GFI's GLOBAL HIGHLIGHTS

January 2024

The top highlights:

- **Aleph Farms became the third company in the world to secure a regulatory greenlight for cultivated meat.** The pre-market approval from Israel's Ministry of Health is the first for a cultivated beef product. This milestone is the culmination of years of advocacy from the team at GFI Israel working across the Israeli alternative protein ecosystem.
- **With input from GFI's SciTech team, the National Science Foundation has launched Catalyzing Across Sectors to Advance the Bioeconomy (CASA-Bio)**—an ambitious effort that brings together scientists from government, industry, and nonprofit organizations to create a unified strategy to advance the U.S. bioeconomy. The initiative, launched in response to President Biden's Executive Order on Advanced Biotechnology and Biomanufacturing, includes alternative proteins as one of four agricultural subthemes. Two other subthemes are also relevant to alternative proteins: one on creating value from waste carbon for a circular bioeconomy and another related to biomanufacturing, bioreactors, and scale-up.
- **Horizon Europe has granted approximately $7.6 million to advance research in cultivated meat and seafood.** The lead researcher is GFI grantee Frederico Ferreira, a scientist at the Instituto Superior Técnico in Lisbon. Dr. Ferreira, who had not worked in cultivated meat before receiving his 2021 grant from GFI, turned a GFI grant of $250,000 into a Horizon Europe grant that is 30 times that size. This is just one among many examples of the power of GFI's grant program and scientific ecosystem building.
- **GFI Brazil launched a new webpage showcasing the first three editions of the Biomes Program, a GFI Brazil initiative that has funded 20 research projects on native plant species as food ingredients for the alternative protein industry**. The webpage gives an in-depth look at the program's completed research projects as well as overviews of new projects in development. The Biomes Program has been supported by the JBS Fund for the Amazon and the Climate and Land Use Alliance.



- **GFI APAC hosted the first meeting of the APAC Regulatory Coordination Forum on novel foods**, co-chaired by the APAC Society for Cellular Agriculture. The session was attended by representatives from government agencies, startups, and academic institutions from Thailand, China, Malaysia, Indonesia, and Singapore, as well as team members from GFI India. GFI APAC Senior SciTech Analyst Dean Powell, Ph.D., delivered a presentation on cell line development, growth media components, microbiological hazards, allergenicity, and labeling.
- **GFI's SciTech team hosted the second annual strategic planning summit for the Alt Protein Project (APP), GFI's global university chapter program.** Student leaders from 40 APP chapters presented their upcoming initiatives, shared insights, and laid the groundwork for future chapter collaborations. Read more about GFI's APP chapter program here.

How we're contributing to our core objectives

The following objectives capture GFI's approach to accelerating the development of alternative proteins and transforming the global food system. Below is a sampling of last month's work.

GFI fosters a strong open-access alternative protein research and training ecosystem

- It was a big month for student leaders across the globe, with several APP chapters launching new alternative protein fellowship programs and courses on their campuses. Additionally, the Johns Hopkins APP formed a partnership with the university's pre-college engineering program, integrating alternative protein curricula into their high school STEM courses; the Wageningen APP secured an official partnership and internship pipeline with the international food ingredient company Kalsec; and the Federal University of Minas Gerais APP co-president was awarded "Best Science Slam" for his research on cultivated meat by the German Minister of Food and Agriculture at the Global Forum for Food and Agriculture conference in Berlin.
- GFI Israel's Introduction to Alternative Proteins lecture was incorporated into the Israeli Ministry of Education's online climate change resource repository for high school science educators, aiming to encourage students interested in science to explore academic pathways in alternative proteins.
- GFI Europe Research Support Manager David Hunt gave a talk on foods developed from precision fermentation to 100 stakeholders from academia, industry, finance, and government at the official launch of SUSFERM, the Centre for Sustainable Fermentation and Bioprocessing Systems for Food and the Bioeconomy, hosted by University College Cork in Ireland.
- Principal Scientist Elliot Swartz, Ph.D., hosted this month's Cultivated Meat Collaborative webinar (our monthly webinar for cultivated meat industry leaders), which featured presentations from members of the Cellular Agriculture Consortium at Tufts University. The seminar showcased how their unique industry-academia partnership works to build foundational science, transparency, and a talented workforce to advance cellular agriculture.
- Associate Director of Scientific Ecosystems Amy Huang hosted the January Science of Alt Protein webinar, which featured Tim Searchinger of Princeton University and World Resources Institute. His presentation on carbon accounting of food products highlighted the land-use benefits of alternative proteins and argued that life cycle assessments showing climate benefits would be even stronger if land-use benefits were weighted more accurately.
- Amy represented GFI in Denmark at the first delegation meeting of the International Cellular Agriculture Network (ICAN), an innovation network of stakeholders from Denmark, Singapore, and the United States focused on collaboratively advancing the ecosystem. The delegate meeting was held in connection with the International Conference on Precision Fermentation of Milk Proteins, co-hosted by Food & Bio Cluster Denmark and Protein Frontiers. At the conference, GFI Europe Senior Policy Manager Ellie Walden gave a keynote speech on why we need investment in fermentation to help solve global challenges.
- GFIC, an independent strategic partner that does mission-aligned work in mainland China, hosted a webinar on the scientific research and prospects of leaf biomass and edible fungal protein, featuring GFI grantee Dr. Chen Zhang from Fuzhou University. Fuzhou University highlighted GFI's support of Dr. Zhang's research in its promotion of the event.

