at which strategies offer the highest leverage. For example, it is hard to say at this point whether plant-based meat or clean meat will play a bigger role in displacing factory farming, so we are pursuing both. But more importantly, we conceive of most of our programs as complementing each other, and so in some cases (esp. SciTech and innovation), disentangling them would be tough. For example, clean meat will not succeed in the marketplace unless companies can overcome the technical barriers that our SciTech team is investigating. However, the chance of hostile regulation poses an existential threat to clean meat, and the policy team's opposition on the Dairy Pride Act could be critical to reducing that very bad scenario.

Every GFI employee creates quarterly and annual goals, beginning about a month after they start at the organization. Right now, our quarterly goal setting is a bit haphazard, although everyone is focused on a specific high level key performance indicator (KPI): removing as many animals as possible from industrialized animal agriculture. That said, because we have been growing so quickly, we are building and flying the plane at the same time, so our process to date has not been perfect. Our expectation is that by the end of the year, Operations Director Reannon Branchesi will have time freed up to focus on working with all GFI directors on departmental goals and systems of measurement.

Our end goal is to define metrics that encourage objective self-evaluation, facilitate prioritization of projects and reward success by tracking it. The actual metrics we're interested in fall into three main categories:

- The highest-level metrics address the outcomes we want to see in the world: amount of farmed animal suffering prevented, plant-based and clean meats' market shares, number of conventional meat meals offset by plant-based or clean meat, etc. Ultimately, such metrics are all we care about, but it is costly, if not impossible, to determine causality for them.
- The next set of metrics defines mission-level goals for each of our departments: number of companies started, number of top 100 restaurants carrying plant-based entrees, number of scientific grant dollars moved to plant-based and clean meat research, etc. We believe these metrics are useful because they are linked to our ultimate outcomes via a sound theory of change.
- Finally, we take an active interest in operations-level metrics that can provide rapid feedback on the efficacy of our approaches: number of entrepreneurs consulting us, rate of hiring, number of major newspaper articles covering our work (and reach from same), etc.

As a part of our commitment to staff autonomy, staff created their own sections of the strategic plan and also write their own quarterly and annual goals, metrics, and expansion plans, all with significant input from directors and the executive director (and any other staff who care to offer input outside of their specific department).

B. Influence

It is difficult to measure the outcomes of speaking engagements, but speaking at industry conferences certainly grants credibility to the concepts we're discussing and raises the issue of plant-based and clean alternatives to animal agriculture among key stakeholders. Speaking invitations are also indicative of an organization's influence in a field.

Already, GFI is speaking at key conferences that are dominated by large food-focused VCs and food industry representatives, and we have been invited many times to speak at top business schools, with no concerted effort on our part so far.

As just one example, GFI had three presentations accepted at the Maastricht [second international cultured meat conference](#) (one by each of our three attendees)—one focused on Technological Readiness Assessments by one of our scientists, one on serum-free media by another of our scientists, and one about consumer acceptance by our executive director. We were the only nonprofit to deliver a presentation at that conference.

We also had two presentations at the third international conference on cultured meat, and again, we were the only nonprofit to present (NB: A New Harvest fellow did present about her research).

And [at the first clean meat conference in Israel](#), we worked with the organizers to pick the theme, which was based on [a GFI blog](#); GFI senior scientist Liz Specht, Ph.D., delivered a keynote, and we received this email from the chief organizer of the conference: “Liz, I think your lecture was the most comprehensive and the most impressive lecture of the conference.”

Additionally, we have spoken at the following (this list excludes our many university presentations—these are exclusively-focused conferences that indicate organizational influence and allow us to reach the scientists, entrepreneurs, and policy-makers who are our target audiences):

