



Shoreline Community College

16101 Greenwood Avenue North

Shoreline, WA 98133

Biotech Advisory Meeting Minutes

Thursday, May 11, 2017

2:30 – 4:00 pm

PUB 9201 (9000 Building)

Meeting Attendees

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

Industry Representatives: Joy Adiletta, Pradip Ghate, Jenna Gravley, Luanne Hebb, April Lewis, Susan Julien, Mark Parrish, Arthur Castleton, Anne-Marie Rousseau and Dmitry Serbzhinsky

Mark Parrish opened the meeting, and it was announced that he is taking over as Chair of the committee

Minutes from the 11/21/2016 Meeting were approved with minor corrections:

Actions: The spelling of Susan Julien's name on the minutes and on the Board Roster needed to be corrected [from Lulien]; Joy Adiletta needed to be added to the Industry Representatives list

Board Member Introductions and Introductions of New Members:

Arthur Castleton – SystImmune

Luanne Hebb – Alpine Immune Sciences

Susan Julien – Zymogenetics

Updates

a. National Science Foundation proposal: Advanced Technological Education (ATE) (Dina)

- Still waiting to hear about funding
- Deep gratitude to the Board for all of their help and feedback during planning
- Grant would fund the development of five new classes [Quality Systems, Cancer Biology, Case Studies in Drug Development seminar, Advanced Bioinformatics, and Special Projects [independent student research course] and revise two courses: Media & Solutions and Molecular Diagnostics
- Grant would also fund the development of two high school curriculum modules on infectious diseases and cancer biology, with associated science loaner kits, professional development and 50% of the Biotech Outreach Manager (Jan Chalupny)
- After two rounds of questions, we were asked to scale the project back from \$675K to \$560K over three years

b. Amgen Biotech Experience (ABE) Grant & Outreach

- Amgen left Seattle 1.5 years ago, sunset ABE outreach funding, concludes at the end of June.
- Submitted innovation grant proposal for one year; notified in 2-4 weeks.
- Part of Shoreline outreach initiative: Shoreline Biotech Experience (SBE), opportunity to re-brand Shoreline biotech experience (kit loan, etc.)
- Guy: Mission and grants white paper handout provided. The goal is to self-fund with donations and grants and to be self-sustaining within a year.
- David Pinter, Shoreline Grants Direction, has identified four smaller grants with August deadlines that could fund SBE. Guy & Louise will follow up.
- Sandra noted that, if the NSF grant is received, we could apply for a supplement at some point
- **Action:** Dina will follow up about letters for support if needed for smaller grants

c. Independent Laboratory Research Experience Pilot (Jan)

- Jan piloted an independent research course focused on DNA barcoding with high school students (mostly Edmonds School District) with the hopes to enlarge the program to include Shoreline. Goal: Reach all of the feeder school districts for Shoreline CC
- Went well. Several submitted to and placed in the Central Sound Regional Science and Engineering Fair; one received the supernova award (shows promise and innovation)
- Aim: for students to come up with their own research or their data feed other organizations, such as the partnership with ORCA through Everett Community College (the Ocean Research College Academy high school program at Everett) which includes a poster symposium
- Jan is working to deepen the curriculum to prepare for college-level rigor in fall
- High school student course will be continued next winter.

d. Project Biotech Camps: Three in 2017 (see flier) (Reitha)

- 4th year for camps. Three camps now for rising 8th-11th graders
- Intro camp is “Biotech Essentials & Beyond” & “Biotechnology and Infectious Disease: Tracking Pandemic Flu” are both full; “Biotechnology & the Environment: Exploring the Health of the Salish Sea” is 2/3 full
- Camps are five days, Monday-Friday, 9:00 AM – 4:00 PM, focused on lab experience, data analysis and career exploration
- Camp is partially funded by the \$450 per student registration cost, but the actual cost per camper is \$650; thank you to sponsors for making this possible, including the companies of many Board members: ZymoGenetics, Seattle Genetics, SystImmune and Covance, as well as Juno, PNDRI, Alturas and Seed IP. \$17,000 has been raised so far.
- Career panels – email from Reitha anticipated
- Field trips –Need an afternoon option for one of them

e. Biotech Student Poster Symposium Invitation – June 12th 5:30-7:30pm, Room #2926 at SCC (Dina)

- At the March, 2016 Curriculum Retreat, three alumni attended (Evan Henrich, Richard Moran and Sean Maden) who suggested having some type of “opening event” and “closing event” for the program
- This year, 17 in the cohort who will present their immunology independent projects at the 2nd Annual Biotech Student Poster Symposium held June 12 in room #2926, with a tour of biotech lab to follow. Alumni, Board members, prospective new students, faculty, family and friends are all invited.
- **Action:** Please come if you are available.

