# CELLULAR AGRICULTURE FOR THE PUBLIC GOOD

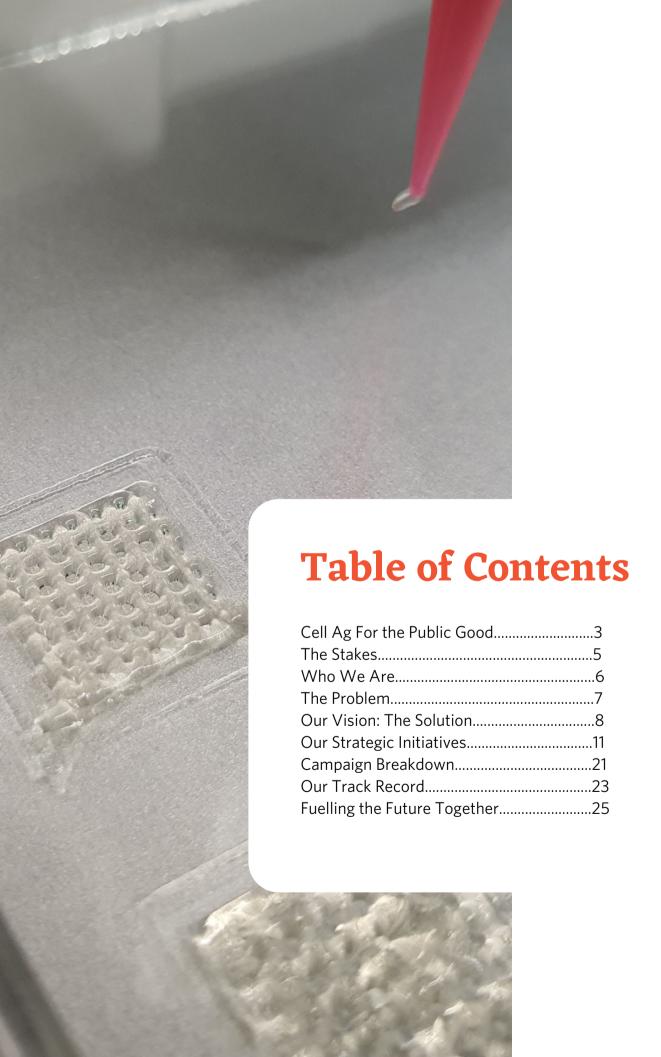
A CAMPAIGN FOR NEW HARVEST

2022-2025



"Cellular agriculture is our once-in-a-lifetime opportunity to get a second chance at agriculture—to do things better and to learn from our mistakes."

—Isha Datar, Executive Director, New Harvest





# Cellular Agriculture for the Public Good

As New Harvest approaches 20 years since our founding, we're embarking on a bold undertaking not a second too soon. Cellular Agriculture for the Public Good is an invitation to join us in a pivotal moment in history.

Cellular agriculture is at a crossroads: investment in the private sector has soared, while public funding lags woefully behind. The stakes are too high for the advancement of cellular agriculture to be left to market forces alone. Now is the time to invest in building the public sector if we want this world-changing technology to truly deliver on its promises to create a more just, equitable and humane food system.

Through an unprecedented \$18.5 million campaign, we will identify and address critical, neglected issues that stand in the way of cellular agriculture's progress.

With your visionary support, we will catalyze growth across the entire field; drive evidence-based policy; and break down silos to inspire field-wide collaboration. And we'll do it all under the auspices of our new mission: to maximize the positive impact of cellular agriculture.

Humanity's second chance at feeding the world is upon us. In partnership with you, we can advance the science of cellular agriculture out of the lab and into society through responsible research and innovation. Together we can build a food system that serves and supports a more livable future for all.

Please, join us.

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Isha Datar, Executive Director



### The Stakes

Every second, 271 land animals are slaughtered for food in the United States alone. Industrial animal agriculture has made unfathomable rates of production possible, and with it unimaginable devastation.

Changing the way we eat could alleviate this suffering—and not just for animals. Meat production is a major driver of climate change and deforestation, deeply threatening food security. It also poses an existential threat to public health, increasing the risk of pandemics and antibiotic resistance. And despite this collateral damage, demand for meat is on the rise. Without a viable way to feed a growing global population of 9 billion by 2050, all life will suffer.

