ABPDU

ADVANCED BIOFUELS AND BIOPRODUCTS PROCESS DEVELOPMENT UNIT

ABPDU Industry Listening Day 2023

Industry Listening Day 2019

- First Industry Listening Day on October 28th 2019 with ABPDU and DOE

24 companies attended Industry Listening Day

Feedback – Turnover

Turnover at the ABPDU affects us. Rehiring, re-establishing relationships, and building knowledge takes time. Schedules were delayed. - Ritu Bansal, , Sr. Director, Process Research and Development, Zymochem. Previously at Mycoworks

I echo the comment on turnover. Can you raise salaries? - Jill Fuss, Managing Director, Activate Berkeley. Previously at Cinder Bio

RESPONSE: We hired a program manager to free up PIs so they can spend more time with their team members and focus on their training and invest in their careers. We are engaging in many workforce development activities to create opportunities to hire skilled team members, e.g. UC Berkeley MBPE program.

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RESPONSE: UCB Masters in Bioprocess Engineering (MBPE) Lab Course at the ABPDU

Berkeley College of Chemistry

Bioprocess Engineering Program Description

PROFESSIONAL MASTERS DEGREE IN BIOPROCESS ENGINEERING

- **Program Description**
- Application Process
- Degree Requirements
- Tuition & Fees
- Info Sessions

PROGRAM DESCRIPTION

The Master of Bioprocess Engineering (MBPE) degree will provide graduates upon completion of a 9-month program with an understanding and ability to apply Bioprocess Engineering to a number of key technological needs spanning multiple industries. These include methods to produce biofuels, bio-based

MBPE Info Session Webinar

Complete our interest form to download the MBPE Info Session Webinar.

Apply Online

Applications for the 2023-24 academic year have now closed. If you are interested in applying late, please email: mbpe@berkeley.edu

https://chemistry.berkeley.edu/grad/cbe/bioprocess-engineering/program-description



James Gardner (PI), Laura Fernandez and Asun Oka (Instructors)


David Chang and Kirch Czarina Quijano, Graduates of the MBPE program and Process Engineers at the ABPDU

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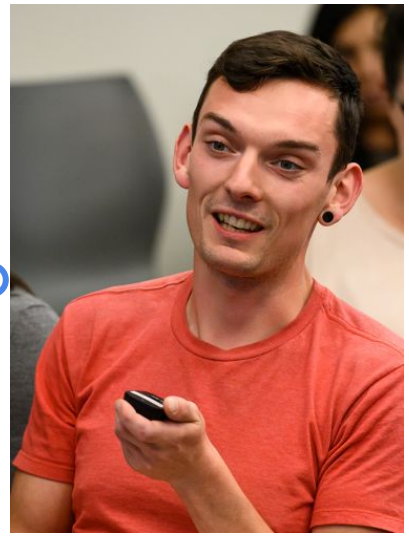
Feedback – Out of House Training

Out of house training of equipment to company affiliates, before a project campaign. This can help with turnover issues - Bryan Dalton, Production and Process Development Scientist, BioPlastech. Previously at Mango Materials



Training our team members can be very valuable. Information is super valuable, especially around safety. Developing the training materials can be very helpful - Noah Helman, Founder and President, Industrial Microbes