f. 2015-2016 Cohort – Employment Opportunities (Dina)

- 8 in the 2015-2016 cohort last year. 2 students had to leave for various reasons came back.
- One is looking for employment
- One at will be looking for employment at the end of the summer
- **Action:** Dina send resume to Pradip Ghate.

g. 2016-2017 Cohort – Internships Needed

- Good meeting with Seattle Children’s regarding potential internships
- Institute for Systems Biology offers high school and college internships
- Any suggestions welcome
- Internships typically last 10 weeks, typically in summer or fall but need not align with our academic calendar.
- Credit load is usually lower in summer and second fall, allowing more time for internship. Sometimes it is a two quarter commitment.
- VA discussion to continue with Dina
- Are they learning a new skill set?
- **Action:** Let Dina know if you are aware of internship opportunities at your company / institution or elsewhere

Tours Need (Louise)

- Typically on Fridays, mid-mornings or afternoons, for about an hour (students have classes Monday-Thursday). We can limit the number of students attending or split them into groups if needed to accommodate the facility’s needs.
- Dmitry offered to help organize the summer tours of Seattle Genetics with Ad
- Joy (SystImmune) and split Mark (Covance) suggested offering tours on the same day, since they are located close to one another on the east side
- Guy: it is a transformative experience for students, seeing really makes a difference

- Dina: Seeing the connections to the curriculum, what they're learning in class, is powerful, and they always come back to class with questions
- Suggestions:
 - Guy – research the company first, like they are doing an interview
 - “what about a company with no information about it?” scenarios
 - “What did they say after tour?” Mark would be interested in hearing feedback.
 - Pre-tour research / Post-tour report-out

Equipment Needs (Louise & Dina)

- Plate Readers – Feedback on Models (establish sub-committee for input)
- Coulter Cell Counter. Ours is old, but much needed for tissue culture class
- Clinical Centrifuge with 96-well Plate Capacity
- **Action:** Dina to email her

QA/QC Mini-workshop (Dina & Group Work)

Purpose: High need for Quality Systems course, with or without support from NSF ATE grant. To develop this course, please help identify bullet points for the curriculum

- Controlled document systems – who writes, approves, change control, 2nd people sign offs.
- Paper vs. electronic signature
- Regulatory bodies: FDA, Australia, China, differences
- Calibration quality systems – 7 – change control, CAPA, deviations
- Training and training others #7
- Compliance
- Specifications, especially in drug manufacturing
- NIMS
- Difference between lab notebook (primary) to a report
- Treatment of primary data
- Jan – sample banking – quality control
- Jan – preparing... plates, etc. proper record, spot release
- Shipping and receiving and quarantine, especially overseas, port permits, etc.
- Role-play an FDA audit, customers, general inspection, audit readiness
- Basic understanding of QA vs. QC
- GLP vs. GMP
- Testing labs & CLIA certification. NY, grandfathered. NY, WA, CA, FL, and Maryland have different accreditation in those states. Diagnostic accreditation takes two years in those states. WA is a grandfathered state.
- ISO
- Documentation office, what does this look like in a small vs. large company

- Phases 1, 2, 3 clinical trials
- QA – In process
- Mark – need a QA person there
- Guy – active learning – keep batch records
- Activity: Abbreviated filing – fill in parts
- Sandra – popcorn activity (in fall) from Austin Community College
- Ad – expectations, QC or QA – interface with various groups, communication
- Jim – textbook: *Drugs: From Discovery to Approval*
- Mark – make up a name, drug, manufacturing, etc.
- Sandra – Franklin Biologics movie – get copies. SLC community college manufacture, plasma, etc.
- Sandra – courses in a box – German country – audits – ISO
- Vivian at Mentorlinks
- Dina will take list; tie in with kits, rank, etc.
- Ad – students need to know what the terms are, what they mean, when interviewing. Dina – great career exploration
- Mark – course requires good speakers
- “Role of QA when something has gone wrong?”
- Jan scenarios... power went out, are plates still good?
- Sandra – “Bad Hair Day” curriculum.

Action Steps & Networking (Mark)

- NSF update from Dina when available
- Dina – would love to see you at the Biotech Student Poster Symposium
- Information about student orientation
- Louise will email about tours
- Dina – will update drafts of SBE Mission, Vision & Goals document

Adjournment

Submitted by

Dina Kovarik, MS, PhD
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