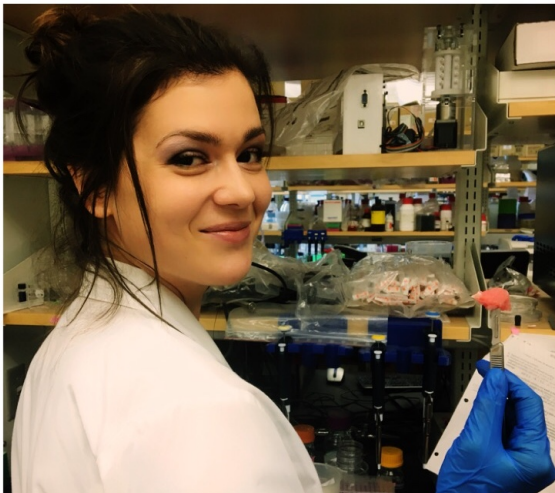




ANNOUNCEMENTS

The latest news from New Harvest:



- **The New Harvest Lab Meet** is a twice-yearly event where New Harvest Research Fellows and Staff get together to share their knowledge, skills, and insights from their pre-published research. This time the Lab Meet took place at Kent State University in Kent, Ohio from September 15th-17th. As part of the Lab Meet, the team visited a company called Viscus Biologics, which makes collagen scaffolds and biomaterials.

- We'd like to thank **Ewan and the Dropbox team** for donating a Dropbox Business account to New Harvest. Thanks!



- We're excited to welcome **Lanto Hariveloniaina** to the **New Harvest team!** Lanto is New Harvest's new Executive Assistant and began on October 1st.

UPCOMING EVENTS

- New Harvest will attend the [Science Board to the FDA Meeting](#) on **October 22nd in Washington, D.C.** The Science Board plans to discuss any potential hazards and nutritional considerations in the production of foods via cellular agriculture. Some of the questions they plan to address include:
 - What does previous cell culture experience tell us about the *potential for contamination* during the culture process, scaling effects, and likelihood of risks to human health from a finished food product?
 - How likely is it that cultured animal cells could produce harmful substances as a *result of errors* in the culture process?
- New Harvest will also attend the FSIS and FDA's [Joint Public Meeting on the Use of Cell Culture Technology to Develop Products Derived from Livestock and Poultry](#) from **October 23rd to 24th in Washington, D.C.** The USDA's Food Safety and Inspection Service (FSIS) and FDA will discuss what regulatory oversight might be the most appropriate for cell-cultured food products, including product *labelling*.
 - To attend the meeting in person or online, you can register [here](#) on the USDA Website.

- The [Cultured Meat Symposium](#) will take place on November 1st in San Francisco, California. The Cultured Meat Symposium is the bringing together a great line-up of speakers to talk about several major themes relating to cell-cultured meat: its *Impact*, *Future*, and *Flavour*.
- The [4th International Conference on Cultured Meat](#) will be held from December 2nd to 4th in Maastricht, Netherlands. The conference is accepting abstracts submissions from interested researchers until October 15th.

NEW HARVEST FEATURES



3D skeletal muscle fascicle engineering is improved with TGF- β 1 treatment of myogenic cells and their co-culture with myofibroblasts

