

Biotech Advisory Meeting Minutes

Thursday, June 13, 2019

4:00-5:00 PM. Room 9202, Building 9000 [“the PUB”] with Lab Tour &
Student Poster Session to Follow

Meeting Attendees

Shoreline Community College: Dina Kovarik, Jan Chalupny, Guy Hamilton, Sandra Porter (also of Digital World Biology), Louise Petruzzella, Jim Schulz, Lauren Hadley and Reitha Weeks

Industry Representatives: Julia Gabriels, Ad Legesse, Jon Digel, Susan Julien, Arthur Castleton, Mark Parrish, Cindy Reichel, Meg O’Conor and Jessica Brett (Guest, NSF Evaluator).

1. Introductions and Approve Minutes from the March 4, 2019 Meeting

Mark joined the meeting later. The 3/4/19 Minutes were approved at the end of the meeting with one correction.

2. Cohort & Program Updates (see Appendix provided as handouts)

a. **Biotechnology Cohort Updates**

Dina distributed the cohort hand out and then yielded the floor to STEM Dean, Guy Hamilton who had to leave 15 minutes later. He welcomed everybody and mentioned highlights of the year within Shoreline’s Biotech Program including the anticipated biomanufacturing center that AGC will be building and Shoreline providing some of the equipment. An MOU is being worked on and a report back will occur in the fall as things develop. Meg O’Conor said AGC envisions the center to be for the community; an asset to biotech companies and consortium efforts.

b. **Cohorts** - Dina went over the cohort update handout. It was requested that Dina include contact information and the LinkedIn profiles of students. That information has been added to the handout in the Appendix.

c. **PROJECT BIOTECH Summer Camps** - see flier (deadline 6/14); there’s one more tour session to schedule. Reitha Weeks rweeks@shoreline.edu talked about the handout on the 2019 Biotech Summer Camps. Registration is \$450 and registrants can request a scholarship which are provided by industry sponsorships [many of which are made possible by Board members in the room, so thank you!] as well as partnerships with local School Districts who provide financial assistance [Edmonds, Everett and Northshore]. We have 36 Registrations for 72 spots. Topics this year include “Biotechnology Essentials and Beyond,” “Tracking Hantavirus in Washington State,” and “Cancer Biology.”

Because of the snow-related high school closures, camp dates will need to be delayed / postponed [starting July 8 instead of June 24]. Both camp sponsorships and tours for 12-24 students each are still needed.

The Board asked how many students return from previous years or participate in multiple camps. Approximately 4-6 students participate in all 3 camps, 4-6 participate in 2 camps, and 4-5 alumni return each year.

- d. **NSF** - update from evaluator (from Boston, Massachusetts). Student interviews will be on Friday for the student data component of the NSF report. Jon Digel gave positive feedback for the Biotech Program - three Shoreline graduates were awesome. The NSF evaluator will interview students 6/14 to inquire about things such as how Shoreline's Biotech Program prepared them for a job, etc.
- e. **NIIMBL Biomanufacturing Grant** - Louise Petruzzella's ASK – she could use two more people for focus group support (6/20, 7/18, and 8/8, from 10:00a-noon. She will re-send the email.)

3. Program Asks: Facilities & Committee Participation

Big ASKS from Dina:

1. **Tissue Culture Incubators (2) are needed.**
Jon Digel said he might be able to help. Jim Schulz mentioned more culturing occurs since Theripion cultures year round.
2. **Dina would like input related to the Biosafety Level 2 (BSL2) certification process.**
Adhanom Legesse and Jon Digel said they can help.

New Biotechnology Student Orientation and Welcome - Lauren Hadley talked about new student orientation in the fall. It will be held in the PUB and board members have the opportunity to do 10-15 minute presentations during the two-hour slots September 19, 20, 23. Jim Schulz said it's a great kick off!

4:40p Poster Session Information and Preparation (“Biotech Poster Review” in Appendix)

One student attending today's advisory meeting gave a short introduction about her poster project on allergens when she participated in the Poster Symposium as a current student. The feedback form for Committee members to provide feedback is provided in the Appendix. Committee members were told that they need not visit every poster to make a valuable contribution to the process.

Action steps:

- Dina will send program review report by state contractor.
- Dina will send program review report by Jessica Brett, the independent evaluator for the NSF ATE grant.
- Dina will follow up on certifying BSL2s and create a doodle poll.
- Louise – will follow up with Jon on incubators, biomanufacturing on stackables, etc.

4. Request for Tours: Spring and Summer

- Seattle Genetics in summer (Adhanom Legesse)
- Potential tour with Jon Digel (freezer farm, etc.)

Dina gave a big thank you to everybody for feedback on the Molecular Biology course. It will be updated for Winter, 2020.

Action items continued:

- Cancer Biology Course will continue to be refined with Committee feedback from the March, 2019 meeting
- Immunobiotechnology Certificate: Given the amount of work needed to determine what should be included in the Certificate and what should not, a half-day Curriculum Retreat is warranted.
- Contingency plan if there are not two cohorts. The end goal of the NSF grant is to have a plan for the Immunobiotechnology Certificate.
- Cohort Update Handout - Meg asked if it could be emailed to the advisory committee.

