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## ANNOUNCEMENTS

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The latest news from New Harvest:



📅 Just 9 more sleeps until the New Harvest 2018 conference! Register today! 📅

- **Last call for New Harvest 2018 registration!** *We are down to our last few remaining tickets* for this year's gathering on cellular agriculture, **July 20 & 21 in Boston**. If you are planning on attending but have not registered yet, please do so ASAP at [2018.new-harvest.org](http://2018.new-harvest.org), as capacity at the MIT Media Lab is limited. Don't miss out!
  - And a reminder: if you are a biohacker, current student, post-doc, or faculty member, write to us at [hello@new-harvest.org](mailto:hello@new-harvest.org) to register at the deeply discounted student rate of just \$100.
- The New Harvest team is headed to Washington, D.C. tomorrow, as **Isha Datar and Kate Krueger will each be presenting at the highly anticipated public meeting on [Foods Produced Using Animal Cell Culture Technology](#), called by the FDA**. The U.S. Food and Drug Administration is seeking input, data, and information on the following questions:

- What considerations specific to animal cell culture technology would be appropriate to include in evaluation of food produced by this method of manufacture?
- What kinds of variations in manufacturing methods would be relevant to safety for foods produced by animal cell culture technology? What
- kinds of substances would be used in the manufacture of foods produced using animal cell culture technology and what considerations would be appropriate in evaluating the safety of these uses?
- Are the potential hazards associated with production of foods using animal cell culture technology different from those associated with traditional food production/processing? Is there a need for unique control measures to address potential hazards associated with production of foods using animal cell culture technology?

Interested parties are encouraged to [register online](#) to attend the meeting in person or by live webcast.

- **New Harvest Fellow Jess Krieger's paper, "3D skeletal muscle fascicle engineering is improved with TGF- $\beta$ 1 treatment of myogenic cells and their co-culture with myofibroblasts" has been published in the open-access journal, *PeerJ*!** Jess' paper looks at the complex interactions between fibroblasts (connective tissue cells), myofibroblasts (fibroblasts with some characteristics of muscle cells), myogenic cells (cells that are forming muscle tissue), and cytokines (cell signalling molecules), such as TGF- $\beta$ 1 in skeletal muscle wound healing. The co-culture (where more than one distinct type of cell is grown together in a combined culture) model described in the paper shows promise in medical applications, as well as in potentially being used to improve the quality of *in vitro* meat.
  - **How?** Jess was able to accelerate the process of myogenesis (the formation of muscle fibres) by using the growth factor TGFB as a media supplement, which can shorten culture timelines for *in vitro* meat products. Adding myofibroblasts in co-culture with muscle cells was shown to help in the arrangement of muscle fibres, and increase similarity to muscle from the body, which may improve mouthfeel when applied to *in vitro* meat products. The full article is accessible at: <http://peerj.com/articles/4939/>

- The [3rd annual New Harvest conference](#) will be taking place next week, on **July 20 & 21 at the MIT Media Lab** in Cambridge, MA.

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## FROM AROUND THE WEB

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Curated highlights from the world of cellular agriculture:



Isha and Andrew with Jessica Almy of the Good Food Institute, Andrew Noyes of Just, and Congressional Aide and AAAS Fellow Yasmeen Hussain

- As we reported in the last issue of our newsletter, **New Harvest Executive Director Isha Datar and Research Fellow Andrew Stout presented at the [first ever congressional briefing](#) on cellular agriculture** in D.C., hosted by R&D Caucus co-chairs, Representative Bill Foster and Representative Barbara Comstock on June 27th. The Good Food Institute

livecast the briefing, and their video of the proceedings is available to view on their [Facebook page](#).

- **Joi Ito, Director of the MIT Media Lab, has written an article telling the story about how he came to discover New Harvest**, cultured meat, and cellular agriculture, and breaks down [six conceptual levels of meat replacement](#) 📖 (hint: New Harvest's primary focus is on levels 4 and up!), for *WIRED*.
- Rose Eveleth has put together [one of the most well-researched articles](#) that we've seen thus far on **the regulatory debates around cultured meat - and importantly - why the regulation matters to consumers**, for *Slate*.

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## EMPLOYMENT OPPORTUNITIES IN CELLULAR AGRICULTURE

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- **Geltor is hiring for two new positions.** Details [here](#).
- **Modern Meadow is actively looking to fill a number of positions.** Check out their current list of openings [here](#).
- **Memphis Meats currently has several openings.** For more information, click [here](#).
- **JUST has several open cellular agriculture positions.** [Take a look](#).
- **Is your cell ag company looking to grow?** [Get in touch](#) to have your job posting shared on the New Harvest newsletter.

Look out for us in D.C. tomorrow!



Erin Kim,  
Communications Director

[New Harvest](#) is powered by people like you.

## Donate Now!

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