



Hello New Harvest Donors,

We're in the middle of an exciting time.

Last week, I had the chance to present at the *first ever* congressional briefing on cellular agriculture, put on by the R&D Caucus co-chaired by scientist and businessman [Rep. Bill Foster](#). We covered the justification and history of cellular agriculture, and New Harvest Research Fellow Andrew Stout shared the challenges of being an active scientist in this underfunded space. Our goal is to inspire government funding agencies to fund cellular agriculture research; this event was an important first step to getting there.



Isha and Andrew in D.C. with Jessica Almy of the Good Food Institute, Andrew Noyes of Just, and AAAS Sci & Tech Policy Fellow Yasmeen Hussain of Rep. Bill Foster's office.

It seems like we'll be in DC more often. [On July 12, the FDA is holding a public meeting on Foods Produced Using Animal Cell Culture Technology.](#) This is a milestone event.

I can't believe that only 5 years ago I was building New Harvest alone in my apartment, working with a small but incredibly supportive donor community.

In just five short years, the cellular agriculture community has exploded into a broad network of hundreds if not thousands of donors, philanthropists, investors, scientists, entrepreneurs, companies, and organizations eager to push forward a cell-cultured future. With governments taking note, I know we've come a long way.

There is still much to do, but it is always important to reflect on the successes that brought us here. You, as a member of this visionary donor community,

should be proud! 🙌

Now, what else did we get up to this month? Here's the latest from New Harvest:

7/1/2018 YTD SNAPSHOT

- + Raised **\$215,540***
 - + **38** new donors
 - + Spent **\$125,564** in research grants
 - + **12** speaking engagements
 - + **44** media engagements
-

*Income & pledges in 2018

Fundraising Opportunities

We're actively fundraising for the following research projects:

- **Phase II of our bioreactor project.** Through our Seed Grant Program, [New Harvest has piloted a project](#) to design a scalable, modular bioreactor prototype for cultured meat production in a laboratory setting. Designed by Research Fellow Jess Krieger, this novel bioreactor could become an important tool in further cultured meat production research. We are now ready for Phase II - an engineering build and the delivery of a fully tested, functional prototype. If all goes as planned, blueprints will be made widely available after testing, *as well as the option to pre-order a completed, operational bioreactor.* **This work will cost \$81,400 over the next 6 months.**

Conference

- [The program agenda is online!](#) We're just over two weeks out from New Harvest's 2018 conference, July 20 & 21 at the MIT Media Lab. Over two days, we'll be discussing the science, IP, business, marketing, and regulation of cellular agriculture.
- **Meet the newest crop of cellular agriculture startups at New Harvest 2018**, including companies like **Because Animals**, **Higher Steaks**, **Kiran**

Meats, New Age Meats, and Seafuture Sustainable Biotech! Check out our [conference webpage](#) for our list of speakers, exhibitors, and program and venue information. More to be announced soon! [Reserve your spot today.](#)