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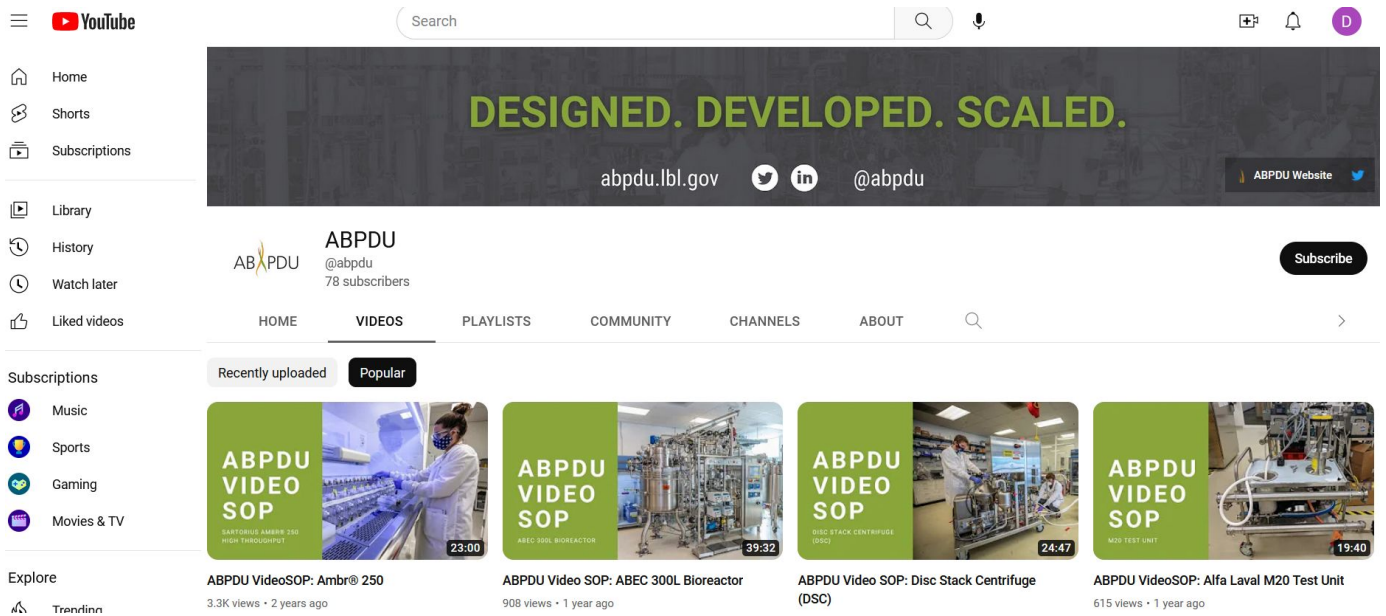
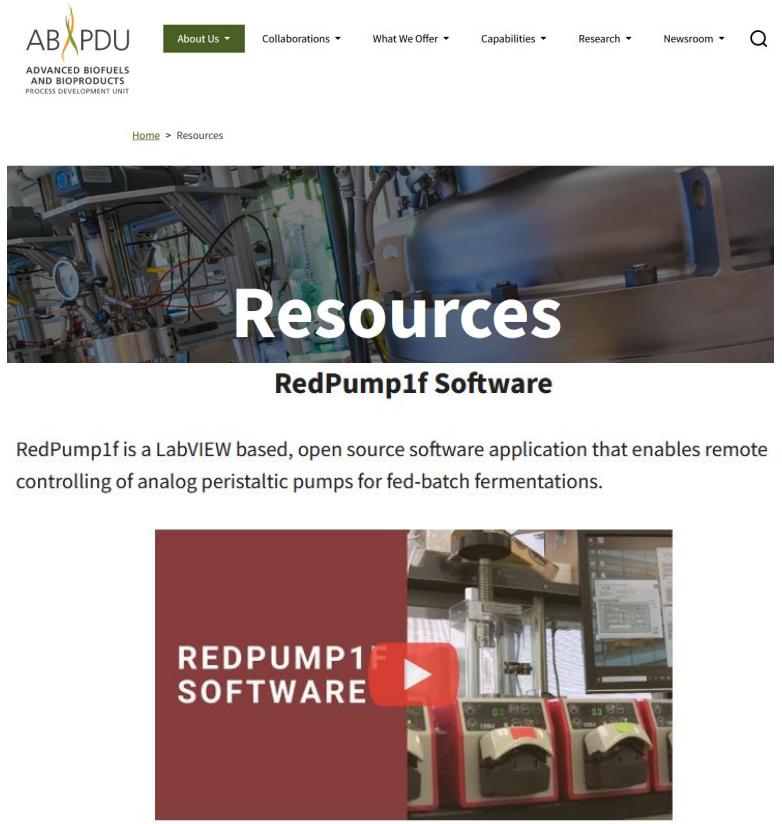
RESPONSE: Video Safe Operating Protocols (Video SOPs)

