

Life Sciences Faculty Resources to Navigate SARS-CoV-2/COVID-19 Online Teaching

Thursday, July 2, 2020

Announcements

- **No Faculty Conference Call or Statewide Biotech Happy Hour this Friday (7/3) due to the July 4th holiday.** These calls will resume on Friday, 7/10.
- **Faculty can take the online CQIA course** offered at Miramar College; open enrollment begins July 15; Class begins August 17, 2020.
 - For more information about the certification, go to <https://asq.org/cert/quality-improvement-associate>
 - To enroll, go to www.sdmiramar.edu
 - For more information about the course, contact Becca Bowers at rbowersg@sdccd.edu
- **Student and Program Success Stories:** we are looking for stories that showcase success of your students and of your programs to include in our new Life Sciences/Biotech Skilled Technical Workforce Report that's scheduled for release in September.
 - If you have a story, please contact Terri (tquenzer@sdccd.edu) or your Regional Director (Josie Sette (jsette@ohlone.edu), Wendie Johnston (wendie.johnston@pasadenabio.org), Keau Wong (kwong@miracosta.edu)) so we can arrange to interview you and/or your student(s).

New Releases:

[Report of the Safe Campus Reopening Workgroup](#) (Chancellor's Office). Considerations for locally governed community college districts for the safe and responsible reopening of college campuses.

[The Bioscience Economy: Propelling Life-Saving Treatments, Supporting State & Local Communities 2020](#) (TEconomy/BIO). Highlights and key findings of the latest bioscience industry and ecosystem assessment.

[2020 U.S. Life Sciences Salary Report](#) (BioSpace). Salaries by key life sciences Hotbed regions, industries, disciplines, titles, and therapeutic areas.

[2020 California Economic Impact Report](#) (Biocom). Providing key statistics and information on California's Life Science Industry.

Other Important Life Sciences Reports

[Supply and Demand Analysis: Life Sciences & Biotech Middle Skills Workforce in California 2017](#) (CA Community Colleges Life Sciences/Biotech Initiative).

[California Life Sciences Industry Report 2019](#) (CLSA). Outlines measures of success in the California Life Sciences Industry.

[The Value of California's Life Sciences Sector 2019](#) (Infographic; CLSA). Highlights from the 2019 CA Life Sciences Industry Report.

[2018 Talent Integration: California Workforce Trends in the Life Science Industry](#) (CLSI, Biocom, Centers of Excellence). Key data that demonstrates the industry's job growth engine, helps steer training dollars toward industry hiring needs, and informs curriculum and professional development.

[2018 Job Trends Forecast](#) (MassBioEd). Broad overview of supply-demand dynamics, pay, skill demand, employer sentiment, and occupational projections within the life sciences industry in Massachusetts.

[The Skilled Technical Workforce: Crafting America's Science & Engineering Enterprise 2019](#) (National Science Board). Focuses on the Skilled Technical Workforce, those with STEM skills and knowledge who do not have a bachelor's degree.

Friday, June 26, 2020

Friday Faculty Conference Call (v. 6/26/20)

Thanks to those who were able to join the Faculty Conference Call today. We were joined by Richard Chan and his team from Embitec to talk about the MiniOne at-home lab kits that as of early August will include their new mini centrifuge that runs inside of the MiniOne Photo Hood. The systems are compact, portable, and affordable, at under \$100.

There was much discussion about the Benchling Life Sciences R&D Cloud for documentation. It's being used by BABEC to store protocols and batch records, and by CCSF to document DNA analysis and sequencing. Benchling is free for academics.

Sorry that there is no recording from today - for some reason the recording did not pick up any of the sound, so I'm not posting it.

Resources:

EmbiTec MiniOne Resources:

- MiniOne Resource Center: <https://theminione.com/minione-resource-center-2/>
- MiniOne instructional videos: <https://theminione.com/minione-videos-minione-user-manuals/>

Benchling: <https://www.benchling.com/> - this life sciences R&D cloud platform is free to academia and is being used for electronic notebooks. Check it out.

Friday, June 19, 2020

Friday Faculty Conference Call (v. 6/19/20)

Thanks to those who were able to join the Faculty Conference Call today. We were joined by Clem Fortman, who is working on the **BioMADE grant proposal**, similar to the NIIMBL grant, only for non-pharma biotech. Clem discussed the requirements and expectations of Colleges that join the grant as members, benefits of which include potential collaboration with companies seeking specific training (enrollment, work-based learning opportunities and jobs for students) and opportunities to apply for grant funding.

Membership requires submission of two forms by your Administrator, including a commitment form. We are working on a letter that you can present to your Administrator to help you gain support and will post that, along with the forms here.

[Click here to access both the video and the chat together.](#)

Friday, June 12, 2020

Friday Faculty Conference Call (v. 6/12/20)

Thank you again for those who were able to join the Faculty Conference Call today. We had a robust discussion recapping how the semester went and looking ahead to teaching plans for the Fall in the wake of COVID-19.

[Click here to access both the video and the chat together.](#)

Friday, June 5, 2020

Friday Faculty Conference Call (v. 6/05/20)

Thank you to those who were able to join the Faculty Conference Call today. Kathy Harker, Rachael Harper-Delupio, and Daniel Michael talked about the student peer-to-peer interviews they piloted between students at Citrus and LA Trade Tech Colleges. They discussed the docs they created, including those to prepare the students and the rubrics they created for the students to evaluate each other in both roles (interviewer and interviewee). It was very informative.