- The Alternative Proteins panel at the Institute of Food Technologists’ virtual Global Summit, organized by the IFT Student Association. IFT is the largest food science professional organization in the country, and serves as a conduit of communication for students from leading food science programs and agricultural universities. Attendees were mostly academics working in food science.
- A 3-hour interactive seminar on cellular agriculture and clean meat at [Impact.tech](#) to a hand-picked audience of about 20 investors and entrepreneurs. The VC firms present in the room represented over \$90B in total assets under management, and the CEOs of several cellular agriculture companies were present to participate in the lively discussion. Because there was a waitlist for the event, a second presentation on the same topic is scheduled for this fall.
- The “Scale-up and Manufacturing of Cell Based Therapies” conference, where we presented a [poster on Clean Meat](#). We were selected as the second best poster out of all 74 that were presented—and of course, GFI’s poster was the only one on a non-medical topic.
- At the Future Food Tech conference in San Francisco with: Bernhard van Lengerich, former Chief Science Officer, General Mills; Dariush Ajami, Director of Research and Discovery, Beyond Meat; Nick Halla, Chief Strategy Officer, Impossible Foods; and Adam Lowry, Co-Founder, Ripple Foods.
- At the Mammalian Synthetic Biology Conference at Boston University, presenting our poster: “Opportunities for Applying Advances in Synthetic Biology to Clean Meat Production.”
- At the first clean meat session to be featured at the annual conference for the Institute of Food Technologists (IFT), the world’s leading food science conference. (NB: We organized this one.) The session had greater turnout than the room capacity—in a room with 160 seats, it was standing room only. It was Food Navigator’s #3 on their “Guide to IFT” list of hottest topics and also featured in [this recap](#) by the editor of IFT’s journal, *Food Technology*.
- A TED-style presentation on innovation in the plant-based meat industry on the main stage at the Institute of Food Technologists annual conference.
- At The Future Food Tech conference in New York City, Bruce was on a panel with Mary Kay James, who leads Tyson New Ventures. She spoke glowingly about Tyson’s relationship with GFI. Hundreds of attendees from FDA and many of the biggest food companies in the country attended our panel.
- A forum convened by our the Jeremy Collier Foundation and Chatham House, the [most reputable think tank in Europe, second most reputable in the world after Brookings](#).
- The [Harvard Project on Asian and International Affairs](#) conference, which allowed us to speak to some of Asia’s future leaders about meat and the problems of climate, global poverty, health, and animals.

- The [Future Food-Tech conference](#) in NYC alongside representatives of Lux Research and General Mills (“The future of animal-based and alternative protein”).
- “On Meat Without Animals: Considering Cellular Agriculture” ([watch here](#)), at Stanford, alongside Dr. Uma Valeti (CEO of Memphis Meats), Paul Shapiro (VP of Policy for HSUS), Cor van der Weele (professor of philosophy at Wageningen University), and Naomi Starkman (founder and lead editor of Civil Eats).
- At [SxSW](#) alongside Memphis Meats CEO/Founder Uma Valeti and Lighter CEO/Founder Alexis Fox. (NB: We organized this.)
- An event titled “Winning Heart, Minds, and Stomachs: the Changing Diet of the Future,” sponsored by [Forum for the Future](#) and held at the Brooklyn Museum of Food and Drink.
- An event in Brooklyn titled [Food + Tech](#) (“The Future of Plant Proteins”).
- At the Yale Social Impact Conference about the social impact of plant-based and clean meat.
- The [annual conference of the American Culinary Federation](#) (“The Future of Food”).
- The [Concordia Summit](#) in New York City, alongside Monsanto and many other major food companies.
- [Indoor Ag-Con](#) in New York City.
- An HSUS conference titled [The Future of Food & Farming](#), Washington, D.C.
- A [Future Food Tech conference in London](#), U.K. (on a panel, “The Future of Protein”).
- [The Change Food Fest](#), New York City.
- [Food Tank Summit](#), Chicago.

As another indication of our growing influence, GFI received shout-outs from KBW Ventures CEO Prince Khaled bin Alwaleed on the [Eat For the Planet](#) podcast, from Whole Foods CEO and founder John Mackey on the [Rich Roll Podcast](#), and from Dr. Bronner’s CEO [David Bronner on the Eat for the Planet](#) podcast.

C. Through the EA Lens

Although we believe that this analysis is effectively covered above, we went ahead and addressed the issues head on.

The five key questions of effective altruism

- *What’s the benefit?* Maximum shift away from conventional animal product consumption and toward plant and clean alternatives. This will save billions of animals and create a more sustainable world, with decreased climate change and better global health outcomes.
- *Is this the most effective path?* We think that what we’re doing is the most effective path forward, or at least that it is on par with anything else happening in animal protection. Various discussions above point clearly in this direction.
- *Neglected?* Yes—no other nonprofit is harnessing market forces and food technology in order to disrupt animal agriculture. There is a trade group for existing plant-based products (PBFA) and a research institute for clean meat (New Harvest), but each of those has just a few staff members, and there is very little programmatic overlap (very close to none). All six of our programmatic departments would benefit from additional staff members, so that we can expand our programs.