12 Video Safe Operating Protocols (SOPs) online on ABPDU Youtube Channel: https://www.youtube.com/@abpdu/videos



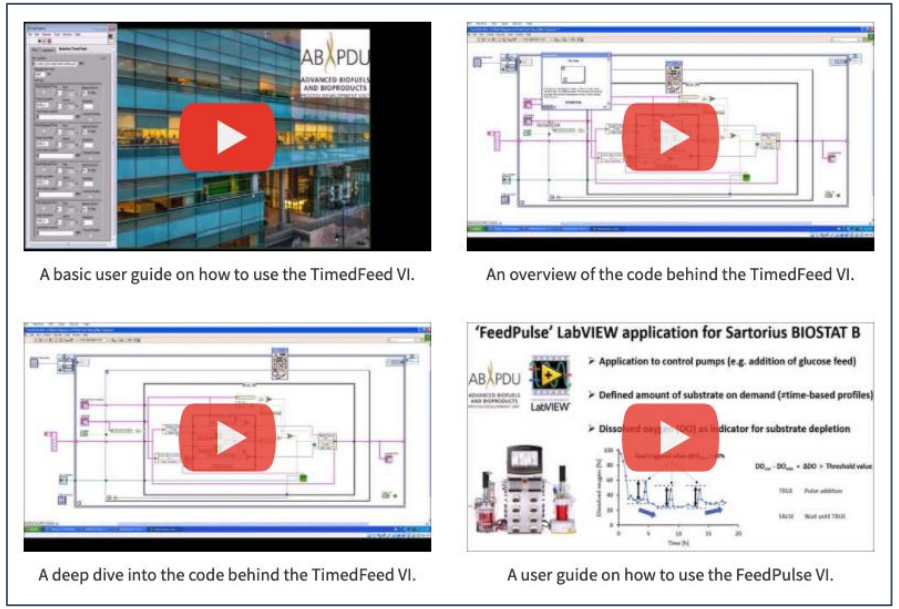


Software and Data made available on ABPDU Resources webpage: https://abpdu.lbl.gov/resources/

RESPONSE: Video Safe Operating Protocols (Video SOPs)

I came in with no fermentation experience and learned from ABPDU staff onsite. Training company affiliates can be very helpful. You can also upload control software that you generated? - Brian Lee, COO Pow Bio. Previously at Visolis

RESPONSE: ABPDU LabVIEW VIs and associated Video SOPs were published online and now used by companies: Visolis and Pow. Currently looking into offering week-long training courses for Industry



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Feedback – More information on Capabilities and Contracting

Knowing ABPDU's capabilities ahead of time will be helpful. What kind of organisms have you worked with, what can you help us with in terms of advising, etc. - Tina Boville, CEO Aralez Bio

What is an example of substantial contribution by ABPDU staff members for them to be listed as inventors on IP - Ouwei Wang, Co-Founder and CTO of Pow Bio

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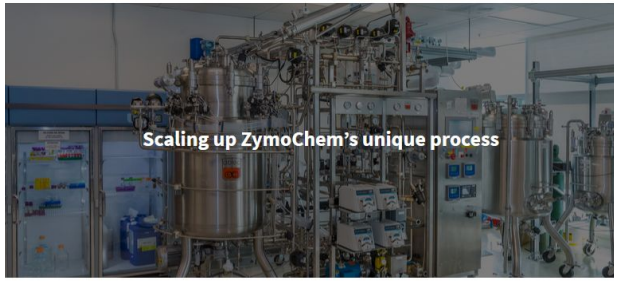
RESPONSE: Case Studies

Over 10 case studies authored. Many more in preparation

Checkerspot

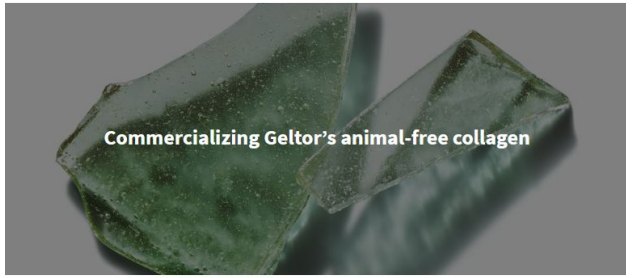
Checkerspot is a high-performance materials company that designs materials at a molecular level.

ZymoChem



ZymoChem is re-imagining the microbe, one that is designed to eliminate — or substantially reduce — carbon loss during the production of chemicals.

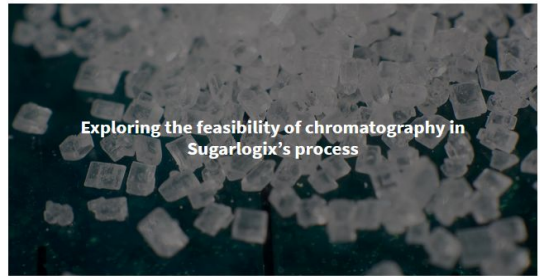
Geltor



Geltor is a Bay Area startup creating biodesigned protein ingredients.