At New Harvest, we envision a world where animal products are made with cells instead of animals, using cuttingedge technology and thoughtful, sustainable systems. A better tomorrow is actually possible with cellular agriculture.

Cellular agriculture was named as one of the most promising ways to reduce



food-related greenhouse-gas emissions in the latest 2022 report by the Intergovernmental Panel on Climate Change.<sup>2</sup> The United Nations Food and Agriculture Organization agrees, citing cultured meat—a product of cellular agriculture—as one of five emerging food technologies that could help countries around the globe meet UN Sustainable Development Goals.<sup>3</sup>

This campaign equips New Harvest with the resources necessary to help ensure cellular agriculture delivers on its potential of creating a better, brighter future of food.

<sup>&#</sup>x27; animalclock.org

<sup>&</sup>lt;sup>2</sup> report.ipcc.ch/ar6wg3/pdf/IPCC\_AR6\_WGIII\_FinalDraft\_FullReport.pdf <sup>3</sup> new-harvest.org/safety-iniative-fao-report/

### Who We Are

New Harvest is a field-building organization dedicated to reimagining the way we make animal products—using cells instead of animals. We fund and conduct original research to guide the development and governance of cellular agriculture toward realizing its promise of creating a new, just food system for a climate-changed world.

Since 2004, New Harvest has defined the field of cellular agriculture through groundbreaking research and creative programming that break down the silos between disciplines and sectors worldwide.

We are the leading experts in identifying and addressing critical, neglected issues that stand in the way of cellular agriculture's progress—problems the market will not solve.

Powered 100 per cent by philanthropy, our mission is to maximize the positive impact of cellular agriculture.



"New Harvest is more directly focused on building the scientific community and funding the research to make cellular agriculture possible. It's directly focused on the technical challenges of cultivated meat. If those aren't solved, then all the lobbying efforts in the world won't matter."

—Ezra Klein, Columnist, New York TImes

### The Problem

Cellular agriculture holds great promise to end our dependence on animal agriculture—a broken system that ravages the environment, causes tremendous animal suffering, and denigrates human health.

But there's a problem. We lack the public research and infrastructure needed to unlock the true potential of this transformative technology. While investment has been pouring into the private sector, public funding lags far behind (>\$3B in private investment across 100+ companies, compared to <\$100M across public institutions). Much of the current research is happening behind closed doors at companies, which means that policymakers have little public, independent information to guide their thinking about cell-cultured meat.

The current trajectory of cellular agriculture is concerning, and the latest International Panel of Experts on Sustainable Food Systems agrees: "...public investment might offer the best pathway to nudge alternative protein production away from corporate capture and toward serving the public good."

There's a real chance cellular agriculture will fail. And it won't be because the science didn't add up. It'll be because we didn't think through ownership, governance, intellectual property or policy. It'll be because the transformation of our food system was left to market forces alone.

As a completely independent, community-funded nonprofit, we can't keep the balance of power in check without you.

# Our Vision: The Solution

We're on a mission to ensure that cellular agriculture delivers on its promises to serve the public good.

We recognize that technological advancement is not inherently positive. This campaign will enable our global community to steward cellular agriculture in the right direction by investing in public research and infrastructure. We believe that positive impact is maximized—and our mission realized—when cell ag is:



**Accessible** Anyone in the world can participate in the

understanding, production and consumption of

cellular agriculture products

**Applicable** Cell ag technologies can be applied accordingly to

different cultures, regions, and cuisines

Accountable Claims can be substantiated and transparency exists

throughout the supply chain

Our goal is to create a more just, equitable and humane food system. This ambitious campaign charts our path for getting there.

#### **Our Vision**

#### **Our Guiding Principles**

For almost two decades, New Harvest has helped build and mobilize the cellular agricultural ecosystem. (We even coined the term "cellular agriculture" back in 2015.) How did we do it? By prioritizing people and open research every step along the way.

#### **People First**

People are at the heart of everything we do. That's because we believe people—rather than ideas or intellectual property—are the real change-makers. Projects, ideas, and initiatives come and go; what continues is an individual's drive to make a difference in the world through their knowledge, experiences, and passion. Progress flourishes with a robust mix of expertise, perspectives, and voices.

#### **Default to Open**

To maximize the positive impact of our work, our approach is to default to open. By ensuring that the research we produce is accessible for all to use, re-use, redistribute and build upon, we are



multiplying the impact of that asset. Open invites collaboration, discussion, and reflection. All of this is crucial in positively transforming our food system.