Our goal for 2017 is to raise \$4.66 million; we have raised \$3,514,767 through September 30, 2017, including gifts received and pledges receivable in 2017. Reaching this ambitious goal will allow GFI to grow to a staff of 47; 38 of these roles are [detailed in this organization chart](#).

The nine staff not currently integrated into the organizational chart are: 1) another senior scientist to assist with the overwhelming amount of scientific work that is required; 2) another business analyst to help with company start-ups; 3) a staff attorney to help with both regulatory and legislative lobbying; 4) a corporate engagement specialist to focus on grocery stores; 5) a strategic implementation specialist to help keep us on track with goals, alignment to strategic plan, and so on; 6) an HR specialist to ensure compliance with all laws and help with hiring, etc.; 7) an IT and web specialist; 8) a second major gifts officer; and 9) another assistant to help with travel and other administrative tasks.

We could also use additional funds for direct research, to expand internationally, and to establish research centers focused on plant-based and clean meat R&D. We feel completely confident that we can spend whatever money we receive in an extremely efficient and effective manner, and we are absolutely committed to doing so.

- *What would happen otherwise?* If not for GFI, none of the work we're doing in our six program areas would happen.
- *Tractability?* Our success in under two years demonstrates that our approach is remarkably tractable.

D. The three key questions for start-up nonprofits

- *Why not already solved by markets?* We were initially perplexed that markets had not solved this problem, until we realized that there is no market sector yet for clean meat, and the plant-based meat market sector is less than half of one percent in the United States and sits at about 0.1 percent globally. Basically, there has been no market incentive. This explains the fact that there is one university in the world that is doing innovative work on plant-based meat, and there are fewer than 15 university researchers focused on the topic.
- *Why not by the state?* The state appears not to be interested in addressing it, though if we're successful in mobilizing public agencies (our policy program area), that would accelerate progress tremendously.
- *Why not by philanthropy?* This appears to be white space. Until GFI, no one had thought to do what we're doing. Our hope is that—on seeing GFI's successes and traction gained thus far—new organizations will join us in these endeavors and well-established animal protection organizations will devote additional resources to this space. We are actively working with nonprofits in Israel and Australia that are patterning themselves after GFI.

V. Conclusion

The Good Food Institute was born out of the Effective Altruism movement, and we are laser-focused on achieving maximum possible impact for animals, the environment, sustainability, and global health.

Historically, the farmed animal protection movement has focused primarily on educating consumers about the myriad of harms of animal agriculture and why they should reduce or eliminate consumption of animal products.

The Good Food Institute fully supports these efforts, and we also believe that transformational and permanent change in our global food system will require that we create and promote choices for consumers that will outcompete conventional animal foods on the basis of price, taste, and convenience, i.e., the primary factors that actually determine what consumers purchase.

Our staff is at your disposal to discuss any and all aspects of our plans and outcomes to date.

APPENDIX A: GFI Top Media Coverage, February-December 2016

There is exponentially more than below, but these are our favorite conventional media hits of 2016.

