

# COLLABORATION NOTEBOOK



iGEM C·O·N·C·O·R·D·I·A

## 06\_23\_2020

### *Attendance:*

**Concordia:** Paula, Lancia, Hajar

**ULaval:** Emilie Alexander, Angel Cisneros, Ben

### *Tasks for next week:*

- Contact 4th Space (Lancia - Concordia)
- Brainstorm speakers (All team)
- Meet next week 10:00am
- TedEx contact (ULaval)

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*Who is our audience?* General public

*Purpose & topic:* To use accessible communication via online platforms to convey how synbio can contribute to sustainable food production on Earth and in space.

*Dates:* Two tentative dates[ Aug 19th & Sept 10th ]

### **1. Format:**

- Two 1hour-sessions *on separate dates*
- 3 speakers and a moderator at each session
- Begin by introducing our iGEM projects and use them to frame the conference
- Speakers will be from industries related to sustainable bioproduction of food
- Consult a science communication specialist as we develop this event
- A separate moderator in the Zoom chat to answer questions
- We will also post polls in the chat to garner public opinion
- Have a Q&A, speakers take questions right after presenting
- Generate our own questions and post during the conference

### **2. Prospective Speakers:**

- Marie Filteau
- Luc Lagacé
- Research chair in science communication as a consultant (ULaval)
- Lallemand

### **3. Feedback:**

- How do we know we communicated well?
  - See activity in the chat, engagement, survey for feedback

- Poll during the event. Create an infographic to visualize answers of the audience
  - Pepper the chat with questions related to the presentations
  - Provide tips on how to be more sustainable
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## 06\_30\_2020

### *Attendance:*

**Concordia:** Paula, Lancia, Hajar

**ULaval:** Emilie Alexander, Angel Cisneros

### *Tasks for next week:*

- Develop questions to frame the event and questions that we want the event to answer (we both work on it this week) (both teams)
  - Contacting Spreadsheet (both teams)
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### **1. Speakers**

Lallemand

Create a spreadsheet - Lancia

Track emails for communication - Hajar will explain “How to” to U Laval

### **2. Event Sponsorship**

U Laval Faculty of science and engineering

Sustainability Action Fund Concordia

### **3. Location**

- a. 4th space online - Email sent to Anna and follow-up
- b. Move the second date to September and check with 4th Space.
  - i. 5th and 12th of September

### **4. Format**

- a. Two dates, one specific to each team (earth vs. space)
  - i. One with 2 speakers geared to maple syrup & earth, 1 speaker with a more futuristic vision.
  - ii. Next session 2 speakers talking about space and the third bringing it back to earth.
  - iii. We each introduce our projects in 5min, 3 speakers 10min each, and 5 min for questions, and general panel questions at the end
  - iv. Active chat, moderator in the chat for questions
  - v. Speakers encouraged to be active in the Q&A box
  - vi. 5min summary / wrap up at the end
  - vii. Synthetic biology can produce sustainable food ethically
  - viii. Speakers Ethics (1) & Sustainability (2) / session

- b. See if we can record a podcast with Broadscience.org

Agenda for the upcoming 4th Space meeting:

1. Introductions
2. Confirm dates
  - Aug 19th & Sept 10th (vs Sept.1st and 3rd?)
3. Structure of event
4. Speakers
  - Maple syrup and microbiotics researcher
  - Regulations and ethics of GMOs
  - Lallemand – yeast production of bionutrients
5. What does 4th Space need from us?
6. Do you have any suggestions?
7. How many people can we host?
8. Questions:
  - TedEx is not an ideal format for a panel discussion, later as a different event next year
  - Podcast
9. Last year's 4th Space event

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## 07\_08\_2020

### *Attendance:*

**Concordia:** Paula, Lancia, Natasha, Anna (4<sup>th</sup> Space), Doug (4<sup>th</sup> Space)

**ULaval:** Emilie Alexander, Angel Cisneros, Joanna, Ben

### *Tasks for next week:*

- Contact more speakers (ULaval: Angel, Concordia: Hajar, Lancia, Paula)
- Confirm date options (Lancia - Concordia)
- Topics for each date (both teams)
- Apply for sponsorships (Concordia: Hajar)