[Click here to access both the video and the chat together.](#)

Wednesday, June 3, 2020

GUIRR Webinar (free): Workforce Education and the Implications of COVID-19, Monday, June 8, 2020, 10 - 11:30 am PST. [Click on this link for more information and to register.](#)

Friday, May 29, 2020

Friday Faculty Conference Call (v. 5/29/20)

Thank you to those who were able to join the Faculty Conference Call today. We had two great presentations. Vicki Nienaber showed us the XplorStem platform which focuses on home education and provides robust hands-on science education that doesn't require a science teacher in the room, and provides hands-on labs that use low-cost equipment (check out the SciXSpinner top-style centrifuge in the video starting at 00:19:00). Dawn Barry and Scott Kahn gave us an overview of LunaPBC and a new paradigm in which people permission their medical data to share in studies that drive new discoveries. The platform is win/win/win for participants, communities, and researchers. In case you missed this, the video was recorded and is posted on the link below.

[Click here to access both the video and the chat together.](#)

Resources

XplorStem: For more information, go to the website (<https://www.xplorstem.com/>). Subscribe to get updates and a free activity book on viruses. If you have questions, you can contact Vicki Nienaber at vicki@xplorstem.com.

LunaPBC: To learn more and sign up for the newsletter, go to <https://lunapbc.com/>. Be sure to also click on this link: <https://www.lunadna.com/>.

Wednesday, May 27, 2020

Friday, May 29 Faculty Conference Call Announcement: We have two wonderful guest presenters joining us this Friday:

Dr. Vicki Nienaber, President of Zenobia Therapeutics and XplorStem, and well known for her pioneering work in the field of drug discovery using fragment-based screening and structure-based drug design, will share information about her platform for homeschooling that can be applied at the college level as well. XplorStem is a science education company founded in 2019 with a National Science Foundation grant to democratize access to science education. Learning is guided through an online learning platform including a hands-on laboratory that reproduces historic scientific discoveries. The program is designed to be completed at home by homeschool students and does not require a science teacher in the room. Safety is a primary consideration and classic experiments have been reimaged and redesigned without harsh, caustic reagents. Art and creative writing activities are included to reinforce learning and all math required to understand and analyze laboratory data is taught.

AND

Dawn Barry, Co-Founder & President, Public Benefit Corporation, LunaPBC. LunaPBC, a World Economic Forum 2019 Technology Pioneer, launched [LunaDNA](#), a SEC-qualified health data sharing platform owned by its members. Dawn was an early Illumina employee and spent 12 years there serving in multiple market development roles including Vice President, Applied Genomics. Dawn was San Diego Business Journal's 2017 Business Woman of the Year, a [TEDxSanDiego](#) 2016 speaker, and is Board Chair of the Alzheimer's Association San Diego/Imperial County. She was also recently named to the [California Entrepreneurship Task Force](#), under the Governor's Office of Business and Economic Development.

LunaDNA builds virtual, dynamic, participant-centered health data sharing communities for disease and quality of life research. LunaDNA seamlessly addresses the full continuum from digital community creation, to privacy-preserving and participant-led data sharing, through

GDPR-compliant research. The platform captures the full spectrum of discovery data including self-reported and real-world data, electronic health records, and DNA. Different than institutional data models and silos, LunaDNA forms a data sharing relationship directly with individuals, is interoperable across communities, delivers value to participants, and operates under SEC oversight and in compliance with modern consumer privacy laws.

Here is a link to an author's copy of our [Nature Biotechnology](#) publication, Database Shares That Transform Research Subjects Into Partners.

Also this Friday (5/29):

The CVC-OEI is holding a webinar on **Friday, May 29, 2020, 2:00-3:00 pm** to **discuss science labs for Biology**. Please see below for more information and registration details.

Tanya Hoerer teaches biology lab classes using OER resources and virtual labs/simulations. Suzanne Wakim has been investigating resources for biology labs with potential use in both hybrid and fully online courses. In this Share Showcase, Suzanne will share her list of resources and discuss ways of designing quality online biology lab courses. As she provides a tour of her Canvas course, Tanya will discuss pedagogy, including methods of facilitating labs at a distance and providing substantive interaction and feedback. The presentation will focus on developing and teaching online science labs for Intro to Biology but Suzanne and Tanya stand ready to field questions about online labs for other biology courses.

Presenters: Tanya Hoerer, Coastline College, Biology & Suzanne Wakim, Butte College, Biology

Before attending this webinar, we recommend watching "[Online Course Development & Delivery: Science Labs](#)," a video archive of a session presented at OTC 2019 that provides a general introduction to teaching science lab courses online.

[Register here](#) to receive an email with a Zoom meeting connection.

For more information, contact Miguel Rother (miguel@ASCCC.ORG), Director of Grants and Initiatives, Academic Senate for California Community Colleges

Friday, May 22, 2020

Friday Faculty Conference Call (v. 5/22/20)

Thank you to those who were able to join the Faculty Conference Call today. We adapted the **Popcorn GMP Workshop** to make it **virtual**, and did a beta run of the virtual version. Due to technical difficulties in getting the forms to everyone, we actually got into the activity about 48

minutes into the video. Remember, this is a beta version of the workshop, so adapting to format and circumstances as we went through the activity.

The activity included a CAPA, both as part of the assignment and for improving the workshop. Some suggestions for improvement of the Popcorn GMP Workshop include the following:

- Add a pre-assignment to get participants to read before participating in the class. E.g., “here’s what my role is”. This will differ based on the audience (students, trainers). The idea is to get them to visualize the activity and see a big picture chronology.
- Have students do the experiment (pop the popcorn and document) and collect data in advance, then come to the virtual workshop with data and do the CAPA
- Pair students into teams of two (rather than 5) and combine roles: 1) Material Control and Quality Control (QC); and 2) Manufacturing Technician I & II. Have the instructor do the Quality Assurance (QA) role.

