



Hello New Harvest Donors,

Happy holidays!

Here's our latest as we move into December:

12/1/2017 YTD SNAPSHOT

+ Raised **\$809,589.53***
+ **110** new donors
+ Spent **\$180,780.66** in research grants
+ **23** speaking engagements
+ **59** media engagements

*Donations & pledges in 2017

Conference

- **Check out our recap video!** Didn't make it to New Harvest 2017? Get a feel for how it went down in [our new video!](#)



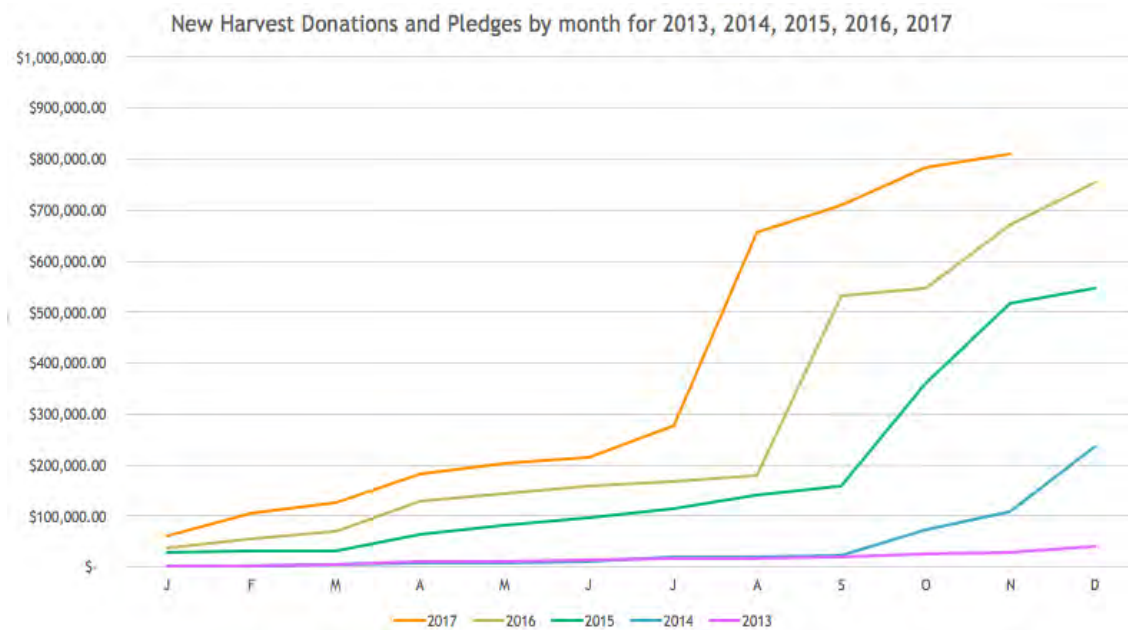
New Harvest 2017 Conference Recap

Organization

- **Annual Board Meeting.** Our year end board meeting is coming up next week. We'll be sharing our plans for next year in a special mid-month mail out... stay tuned!

Fundraising

- **Fundraising status.** New Harvest has received **\$809,589.53** in donations and pledges between Jan 1 and November 30 of 2017. This does not include ticket sales, sale of merchandise, or income from speaking engagements.