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### **Discussion with 4th Space:**

- **\*\*\*Interactivity** of the event: interact vs passive listening
- Contextualization and clarity
- What do we want to get out of this event? Take-away from the presentation: How synthetic biology can be used to produce food sustainably.
- Speakers: sustainability, food production, space, researchers

- Build more interest around a wider audience
- Tie this in with Concordia's orientation activities: sept 1st and 3<sup>rd</sup> - Shows student research, and the global iGEM network
  - Branding conference as part of an orientation activity that is fully open to the public.
  - Potential for interdisciplinarity is huge for the audience and speakers you choose.
  - Bilingual.
  - Concordia.ca listing, live stream on Facebook, and release as a podcast after.
  - Promo: 'we are investigating x,y,z, this is what it can do, join us Aug 19<sup>th</sup>'
  - Ask participants questions in the EventBrite listing
  - Friday reads feature (synbio) - could be recommending a journal, article, website, iGEM
  - Remember that a lot of people come to synthetic biology with an idea of the ethical implications.
  - Get a sense of the audience to poll/ survey at beginning of the event "you joined this event because you are interested in ----- "
  - Promote in iGEM Global

**Questions we want the event to answer:**

1. What are the ethics behind using synbio in the food industry?
2. How can synbio help the food industry? Give examples (ULaval- the maple syrup industry and food in space industry)
3. For Marie Filteau: How does the microbiota of maple sap impact syrup quality and how can synbio help?
4. For Jean-François Sénéchal: What are the ethical questions we should ask ourselves when implementing synbio into the food industry? What does the relationship between synbio and the food industry look like in the future?
5. For Jeanmarc Fleury: How is synbio implemented in the food industry these days? What is synbio? (**Emilie:** Since Jean Marc is an author for Quebec Science, I think that Jeanmarc could be a good person to introduce what synbio is and how we're using it today)
6. What are the positive and negative implications of synbio on the food industry?
7. In what ways is synbio already used in the food industry?
8. How can synbio help with sustainable food production in space?

**Speaker update:**

- Dr. Marie Filteau said YES

**07\_15\_2020**

*Attendance:*

**Concordia:** Hajar, Paula, Lancia, Natasha

**ULaval:** Emilie Alexander, Angel Cisneros, Joanna

### Tasks for next week:

- Research & brainstorm advertising ideas (both teams)
- Outreach plan (Concordia - Hajar)
- Contact more speaker (both teams)
- Contact Orly with confirmed dates and who we'd like her to contact (Concordia: Hajar)
  - i. When we want the speaker to attend and brief description
- Follow up with Anna at 4<sup>th</sup> Space (Concordia: Lancia)
- Research Remo.co or equivalent (Concordia: Hajar)
- Contact Steve (ULaval)

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- **Sept. 3rd** vs the 10<sup>th</sup>:
    - We get more attendees if we pair our event with orientation on the 3rd
    - ULaval promote as well with their university's orientation.
  - Clarify **focus** for each date:
    - August 19
      - What is the topic this date?
      - What is the format of the event? Panel? Round table?
        - Speakers Available: Michelle Oeser, Lallemand
    - Sept 3rd
      - What is the topic of this date?
      - What is the format of the event? Panel? Round table?
        - Speaker Available: Dr. Marie Filteau
  - Update on speaker progress
  - Advertising
  - Any questions for 4th Space? Lancia will confirm the dates
  - New structure:
    - Project presentations (5 mins)
    - Speakers (7 mins each, 8 mins for Q&A) (45min)
    - 10min wrap up
    - Networking session hosted after each event on Remo.co - 1hr

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## 07\_22\_2020

### Attendance:

**Concordia:** Hajar, Paula, Lancia, Natasha

**ULaval:** Emilie Alexander, Angel Cisneros, Joanna

### Tasks for next week:

- Contact Karen McDonald (Concordia: Paula)
- Contact Finless Foods, Cultured Eats (Concordia: Hajar)
- Poster Design (Concordia: Hajar & Paula)
- Discuss 4<sup>th</sup> Space week-long virtual event (ULaval team)