- Bill Gates engaged in an interview about climate change with the *New York Times*, and they solicited questions from readers. We submitted a question, which was passed along to him, and [he answered it](#). Additionally, the paper used that exchange to add the idea of plant-based meat to the headline for the feature, which was included in the Times' daily email headlines, which has more than 5 million subscribers. We also had [a letter in the New York Times](#) in response, raising the issue of climate and animal agriculture for millions of readers.
- Bruce had [a letter in the New York Times](#), which put clean meat and plant-based meat into [the #2 paper in the country](#) ("Mr. Lusk sets the small and inefficient farm of yesteryear against the large and more innovative farm of today, but at least in the case of what meat to eat, consumers needn't choose the lesser of two evils; plant-based meats are available now, and clean meat will be available and cost-competitive within about a decade.")
- Bruce had an op-ed in *The Wall Street Journal*, calling for "a Beast Burger, and not a real one, on every plate in America" (a.k.a., a response to Tyson Food's investment in the plant-based startup, Beyond Meat). The WSJ promoted it on their FB page and also promoted it three times on Twitter! The WSJ has more than 2.4 million subscribers, which is [far more than any other paper](#).
- The Sunday *Washington Post* magazine ran a [full-page profile of Bruce](#). It took up all of page 2 in the physical paper (scroll down [here](#) to see it).
- Bruce did an interview [with Ezra Klein for his podcast](#)—his twelfth guest. Other Klein guests [have included](#) Bill Gates, Hillary Clinton, Cory Booker, Rachel Maddow, et al.
- Bruce wrote an op-ed about clean and plant-based meat for *WIRED* ("Nerds Over Cattle: How Food Technology Will Save the World"). It ran on Wired's home page for four days and on their Science and Opinion pages for more than a week. Wired shared the op-ed TWICE on Twitter to 7+ million ([here](#) and [here](#)) and on FB to another 2+ million ([here](#) and [here](#)). Morning Ag [also picked it up](#) and sent it to everyone who's anyone in Ag Policy in D.C.
- Liz was featured on the wildly popular website [Amy Poehler's Smart Girls](#), which is dedicated to empowering young women to pursue and cultivate their authentic selves. They also [shared Liz's q-n-a on FB](#) to their 1.5 million FB followers and [Twitter to their 216,000 Twitter followers](#).
- Bruce took part in [a podcast for Andreessen Horowitz \(one of the top VCs in Silicon Valley\)](#), alongside Memphis Meats founder and CEO Dr. Uma Valeti and Impossible Foods COO David Lee. It's a real sign of GFI's influence that we were invited by one of the top VCs in the world to comment on disrupting animal ag, alongside the heaviest of heavy hitters in both plant-based meat and clean meat.
- The popular news website *Vox* profiled Bruce and GFI's mission to leverage markets and food technology to transform the food system. Vox shared the article in its e-newsletter and with its 1 million Facebook followers and [400,000 Twitter followers](#). Vox media founder Ezra Klein also [shared](#) the interview with his 1.7 million Twitter followers (along with his "I agree with this" tag). And *Morning Ag* also picked it up.
- Bruce did [an interview with Vice's food site, called Munchies](#), which was also on the home page of Reddit for about 36 hours, including quite a while as the most popular story.
- GFI effort to convince In-N-Out to offer a veggie burger was covered by the *L.A. Times*, *USA Today*, *New York Post*, and many additional news outlets. The petition also netted us live

interviews on a bunch of very large radio and TV stations in L.A. and San Francisco including CBS radio news, a massive L.A. hip hop station, and KABC, the biggest talk radio station in L.A. In all cases, we kept the focus on why it would be to In-N-Out's benefit to offer its patrons a veggie burger.