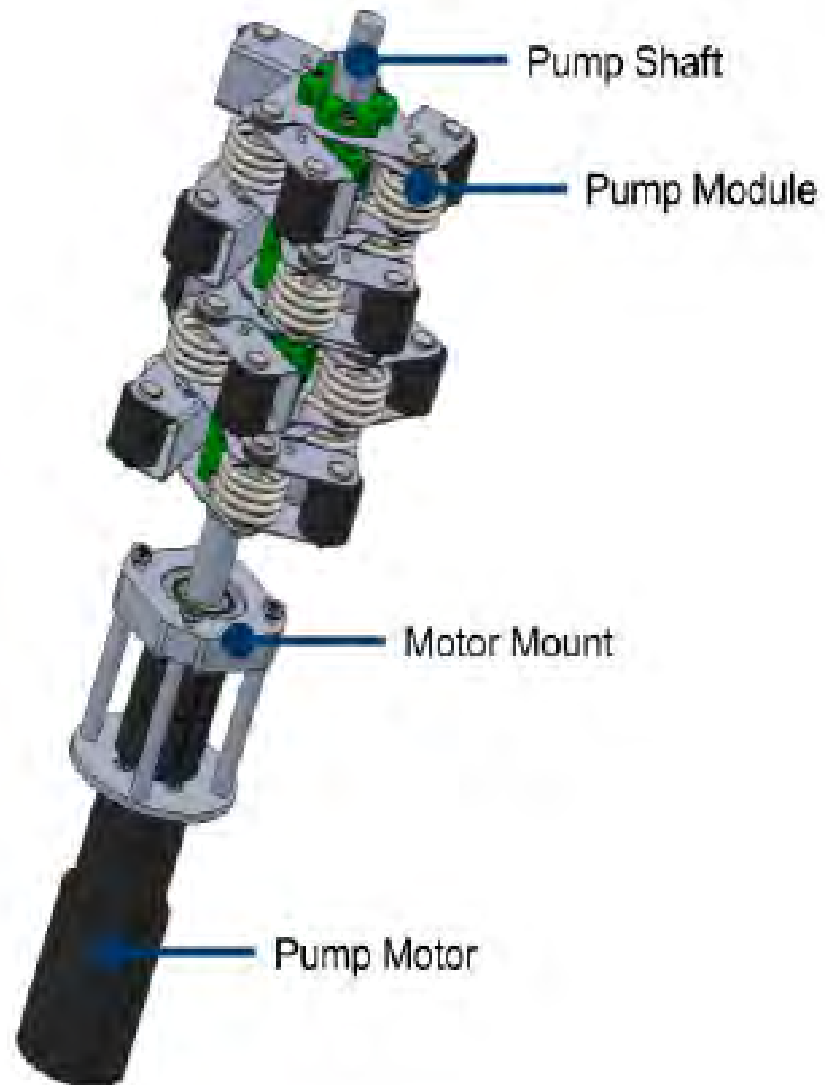


- **Fundraising goals.** Our goal is to raise a total of \$1,000,000 by the end of this year. This will allow us to expand our research program next year, while also allow us to build reserve for [our multi-year research projects](#).
- **Growing donor community.** We're seeing our donor community continue to grow steadily! Two hundred individuals donated to New Harvest in 2017, and of them, 110 were new donors! We're super excited to see these numbers grow into December's fundraising season.
- **We're heading into year-end fundraising season, the most important time of the year for determining our 2018 budget.** The success of our fundraising effort over the next two months will factor into our research and other activities for the next year (and beyond). Do you know any individuals or foundations who we should be in touch with to meet our goal of \$1 million? [Let us know!](#)
- **[Donate to New Harvest!](#)** The field of cellular agriculture is exciting and promising, but also nascent and fragile. A contribution to New Harvest helps ensure that the field is built on a foundation of robust, open, academic science.

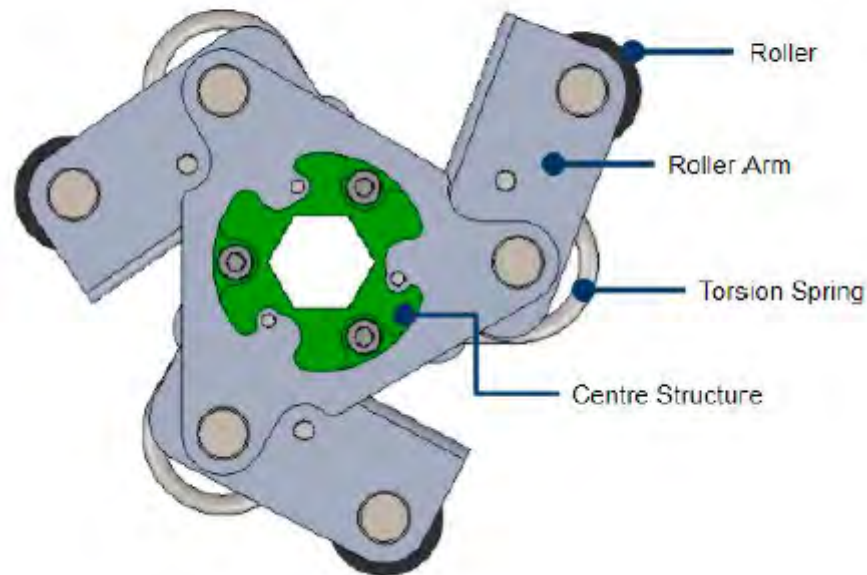
Research

- **Parts have been ordered for the first New Harvest Seed Grant team** - Han, Kyle, and Yifan are well on their way to building a bioreactor in collaboration with New Harvest Fellow Jess Krieger! They've finished