[Click here to access both the video and the chat together.](#)

Resources

Virtual Popcorn GMP Workshop: Contact Terri at tquenzer@sdccd.edu for access to the forms.

Wednesday, May 20, 2020

Virtual Popcorn GMP Beta Run This Friday

This **Friday, 5/22**, from **1 - 3 pm**, we are going to have some fun adapting the Popcorn GMP Lab into a virtual lab activity that your students can easily and safely do at home. In the process, they will learn some basics about **quality, GMP/documentation/compliance, and root cause analysis**.

In the spirit of continuous improvement, we would like for you to participate in this beta run from your kitchen and give us feedback as to how you would improve it for your students.

Nikita Malavia will lead the group in this activity. You will be paired up and placed into breakout rooms on Zoom. We are allowing **2 hours** for this activity.

Here's what you will need:

Documents and Forms. Please download all the documents and forms you will need in advance.

- Introduction materials: [click here to download Introduction materials.](#)

- Training documents: [click here to download the Training Docs.](#)
- SOPs: [click here to download the SOPs.](#)
- ASC Forms: [click here to download the ASC Forms.](#)
- Signs: [click here to download the signs.](#)

Materials, equipment, and PPE.

- 3 3-oz bags of microwave popcorn or 3/4 cup of popcorn kernels (yellow or white)*
- 1 microwave oven
- 3 large bowls to hold the popped popcorn
- 3 small bowls to hold the unpopped kernels
- Goggles and gloves (if available)
- 1 sharpie or other permanent marker

*If you're using loose popcorn, you will need the following instead:

- 3/4 cup loose popcorn kernels
- 1/4 cup measuring cup (holds 400 popcorn kernels on average)
- 3 brown or lunch-size paper bags for popping.

Here's the Zoom link to participate: <https://cccconfer.zoom.us/j/134821012>

Friday, May 15, 2020

Friday Faculty Conference Call (v. 5/15/20)

Thank you to those who were able to join the Faculty Conference Call today. We had a presentation from Damon Tighe of Bio-Rad with many resources to help faculty, including talking to your students!

[Click here to access the recording and chat.](#)

And we have some exciting things coming up on the next few Friday Faculty Conference Calls:

Friday, May 22: Beta test of the online version of the Popcorn GMP Workshop. Many of you have done the hands-on workshop. Whether you've done the workshop or not, come and help us Beta test this workshop online and share your ideas as to how we can make it "ready for prime time".

Friday, May 29: We have two guest speakers lined up for this call. Vicki Nienaber, President of Zenobia Therapeutics and XplorStem will join us to talk about STEM kits she produces for K12 home schooling and how those kits might be modified and applied to your students. Dawn Barry, President and Co-Founder of Luna PBC, a community-owned health and DNA research platform

Resources

BioRad Resources. [Supports from BioRad during the new normal](#). I would like to thank Bryony Reugg and Damon Tighe for joining our call today, and special thanks to Damon for a great presentation on the many resources available through BioRad. In addition to at-home resources, you can even request an industry presentation for your class! You can see Damon's slides by clicking on the link above.

Thursday, May 14, 2020

Free Nepris Industry Presentation Friday, 5/22/20 at 10:00 AM:

Biotechnology: Applications and Multidisciplinary Careers.

Shahira Badran of Nammi Therapeutics will introduce students to the biotechnology industry, its domains and future promise, especially in the COVID-19 era. She will explain how DNA technology is used to make biotech products that can improve human life and will use an animation to illustrate the steps. She will discuss the multidisciplinary career options of the biotech industry, and the hard and soft skills required to best prepare for a biotech career. She will use a video to explore the bio-manufacturing technician career along with the lab work involved, while demonstrating the set-up of a bio-manufacturing facility. Her presentation will be interactive: She will ask students questions throughout to push their thinking, and will leave time for Q and A. Students will also receive helpful resources to explore further. [Click on this link to register](#).

Plans for reopening (or not) campuses in the fall

Here are some current articles on what other colleges and universities are planning to do about opening their campuses:

[Here's a List of Colleges' Plans for Reopening in the Fall](#). Although this article was published on April 23, it is updated frequently. Note that you can scroll through 23 pages by clicking above the right side of the table of colleges and universities, or search for a specific institution.

[Fearing a Second Wave, Cal State Will Keep Classes Online in the Fall](#). The CSU system's chancellor said on Tuesday that the risk was too great to bring back 480,000 undergraduates to 23 campuses in the fall

Tuesday, May 12, 2020

Webinar recording: Preparing for an FDA Inspection

Marlene Swider, a former FDA Inspector, talks about how to prepare for an FDA inspection. [Click here to access the recording.](#)

Next free presentation on May 20th: OSHA Inspections for Biotech labs and Q & A session!

Friday, May 8, 2020

Friday Faculty Conference Call (v. 5/08/20)

Thank you to those who were able to join the Faculty Conference Call today. Thomas McMullen of Nepris joined us and gave us a tour of the industry engagement platform, Rachael Harper (LATTIC) and Daniel Michael (Merritt College) gave an update on the status of student peer-to-peer mock interviews involving multiple colleges, and Ying-Tsu gave an InnovATEBIO update.

[Access the recording and the chat by clicking here.](#)

Nepris:

Nepris provides opportunities for virtual industry engagement with several cool features, including a video library, live speakers, virtual industry tours, and career exploration. Nepris can also be used to create industry advisory boards. Nepris is allowing free use until June 15 - [click here to explore Nepris](#).