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## 1. 4th Space week-long virtual event:

- Email from 4<sup>th</sup> Space: I'm wondering if you there might be interest from iGEM to do a week-long virtual residency with us? Perhaps the week of August 17<sup>th</sup>? Your first event would happen during that week, but you could use this opportunity to take over our channels. You could consider ways in which you might want to use twitter, Instagram and FB to engage people with your research and the project you're developing? We can create mini videos (#FridayReads book/article recommendation, #TechTuesday demos for example), polls, surveys, games, perhaps a brief podcast conversation, if you'd be willing to record an audio conversation with someone about a specific question that might allow us to deep-dive into your project. The possibilities are endless, let us know if you're interested.

## 2. Speakers:

### a. August 19th

#### i. Which speakers?

1. Michelle Oeser - Lallemand
2. Morgan Irons – Deep Space Ecology
3. Gary Marchant is not available between 13:00 - 14:30 or between 16:00 - 18:00 (time difference)
4. Karen McDonald – Center for Utilization of Biological Engineering in Space

#### ii. What time?

1. 6:00 pm- Moderator: Kenza (Need to confirm)

### b. September 3rd

#### i. Which speakers?

1. Marie Filteau - Researcher
2. Morgan Irons

#### ii. What time?

1. 6pm - Moderator: Kenza

## 3. Outreach plan proposed by Hajar (Concordia)

Our outreach plans include event invitations to stakeholders within Concordia's sustainability community, which will be sent through student-run sustainability initiatives including Concordia Food Coalition, Sustainable Concordia, Sustainable Engineering Concordia, Concordia Food groups, John Molson Sustainability Groups, and Loyola's College for Diversity and Sustainability. To reach other stakeholders within the larger Concordia community, we are reaching out to our contacts at ASFA, 4th Space, CSU, District 3, Women in STEM at Concordia, Concordia's biology and biochemistry associations, CUTV, the Concordian, and CJLO. We are also planning to promote our event through internal emails sent to departments including biology, chemistry and biochemistry, science college, psychology, and engineering. The conference will also be accessible and advertised to the general public through equiterre.org, SynBioBeta, Synbio Canada, Eventbrite, Science & Policy Exchange (www.sp-exchange.ca), and our social media accounts on Twitter, Instagram, and Facebook. We are also planning to launch a paid, well-targeted facebook and youtube advertising campaigns and we will reach out to instagram influencers who are passionate about sustainable science to share our event with their followers. We are also reaching out to Concordia news, journalists, and eco-bloggers and influencers. Our collaborators from ULaval will reach out to their respective students, faculty, staff, associations, sustainability groups, and community radio, newspaper and TV. We are also planning to reach out the international iGEM community by posting our event on the Global iGEM slack, the Canadian iGEM slack, and emailing the individual teams.

To maximize the impact of our outreach campaign, we are creating compelling visuals which include a promo video for our event, a web page, posters, and social media content. These will be shared not only through our social media but also through the university associations, departments, and interest groups cited above.

We are expecting hundreds of Concordia students and faculty as well as members from the public. We are fortunate to work with 4th Space. They also allow us to access their network for growing our event exposure. The second part of our event, which is scheduled for September, will be part of 4th Space's programming for Concordia's recruitment campaign, which is happening online this year. Our event will welcome new students to the Concordia communities of sustainability, synthetic biology, and STEM. Attendees will also be welcomed to the diverse international synthetic biology network that Concordia offers through iGEM.