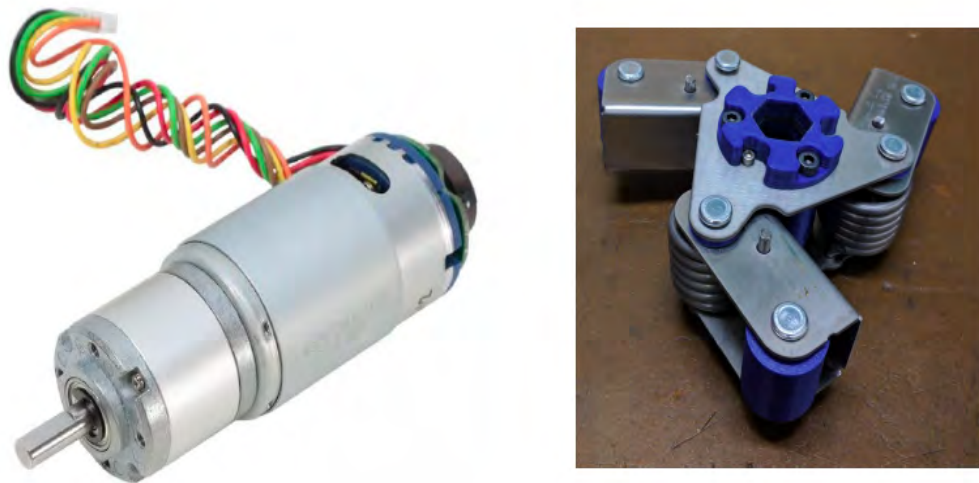
schematics, ordered parts, and are midway through the project. The team is aiming to have their prototype complete and ready for testing by January 2018.



Han and his team have designed a pump head exactly to Jess's specifications.

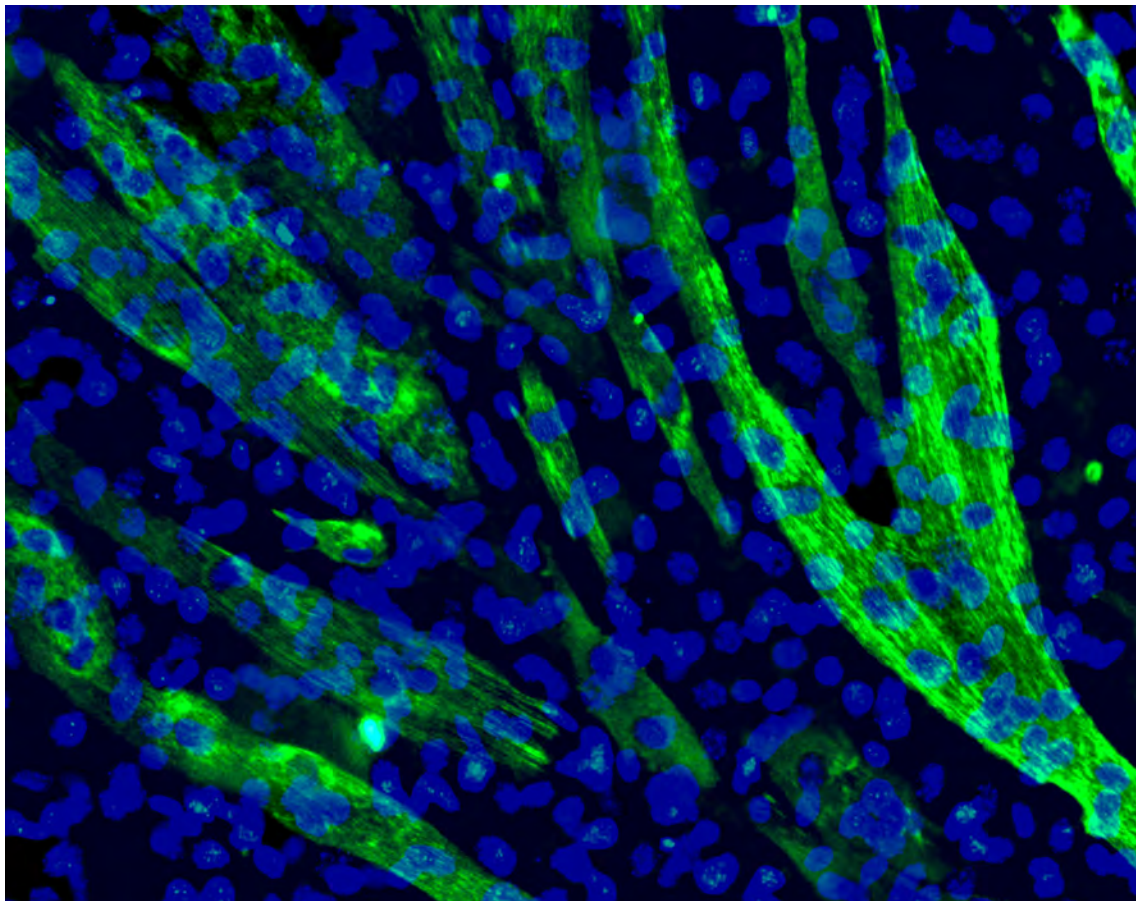


Their design is meant to be more durable and resilient than the average peristaltic pump head. Note the extra springs!