Jessica Krieger¹, Christopher R. Lambert³ and Christopher Malcuit²

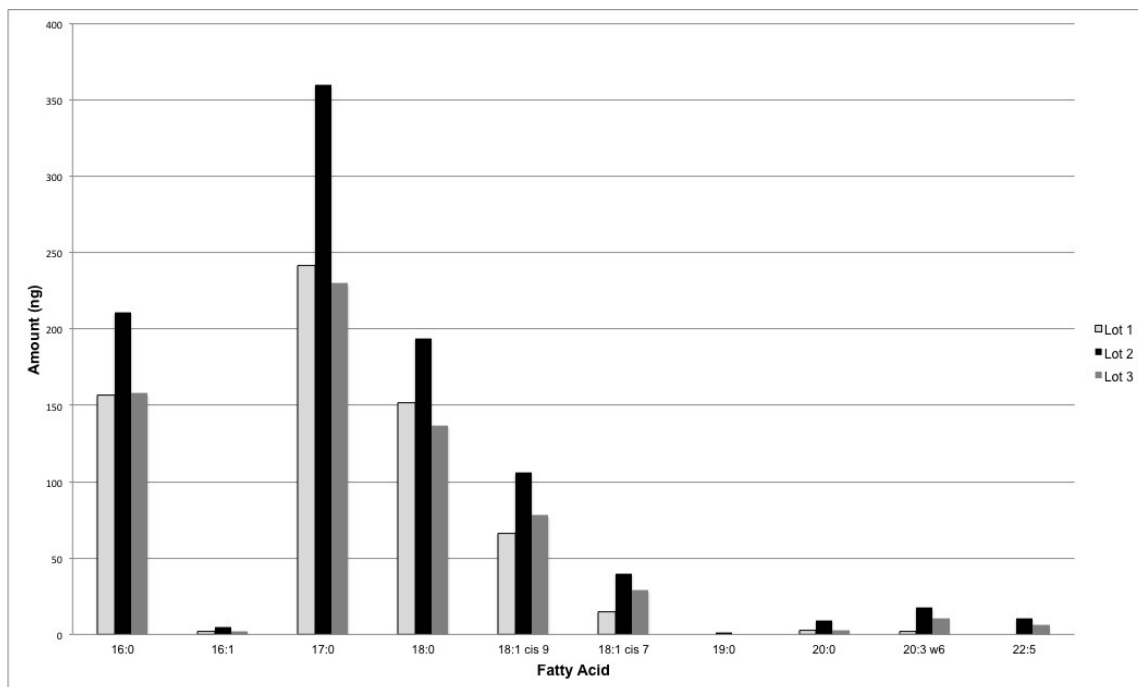
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² Department of Civil/Environmental & Chemical Engineering, Youngstown State University, Youngstown, OH, United States of America

³ Chemistry & Biochemistry, Worcester Polytechnic Institute, Worcester, MA, United States of America

Check out Research Fellow Jess Krieger's [video presentation](#) about her recently published research paper

- New Harvest Research Fellow Jess Krieger's [paper](#), "3D skeletal muscle fascicle engineering is improved with TGF- β 1 treatment of myogenic cells and their co-culture with myofibroblasts" has been published in the open-access journal, *PeerJ*! Jess's paper investigates the complex interactions between different cells in tissue cultures to find out the *true* role of TGF- β 1. You can access the [full article here](#). In her fascinating [video presentation](#) about her published work, Jess walks you through the paper's findings and what the results may mean for *muscle regeneration* and *cell-cultured* meat production.



Gas Chromatography Analysis for the Fatty Acid Composition of different serum samples by Matt Anderson-Baron

- New Harvest **seed grantee Matt Anderson-Baron at the University of Alberta** shared a gas chromatography analysis of *fatty acid lipids* from three lots of fetal bovine serum. Fetal bovine serum is a biomedical industry standard for growing cell cultures. Many researchers are looking to develop an animal-free serum that would make scaling cellular agriculture production feasible and affordable. Matt's work may help elucidate some of the contents of FBS that are relevant for meat production, so that serum-free alternatives can be better designed.

FROM AROUND THE WEB

Our favourite content from the world of cellular agriculture:

- **ICYMI:** New Harvest is excited to share the latest Massive Science Report: [**You Are What You Meat**](#). Massive Science selected a team of five active researchers to dig into existing research and answer many fundamental questions about cellular agriculture in a way that's easy for anyone to understand. We are thrilled to *support* the third Massive Science Report and **make it freely available to everyone**. [Read it now.](#)
- **Executive Director Isha Datar** wrote the article "[The Future of Food is Farming Cells, Not Cattle](#)" as part of *Quartz*' new series '[What Happens Next](#)'. Isha provides a thorough overview of cellular agriculture and highlights the main steps in production. Isha also looks at the obstacles ahead for the field in becoming the [Future of Food](#).

