

**From:** Caleb Harper <[REDACTED]>

**To:** "jeffrey E." <jeevacation@gmail.com>

**Subject:** Re:

**Date:** Thu, 06 Sep 2018 18:57:52 +0000

**Attachments:** Cyber\_Agriculture\_Paper\_Harper.pdf; OpenPharm.pdf

**Inline-Images:** IMG\_3796.JPG; IMG\_3794.JPG; IMG\_3795.JPG

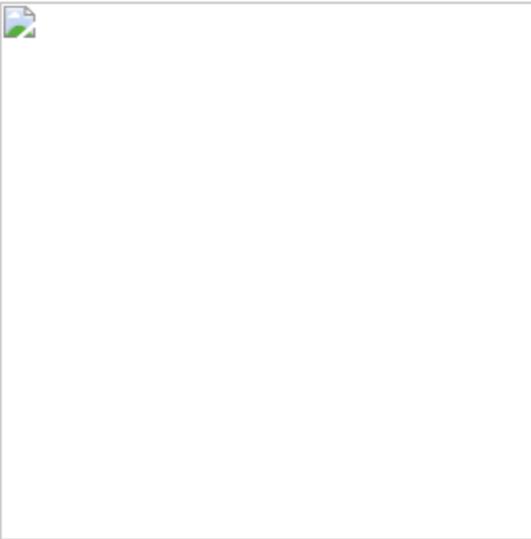
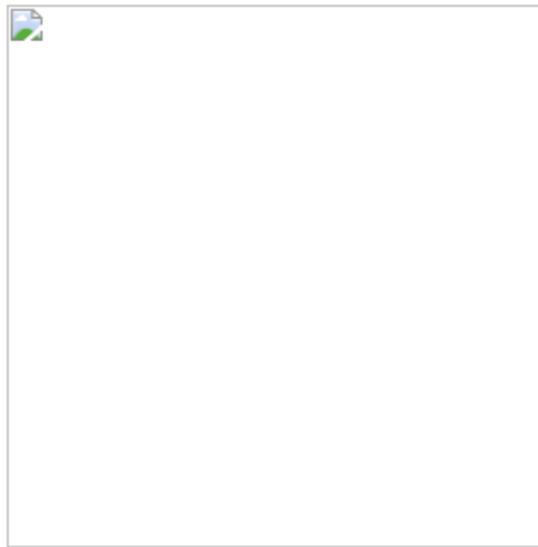
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sorry for late response - just got back from eastern europe.

1. **Follow up On [John De La Parra](#)** - Got John on board as a temp to perm hire (he is perfect for the team - brilliant) and we are working on a white paper to send out shortly. He is willing/able to leave his positions at North Eastern and Tufts and go full time with us starting in Nov. So until then I have him committed to 50% time.
2. **Next steps** - Setting up mtgs with Ed B and Martin to discuss the draft white paper and our approach. In general I think developing a quantified "turing test" for plants would be a great first step to proving sentience. Ive also started working with [Lazlo Barabasi](#) on the next round of the flavor experiments, and from a network science perspective, I think he would be a great collaborator on this work. With advisory from Ed, Martin and Lazlo and building up my team here - I think we are in great shape. We might need a reputable thinker on consciousness, maybe a philosopher? Know anyone that could collaborate from that perspective?
3. **Funding** - I cant hire John full time and start spending money on other staff/prototype development/experiment costs until Joi signals to me that the budget we talked about has landed at ML. Is it possible to move forward with that?
4. **Things to read** - attached - OpenPharm : a white paper John started in the last week or so geared towards using our tools for drug discovery --- Cyber+Agriculture\_Paper\_Harper - a flavor paper we just sent to PLOS , its pretty basic but has some good underpinnings that we will expand on with further experiments.

In Boston anytime soon? Id really like for you to see the lab out in Middleton, MA (40 mins north boston) next time

the real question....what are these plants thinking in my lab today and what language are they speaking...



Best,  
Caleb

Previous email breaking down funding:

To do this I'd need to add depth to my bio team, that's by far my weakest team in the lab currently. I recently let contracts lapse on Arielle and my molecular biologist as it wasn't working out. ■ want to add the following team and would need to do a search to get the best. MIT won't let me hire PhD Research Scientists, and likely quality people wouldn't accept, without secure multiyear funding. ■ propose 500k a yr for 3 yrs with the expectation we evaluate progress after year one as to year 2 and 3. The transparent cost break down is:

PhD plant physiologist - 80k base salary + 56% mit research OH (none goes to my lab or ML) + 20% benefits = 149, 760 k total cost

PhD plant biochemist - 100k base salary + 56% mit research OH + 20% benefits = 187k total cost

Plant science tech (JR) - 40k \* 20% administrative OH - 48k total cost

100k prototyping budget + 20% material & services OH = 120k total cost

= 500k a year / 3yrs

On my side I'll dedicate 2 out of our 4 shipping containers for 3 years (target paid for install / dev etc but with stock price decline is stopping support for non essential research) and my salary is covered in other sponsored accounts plus my team of engineers on staff (backend /front end software, data science , electrical, embedded systems and mechanical engineers)

I know it's a big ask, and would understand if it's out of ball park, but I think that's what it would take to make meaningful and rigorous progress on figuring out if plants can think and communicate

Thoughts?

On Fri, Aug 31, 2018 at 1:03 PM, jeffrey E. <[jeevacation@gmail.com](mailto:jeevacation@gmail.com)> wrote:  
next step?

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please note

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