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## 07\_22\_2020

### *Attendance:*

**Concordia:** Hajar, Paula, Lancia, Natasha

**ULaval:** Emilie Alexander, Angel Cisneros, Joanna

### *Tasks for next week:*

- Prepare for next week's Zoom chats with confirmed speakers (both teams)
- Draft a promotion email for the event (Concordia: Hajar)
- Create a contacting sheet for promotions (Concordia: Hajar)
- Follow up with Gary (ULaval: Angel)
- Follow up with Michael Selden (Concordia: Hajar)
- Send an outline to Karen McDonald (Concordia: Paula)
- Ask about 4<sup>th</sup> space about EventBrite , promo video, send Morgan Irons' video (Concordia: Lancia)
- Make a promo video design (Concordia: Hajar)
- Shoot the script for the promo trailer (ULaval: Emilie, Concordia: Paula)
- Write listing info (Concordia: Hajar)
- Write panel discussion questions (Concordia: Hajar and Lancia)



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SCRIPT for PROMO TRAILER: Draft done by Monday, Send on Wednesday

- Hi, We are iGEM [ ] and our project [ consists in using synthetic biology to help maple syrup producers in Canada ]
- Come join us Aug. 19th as we talk about How synthetic biology can contribute to the sustainable production of food on Earth and in space!

SPEAKERS: 6th speaker

Aug. 19th

- Michelle Oser (**Ay-Zer**), Lallemand (Confirmed)
- Gary Marchant, Arizona State University (Followup)
- Mike Seldon, Finless Foods (Followup)

Sept. 3rd

- Morgan Irons, Deep Space Ecology (Confirmed)
- Marie Filteau, Food Science, Universite Laval (Confirmed)
- Karen A. Macdonald, CUBES (confirmed)

Networking session:

- 4th Space is looking into Remo

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**08\_04\_2020**

*Attendance:*

**Concordia:** Hajar, Paula, Lancia, Natasha

**ULaval:** Emilie Alexander, Angel Cisneros, Joanna

*Tasks for next week:*

- Prepare for next week's Zoom chats with confirmed speakers (both teams)
- Contact David Secko (Concordia: Hajar)
- Follow up with Gary Marchant (ULaval: Angel)
- Email questions to Karen (Concordia: Paula)
- Contact Ahmed Khan (Concordia: Hajar)
- Send promotions emails and direct slack messages (Concordia: Hajar)
- Post to Global slack (Concordia: Lancia)
- Draft poll questions (Concordia: Lancia)
- Finalize promo video and poster (Concordia: Hajar)
- Send to 4<sup>th</sup> Space (Concordia: Lancia):
  - a. Mini video trailers done tonight

- b. Script: "Are you interested in the sustainable production of food? Join us August 19th at noon, as we speak with Michelle Oeser (Ay-zer) R&D manager at Lallemand, Michael Selden CEO and cofounder of Finless Foods and Gary Marchant sustainability scientist, as we ask can synthetic biology contribute to sustainable food in space and here on Earth?"
- c. Listing info
- d. Question: Can we have Google calendar integration with registration
- e. Send Posters (all versions)
  - i. Eventbrite: horizontal
  - ii. 4th Space: horizontal
  - iii. Social media
- f. Confirm No Remo/ we are doing Breakout rooms
- g. Ask if we can have optional questions in EventBrite
- h. Can you run a webinar zoom (QnA) button
- i. Confirm Roles
  - i. ULaval – Emilie: participants in zoom, admin rights, coming into the room, prevent zoom bombing, make it clear to use the same email as registered
  - ii. ULaval – Angel: Moderate chat: ask questions related to how the convo is going
  - iii. Concordia – Lancia: Pop up the polls

**Sponsorship update:**

- We are sponsored by Concordia's Sustainability Action Fund, YAY!