#### **Realizing Our Impact**

Through all of the programs, projects, and initiatives powered by this campaign, we are building an open, collaborative community, united by our mission and strengthened by our differences. We invite you to invest in these values and catalyze critical solutions to some of the greatest problems of our time.

"New Harvest is a visionary org that has been ahead of the curve in many aspects of cell ag. Their track record speaks for itself and I can think of no better organization to donate to if your goal is advancing the field in an equitable, open access, transparent manner.

<sup>—</sup>Cameron Semper, New Harvest Research Fellow, University of Calgary

Guided by impact, this campaign will bolster New Harvest's commitment to maximizing the positive impact of cellular agriculture through five strategic initiatives.

### Together we will...

- 1. Advance Open Research
- 2. Foster Policy Engagement
- 3. Align the Community
- 4. Sustain Organizational Growth
- 5. Make Big Strategic Bets

### 1. Advance Open Research

#### Catalyze field growth by funding neglected research

Since 2015, New Harvest has helped build the field of cellular agriculture from scratch by funding public research. Through our flagship fellowship program, we've funded 54 of the world's first cultured meat researchers, published research cited by the world's leading climate scientists, and helped attract more than \$17M in public funding to accelerate breakthroughs in cultured meat science.

We have a track record of taking bets on people and projects before the private sector is comfortable doing so and now, with your help, we can do it again by expanding the scope of our fellowship in response to the changing needs of the field. We want to move the dial on governance and policy by putting the people thinking about how to commercialize and scale cell ag in conversation with the people actually in the lab. With your support, we will break down the silos between sectors and disciplines to proactively bring cultured meat into the world as responsibly as possible.

#### **Impact of Your Support**

Investing in the researchers on the frontlines of cultured meat research expands the information ecosystem, seeds the workforce with experts, and catalyzes more public research funding. New Harvest supporters saw their impact in action last year when Dr. David Kaplan's Lab at Tufts University—seeded with our community's very own funding—won a \$10M grant from the USDA to establish the first ever National Institute for Cellular Agriculture. With this landmark grant, our generosity network saw its contributions amplified by 10x. This is only the beginning. Powered by you, we will continue to establish the academic foundations of cellular agriculture.





### 2. Foster Policy Engagement

## Drive evidence-based policymaking through research collaborations

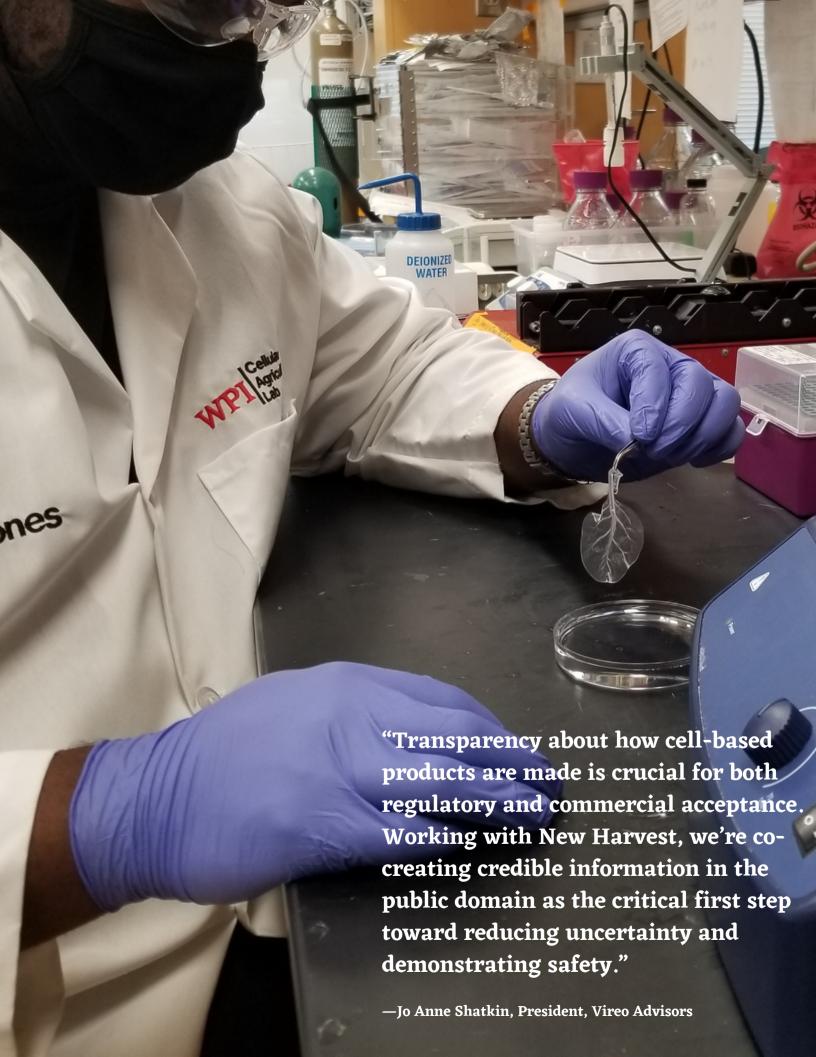
New Harvest provides essential public data and credible expertise that policymakers need to make informed decisions that bring cultured meat safely to market. This work has been building steam since 2020 when we spearheaded the first collective action in the history of cellular agriculture, bringing together 50 cultured meat companies to share previously unpublished details about their manufacturing process. We've since published the findings of this collaboration in a paper that charts a path forward for how we can demonstrate the safety of cultured meat, which was recently cited in the latest United Nations Food and Agriculture Organization food safety report.