As Geltor's first hire, Monica Bhatia was faced with a difficult task: turn the company's concept bioprocess into a commercially scalable technology in a short amount of time.

Sugarlogix



Sugarlogix is a biotech startup developing yeast-based technologies to produce a key component in infant formula.

Recology

Recology is an employee-owned resource recovery company headquartered in S

Collecting and managing waste is tricky business. Recology knows that firstha

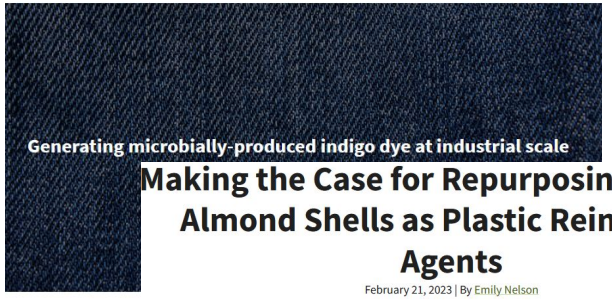
Digestiva

ABPDU's Gas Capture Capability Enables Production of Sustainable Aviation Fuel Molecule

February 06, 2023 | By ABPDU

tion combats

Huue



Huue uses biotechr

Making the Case for Repurposing Leftover Almond Shells as Plastic Reinforcing Agents

February 21, 2023 | By Emily Nelson

Speeding up Joywell Foods' Sweet Protein Development

March 02, 2022 | By Emily Nelson

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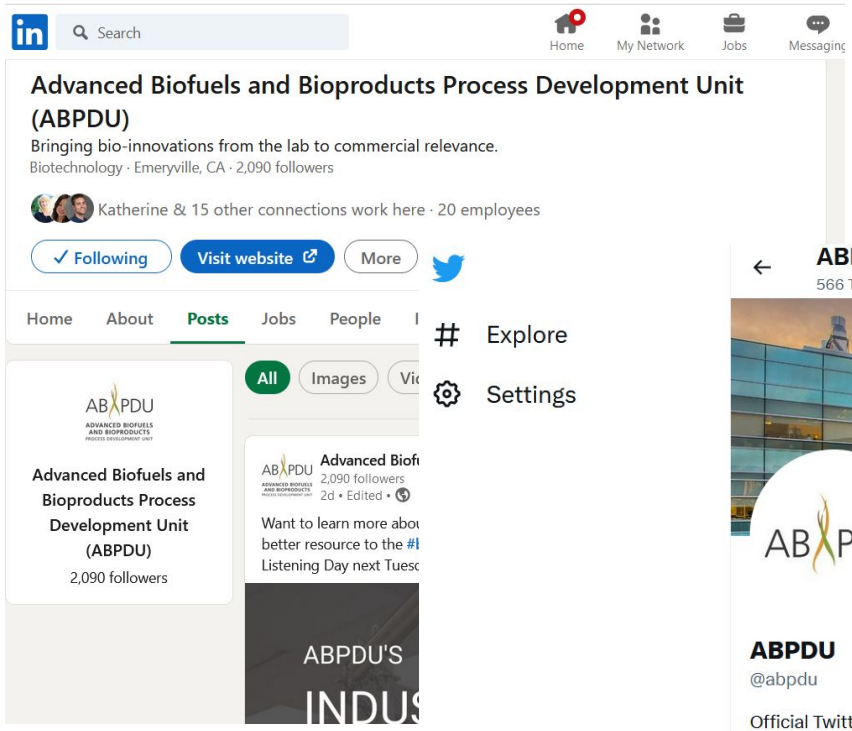
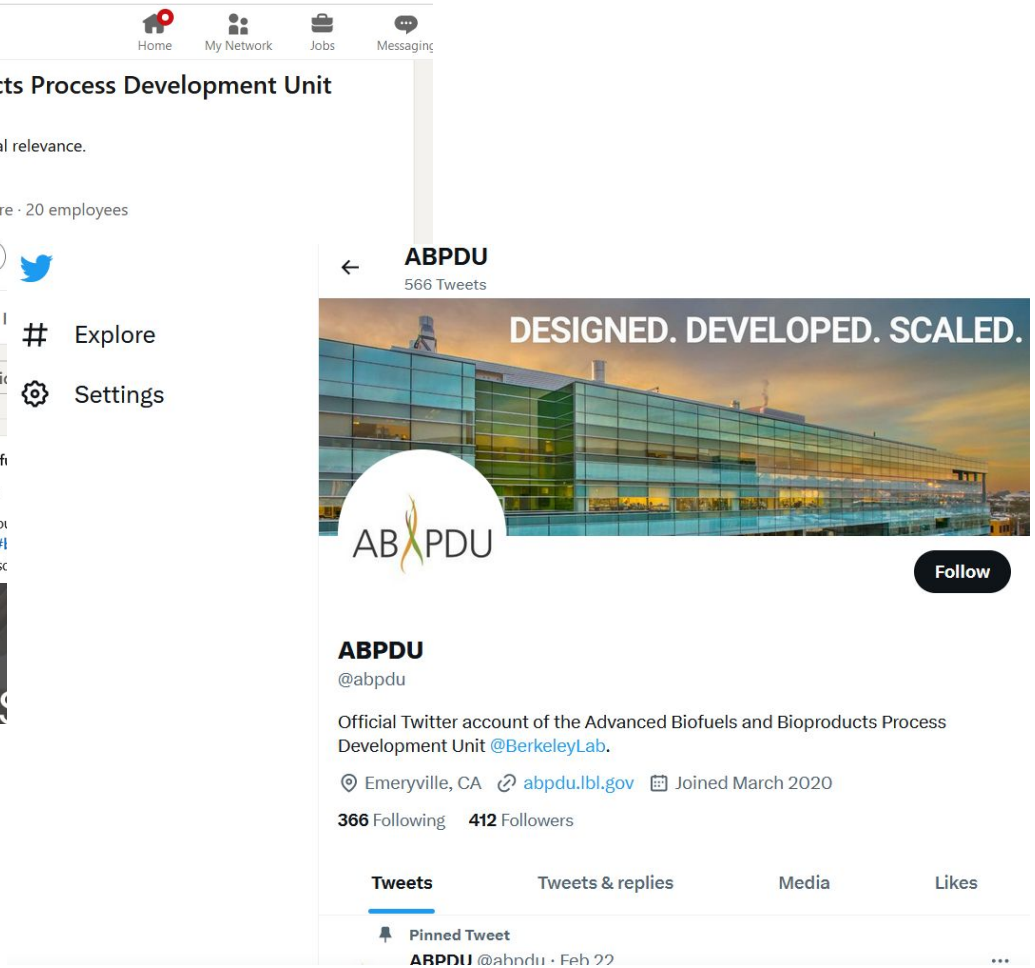
RESPONSE: Online Presence