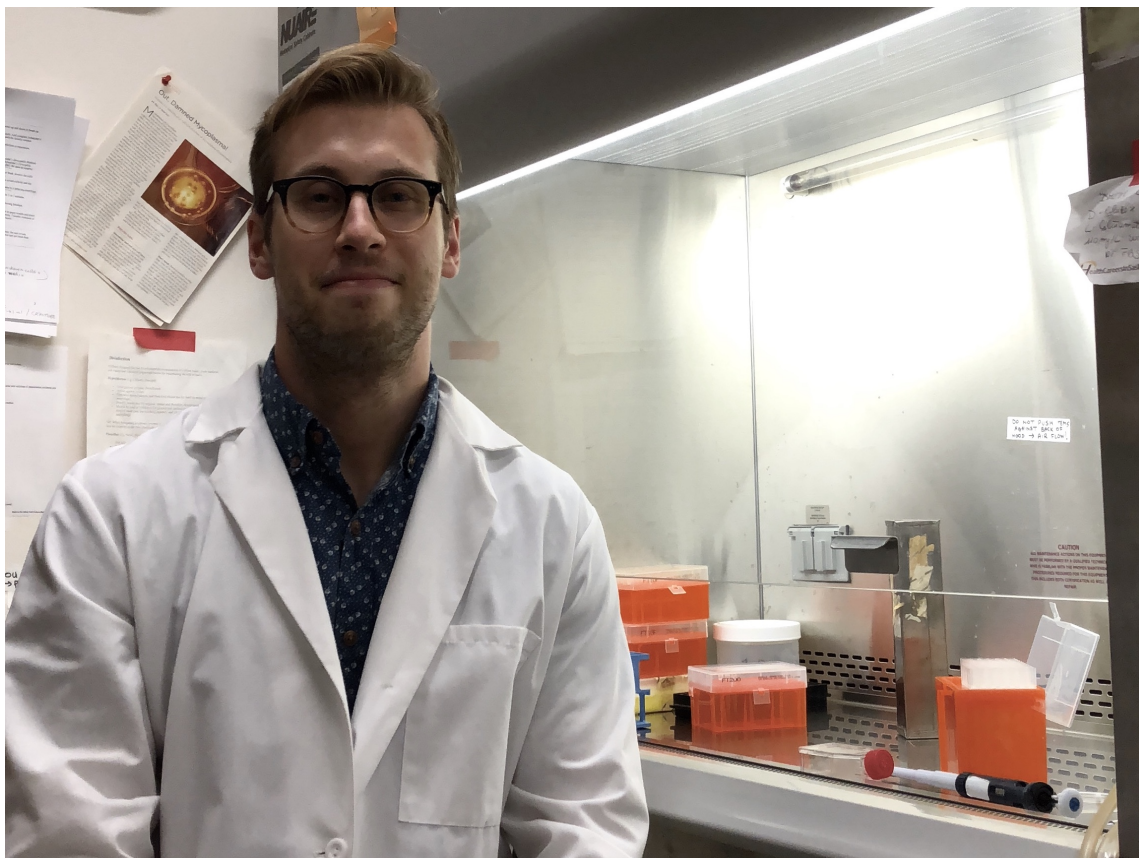
- And a reminder: if you're a biohacker, current student, post-doc, or faculty member, write to us at hello@new-harvest.org to register at the deeply discounted student rate of just \$100.
- **Sponsorship is what makes the New Harvest conference possible.** If you or an entity you know are interested in cultivating the cellular agriculture community with New Harvest, please [get in touch](#) - we'd be happy to find a sponsorship opportunity that is right for you.

Fundraising

- **Fundraising status.** New Harvest has received **\$215,540** in donations and pledges in 2018 to date. This does not include conference ticket sales, sale of merchandise, or income from speaking engagements.
- **Interested to fund cultured meat research?** New Harvest co-designs research projects around donor's interests. If you are interested in backing specific cultured meat projects, let's chat about how we can work together.

Research

- **New Harvest is welcoming a new seed grantee, Matt Anderson Baron!** Matt will study the lipid components of fetal bovine serum (FBS), focusing on lipid profiling in FBS, variation between FBS batches, and validation of key lipid components in order to better understand the efficacy of FBS as a culture medium. Matt is a final-year PhD candidate in the Cell Biology Department at the University of Alberta. Welcome to the team, Matt!