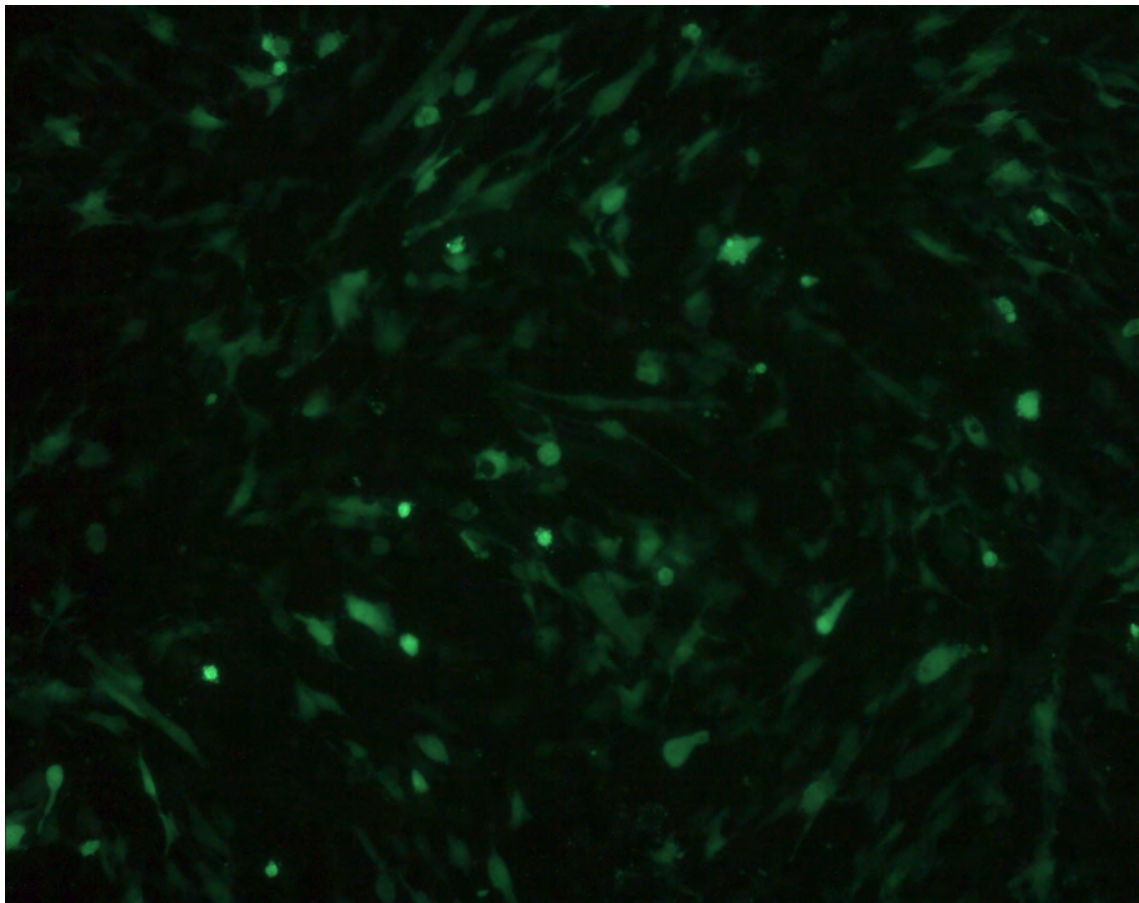
Here's an image of their motor - designed for large torque and low velocity flow rates.

- **Muscle cells are thriving at the University of Bath.** Our chemical engineer, Scott Allan, has been learning how to grow and stain cells. Here are a few of the very impressive images he generated of murine C2C12 (mouse cells), stained with a nuclear and cytosolic stain.

