



Hello New Harvest Donors,

Here's the latest, one month into 2018:

2/1/2018 YTD SNAPSHOT

+ Raised **\$45,199.77***
+ **10** new donors
+ Spent **\$27,830** in research grants
+ **0** speaking engagements
+ **12** media engagements

*Income & pledges in 2018

Conference



- **SAVE THE DATE!** The New Harvest 2018 Conference will be held July 20 & 21, at the MIT Media Lab. Join us in Cambridge, Massachusetts,

for the third annual cellular agriculture conference.

- **Would you like to share your research/work/prototypes at the 2018 New Harvest Conference?** [Apply here.](#)

Fundraising

- **Fundraising status.** New Harvest has received **\$45,199.77** in donations and pledges in 2018 to date. This does not include ticket sales, sale of merchandise, or income from speaking engagements.

Research

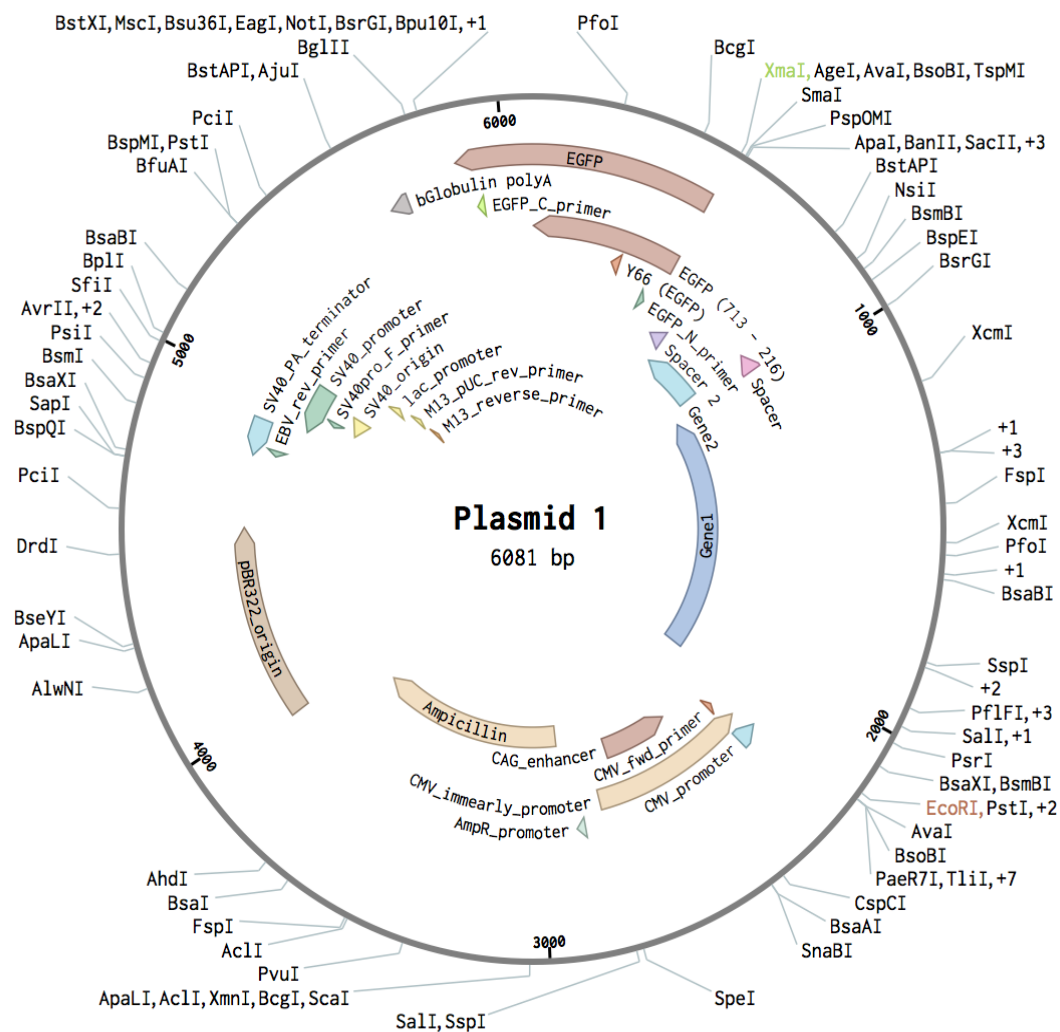
- New Harvest fellow Scott Allan has been learning to decellularize plant to use as a cell scaffold for his murine C2C12 cells. Here's his fully decellularized spinach leaf, ready to be seeded with cells.