- Emily wrote a bemused [op-ed about that for the L.A. Times](#) (“Will adding a veggie burger to the In-N-Out menu destroy the country?”), and it was the most popular op-ed on the paper's website for days. The L.A. Times [tweeted the op-ed](#) to their 2.2 million Twitter followers and [shared it on Facebook](#) with their almost 2.4 million Facebook fans, and they also sent it as the lead op-ed in their daily email headlines.
- The Sunday [Washington Post Magazine](#) (circ. 838,000) took a humorous look at the response to our In-N-Out veggie burger petition in the popular “Below the Beltway” section (written by two-time Pulitzer winner Gene Weingarten). The Post then Tweeted the story to its 7.6 million Twitter followers.
- Bruce's [blog](#) about why we're calling meat grown outside of animals “clean meat” instead of lab-grown meat or cultured meat received quite a bit of attention, including [this piece from Canadian Broadcasting](#), which ran across Canada. It was also covered by [Triple Pundit](#), [Food Dive](#), [Global Meat News](#), [Civil Eats](#), and on about a dozen additional news sites and blogs.
 - And [here's Bruce talking about it on Canadian radio](#).
- Emily sent FAIRR's press release about their \$1.25 trillion investor coalition to our media contacts, netting nice coverage in [Global Meat News](#), [Organic Authority](#), and [AgFunder News](#) (quoting Bruce).
- Bruce had a letter [in the Washington Post](#) about antibiotics.
- Our lawsuit against the USDA for FOIA violations was [the lead item on Politico's Morning Ag](#), which is read by everyone in food policy.
- The market segments of clean and plant-based meat received a major feature from Sputnik News Agency, which focused on an interview Bruce did for Sputnik radio news. You can [read and listen here](#). They also blasted the story to their 922,000 [Facebook](#) followers and 140,000 [Twitter](#) followers.
- GFI advisor Suzy Welch was asked by LinkedIn what she wants to tell the next president. Her response: To support the plant-based food revolution. [Her post](#) has received almost 100,000 views and more than 200 comments.
- Quartz ran [a short profile of GFI's policy work](#), which they also shared with their 215,000 twitter followers and 1.1 million Facebook followers. The piece was [picked up by Politico Influence](#) (a very popular daily briefing for D.C. lobbyists and politicians) and it also ran [on Reddit's home page](#) for about 12 hours (and [the comments were quite good](#)).
- We filed our first lawsuit, against FDA for inadequate FOIA response. Our lawsuit made [Courthouse News](#) and [Politico's Morning Ag newsletter](#) (which is read by everyone in Ag policy). It was also picked up by [Dairy Reporter](#) and was part of a few food legal briefs at Lexology.com ([1](#) and [2](#)).
- Forbes [wrote about New Wave Foods](#) and quoted us at some length about problems in the seafood industry and the prospects for disruption.
- Bruce was on a panel at a future of food conference, which was [covered by the New York Business Journal](#) (click on “show full article” to read all of it), and that article went out on half a dozen food industry email lists.
- Organic Authority (very popular Blog) [tagged GFI nicely in a piece titled, “Vegan Meat is Now the Biggest Trend in the Tech Industry.”](#) We're prominent in and close out the piece.

APPENDIX B: GFI Top Media Coverage, January-August 2017

- The San Francisco Chronicle covered the Berkeley plant-based meat class that Christie designed (article [here](#)).
 - News of the class was also covered by [Eater SF](#), Meatingplace Magazine, [VegNews](#), [Vice](#), [ClearlyVeg](#), and [The Memo](#), with features to come in Mother Jones, Fast Company, Discovery Seeker, and Women’s Health.
 - Shared by the S.F. Chronicle with [their FB followers](#) and [Twitter followers](#).
- Plant-Based Milk:
 - After a group of 32 House members sent a letter to the FDA asking the organization to crack down on plant-based dairy alternatives, Emily published her second [op-ed in the LA Times](#) denouncing this thinly veiled industry interference. Her op-ed made the [L.A. Times headlines email](#) and was a big hit on social media.
 - After Wisconsin senator Tammy Baldwin proposed a new bill in Congress focused on the same issue, Nicole published an [op-ed in the largest paper in the Senator’s state, the Milwaukee Journal Sentinel](#).
 - News of our efforts caught the attention of media from a wide range of publications, from The Guardian to [Dairy Reporter](#) to [Food Navigator](#) to the organ of the Libertarian movement, [Reason](#), which nailed it: “The congressional letter is ridiculous, and reeks of a mix of unconstitutional protectionism and unconstitutional restrictions on free speech.”
- Emily pitched [a question and answer by Bruce into the Stanford University campus paper](#), thus reaching the entire Stanford campus with information about clean meat. It ran on a Friday, which is the best day for a campus paper, because it circulates on campus all weekend.
- Ezra Klein, media mogul and founder of Vox news, has hosted just about everyone who matters in the progressive policy realm on his podcast (e.g., Hillary Clinton, Cory Booker, Barack Obama, and Arianna Huffington), but when asked on a recent podcast what three ideas and interviewees have truly changed his beliefs over the course of The Ezra Klein Show, the first person he mentioned was Bruce. Ezra stated what we at GFI deeply believe: “Culture often changes in response to technology. And I think the technology around meat is changing dramatically.” You can listen to Bruce and Ezra’s original podcast [here](#), hear why Bruce impacted Ezra so powerfully [here](#) (starting at minute 29), and listen to Ezra reiterate his thoughts on animal agriculture and GFI’s mission in a talk with another podcast heavyweight, Tim Ferriss [here](#)!
- Our efforts to fight back against Big Dairy’s attack on its plant-based competition earned coverage in [the New York Times](#), the [Washington Post](#) (which was amplified and re-published in many local news sources), and [Politico Influence](#) – which is read by everyone on Capitol Hill.
- In addition to the feature in the *Washington Post*, Bruce also published a letter making the argument that the Dairy Pride Act is not only absurd, it’s also unconstitutional, [Free Speech & Soy Milk](#).
- We put this issue in front of lawmakers writ large with another Joanna op-ed in [The Hill](#), a vital news source for policy and politics; *The Hill*’s website is read by lawmakers more than any other U.S. political site (Joanna also forwarded it to her many Hill contacts).
- Memphis Meats created a media sensation by releasing the world’s first chicken and duck meat grown directly from animal cells; we are grateful to the MM team for inviting us to attend the event, and we followed up on the amazing [Wall Street Journal](#) story and video by pushing the