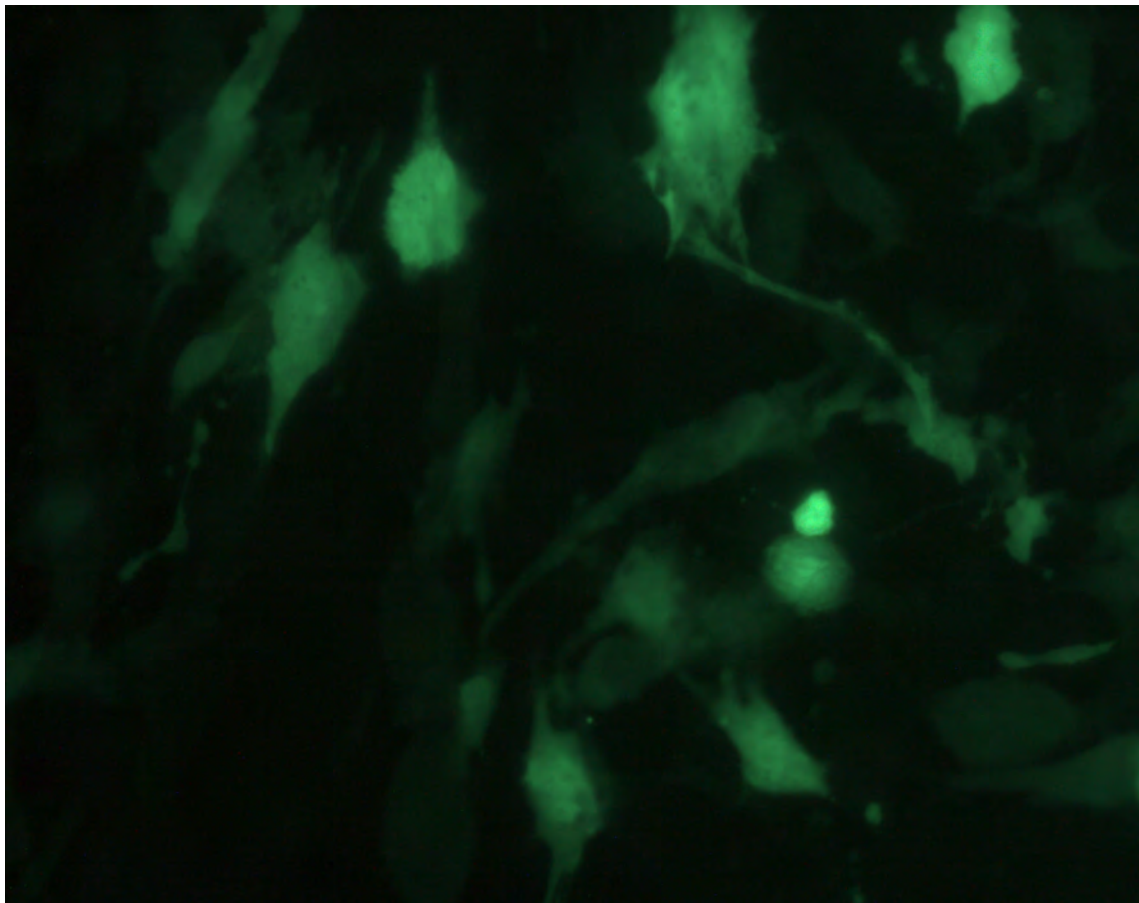


New Harvest Fellow Scott Allan's C2C12 cells stained green for heavy chain myosin. Their nuclei are stained blue with Hoechst stain.

- **Cells are also growing (and *glowing!*) at Tufts!** Andrew Stout, a bioengineer, has been working on cells, too. He's been using molecular biology to coax cells into making proteins, like green fluorescent protein (GFP). Here are some of the cells that are glowing with all the GFP that they have made.