Scott's fully decellularized spinach leaf ready to use.

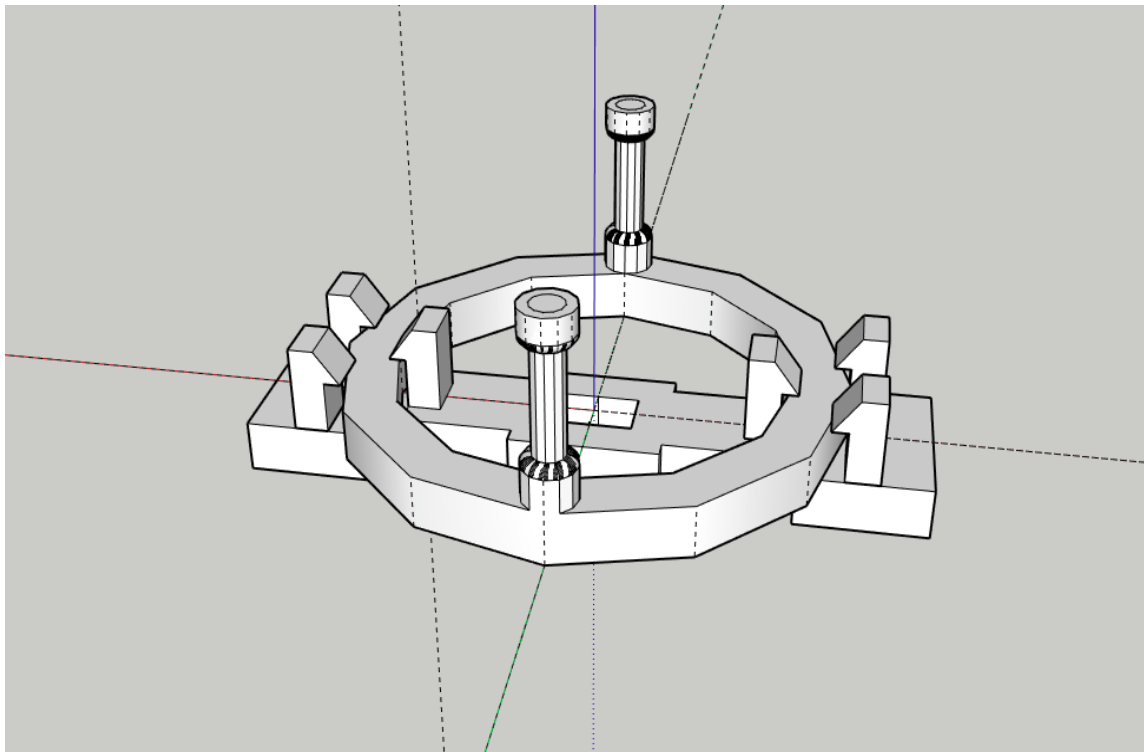
- New Harvest fellow Andrew Stout is learning to manipulate DNA in mammalian systems – designing custom sequences of DNA to fit into on plasmids, and then transfecting those plasmids into mammalian cells.

Plasmid 1 (6081 bp)