The Chancellor's Office would like to see a pilot in which around five colleges try Nepris and provide feedback. The Chancellor's Office suggested the colleges fund Nepris using leftover local SWP shares that need to get spent by June 30. If the pilot is successful and budget permits, the Chancellor's Office will consider funding Nepris for all the colleges that would use it.

There will be an **informational webinar about Nepris** with panelists from colleges that currently use Nepris on **Friday, May 15 at 10:00 am**. [Click on this link to register for the](#)

[webinar](#). And please send me an email (tquenzer@sdccd.edu) if you are interested in getting Nepris at your college.

For questions or more information about Nepris, contact Thomas at thomas@nepris.com.

Resources:

InnovATEBIO: [click here for the latest announcements at InnovATEBIO](#).

Bio-Rad Classroom Resources. Bio-Rad's mission is to support life science education by providing educators the tools they need to offer thorough, current, and engaging experiences for students. They've compiled resources and materials that can stand alone or enrich lessons. [Click here to access Bio-Rad resources](#).

Wednesday, May 6, 2020

Free Virtual STEM Fairs:

Free Virtual STEM Fairs for students, parents, and faculty in May on Nepris: <https://nepris.com/sessions/upcoming>

Friday, May 1, 2020

Friday Faculty Conference Call (v. 5/01/20)

Thank you to those who were able to join the Faculty Conference Call today. We talked about **InnovATEBIO** (formerly Bio-Link) **resources** and webinars. Richard Chan and Erika Fong joined us from **EmbiTec** to talk about their **MiniOne PCR kits** with single-use reagents that **students can use at home** in their kitchens. And much of the time was spent polling faculty and an administrator (thank you Ray Hernandez!) on **campus plans to re-open labs** to students in the fall and the ensuing discussions. If you missed the call or want to see it again, click on the links below to access the full recording and the chat:

[Access the recording of the 5/01/20 Faculty Conference Call here.](#)

[Access the chat from the 5/01 Faculty Conference Call here.](#)

Results from the polls about reopening labs:

[Access the results of the poll on re-opening labs here.](#)

Resources

EmbiTec: here are links and contact information to learn more about the EmbiTec home lab kits:

- Learn more about Embitec at <https://embitec.com/>
- Learn more about the MiniOne and at-home lab kits at <https://theminione.com/>
- For more information about the MiniOne home kits, send an email to:
marketing@theminione.com
Erika_fong@theminione.com
richard_chan@embitec.com

Wednesday, April 29, 2020

Re-opening Labs During COVID-19 Webinar Recording:

- **Returning To The Operational Lab Environment During COVID-19 Town Hall (I2SL)**
(recorded April 28): [Click on this link to access the recording.](#)
- [Click on this link to access notes from the I2SL webinar.](#)

Monday, April 27, 2020

Resources

JPL Virtual Lab Tour Recording:

The virtual lab tour titled "**OC BIOTECH SERIES: Tour a Premier Biotech Wet Lab Incubator Where Medical Innovation Happens**" was recorded. To access the video:

1. Go to <https://www.nepris.com/home/v4>
2. Log in or sign up for a free account.
3. Click on "Browse the Video Library"
4. Search on "biotech" near the top and the video will come up to the top (or just scroll down until you find the video - you can check out other videos as you scroll)

Returning to Work Webinars:

Returning To The Operational Lab Environment During COVID-19 Town Hall, Tuesday, April 28, 9:00am - 10:30am PT

As the COVID-19 coronavirus has required closures of facilities across the country, many laboratory owners, operators, engineers, and designers have discussed how to ensure safe and sustainable start-ups once restrictions are lifted. To reach the broader sustainable labs community with this important topic, the International Institute for Sustainable Laboratories (I²SL) is hosting a free town hall, **Returning to the Operational Lab Environment During COVID-19**, from 12:00 to 1:30 p.m. Eastern (9:00 to 10:30 a.m. Pacific) **April 28, 2020**.

Join a panel of representatives from academic, private, and government laboratories addressing questions from social distancing to personal protective equipment to operational issues, such as ventilation balancing and controls. Participants will be polled for their input, and panelists will answer a variety of questions about returning labs to operation,

Returning to Work: A Framework to Help Analyze Risk & Reopen Safely, Tuesday, April 28, 11:00 am PST. [I will post the recording as soon as it is available](#)

Businesses everywhere have taken rapid, drastic measures to comply with governmental restrictions, protect employee health, and adapt to turbulent economic conditions during the most impactful public health emergency of our time. Eventually, based on CDC data and other information, the rate of COVID-19 infections will decrease and businesses will begin to ramp-up their operations. It's vital to prepare a strong recovery plan now to identify and manage the inevitable operational challenges and risks as we adapt to work in the "New Normal" environment.

This webinar will provide a risk analysis approach for a number of key health, safety, and environmental areas you should examine to prepare to reopen or ramp-up operations and facilities that have either been closed or operating at a reduced capacity.

Attend this webinar to learn how to answer these and other questions:

- Is your facility ready to bring people (or more people) back into the building?
- What will your "New Normal" workplace look like and what are the associated operational risks and challenges?
- What strategies will your organization deploy to keep employees healthy and safe and your business productive?
- How you manage your company's most important resource – your people – is dramatically changing. How will your organization adapt its HR policies?

Friday, April 24, 2020

Friday Faculty Conference Call (v. 4/24/20)

Thank you to those who were able to join the Faculty Conference Call today. We talked about InnovATEBIO (formerly Bio-Link) resources and webinars, Nepris (bring industry into your classroom), progress toward student peer-to-peer mock interviews at multiple campuses in conjunction with LinkedIn, and how to safely get back into teaching labs with students.