GFI influences the public sector to support alternative proteins

- The Department of Defense (DOD) announced a new, groundbreaking program to make capital investments in domestic biomanufacturing. The Distributed Biomanufacturing Program will be a crucial component of the Biden Administration's biotechnology initiative, which includes over $1.5 billion in funding from the DOD over the coming years. GFI has advocated for agencies to include food systems in biotechnology and biomanufacturing initiatives (e.g., our DOD-specific factsheet), so we are happy to see that food was specifically included as one of the DOD's five focus areas. They will select approximately 30 proposals for funding of up to $2 million per award, and we are promoting this opportunity heavily within the alternative protein ecosystem.
- The Brazilian Health Regulatory Agency (Anvisa) announced an updated regulation framework for novel foods and novel ingredients that now includes cultivated meat and fermentation, giving these production platforms a clearer path to market. GFI Brazil has been working with the Brazilian government on this outcome since 2018—meeting with Brazilian regulators, hosting workshops with food safety regulators from other countries, commissioning food safety studies, and more.
- GFI Israel contributed to a pivotal forum for formulating a national food security strategy hosted by the Ministry of Agriculture and Rural Development. The inaugural session focused on evaluating Israel's food supply chains, assessing climate change impacts on agriculture, and reviewing benchmark studies from other countries. GFI Israel will contribute to the R&D and Innovation Working Group, advocating for the integration of alternative proteins within the national food security framework.
- The National Security Commission on Emerging Biotechnology released its first report on the U.S. bioeconomy. The report underscores the urgent need for federal government support for biotechnology and biomanufacturing in the face of growing global competition. GFI Policy team members met with the commission several times leading up to this launch, and we were pleased to see both food and alternative proteins included.
- Team members from GFI Israel and GFI APAC along with GFI VP of Policy for Asia Sam Lawrence participated in a webinar in collaboration with the Israel Innovation Authority and the Korea-Israel Industrial R&D Foundation (KORIL-RDF). Their presentations provided an overview of the foodtech ecosystems in Israel and Korea and shared details of the KORIL Funding Program call for proposals for R&D projects between Israeli and Korean companies.
- Legislative Specialist Drake Jamali testified at the House Land, Agriculture, and Rural Affairs Committee in Phoenix, Arizona to share GFI's opposition and concerns with House Bill 2244, which would censor cultivated meat labels. While the bill passed out of the committee, GFI is working to stop it before it becomes law.



- GFI Europe Senior Public Affairs Manager Ivo Rzegotta spoke at three events during International Green Week in Berlin, a leading international food and agriculture fair. He was a panelist for a session on alternative proteins and food security in the Global South (organized by the German Ministry for Development Aid and International Cooperation) and for a session on innovation in food and agriculture hosted by Germany's digital association BITKOM. He also gave a presentation on the commercial and policy landscape of alternative proteins in

Germany at a day-long conference on alternative proteins organized by the state government of Lower Saxony.

- GFI India Policy Specialist Astha Gaur and GFI India Acting Managing Director Sneha Singh, in collaboration with executives from Dr. Reddy's Labs, People for Animals, and The Plant Based Foods Industry Association, presented recommendations to the CEO of the Food Safety and Standards Authority of India on labeling, naming conventions, and a regulatory approval process for market entry for India's alternative protein sector.
- GFI India Policy Manager Arghadeep Saha and Sneha participated in the Investment Forum for Advancing Climate Resilient Agrifood Systems, an invite-only, multi-stakeholder meeting hosted by The Food and Agriculture Organization of the United Nations, the National Institution for Transforming India (NITI) Aayog (a public policy think tank of the Government of India), and India's Ministry of Agriculture and Farmers Welfare. The forum convened leaders from the public and private sectors, including representatives from the World Bank and Asian Development Bank.
- GFI Israel held a webinar on food security and protein supply chains, in which GFI Israel CEO Nir Goldstein highlighted key findings from GFI Israel's recent report assessing national food security and GFI Israel Director of SciTech Michal Halpert, Ph.D., presented a new grant program aimed at reinforcing the role of alternative proteins in addressing food insecurity.
- Senior Scientific Research Advisor Erin Rees Clayton, Ph.D., was one of six stakeholders invited to conduct a retrospective review of the U.S. Department of Agriculture (USDA) program that covers product quality and new uses of agricultural products (NP306). Erin will also be providing input into the hiring process for a new permanent scientist position with NP306 focused on plant-based meat research.