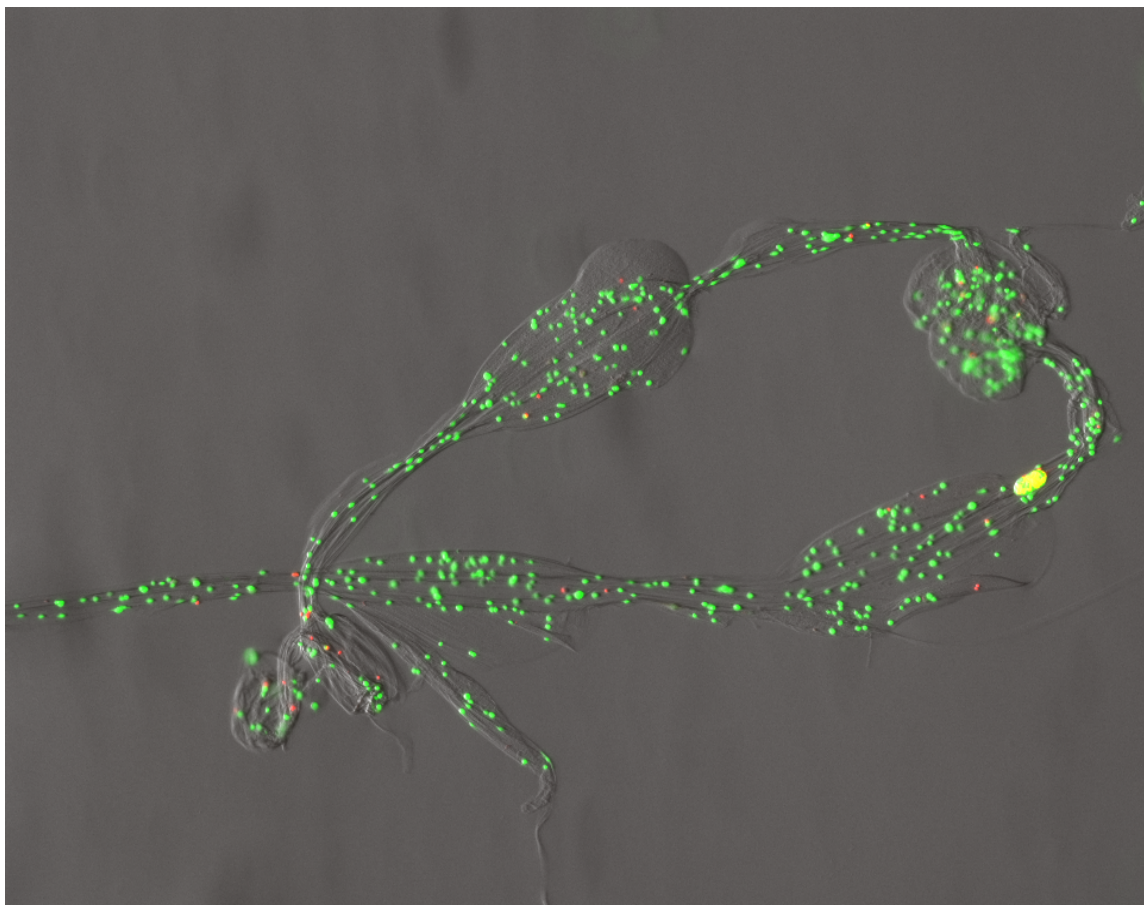
Andrew Stout's plasmid map, showing all relevant sites for digestion by restriction enzymes. His gene of interest is followed by an emerald green fluorescent protein (EGFP) tag.

- Andrew's been experimenting with Google SketchUp to design a fiber puller to make consistent fiber scaffolds. Here's a look at one of his schematic diagrams!