The momentum for this work is just taking off. Fuelled by your support, we will continue to mobilize our team of global experts to tackle shared, pre-competitive issues like safety and public infrastructure.

#### **Impact of Your Support**

Through the realization of this strategic initiative, policymakers and the public will have the information they need to welcome cellular agriculture into society. Your gift will amplify nonprofit, nonpartisan voices and help bridge the academic, industry, and policy sides of cellular agriculture. With your support, we will pioneer field-wide initiatives that bring key stakeholders together to create the foundational data and build the critical infrastructure needed to address shared industry challenges.





### 3. Align the Community

#### Break down silos through creative outreach

Ever since we hosted the world's first cellular agriculture conference in 2016, New Harvest has been the guiding force in convening the ecosystem around shared, neglected issues. Our annual meeting-of-the-minds brings together industry and academic leaders to enhance global networks, discuss thorny issues, and lower the barrier to entry for newcomers. Offstage and throughout the year, we show up on myriad platforms to deepen the public conversation about cellular agriculture through credible, evidence-based insights. Most recently, we shared our ambitious future vision of cellular agriculture on the <u>TED main stage</u>, reaching a global audience of more than 2 million people worldwide.

Funding this initiative allows us to operationalize, expand, and optimize our outreach—from our annual conference to our ongoing thought-leadership—to inspire a culture of collaboration and credibility to propel cellular agriculture forward.

#### **Impact of Your Support**

The cellular agriculture ecosystem will advance in a responsible and coordinated way—beyond silos between industry and academia—toward realizing a shared vision of serving the public good. Your support will fortify existing networks and deepen the dialogue around sticky subjects that slow progress. Together we can enliven the momentum of the cellular agriculture movement, attracting diverse, bright minds to invest their time, effort, and resources in cellular agriculture.