[Access the recording of the 4/24/20 Faculty Conference Call here.](#)

[Access the chat from the 4/24 Faculty Conference Call here.](#)

Resources

[InnovATEBIO](#). Online teaching and COVID-19 resources. [InnovATEBIO Google Doc: Announcements for CA CC Biotech Community](#) includes resources and announcements.

Virtual platform that brings industry into the classroom: [Nepris](#). Includes virtual industry tours, industry speakers, career exploration, and mock interviews. Nepris is available for free until June 15, 2020, so check it out!

Healthcare Skills Simulators: [Simtics](#) and [TriPointLab](#). (Becca Bowers-Gentry, SD Miramar College)

Wednesday, April 22, 2020

Resources

[From InnovATEBIO and City College of San Francisco this Friday: Going Virtual while Sheltering-in-place: Developing Tools & Strategies](#)
[Friday, April 24th, 10:30 am-12 pm \(Zoom Meeting\)](#)

With the onset of the current pandemic, when the shelter-in-place order was first put into effect, it took a long moment to take it all in. Our campuses were closing, our interns were being told they could no longer work in the lab. Rather than canceling everything and ending the semester abruptly, we were being encouraged to continue however possible, somehow developing engaging and comparable online versions of all our coursework and program-related activities.

This presented serious challenges for us. [City College of San Francisco's Biotech program](#) prominently features the following:

-
- Hands-on technical training through lab-based coursework;
-
-
- Work-based learning through internships at local research labs and companies;
-
-
- Networking events that bring people together to share their interest in doing scientific work;
-
-
- And we rely heavily on in-person outreach and recruitment activities to help sustain the program.
-

So, we are currently working to develop new online tools and strategies for preparing and engaging our students, continuing as best we can with the work-based learning and lab-based technical training that defines our program, as well as outreach and recruitment that we need to keep our classes running, by means of virtual platforms. Ideally, we end up enhancing the way that we work with our students, providing them with additional resources and means of communicating for learning and working more effectively.

[Register to attend](#)

We hope that you will join us for this upcoming meeting to share your experiences and ideas.

Best,
James Lewis, Goli Afshar & Karen Leung

Tuesday, April 21, 2020

Resources

[ASCCC provide faculty resources for COVID-19.](#)

Friday, April 17, 2020

Friday Faculty Conference Call (v. 4/17/20)

Thank you to those who were able to join the Faculty Conference Call today. We talked about InnovATEBIO (formerly Bio-Link) resources and webinars, including a RT-PCR ant project, New World of Work badging, where industry is heading and the need to anticipate future workforce and training needs, current virtual classroom issues, including grading, how courses are being offered, and use of at-home lab packs.

[Access the recording of the 4/17/20 Faculty Conference Call here.](#)

[Access the chat from the 4/17 Faculty Conference Call here.](#)

Resources

[InnovATEBIO](#) (formerly [Bio-Link](#)) for online teaching resources, including COVID-19 resources.

[New World of Work](#) provides free downloadable lessons and videos to help teach employability skills.

Thursday, April 16, 2020

COVID-19 Resources

New from Amgen Biotech Experience (ABE): [Online Curriculum: Responding to a Mystery Illness](#). ABE just released a curriculum module that explores the COVID-19 pandemic that includes both student materials and a Teacher Guide.

Tuesday, April 14, 2020

Labster Best Practices

Best Practices for Using Labster

[In response to this student's complaint](#) about being stuck with Labster acting really slow, Sam Butcher at Labster said this is a common complaint and sent the following:

- Use Labster on laptop or desktop computers on the latest version of the Google Chrome or Mozilla Firefox web browser
- Clear cache/cookies prior to launching a simulation ([how to clear your cache](#))
- Make sure that Labster is the only tab open and that you have a strong Wi-Fi connection
- [Commonly Asked Student Questions](#)
- [TroubleshootingLabster](#)
- It's also important that students submit a ticket to our support team if they ever have any issues as it will allow us to investigate and fix any issues.

Monday, April 13, 2020

OnwardCA

[Onward CA is a one stop resource](#) for the people of California impacted by job loss during the COVID-19 pandemic. OnwardCA is an initiative of companies, foundations, and humans to get California workers displaced by COVID-19 essential life services and back to work as quickly as possible.

Friday, April 10, 2020

Friday Faculty Conference Call (v. 4/10/20)

Thank you to those who were able to join the Faculty Conference Call today. We talked about how the Labster integration is going and those who have started using Labster shared what has/hasn't worked for them (faculty) and for their students. We talked about several other online resources, and faculty who have used those resources shared their experiences. We heard from Lori Lindburg (CLSI) and Kathy Harker (Citrus College) about their pilot to bring industry professional(s) from Boehringer Ingelheim virtually into Kathy's classes to talk to her students.

And I announced that beginning next Friday, 4/17, we will begin having a Virtual Biotech Happy Hour on Friday's at 4 pm (look for an email invitation next week).

[Access the recording to the 4/10 Faculty Conference Call here.](#)

[Access the chat from the 4/10 Faculty Conference Call here.](#)

Labster Updates

[This link has instructions to add Labster to Canvas.](#)

Chromebook Issues: Daniel Michael (Merritt College) shared a [link to a Chromebook add-on](#) that enables Labster to be used on Chromebooks. Thanks Daniel!

More Online Teaching Resources

[Online Resources for Science Laboratories \(POD\) - Remote Teaching](#) - list of simulations and virtual labs maintained by LeighAnn Tomaswick of Kent State University.