Regular Communications via Linked In and Twitter

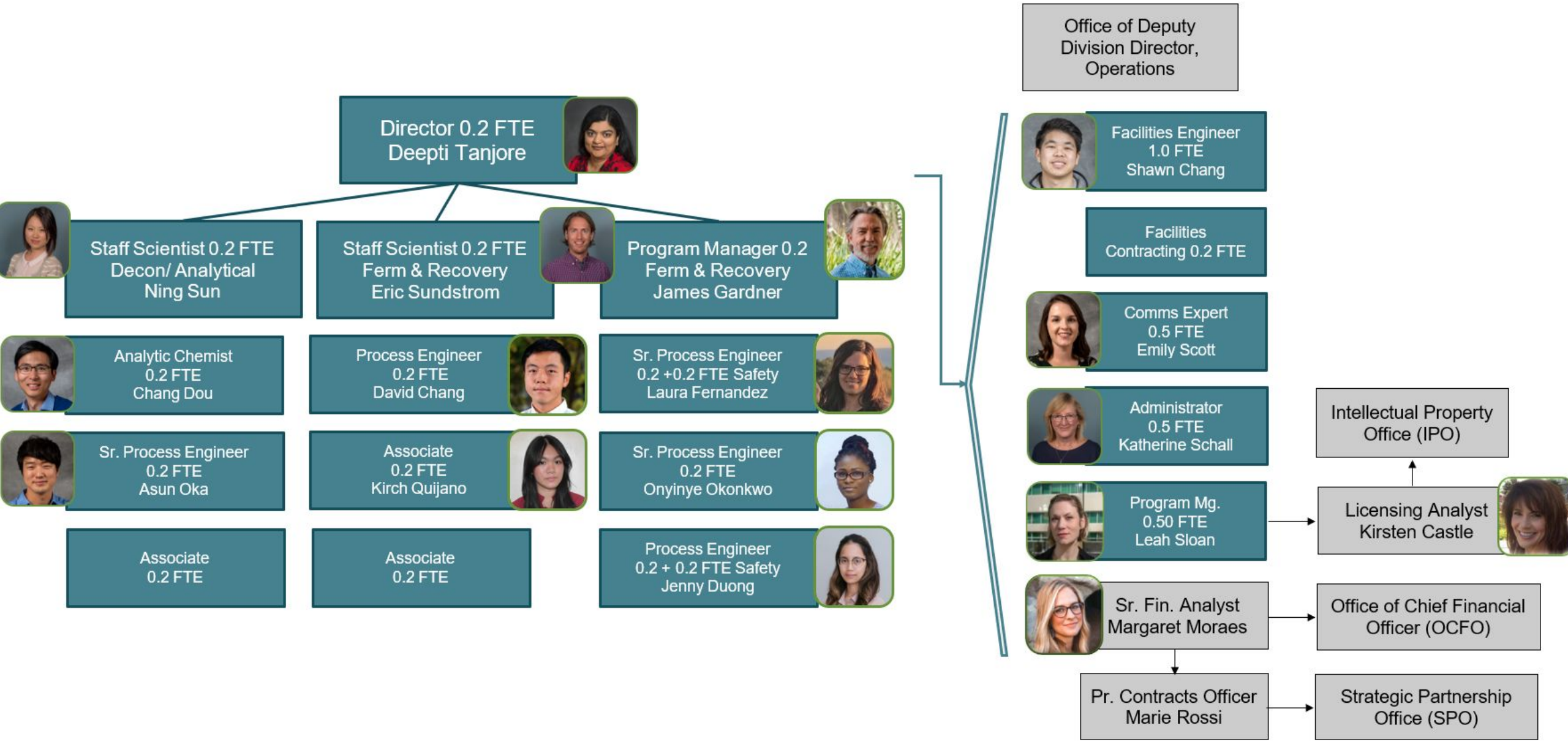
Quarterly Newsletter (https://mailchi.mp/f8855bfee857/abpdu-newsletter-signup)





In this issue: Industry Listening Day | Sustainable aviation fuel | Almond shell study | Pilot City interns | Funding opportunities

RESPONSE: Role of PM in Navigating LBNL system



Feedback – The Good

Small companies appreciate ABPDU's ability in adapting project scope, i.e. learning that DSP and not fermentation is the problem and quickly amending SOW is very important to small companies. - Brian Lee