Adjournment: 5:05p. The next meeting will be in November. A “Save the Date” will be sent in October.
Submitted by

Dina Kovarik, MS, PhD
Program Chair, Biotechnology Lab Specialist Program

Attachments: Meeting Handouts

Biotechnology Lab Specialist Program

June, 2019 Student Update

[with Contact Information and LinkedIn Profiles added at the Committee's request]

Completing/Completed: 2016-2017 Cohort

Student	Internship	Employment	Degree or Certificate
Preethi Jayaraman	Completed	Seeking	Certificate
PL	Paused		Certificate

Completing/Completed: 2017-2018 Cohort: All employed or working towards a four-year degree!

Current 2018-2019 Cohort

- Certificate Students = 10
- AAAS Students = 3
- Other = 2

Student	Internship	Employment	Degree or Certificate
Jenn Atkinson Jennifer.atkinson@go.shoreline.edu https://www.linkedin.com/in/jenn-atkinson-5067b0178/	Seeking		Certificate (AAS in Veterinary Technology and BA in Biology)
Erin Barry Erin.barry@go.shoreline.edu https://www.linkedin.com/in/erinmariebarry/	Seeking		Degree
Matthew Burke ("Matt") matthew.burke@go.shoreline.edu https://www.linkedin.com/in/matthew-burke-biotech/		Seeking (for fall)	Certificate (BS from UW)
Rachel Chapin Rachel.chapin@shoreline.edu https://www.linkedin.com/in/rachel-chapin-0647b2178/	Seeking (for fall)	Seeking (for fall)	Certificate (BS from WWU)
Venkata Ramya Kongala ("Ramya") venkata.kongala@go.shoreline.edu https://www.linkedin.com/in/venkata-ramya-kongala-3388baa1/	Seeking	Seeking	Certificate (has an H4-EAD Visa through 2023)
Jasmine Mueller Jasmine.mueller@go.shoreline.edu https://www.linkedin.com/in/jasmine-mueller-39842b106/	Seeking	Seeking	Degree <i>Continued on next page</i>

Miriam Ramos miriam.amos@go.shoreline.edu https://www.linkedin.com/in/miriam-amos-aa5647a6/		Seeking (for fall)	Certificate (Bachelor's in Biotechnological Engineering)
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2019-2020 Cohort

- REGISTERED for classes: 12 [including 2 from last year 😊]
- AAAS Students = 5 (taking classes at Shoreline)
- Certificate of Completion Students = 17 (of which 12 have met with Dina one-on-one)

Future 2020-2021 Cohort

- AAAS / AAS-T Students = 4 (2 taking classes at Shoreline and 1 PROJECT BIOTECH alum!)

March 2019 Biotech Advisory Board

Feedback Summary – Cancer Biology Course – course outline and requirements and pre-requisites

Important Topics on the course outline

- Causes of cancer
- Signal transduction
- Retinoblastoma
- Cell cycle
- Tumor suppressor genes and oncogenes
- Cancer invasion and metastasis
- Targeted therapies

Topics which should be added to the course outline

- Viral (HPV vaccine) and environmental causes of cancer
- Pharmacokinetics
- Diagnostics for cancer/companion diagnostics
- Cancer screening/genetic testing
- Refractory/resistant cancers (mechanisms)
- Clonality
- Xenografts
- Classification of cancers based on genetic mutations (personalized medicine)
- Mechanobiology – role in cancer metastasis
- Cost of Treatment
- Pre-emptive treatments (mastectomy)

Requirement for Cancer Biology Course (board opinions)

- Required for all Biotech students – 3
- Required for Immuno-biotech students – 7
- Elective for all or subset of Biotech students – 6

BIOL 270 (Molecular Biology lecture) as a pre-req for the Cancer Biology class (board opinions)

- Required – 9
- Recommended but not required – 2

BIOL 277 (Immunology) as a pre-req for the Cancer Biology class (board opinions)

- Required – 3
- Recommended but not required - 7

Biotech Poster Review

Poster Number _____ TOPIC _____

NAME(S) _____

	Below Expectations	<i>Circle One</i>	Exceeds Expectations			Notes
	1	2	3	4	5	
Introduction: Background or <u>rationale</u> for the study was explained, as well as the <u>goals or objectives</u> .	1	2	3	4	5	
Methods: An explanation of the techniques used and the <u>rationale for their use</u> was provided.	1	2	3	4	5	
Results: A summary of the <u>most pertinent data</u> was provided.	1	2	3	4	5	
Discussion: A summary of <u>what the data means</u> was provided.	1	2	3	4	5	
Outcome 3: <u>Conduct research</u> experiments following operating and safety protocols and apply knowledge of theory and techniques to <u>troubleshoot appropriately</u> .	1	2	3	4	5	
Outcome 4: <u>Analyze and display data</u> using computer technology including the Internet and software designed for maintaining a database, preparing spreadsheets, conducting statistical analysis, bioinformatics and graphical display.	1	2	3	4	5	
Outcome 5: Manage laboratory activities including record keeping, ordering supplies and <u>preparing reports and presentations</u> .	1	2	3	4	5	