GFI influences the private sector to prioritize alternative proteins

- GFI India published two new market and consumer studies: consumer awareness, trial, and purchasing behaviors of plant-based meat and dairy, and consumer perception and experience of both plant-based and animal-derived milk. These reports offer valuable insights for manufacturers and industry stakeholders in India to promote food innovation and grow the sector.
- GFI India participated in Advantage Vidarbha, an industrial expo and innovation event organized by the Association of Industrial Development. GFI India Corporate Engagement Specialist Divya Saravana and Sneha presented alternative proteins as an avenue for economic growth and the potential of the Vidarbha region to become a globally competitive alternative protein ingredient supplier. Additionally, GFI India and the Nagpur Daal Millers Cluster (NDMC) formalized a partnership to create a Plant Protein Cluster manufacturing hub under NDMC.



- Startup Innovation Lead Audrey Spence moderated the January Business of Alt Protein webinar on the 2024 investment outlook for alternative proteins. Panelists from Blue Horizon, Clear Current Capital, Bluestein Ventures, Barclays, and AiiM Partners discussed the current funding environment and expected changes this year.

- Innovation and Entrepreneurship Manager Laine Clark hosted an industry roundtable focused on plant molecular farming, a nascent field of innovation in alternative protein production that presents new opportunities and challenges (e.g., naming conventions, regulatory issues, and consumer messaging). Ten molecular farming start-ups participated in the roundtable, sharing their priorities and areas of greatest need.

GFI positions alternative proteins as a scalable solution to global challenges

- Founder & President Bruce Friedrich joined Tufts University Professor David Kaplan—who received $10 million from USDA to form the world's first Center of Excellence in Cellular Agriculture—for an opening plenary fireside chat about the current state of cultivated meat as part of the opening plenary at the second annual Tufts Cellular Agriculture Innovation Day. The session also featured Tufts President Sunil Kumar and USDA Deputy Under Secretary Sanah Baig.
- GFI Israel Associate Director Ari Ben Dror was elected to hold a three-year seat on the board of directors of Life and Environment, an umbrella organization for the entire Israeli environmental ecosystem that leads and shapes public and political discourse on environmentalism and climate change. Ari will be representing GFI Israel alongside representatives of some of Israel's most prominent and long-standing environmental organizations.
- GFI created a Japanese translation and a Korean translation of the UNEP Report Summary to distribute to stakeholders in government, science, and industry.
- GFI published a fact sheet on alternative proteins' environmental benefits, making the case for their key role in delivering a sustainable food supply. The resource details alternative protein advantages in reducing greenhouse gas emissions, land and water use, and pollution—with a comprehensive compilation of comparative life cycle assessment studies.

Top media mentions:

- Bruce had a lead opinion letter published in the *New York Times* in response to the paper's front-page article about groundwater resources being drained nationally to grow feed for chickens and dairy cows. Excerpt: "Plant-based and cultivated meat use far less land and water, and they have a host of other benefits. The Center for Strategic and International Studies released a report in May documenting how these 'alternative proteins' can create opportunities for farmers, jobs in the heartland, more choices for consumers, and robust export markets."
- Associate Director of Industry Intelligence and Initiatives Emma Ignaszewski wrote an article (page 22) for the Future Possibilities Index 2024 report from Newsweek Vantage (*Newsweek*'s deep dive research endeavor) and Horizon Group. Excerpt: "Alternative proteins—meat made from plants, cultivated from cells, or fermentation-derived—are essential for meeting global climate, biodiversity, public health, and food security goals. Governments around the world have increased their support for alternative proteins in the past few years, but still greater help is needed to realize alternative proteins' benefits as part of the BioGrowth economy, which is forecast to be worth $1.7 trillion by 2030."
- GFI Europe Senior SciTech Manager Seren Kell was quoted in an article in *The Guardian* about the Israeli company Forsea Food's plan to develop cultivated eel. Seren noted, "Cultivated seafood pioneers are developing healthy and sustainable alternatives to an ever-growing range of local

delicacies, giving people the food they love without contributing to problems such as overfishing and the destruction of precious marine habitats."

- *The Economic Times*, India's top business news platform, published an article sharing industry leaders' economic perspectives on the government's 2024 interim budget that included a quote from Sneha: "Creating tax breaks and grants for companies investing in agricultural tech and novel technologies like alternative proteins will incentivize the private sector to enter this ecosystem. This, in turn, will build innovative and efficient value chains for indigenous and climate-resilient crops such as millets, pulses, legumes, etc."
- GFI Israel VP of Strategy and Policy Alla Voldman-Rantzer was quoted in a *Jerusalem Post* article about Aleph Farms' cultivated beef pre-market approval: "Alternative protein emerges as a strategic asset for enhancing national food security by diversifying protein sources and raw materials, providing an additional avenue for local production [while] diminishing dependency on imports."
- Bruce was featured on an episode for *Another ClimateTech Podcast* where he discussed GFI's history, alternative proteins as a critical climate intervention, and more.

Thank you for fueling our mission!

GFI is powered by philanthropy; these accomplishments are only possible thanks to gifts and grants from our family of donors. If you or someone you know would like to learn more about supporting the work you read about in our Global Highlights, please contact philanthropy@gfi.org.

From everyone on Team GFI, thank you for your enthusiasm, partnership, and commitment to a better future.

Sincerely,



Bruce Friedrich
President and Founder