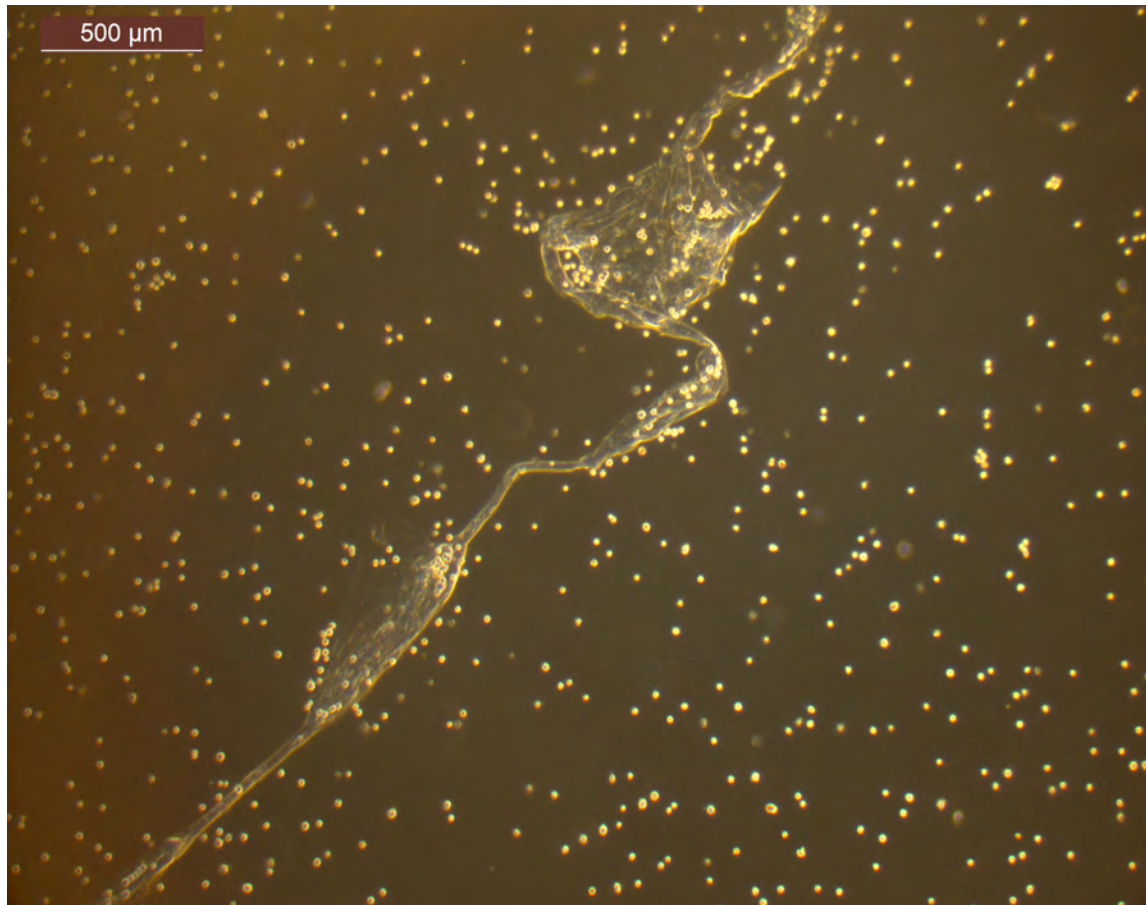


New Harvest Fellow Andrew Stout's C2C12 mouse muscle cells that he has coaxed into producing green fluorescent protein through transduction.

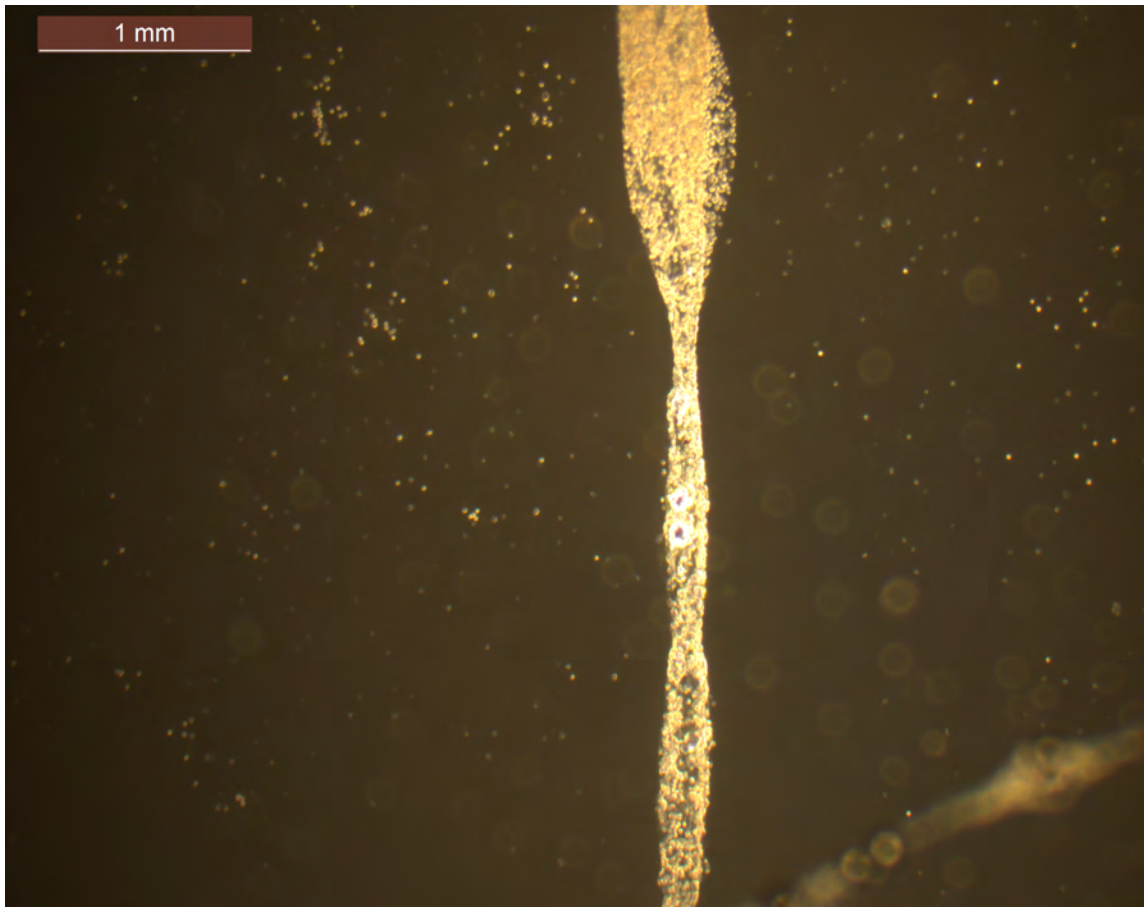


New Harvest Fellow Andrew Stout's green fluorescent protein-producing C2C12s at higher magnification.