**Speaker update:**

- No answer yet from Gary Marchant
- Contact David Secko – Science Communication, Synbio, Professor at Concordia

**Format:**

- Introductions 5-7 minutes
  - Introduce your work / your company
  - How does your work involve synthetic biology
  - How does this contribute to sustainable food production
- Guided dialogue afterwards

**Speakers info:**

- August 19th
  - Michelle Oeser (Ay-zer) (confirmed)
  - Michael Selden (confirmed)
  - Gary Marchant (?)
- Sept. 3rd
  - Morgan Irons (confirmed)
  - Marie Filteau (confirmed)
  - Karen A. Macdonald (confirmed)

**Moderator Kenza:**

- Introductions

- During conversation, pop up a poll, next question is relevant to answers of the poll
- Draft the polls, send her a list of questions
- QnA breakout rooms? Give them a question, let participants talk about their own experiences so their careers come up- like networking
- **Decide who will help Kenza moderate the chat and maybe the breakout rooms**
  - Will also check for participants and let participants in and assure there are no zoom bombers

#### Promotions:

- Tweet
- Tag iGEM, SynbioBeta, Finless Foods, Lallemand
- Post to iGEM Slack
- Emails

#### Draft of questions for event (Hajar & Lancia):

##### General (all speakers)

- How is biosafety addressed in the industry?
- Cellular agriculture has a claim to be more sustainable than traditional means, how do lab operations and supplies fit into this?
- How has the public perception of cellular agriculture products evolved over the years?
- What are the barriers that exist in your industry to commercialize your products?
- We are excited about the endless possibilities of synthetic biology. From bioluminescent glowing trees that replace street lights to cellular meats and full agricultural systems in space. What are effective means to convey these exciting applications to the public?
- What are some cultured products that you have personally tried?
- How does a company assess the impact of their products in terms of environmental sustainability. If they have not yet released a product, how do you plan to do so?

##### Speaker Specific

- Michelle Oeser (R&D manager at Lallemand)
  - What product has Lallemand produced with synthetic biology practices for sustainable food production that you are most excited about?
  - You spoke of how media and other growth factors don't have to be pharmaceutical grade, they could instead be food grade, can you elaborate on how this would be beneficial to synbio/ cellag food production and what barriers prevent its implementation?
  - This industry is moving away from animal-based molecules and is looking for nutrients which are sustainable, allergen free, animal free and moreover reliably lot-to-lot consistent. Can you give examples and perhaps tell us why the company chose this direction?
- **Michael Selden (CEO and cofounder of Finless Foods)**
  - What was your motivation for creating Finless Foods?
  - Why Fish?
  - Is producing seafood with cellular agriculture more sustainable compared to traditional fishing and aquaculture practices? How so?
  - **GENERAL** Your company produces fish via cellular agriculture as a means to preserve our ecosystems while maintaining a food supply to our communities.

How does sustainability with respect to manufacturing, packaging and distribution fit into your company's development? (i.e. use of pipettes, water, plastic packaging, shipping).

- Is cultured fish a threat to economies that rely on local fishing practices (responsible fishing). Is there enough market share for both to co-exist?
- What were the unexpected challenges and regulatory issues that you had to overcome?
- What are the policies in place for bringing a product like Finless Foods to market?
- **Subtopic growth medium:** The cost of growth medium seems like a barrier to commercialization, how do you tackle this issue?
- Will you reach price parity with products that are already available on the market?
- When do you expect to commercialize your products?
- What kind of serum are you using? Why is it important not to use media that involve animal components?
- Do you envision your cellular products in the kitchens of everyday homes?

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**08\_12\_2020**

*Attendance:*

**Concordia:** Hajar, Paula, Lancia, Natasha

**ULaval:** Emilie Alexander, Angel Cisneros, Joanna

*Tasks for next week:*

**Send to Anna (Lancia-Concordia):**

1. **Final Poster**
2. **Final Video**
3. **Polls & in chat questions**
4. **Change to 'Panel Discussion'**
5. **Social Media Accounts**
6. Facebook: <https://www.facebook.com/iGEMConcordia/>  
Twitter: <https://twitter.com/igemconcordia?lang=en>  
Instagram: igem\_concordia  
  
Facebook: <https://www.facebook.com/equipeiGEMULaval>  
Twitter: <https://twitter.com/IUlaval>  
Insta: igem\_ulaval (edited)
7. **Speakers**
  - a. **Titles to update listing**
  - b. **Emails for Zoom panel admin Link**

- c. **Social media accounts**
- d. **Websites**

**Email speakers (Hajar – Concordia & Angel - ULaval):**

1. **Send above +**
2. **Combine honoraria form and release form & request signature**