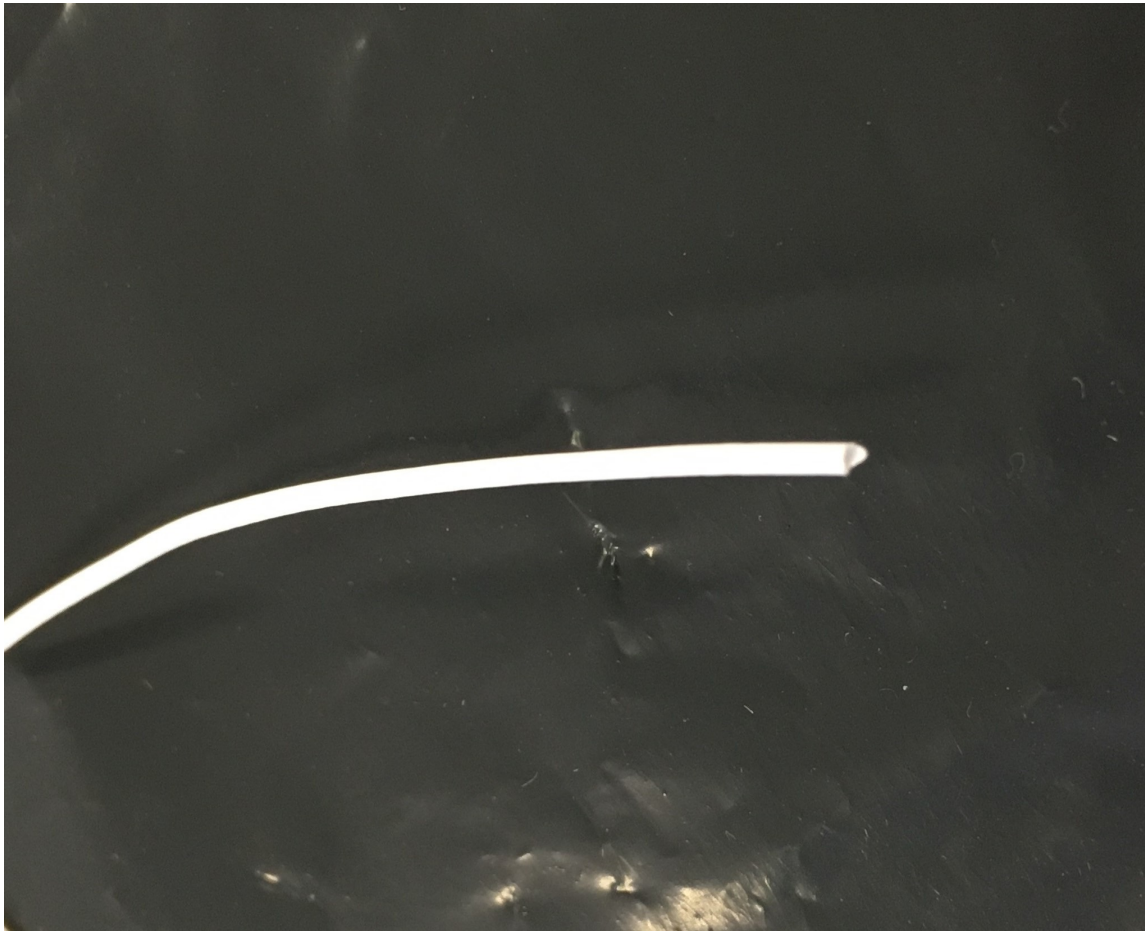


Matt in his native environment - the tissue culture hood.

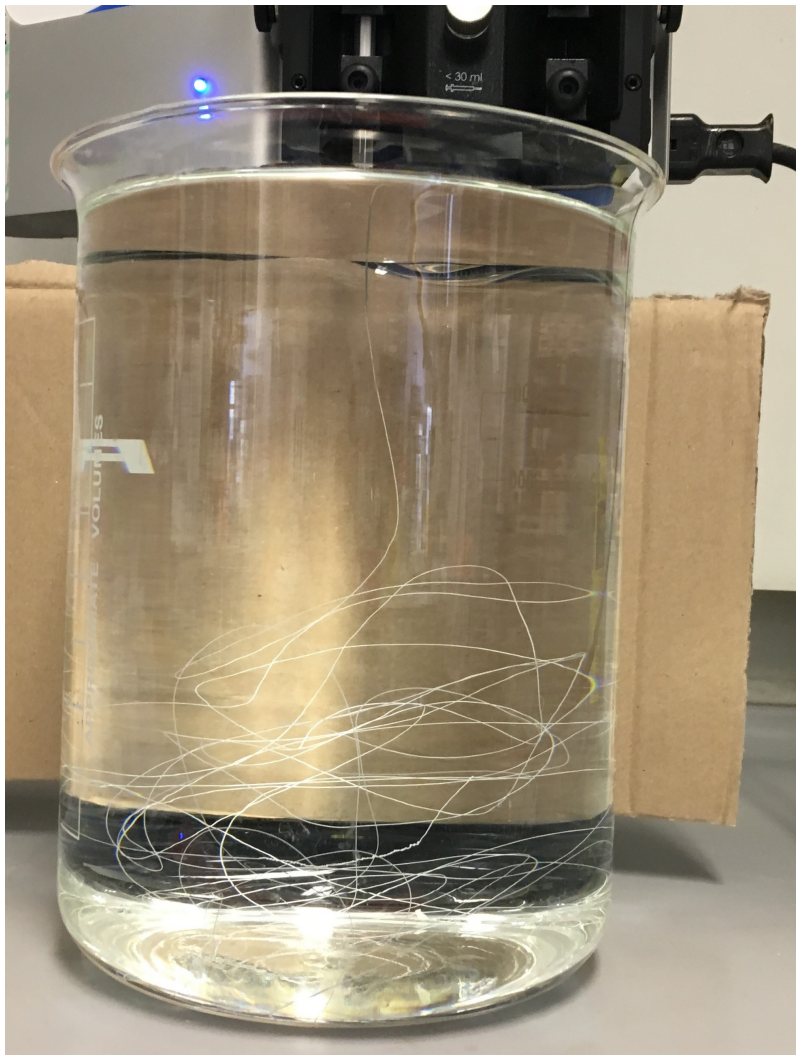
- **New Harvest Fellow Scott Allan** is using a wet spinning rig to make hollow fibers for use in bioreactors, by dissolving polymers in solvent and wet spinning them to form the fibers that will make up the scaffold in his bioreactors. This process is essential for creating the equipment that Scott will use to grow muscle cells at high density.