- The **issue of naming** isn't unique to cellular agriculture. In the article [“Call to Stop Using the Term ‘Mesenchymal Stem Cell’”](#), Abby Olena highlights how the phrase *mesenchymal* stem cell has expanded to mean *so many* different cell types from various tissues. It has gotten to the point where some in the field are calling for the term's *end*.
- **How can livestock producers collaborate with the cellular agriculture community?** Written by Elizabeth Hines, Robert M. Chiles, Jonathan A. Campbell, and Tara L. Felix, this [Penn State Extension article](#) takes a look at the field's regulatory concerns moving forward. It also addresses opportunities where livestock producers can enter the conversation and work alongside the cell ag community.
- How has the **narrative around cell-based meat changed over the years?** This [report](#) by Nina Pusic and Dave Rejeski from the Environmental Law Institute investigates how the *language* and *story* around cellular agriculture has changed in the press in the US, UK, and France over time.
- **Executive Director Isha Datar** spoke to Derek Thompson from *The Atlantic* on the Crazy/Genius Podcast episode [“Will We Ever Stop Eating Meat?”](#). Isha shared her thoughts on cell-based meat, the future of food, and what role New Harvest is playing to grow the field.
- [Can science build a better burger?](#) Written by Susan Milius, this article takes a look at the arguments for plant-based and cell-based meats and the obstacles ahead for them. Milius also speaks to former New Harvest Communications Director Erin Kim.
- **Robert Yaman of Kiran Meats** has continued to take a thorough look at the patent landscape for cell-based meats. Check out his latest analysis of Modern Meadow's patents [here](#), and his analysis of Integriculture's patents [here](#).

In the world of **startups**:

- **Ecovative** is exploring how mycelium from mushrooms can be used to make [scaffolding](#) for cell-based meats. Called the *MycoFlex* platform, Ecovative *first* debuted their interest in cell-based meat at the New Harvest 2018 Conference.
- **Meatable** raised **\$3.5 million** in [funding](#) in a seed round led by BlueYard Capital. Based in Leiden, Netherlands, Meatable plans to use the financing to expand their team and start their commercialization plans. Interestingly, Meatable's Chief Technology Officer, Daan Luining, has been involved with cellular agriculture from the *very* beginning. Luining was part of the

research team under Dr. Mark Post that developed the *first* cultured meat burger in August 2013. Luining has also worked as a research strategist at New Harvest!

- **Modern Meadow** and **Bolt Threads** were named a [finalists](#) for **Business of Fashion (BoF) 500** for their work in *reshaping* the \$2.4 trillion fashion industry.
- **New Age Meats** invited journalists and investors to try [a piece of sausage](#) for a taste testing. The *first* cell-cultured pork sausage. *Made without requiring animals.*

EMPLOYMENT OPPORTUNITIES IN CELLULAR AGRICULTURE

- **Geltor** is looking to [expand its team](#).
- **Clara Foods** is looking for a [Senior Research Associate](#).
- **New Age Meats** is looking to hire a [Stem Cell Biologist](#).
- **Modern Meadow** is actively looking to fill a [number of positions](#).
- **Memphis Meats** currently has [several openings](#).
- **Ecovative** has openings for an [Accounting Supervisor, Business Developer/Market Researcher, and R&D Operator](#).
- **JUST** has [several openings in cellular agriculture](#).
- **Is your cell ag company looking to grow?** [Get in touch](#) to have your job posting shared on the New Harvest newsletter.

This mailout was written by New Harvest community member Ahmed Khan from [CellAgri](#). Check out CellAgri on [Twitter](#) and [Instagram](#)!

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