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**1. Speaker Update:**

- a. Ahmed said Yes
- b. All speaker confirmed

**2. Questions - Hajar:**

- **Ahmed Khan (Founder of Cell Agri)**

- How did you become interested in cellular agriculture and what motivated you to create Cell Agri?
- You have created the first comprehensive e-book on cellular agriculture, what was the purpose of doing so?
- Why do you consider cellular agriculture to be the future of food?
- How does cellular agriculture solve food insecurity and sustainability issues? (General)
- Who benefits from cellular agriculture?
- You are the cofounder of cellular agriculture canada, a non-profit organization that supports and promotes the cellular agriculture industry and research in Canada. What are some regulatory barriers and safety concerns that the industry must overcome?
- In your experience, how has public perception of cellular agriculture products evolved over the years?

**3. Breakout rooms:**

- a. Ahmed
- b. D3
- c. Lallemand
- d. iGEM

**4. Format:**

Each ULaval & Concordia: Problem & solution why is it important for sustainability 2min  
[5min]  
Speaker 8min  
Speaker 8min  
Speaker 8min  
[30min]

QnA

[20min]

Breakout rooms announcement [2min]

D3 introduction [3min]

Breakout rooms [2min]

D3: workshop (Moderators: Lancia-Concordia/Angel-ULaval)

Ahmed- ask him- open format (Moderator: Hajar)

iGEM & synbio: want to know more about iGEM or our projects? (Moderators: Paula-Concordia /Emilie-ULaval)

Emilie-ULaval: intruders/ zoom bombers

Lancia-Concordia: relay questions to Kenza & who will take care of breakout rooms

## 5. Polls Draft (Lancia):

1. I am

- a. Undergraduate student
- b. Graduate student
- c. Concordia employee
- d. Part of iGEM
- e. From a related industry
- f. Interested in sustainability

2. If a lab grown burger was offered to me, I would

- a. Eat it without thinking about it
- b. Eat it with hesitation
- c. Not eat it, no way
- d. Check out the company first

3. I am \_\_\_\_\_ familiar with the field of synthetic biology

- a. Very
- b. Somewhat
- c. A little
- d. Not

4. I know about cellular agriculture from

- a. Movies
- b. Journalism- articles, the news
- c. Finless Foods
- d. Cellag.com
- e. School

5. I feel safest consuming lab grown:

- a. Vegetables

- b. Beef, Pork, Chicken
  - c. Fish
  - d. Milk
  - e. Vitamins & other nutrients
6. My biggest concern about cellular agriculture is
- a. Accessibility, who will own this tech?
  - b. Corporations exploiting it for financial gain
  - c. Safety in the products
  - d. Sustainability & environmental footprint of a lab
  - e. Labelling of the products, I want to know what is lab grown
  - f. Other: \_\_\_\_\_
7. I am most excited about cellular agriculture because of
- a. Its promises for sustainable production
  - b. The advances in synthetic biology
  - c. The ability to protect animals
  - d. The potential to address food shortages
  - e. Other: \_\_\_\_\_

**08\_19\_2020**

*Attendance:*

**Concordia:** Hajar, Paula, Lancia, Natasha

**ULaval:** Emilie Alexander, Angel Cisneros, Joanna

*Tasks for next week:*

- Draft the next event's listing and send to Sustainability action fund and 4<sup>th</sup> space (Concordia: Lancia)
- Draft posters (Concordia: Lancia)
- Ask for Marie's photo and bio (ULaval – Angel)
- Ask for Morgan's photo and bio (Concordia-Lancia)
- Ask for Karen's photo and bio (Concordia-Paula)
- Send the listing info to the speakers (Concordia-Lancia and ULaval – Angel)
- Draft Questions & Polls (Concordia-Lancia)
- Send an email to attendees (Concordia-Lancia)
  - a. Thank you
  - b. Questions and answers
  - c. Video link from this event

- d. Next event listing & announce Remo
- e. Send and ask them to fill the event's feedback form