[HHMI BioInteractive](#) - Free online resources from the Howard Hughes Medical Institute.

Pearson's Lab Bench (www.phschool.com) - Currently offering free resources.

[Jove](#) - Currently offering free online resources until June 15; shows people working in labs, not animations.

[InnovATEBio \(the new Bio-link\)](#) - They have weekly webinars at 11am on Fridays but they are recorded. Make sure to register. (Ying-Tsu Loh, City College of San Francisco & BABEC)

[Northeast Biomanufacturing Center and Collaborative \(NBC2\)](#). (Jim DeKloe, Solano College)

[Mt. San Antonio College career videos on YouTube \(2014\)](#). The biotech ones are really good and although the LMI is out of date, the advice still holds. (Sandy Slivka, Miramar College)

[NC Community College BioNetwork online teaching resources](#). For interactives, videos, introduction to jobs and lots more. We use some of it for Biotech Employment Skills Training (BEST) workshop preparation (Sandy Slivka, Miramar College)

COVID-19 Resources

[Coursera \(free\) course for basic biology](#) (Jim DeKloe, Solano College)

Denise Foley (Santiago Canyon College) shared a [link to a spreadsheet in which a PhD student in biochemistry posts “tons of good detailed info”](#), including much on COVID-19. Her style is very student friendly and the science is very detailed. The spreadsheet includes her list of topics with links.

The [Virtual Interactive Bacteriology Lab](#). (Michael Plotkin, Mt. San Jacinto College).

[Coronaviruses 101: Focus on Molecular Virology](#). (Aron Kamajaya, L.A. Pierce College)

[Coronavirus Genome - Bad News Wrapped in Protein](#). (Jim DeKloe, Solano College)

Friday, April 3, 2020

Friday Faculty Conference Call (v. 4/3/20)

Thank you to those who were able to join the Faculty Conference Call today. We talked about integrating Labster, I introduced Nikita Malavia as an industry resource to help faculty with online teaching (nikita.malavia@gmail.com), Lori Lindburg (CLSI) spoke with us about having industry professionals do virtual tours and career talks, and Rachael Harper (L.A. Trade Tech) talked about having students around the state practice virtual mock interviews with each other, and have industry professionals hold mock interviews with students.

[Access the recording from today's Faculty Conference Call here](#)

[Access the chat from today's Faculty Conference Call here](#)

Effective Online Instruction Series

[Josie Sette shared this link](#) for the first webinar in a collaborative Effective Online Instruction Series, "**Welcoming Students to your Online Environment.**"

Josie found that it had a lot of tips for instructors that are learning, as they go, the ropes of online instruction, and liked it, especially because those talking were faculty from different colleges in the country.

Thanks Josie!

Thursday, April 1, 2020

Labster

Great news - Labster is now available for all of the CA Community Colleges, thanks to the Chancellor's Office! Labster is a virtual lab simulation platform that offers lab simulations mainly for biotech, biology, and chemistry courses, and including simulations for physics, ecology, engineering, food science, and safety courses.

Before you start, here's what you need to know:

- Labster is available for use in any relevant course at all of the community colleges
- Labster is run through Canvas
- Your campus can access Labster through the campus or district Canvas Coordinator

Here is a link to get you started: <https://www.labster.com/calcommcolleges/>

1. Watch a brief 3.5 min introduction video
2. Review and choose simulations for your classes
3. Check the status of your college's Labster integration:
 - Complete (left column, green) - you are ready to access Labster through Canvas ("Import Course Content" tab, then download the Common Cartridge .zip file you selected from Labster)
 - Pending (center column) - your Canvas Coordinator is integrating Labster
 - Not started (right column) - request Labster integration from your Canvas Coordinator
4. Import simulations into your course(s)
Includes resources: Faculty Resources Page and Canvas Guide
5. Here is a link to a training session recorded today:
https://zoom.us/rec/share/yPMYKZjd6jLTK_Xq23CaLB5LL7Eaaa8gSEerPNYmEZY94ZYvhweawcTAVUQ6Sr https://zoom.us/rec/share/yPMYKZjd6jLTK_Xq23CaLB5LL7Eaaa8gSEerPNYmEZY94ZYvhweawcTAVUQ6Sr https://zoom.us/rec/share/yPMYKZjd6jLTK_Xq23CaLB5LL7Eaaa8gSEerPNYmEZY94ZYvhweawcTAVUQ6Sr
6. Here is a link to future webinars: <https://cvc.edu/events/category/labster/>

Wednesday, April 1, 2020

Free Teaching Resources from Bio-Rad Laboratories:

Resources on Various Life Science Topics

- YouTube Videos from Bio-Rad and the Life Science Education Community
https://www.youtube.com/bioradeducation?sub_confirmation=1
- Presentations and Activities (files are completely editable)
https://www.bio-rad.com/en-us/applications-technologies/presentations-activities-for-workshops-teaching?ID=NISQQ7E8Z&WT.mc_id=200325027905
- Biotechnology Webinars
https://www.bio-rad.com/en-us/education/support/webinars?ID=KVY71A7OP&WT.mc_id=200325027905

Resources on Disease Testing Techniques

The links below are about techniques used to detect pathogens, including:

- Polymerase chain reaction (PCR), a way of selectively amplifying nucleic acids
- Real-time PCR (also known as quantitative PCR or qPCR), a specialized technique that allows a PCR reaction to be visualized “in real-time”
- Enzyme-linked immunosorbent assay (ELISA), a way to detect proteins