news out to every reporter who has previously covered plant-based or clean meat for a major media outlet. GFI's support showed up in dozens of news outlets, including [The Daily Telegraph](#), which has the largest circulation for a broadsheet newspaper in the UK ([shared with their 4 million FB followers](#)), and [Business Insider](#) interviewed Emily and shared their story with 10.4 million on Facebook.

- **Headline of the Year:** Bruce weighed in on Impossible Foods's scale-up efforts in a *Washington Post* article titled "[Is this the beginning of the end of meat?](#)" *The Post* [tweeted the story to its 9.49 million Twitter followers](#) and shared it with [5.8 million on Facebook](#).
- Our policy department earned coverage for its work to protect plant-based products by filing an official Petition for Rulemaking in response to [The Dairy Pride Act](#).
 - [The Wall Street Journal](#) broke the story of our petition, and [Tweeted it to the paper's 13.2 million followers](#) and [shared on FB to their 5.5 million followers](#).
 - [Buzzfeed](#)'s story ran on its homepage and Trending List, and they sent it to [23 million via Facebook](#).
 - [NPR's Marketplace](#) interviewed Bruce, and [AP included our petition in a larger story about the issue](#), where it was picked up by dozens of media outlets, including major networks such as CNBC.
- [Politico's extremely influential daily news of agriculture, Morning Ag, announced the news](#) that GFI has the first-ever full-time lobbyist on the Hill to be a voice for plant-based and clean meat. [Quartz](#) also shared the news about Joanna's hire and GFI's work alongside Hampton Creek Foods to reform the checkoff programs.
- [Quartz](#) made sure the world knew about our plans for complete global food system reform: "Bruce Friedrich is about to up the ante in the effort to get more people eating plant-based and cell-cultured meat. With a staff that will soon exceed 30, Friedrich's DC-based firm is expanding its attention from the United States to the entire world." The article climbed to #1 on Reddit's Futurology forum (11.3m subscribers) and #19 on Reddit's main page (aka "The Front Page of the Internet!"). It was shared as a lead item by Yahoo Finance ([link](#)) and also made an impression for a very different readership: Tri-State Livestock News (motto: "What ranchers read") ran the information in [an article about food innovators](#) featuring GFI friend and supporter Seth Bannon and the founders of Perfect Day.
- Bruce was a panelist on [The Agenda with Steve Paikan, a popular PBS-style TV show in Canada](#). Bruce was the sole panelist focused on food tech or market-based solutions, within a group focused on reforming the status quo for animal agriculture. The introduction alone makes the (45 minute) segment worth a watch, and Bruce was given both the first and the last word on the program.
- NBC won the headline of the month with the article "[Lab-Grown Meat May Save a Lot More than Farm Animals' Lives,](#)" which featured quotes from GFI and an extremely positive take on the potential of clean meat and the absolute necessity of changing conventional animal agriculture.