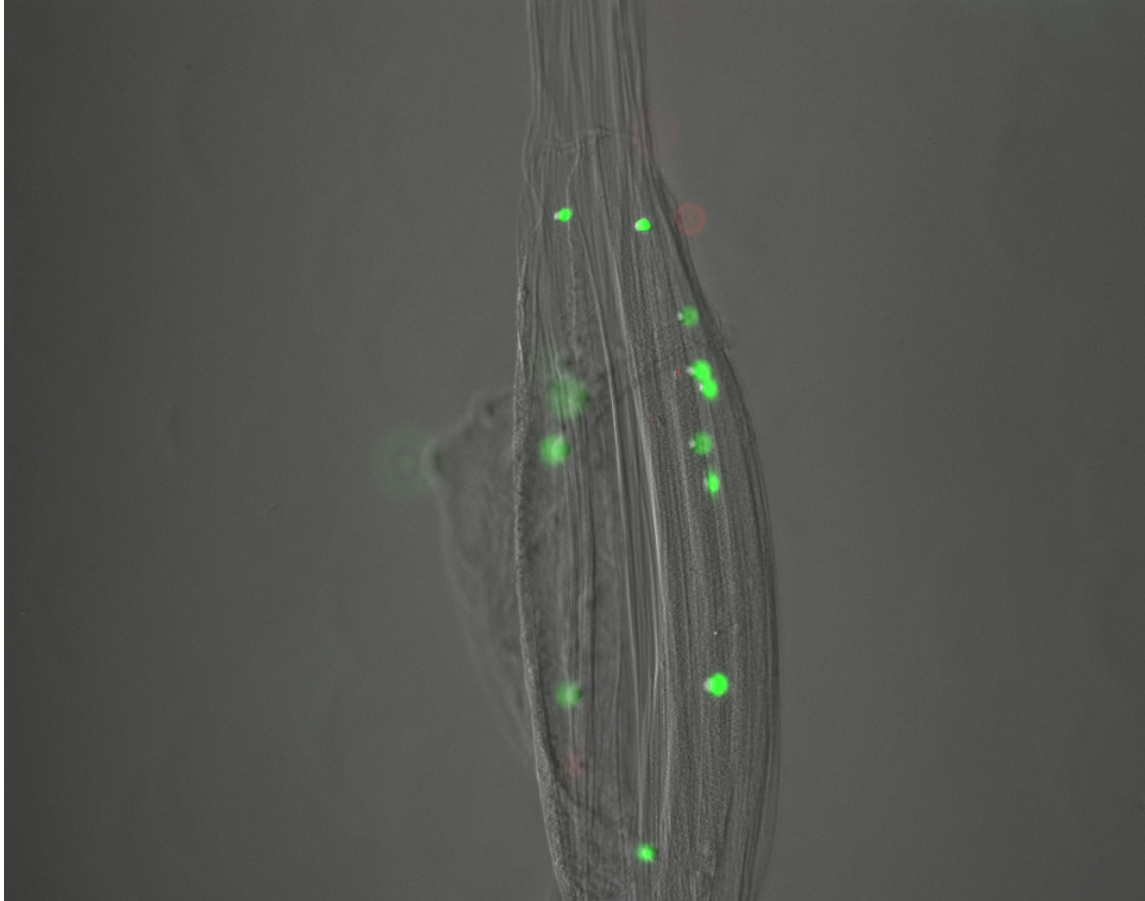


Andrew Stout's fiber puller design in Google SketchUp!

- By altering the pH of his alginate chitosan fibers, Andrew's been able to perfect his cell scaffolding. Here are a few examples of how well his cells (the green dots below) grow on fiber scaffolds.

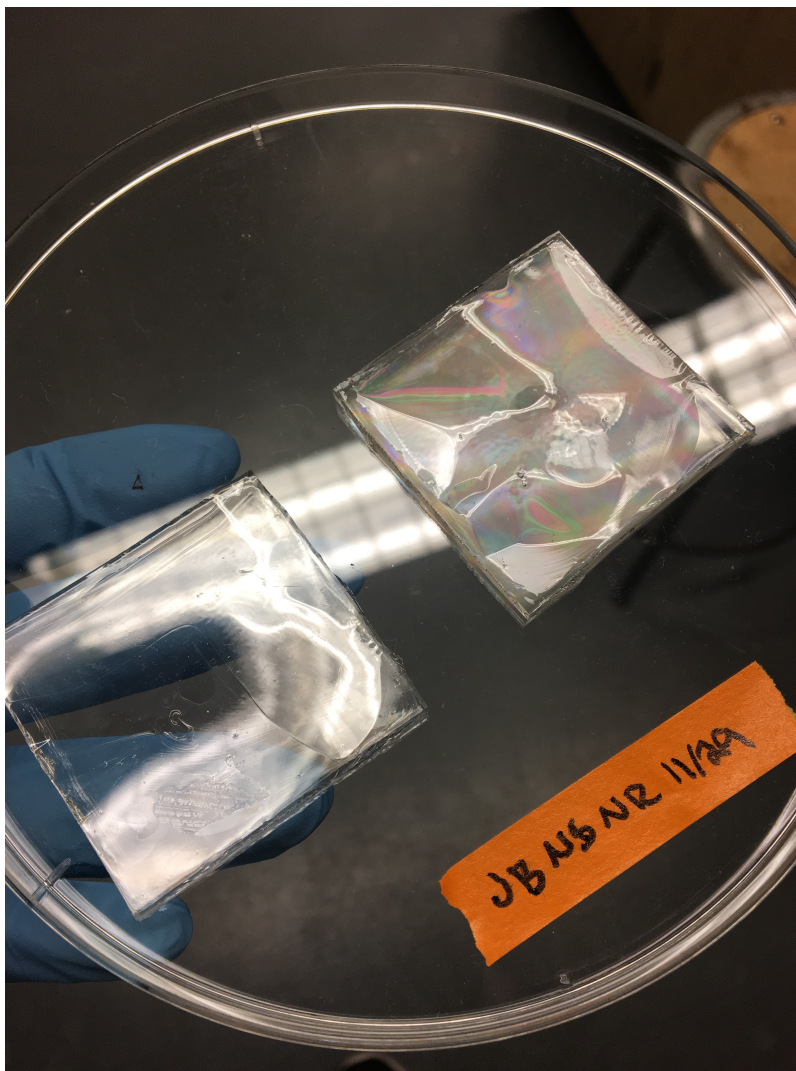


Andrew's pH-controlled liquid solutions are perfect for cell growth on these fiber scaffolds.