PCR

- Animated PCR Tutorial
https://www.bio-rad.com/webroot/web/movies/lse/global/english/what-is-polymerase-chain-reaction/tutorial.html?WT.mc_id=200325027905
- PCR Video Playlist
https://www.youtube.com/playlist?list=PL7_N-H8d6RiINVZ5Fi6ccX-uoxiIBT5tmU
- A Brief History of PCR (PowerPoint)
https://www.bio-rad.com/webroot/web/software/lse/Downloads/A_Brief_History_of_PCR.ppt?WT.mc_id=200325027905

Real-Time PCR

- Discover Real-Time PCR for the Classroom (Youtube video)
<https://www.youtube.com/watch?v=bMw5t9Os6qA>
- Real-Time PCR Basics (PowerPoint)
https://www.bio-rad.com/webroot/web/software/lse/Downloads/Real-Time_PCR_Basics.ppt?WT.mc_id=200325027905
- Real-Time PCR Applications (PowerPoint)
https://www.bio-rad.com/webroot/web/software/lse/Downloads/Real-Time_PCR_Applications.ppt?WT.mc_id=200325027905

ELISA

- Antigen Detection ELISA Animated Tutorial
https://www.bio-rad.com/webroot/web/html/lse/global/english/products/protein_analysis_kits/product_overlay/global/antigen-detection-elisa-animation/antigen_elisa.html?v=bMw5t9Os6qA&WT.mc_id=200325027905
- ELISA Antibody Animated Tutorial
https://biorad-ads.com/elisa_antibody-animation/elisa_antibody-test-full.html?WT.mc_id=200325027905
- How To Perform A Qualitative ELISA Video
https://www.youtube.com/watch?v=52V8ackjd20&list=PL7_N-H8d6RiOwN6bx9JRqmKUSa64eXugg
- How To Perform A Quantitative ELISA Video
https://www.youtube.com/watch?v=cLVKB4MPVMA&list=PL7_N-H8d6RiOwN6bx9JRqmKUSa64eXugg

Our account, curriculum, and technical support specialists will always do their best to help. Reach us at 1-800-4BIO-RAD (1-800-424-6723), email support@bio-rad.com, or visit bio-rad.com/support

Thank you,

The Bio-Rad Explorer team

explorer.bio-rad.com

Monday, March 30, 2020

CLSA Bulletin Article

- Just Published In The CLSA Bulletin: [Opportunities For Industry As CA Community Colleges Turn To Labster For Online Virtual Lab Course Simulations](#). Please Share With Your Partners.

Labster

- According to VC Sheneui Weber this morning, Labster will be deployed in Canvas within a week. Her instructions are for you to contact the Canvas Coordinator on your campus, who will be receiving a memo from the Chancellor's Office.
- In the meantime, you can use the link and my login credentials below to explore simulations in Labster:

Link: <https://www.labster.com/faculty-resources/>

Username: tquenzer@sdccd.edu

Password: Lab20ster20!

You may share this with colleagues. Please do not share with students because it provides access to faculty resources, including quiz answers.

Friday, March 27, 2020

Friday Faculty Conference Call (v. 3/27/20)

Thank you to those who were able to join the Faculty Conference Call on Friday. Lots of great information was shared about resources, discussion about what it might look like to get students caught up on their lab skills once this ends, as well as having Lauren Russell to talk about Labster and answer questions and Lori Lindburg of CLSI to talk about how industry might help us meet their needs using virtual lab simulations, and how industry professionals might supplement students' virtual learning experience.

- [Click here to access the recording.](#)
- [Click here to access the chat.](#)

PPE Supply Inventory

Still collecting PPE inventories. [Click here to add to the inventory list.](#) We will be notified when/if the supplies are needed.

I've been told that if you come across an urgent need, you can go ahead and donate, and to please be sure to adjust the inventory list accordingly.

Many thanks to the following Biotech/Bioman, Biology, & STEM programs: CCSF, LA Mission, Laney, Moorpark, Ohlone, Palomar, Santa Ana, and SD Miramar Colleges!

Resources ([Click here to access and comment on your experience using any of these resources](#))

LabXChange

- LabXChange: <https://www.labxchange.org/> (currently not integrated with Canvas)
- Here are the LabXchange resources related to the Amgen Biotech program -- <https://www.labxchange.org/library/clusters/abe> (Jo Wu, Fullerton College)
BTW, Jo's link to Amgen biotech experience has bacterial transformation and streaking of cells for example. That's on LabXchange
I have my students register to LabXchange platform and enter my LabXchange course shell. (Aron Kamajaya, L.A. Pierce College)

JoVE

- We are all getting free access to JoVE until June. So you might want to look at the Lab Techniques and Collections.
- <https://www.jove.com/science-education-library/84/microbiology>
- <https://www.jove.com/science-education-library/59/biotechnology> (Jo Wu, Fullerton College)

Beyond Labz

- <https://www.beyondlabz.com> (Daniel Michael, Merritt College)

Biotech Career resources, including interviews

- <http://abe-la.org/careers.html> (Jo Wu, Fullerton College)

Business Advisory and/or Industry Guest speakers.

- Daniel Michael: <https://www.linkedin.com/in/danielmichael/>; dmichael@peralta.edu

California Life Sciences Institute (CLSI): lori@califesciences.org

Tuesday, March 24, 2020

Labster

- The latest word as of today from VC Sheneui Weber is that the CCCCO is working out the contract with Labster and hope to have it in your hands in a couple of weeks.