- **Scaffold testing is well underway at Tufts** - New Harvest Fellow Andrew Stout is continuing his investigation of scaffolding techniques. He's been experimenting with different types of scaffolding materials, such as chitosan and alginate, and the complexes that are created by combining the two. He's working on finding a way to enclose the cells in scaffold so that they stick and spread out. Here are some of his preliminary results:

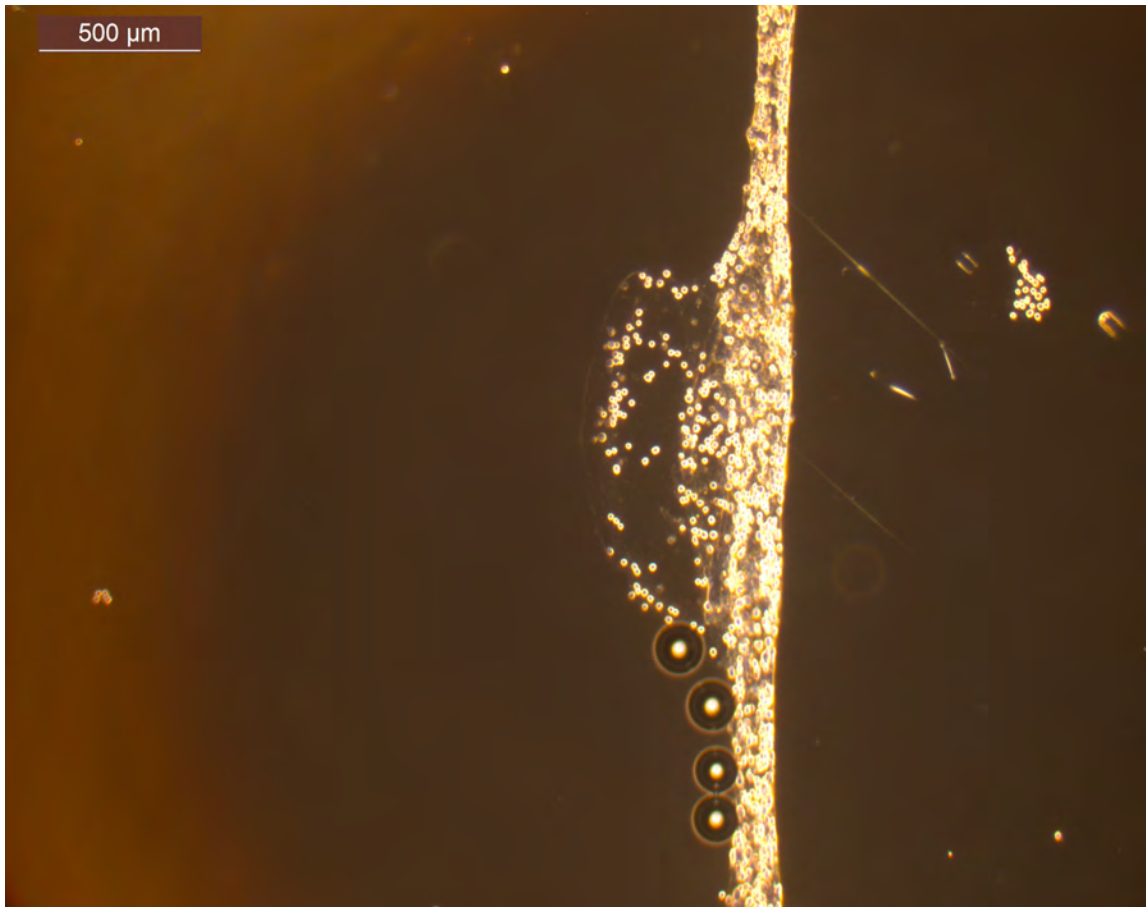


New Harvest Fellow Andrew Stout's images of bovine cells remixed with alginate and complexed with bare chitosan.