### 4. Sustain Organizational Growth

#### Keep New Harvest Growing through our General Fund

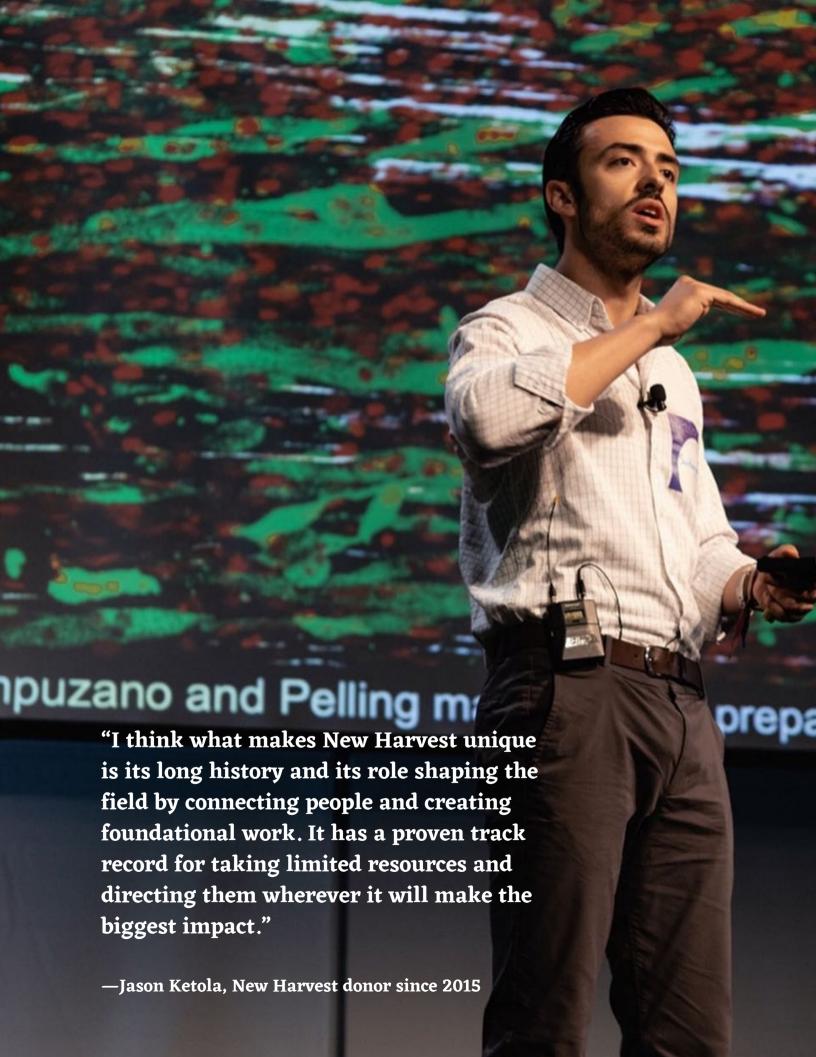
Over the course of the last decade, New Harvest has grown from a staff of one to a robust, global network of donors, founders, experts and researchers. Together, we've elevated cellular agriculture from the realm of science fiction into a multibillion dollar industry with a real shot at providing tangible solutions for some of the world's most consequential problems. This exponential growth has been largely fueled by our general operating fund; a traditionally overlooked, undervalued essential stream of revenue. This foundational support empowers the sustainability of our people and our programs. Without it, we cease to exist. Without its growth, we cease to evolve.

Your support of our general fund allows us to remain nimble and adaptable in the face of changing needs and economic uncertainty. Indirect expenses are not incidental to our mission; they are essential to fuelling the people and programs that transform our food system for the better. Through sound administration, equitable pay, and transformational fundraising, we invest in the long-term effectiveness, vitality, and sustainability of our collective progress.

#### **Impact of Your Support**

Your gift to the general fund elevates everything we do, from the caliber of the people we hire to the partners we retain and the projects we pursue. With your support, we will maintain the highest standards of transparency, accountability, inclusion, and compliance while expanding our generosity network to ensure we remain a highly effective and impactful organization.





### 5. Make Big Strategic Bets

#### Propel discovery through our Agility Fund

As the longest standing nonprofit in cellular agriculture, New Harvest is the only organization with the unique vantage point needed to pinpoint the field's critical, neglected needs. In 2014, we co-founded two of the first cell ag companies and now there are 100+ companies worldwide. A year later we took the leap to start funding some of the first cultured meat researchers, who now have the data and expertise they need to start attracting government funding. What's the next neglected issue standing in the way of progress? Building up the public sector of cell ag through purpose-built research infrastructure.

As a reputable and trusted partner of industry, academia, and government, we already have the stakeholders within our network who could put our plans into action quickly and effectively. The only thing missing is you.

With your support, we will fund major public infrastructure projects like a functional, global cell bank to elevate the field as a whole. Beyond funding individual researchers, we will support entire dedicated laboratories to further accelerate breakthroughs and establish the field.

#### **Impact of Your Support**

Your gift to the Agility Fund would allow us to dream big and put into immediate action the large-scale, infrastructure projects we need to maximize the positive impact of cellular agriculture. With your support, we will be able to actually build the global pre-competitive infrastructure needed—from discovery to commercialization, including tools, facilities, resources, and training—to most effectively advance the field.