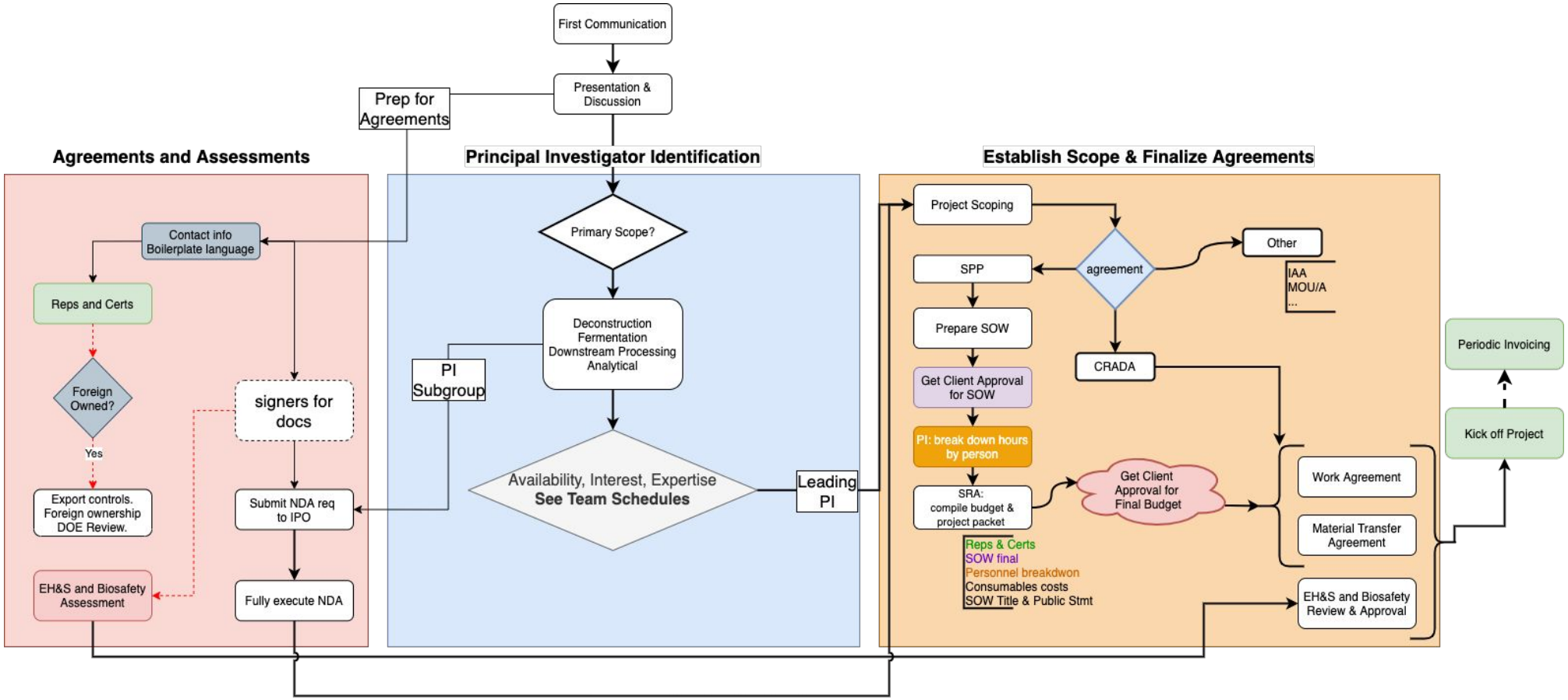
We are glad that you exist
- Jill Fuss

Team is very adept at problem solving. - Ritu Bansal

2 – Progress and Outcomes

Task 1.1.2 – Technical Scope Development and Internal Coordination

To establish a collaboration via a contract with LBNL, we follow the Workflow given below to ensure that we can deliver on the 12-week timeline for Strategic Partnership Program (SPP) contracts. Co-operative Research And Development Agreements (CRADA) and other contracts can take longer depending on the review of contract terms by the collaborators. Industrial collaborators prefer SPP contracts due to favorable IP terms.



2 – Progress and Outcomes

Task 1.1.2 – Technical Scope Development and Internal Coordination

After an initial phone call or email contact from a potential collaborator, PM Leah Sloan sends out a standard email with the overview video given below and option to process an NDA. This is followed by a meeting to answer any specific questions from the prospective collaborator and initiate scoping with an ABPDU PI, who is the expert on the topic.

https://www.youtube.com/watch?v=zJ_m0N7aTb8

In FY21-22, we met with 123 companies

Typical Questions from Potential Collaborators

Can you execute on *this* project?
The PI discusses the scope of the project in this first meeting to answer the question.

How much will it cost?
Cost varies drastically from campaign to campaign and is calculated based on staff hours required for a given project. SOW draft shared with clients after the meeting elucidates the # of hours needed to execute the project.

When can we start?
We suggest a 12-week timeline and initiate Reps and Certs, etc. immediately after the first meeting.

Agenda

Time (PST)	Time (min)	Topic	Speaker	Note Taker
10:00 - 10:10	10	Introductions	Deepti, Gayle, James, Ning, Eric, and Leah	-
10:10 - 10:20	10	Overview on responses to previous listening day session	Deepti	-
10:20 - 10:25	5	PM support to navigate LBL system and contract with ABPDU/ LBNL	Leah, James	-
10:25 - 10:55	30	5-min reflection followed by Open Discussion	Deepti	Eric
10:55 - 11:00	5	Break	-	-
11:00 - 11:05	5	Updates on Catalysis and Analytical equipment and research	Ning	-
11:05 - 11:20	15	2-min reflection followed by Open Discussion	Ning	Chang
11:20 - 11:25	5	Fermentation Automation and other equipment & research	James	-
11:25 - 11:40	15	2-min reflection followed by Open discussion	James	Deepti
11:40 - 11:45	5	Emerging Fermentation Modes	Eric	-
11:45 - 12:00	15	2-min reflection followed by Open discussion	Eric	James