Scott's wet spinning rig for hollow fiber fabrication.

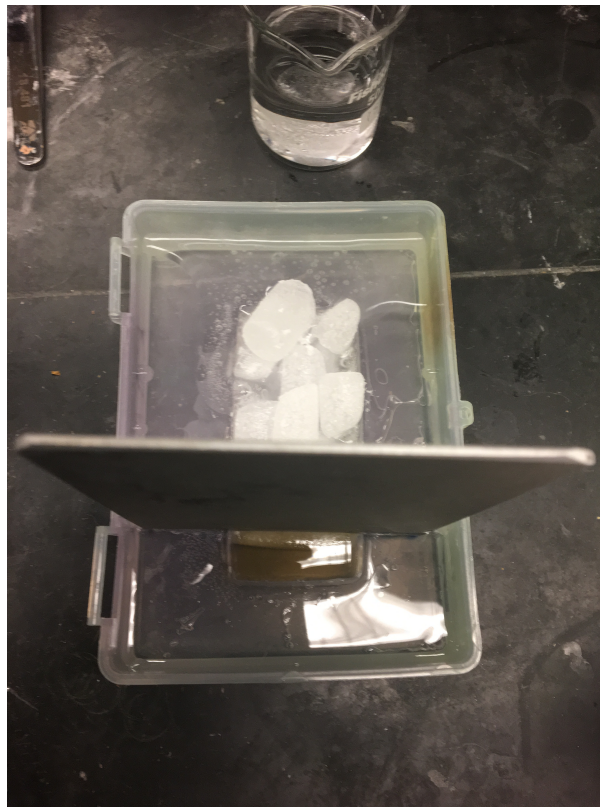


Scott's single synthetic polymer hollow fiber.