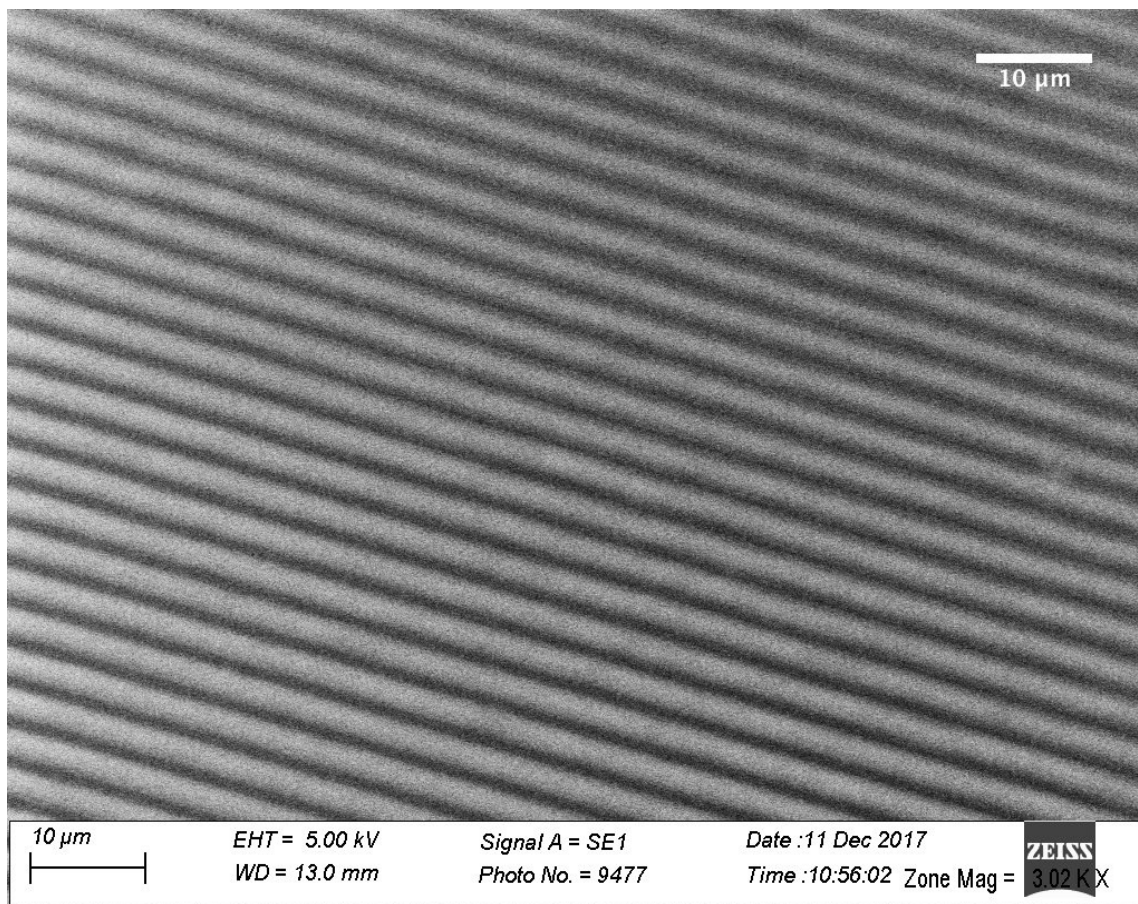


Here's a close-up of Andrew's cells growing on fiber scaffolds.

- Andrew isn't the only one hard at work making scaffolds! New Harvest fellow Natalie Rubio is creating patterned silk scaffolds to grow her cells in a specific shape.



Natalie's silk scaffolds to the naked eye- this photo was snapped without any magnification. The scaffold on the left is unpatterned (ie. smooth) and the scaffold on the right has a microscopic grooving pattern.



Natalie's patterned silk scaffold at 3000x magnification - note the clear grooved pattern. Pretty groovy!

- [Did you know? CRISPR stands for](#) Clustered Regularly Interspaced Short Palindromic Repeats. It's a tool that capitalizes on how bacteria ward off attacks from other organisms. New Harvest Fellow Marie Gibbons is using it to tweak gene expression in her turkey cells. Read more about it [here!](#)

Communications

- **We've updated our Frequently Asked Questions** on the New Harvest website! Have a look [here](#).
- January was somewhat of a quieter month on the public-facing Comms front, as Erin took a well-deserved week off. We're glad to have her back in the office now!

Thanks so much, donors! Moving this field forward could not be possible without your generous support.

Until next month,

2 February 2018

A handwritten signature in black ink, appearing to read 'Isla'. The signature is written in a cursive, flowing style with a vertical line at the beginning and a horizontal line at the end.

Executive Director, New Harvest