- The San Francisco Chronicle ran a full-out media blitz on the Bay Area biotech companies paving the way for the animal-free future of food with a five-page spread! The paper shared the main feature article, [“The Bay Area becomes the global hub for faux meat innovation”](#) —which includes quotes from Bruce—to its Facebook and Twitter followers (181k and 118k respectively). We particularly love this paragraph: “When Uma Valeti comes out with phrases like ‘This is one of the biggest technological leaps for humanity,’ it sets the eye a-rolling until another part of the brain freezes it mid-rotation: *What if he’s right?*”
- Bruce was featured in an article in Newsweek titled [“The Future of the Veggie Burger is Juicy,”](#) where he spread the news that plants can be used to make meat in a way that is better for people, the planet, and animals. Newsweek not only shared this with its readers, but also its 1.2M Facebook followers!
- An article in Israel21c, [“A clean meat revolution is cooking in Israel,”](#) took up the entire homepage of Israel21c and was shared with their 87k Facebook followers, who in turn shared it independently more than a thousand times!
- Bruce had a letter published in [The New York Times](#) following the acquisition of Whole Foods by Amazon.
- The *Raleigh News and Observer* covered Liz’s presentation at the Society for In Vitro Biology, resulting in a [piece on clean meat](#) that references GFI extensively.
- Hampton Creek went public with their clean meat initiative, and we were interviewed by a bunch of outlets for stories about the news, including [Quartz](#), which Politico shared in Morning Ag. Everyone in food and agriculture policy reads Morning Ag, so we are especially excited about that coverage (and two more this month, listed below).
- Food Navigator [ran a very large piece on Clean Meat](#) in response to the H.C. news, which quotes Bruce and Liz extensively.
- Our clean meat white paper was covered by [Morning Ag](#) and [Food Navigator](#).
- Our policy team asked the FDA to take a stance on the great milk naming debate by responding to a 20-year-old Soyfoods Association petition, landing us our first-ever [lead item in Politico’s](#) Morning Agriculture roundup, along with an article in [The Hill](#) (a popular Capitol Hill daily) and a leading spot in [Food Navigator’s](#) newsletter.
- Earlier in the year, GFI had sued for information from the FDA on its enforcement of Standards of Identity regulations for plant-based milk, and based on that lawsuit, we learned that even USDA insists on calling soymilk soymilk. We received coverage for these records [from the AP \(story in dozens of papers around the country\)](#), including the [LA Times](#) and [SF Chronicle](#).
- [Food Business News](#) featured our SciTech team’s work at the Institute of Food Technologists (IFT) annual conference last month in this awesome article, which was re-published in [Meat +Poultry](#) with the headline “The future of clean meat continues to grow.” Our SciTech team’s work also landed the #3 spot on [Food Navigator’s](#) “Guide to IFT” list of hottest topics, and inspired [this recap](#) by IFT’s director of publications and the editor of the journal Food Technology. [FoodDive](#) published our favorite IFT piece, which earns the title mostly on account of this quote from GFI’s own Christie Lagally: “People ask me a lot of it’s going to be better to grow the clean meat industry or the plant-based industry, and my answer is I think they’re the same industry.”
- GFI advisory council member Dr. Uma Valeti and his team at Memphis Meats raised their Series A round of venture capital funding (\$17 million). This milestone was riddled with firsts: the first Series A raised by a clean meat company, the first conventional meat company (Cargill) to invest in clean meat, and the first Sand Hill Road VC to invest in clean meat. This is only the beginning

of breakthroughs for the next agricultural revolution, wherein companies like Memphis Meats domesticate cells, not animals, to sustainably feed the world.

- Click [here](#) to read Memphis Meats' press release, which includes a quote from Bruce, and click [here](#) to read Bruce's thoughts on the news. Many thanks to Memphis for including us on this journey.
- The news, which broke in [The Wall Street Journal](#) (paywall), spread like wildfire. GFI was quoted in coverage from the [San Francisco Chronicle](#), [Yahoo News](#), [Food Navigator](#), and many other outlets.
- Our nomenclature ("Clean Meat"!) is [everywhere](#), including on the front of the Business & Finance section of the *Wall Street Journal*. It was just under a year ago that [we announced our intention to rebrand clean meat as "clean meat."](#)
- The extremely influential science journal, *Nature*, [covered clean meat](#), and GFI is prominent in the story.
- GFI's policy department put the dairy definition debate back into the public eye by asking FDA to finally respond to SFA's decades-old petition to allow the soymilk label (blog [here](#)). As a result, we led [Politico's influential Morning Ag](#) newsletter for the first time ever! Subject line: "The wayback machine hits the plant-based foods fight." Politico ran a follow up the next day, and our action on the SFA petition also got us media hits in The [NY Post](#), [The Associated Press](#), and many additional outlets. [Organic Authority](#) nailed the title: "Zombie Soy Milk Petition Awakens to Bring Everlasting Life to Nondairy Milks."