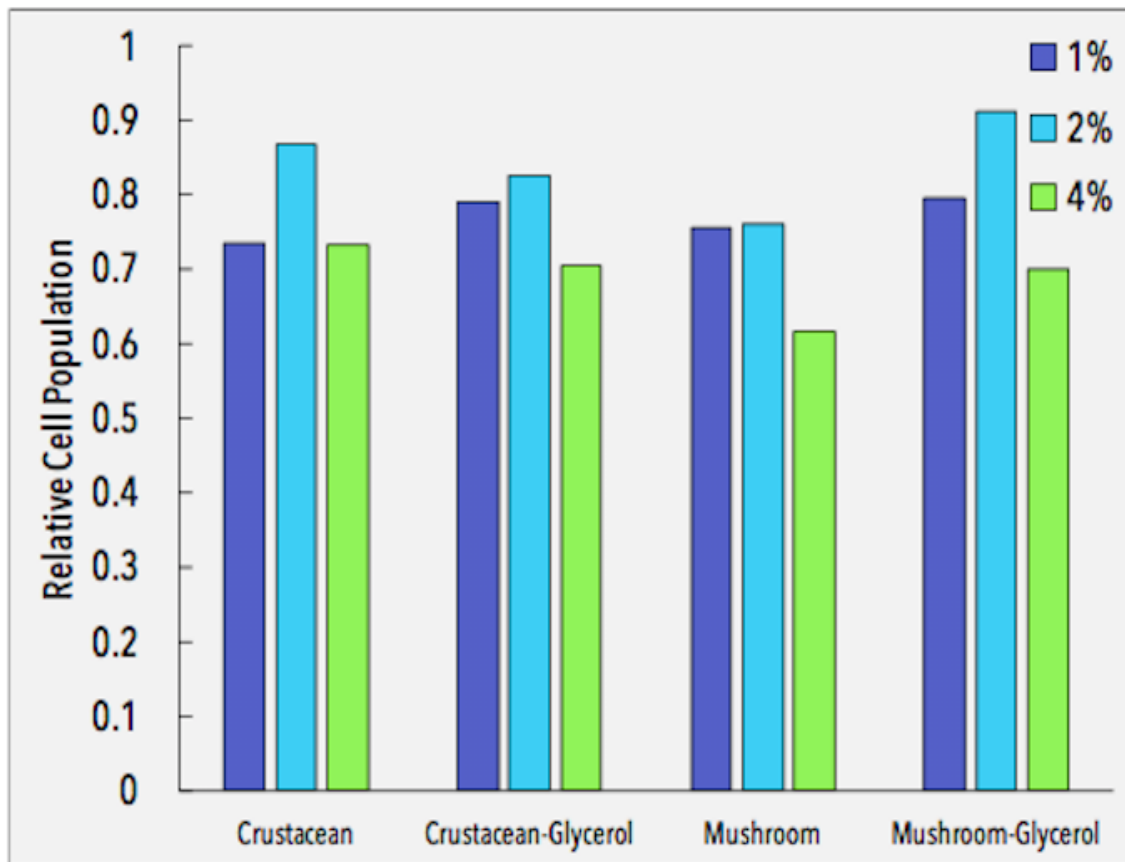
Scott's alternative fiber spinning process.

- Over the past couple of weeks, **New Harvest Fellow Natalie Rubio** has been making chitosan sponges from a variety of sources, including crustacean and mushroom sources. These sponges are essential for allowing the cells to grow healthily in 3D.



Natalie freezes chitosan solutions with dry ice and ethanol to create sponges with aligned microtubules.

- Natalie has been measuring how effectively her cells attach and grow when they are attached to different types of chitosan surfaces. She is currently comparing chitosan films derived from crustacean or mushroom sources with or without a 10% glycerol coating after 5 days in culture.



Natalie's cell counts for cells attached to different types of chitosan films. Based on this data, it looks like crustacean and mushroom chitosan perform similarly.

- **Did you know?** Hollow fiber technologies were first pioneered in the 1960s for use in reverse osmosis applications. Read more about how they are made and tested [here](#)!

Communications



Erin on stage at the Ellen MacArthur Foundation Annual Summit

- We have had a very busy month on the domestic and international speaker circuit!
 - **Joi Ito of the MIT Media Lab** has shared his perspective on cellular agriculture: that not all cultured meats are created equal, and each have their own level of technological readiness. Check out his piece in WIRED [here](#).
 - **Isha spoke at BIO 2018 and AgTech Nexus** in Boston.
 - **Erin gave talks** at Sweden Food Tech, EAT Forum Stockholm, and the Ellen MacArthur Foundation Annual Summit in London.



Andrew Stout & Isha Datar of New Harvest, Rep. Bill Foster, Andrew Noyes of JUST and Jessica Almy of GFI

- **Isha and New Harvest Fellow Andrew Stout each presented on the state of cellular agriculture research before the U.S. Congressional R&D Caucus** in Washington, D.C. last week.
- **Our Annual Report and Reader for 2017 is complete and off to the printers!** Look out for its debut at the New Harvest conference next month.

See you next month!

Isha, Erin, & Kate

The New Harvest Team