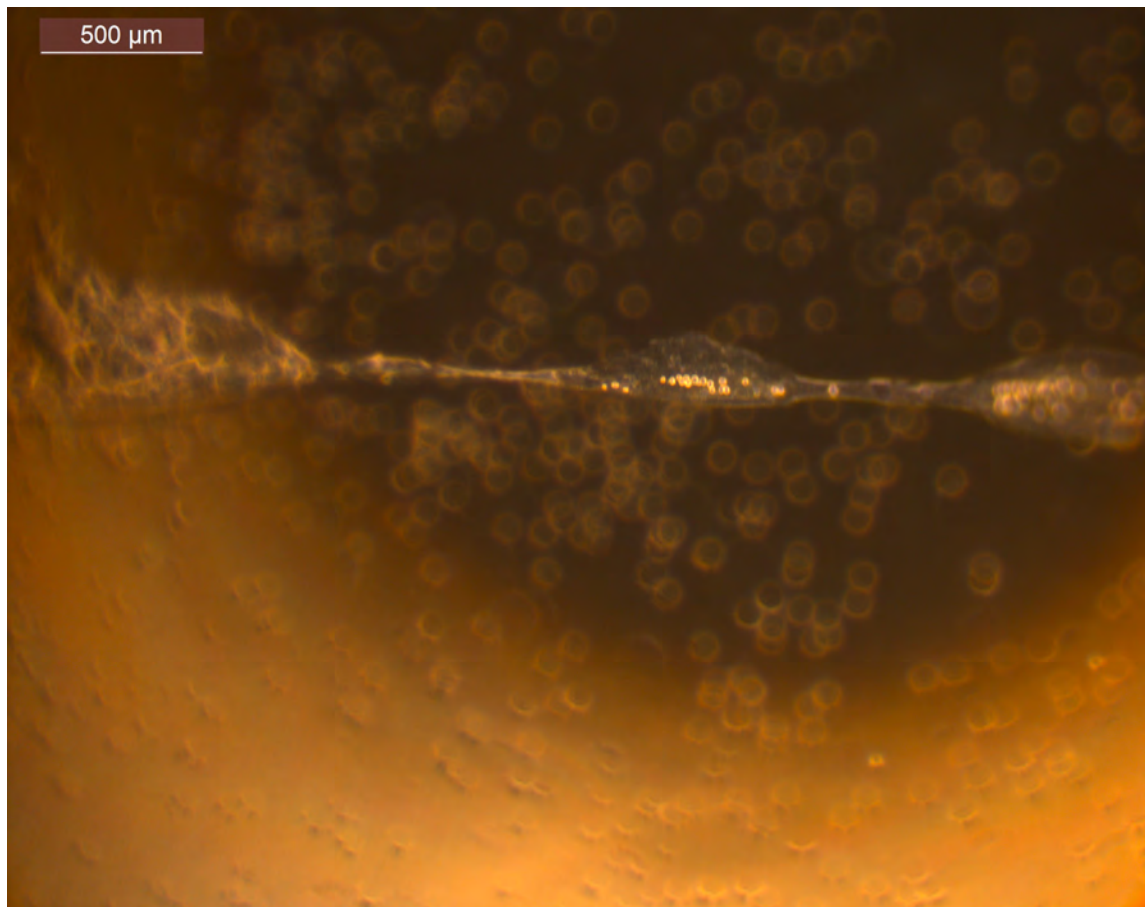


New Harvest Fellow Andrew Stout's murine C2C12 cells premixed with chitosan and then complexed with alginate.

See how the cells are now enclosed within the scaffold material?



Bovine cells premixed with chitosan and complexed with bare alginate.



Murine C2C12 cells premixed with alginate and complexed with chitosan.

- **[Did you know?](#)** Scott Allan's current cell scaffold of choice is zein - a durable, edible material made from corn protein. Learn more about it [here!](#)

Communications

- **Erin was invited to give a talk** about New Harvest's role in the cellular agriculture space at Digital Garage's "New Context" conference in San Francisco on November 4th.
- **Kate moderated a panel at "What Can You Be With a PhD?"**, the largest PhD career symposium in the U.S., on November 4th at NYU.
- **I spoke on a panel** at *The Atlantic's* "Planting the Future" summit in Boston on November 9th.

- **We put together a blog post detailing how New Harvest makes its research funding decisions, [available here](#).**
- **Our #NewHarvest2017 [recap video](#) is out!** Recordings of the conference talks are currently in post-production, but will be released soon.

Community

- **What does donating to New Harvest mean to you?** Our community remains a small but growing one, and we are thrilled that our donor base represents so many diverse backgrounds, perspectives, and motivating factors. **We're inviting all donors to submit brief written statements on why they choose to support open research in cellular agriculture via New Harvest.** If you have a statement that you'd like to share, please [write to Erin](#). Stuck on what to write? Check out what past donors have had to say [here](#).
- **Has your mailing address changed in the past year?** If so, [please let Erin know](#), as we are preparing for our holiday snail mailout ❄️
- **New Harvest 2017 attendees: *Have you completed our conference feedback survey yet?*** [Please share your thoughts with us!](#) Your feedback on everything from the dates, venue, programming, and catering will be incredibly helpful to us as we plan for next year's conference.

That was our November! Thank you so much for making this work possible!! I hope you will consider another contribution to New Harvest before the close of 2017... everything we do is powered by donors like you.

All the best,



Executive Director, New Harvest