# Campaign Breakdown

Advance Open Research	.\$10.1M
Foster Policy Engagement	\$3.4M
Align the Community	\$3.1M
Sustain Organizational Growth	\$1.9M
Make Big Strategic BetsL	.imitless





## Our Track Record

Why us? For nearly 20 years, New Harvest has been the pioneering force transforming cellular agriculture from mere science fiction into a multi-billion dollar industry. And we're just getting started. With your support, we can shape the future of the field for years to come

2004: Jason Matheny founds New Harvest, the first nonprofit organization devoted to advancing the yet-to-be-named field of cellular agriculture

2005: Jason Matheny publishes: "In vitrocultured meat production" in the journal Tissue Engineering along with Pieter Edelman, Doug MacFarland, and Vladimir Mironov. This was the first modern-day scientific publication about an idea that has been around for nearly a century.

2007: Grant \$7,000 to Henk Haagsman, the principal grant writer for the Dutch In Vitro Meat Project. Included among the other team members in the project is Mark Post, who eventually founds Mosa Meat

2010: New Harvest's future executive director Isha Datar publishes <u>"Possibilities</u> for an in-vitro meat production system"

2013: New Harvest hires Isha Datar, our first employee, as executive director

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"If you had told me five or six years ago that we would have the size and activity in cellular agriculture that we have today in our lab, I would've said "no way." We have New Harvest to thank for this incredible rate of growth."

—David Kaplan, Chair of Biomedical Engineering, Tufts University

#### Our Track Record (cont.)

2014: New Harvest co-founds the first two cell ag companies. The New Harvest Dairy Project became Perfect Day Foods, and the New Harvest Egg Project became The EVERY Company. Both companies have raised hundreds of millions of dollars to advance animal products made without animals.

2015: The New Harvest community coins the term "cellular agriculture" to describe a hypothetical "centre of excellence" devoted to cell-cultured research.

2015: New Harvest launches our flagship research fellowship and funds our first research fellow, Abi Glencross

2016: We organize the world's first-ever cellular agriculture conference in San Francisco

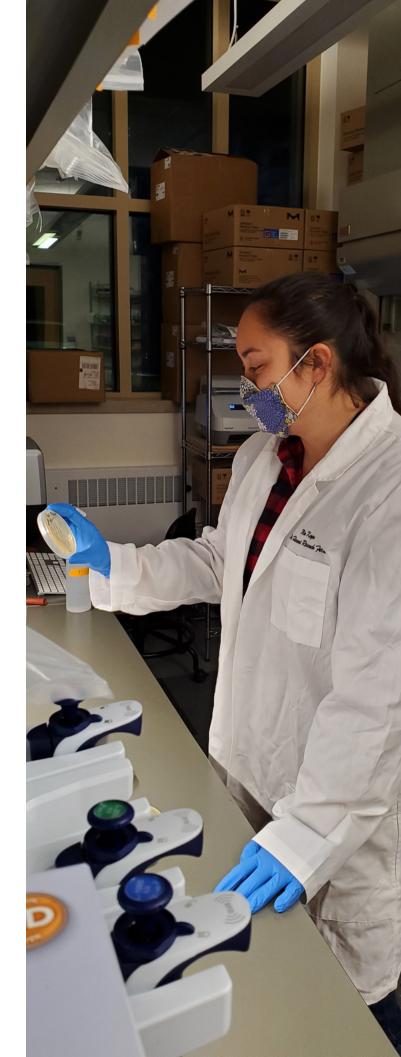
2016: We launch a cellular agriculture research group at Tufts University

2020: We host the <u>first collective action</u> in cell ag with a series of workshops on the safety of cultured meat with 87 people from 50 cultured meat companies

2021: We publish our landmark openaccess, peer-reviewed safety roadmap for cultured meat, "Food Safety Considerations and Research Priorities for the Cultured Meat and Seafood Industry"

2021: New Harvest's cellular agriculture research group at Tufts University receives a \$10 million grant by the USDA to establish the first-ever National Institute of Cellular Agriculture.

For a complete overview of our contributions to the field, please visit our website here.



# **Fuelling** the Future, **Together**

At the heart of our theory of change is people. Looking back on pivotal moments in history, positive progress has been made by individuals who are "not only brave enough to reimagine the future, but brave enough to try."

People like you. Nothing we do happens without you.

#### Learn More

We invite you to follow the spark of hope that led you to discover our work. If you're inspired or intrigued by any of the campaign's opportunities, please connect with us. We'd love to hear from you.





#### **Give Today**

If you'd like to make a gift in support of our general fund, you can do so securely online right here.

Thank you for helping to make cultured meat a reality and transforming our world for the better. We are deeply indebted to your visionary support.

#### **Connect With Us**

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