Monday, March 23, 2020

Labster

- **Labster is coming!** The Chancellor's Office is purchasing Labster and it will be available to all colleges statewide for the rest of this semester. They are working on the contract and do not have it set up for use yet, so stay tuned.
<https://www.cccco.edu/-/media/CCCCO-Website/Files/Communications/COVID-19/es-20-09-preliminary-guidance-for-converting-hard-to-convert-courses-v5-co-a11y.pdf?la=en&hash=504A67781F892F722585A15FB9A9652F9332BBAC>

- Try Labster yourself using these credentials (I've been given permission to share):
 - **Link:** <https://www.labster.com/faculty-resources/>
 - **Username:** tquenzer@sdccd.edu
 - **Password:** Lab20ster20!

- In addition to Biotech, Labster offers the following virtual lab simulation courses:
 - Anatomy & Physiology
 - Biochemistry
 - Cellular & Molecular Biology
 - Ecology
 - Engineering
 - Evolution & Diversity
 - Food Science & Nutrition
 - General Biology I & II
 - General Chemistry I & II
 - General, Organic, & Biological Chemistry I & II
 - Genetics
 - Introduction to Biology
 - Introduction to Chemistry
 - Microbiology
 - Organic Chemistry
 - Physics
 - Safety

- **Other Labster Materials:**
 - [Labster simulations grid](#) (note, this contains quite a bit of internal data - please do not share externally)
 - [Our webinar recording](#) (31 minutes)
 - [Register to attend](#) the Webinar with Cindy Malone (CSU Northridge) for Tuesday 3/24 at 12:00pm PST

Chancellor's Office Facts and Resources regarding COVID-19

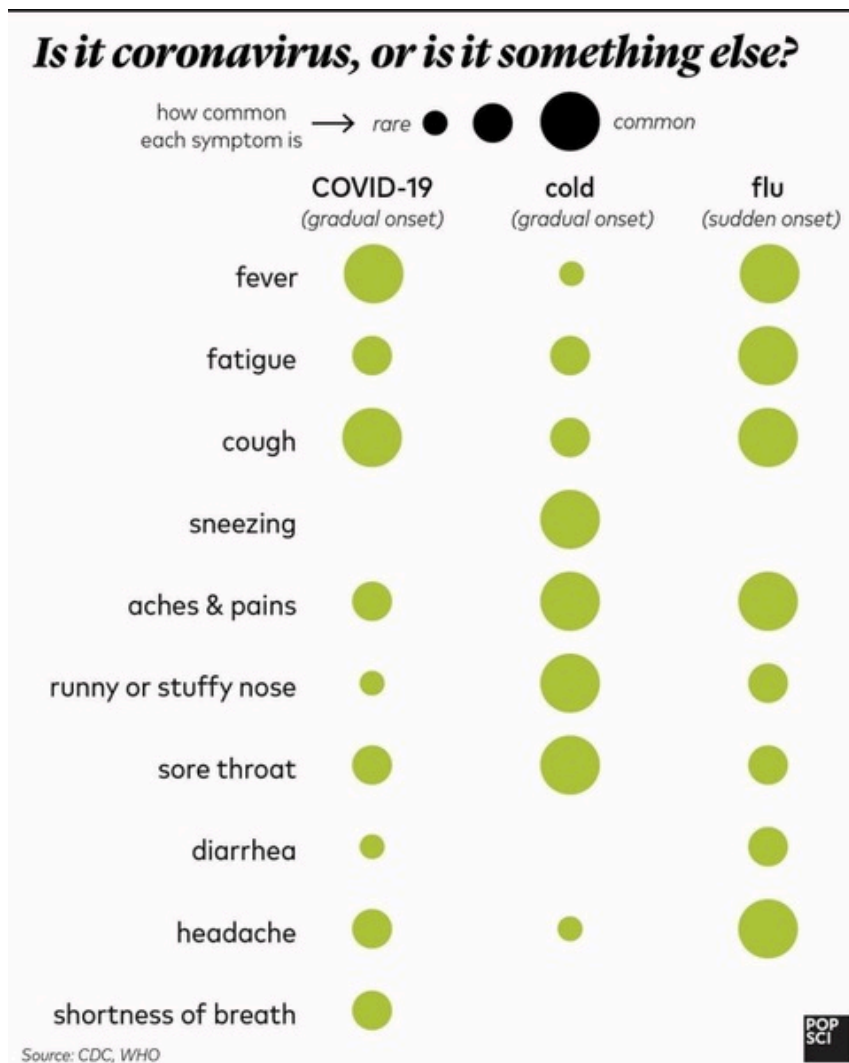
- This link provides facts and resources regarding COVID-19 from the Chancellor's Office for students, staff, and colleges:
<https://www.cccco.edu/About-Us/Chancellors-Office/Divisions/Communications-and-Marketing/Novel-Coronavirus>

Life Sciences Teaching Resources Faculty Forum

- I created an editable Google Doc. where you can share resources and experiences using the resources. Here is the link: <https://docs.google.com/document/d/1IKwNvh4Obyqk3q1evlZR8gg0nvZKvSm4PaJSoC0spgs/edit>
- I will set you up with permission to edit this Google Doc. You can share the link with your colleagues. Anyone that still needs permission can write to me at tquenzer@sdccd.edu.

Is it Coronavirus or is it something else?

- The chart below is from the CDC & WHO. Please share.



Friday, March 20, 2020

[Zoom Faculty Conference Call recording link.](#)

Tuesday, March 17, 2020

[Zoom Faculty Conference Call recording link.](#)

[Online Biotech Teaching Resources from Bio-Link/InnovATEBIO.](#)

From Michael Plotkin (Mt. San Jacinto College):

- For Micro and Major Biology, here is one resource: <http://learn.chm.msu.edu/vibl/> Virtual Bacteriology Interactive Labs
- HHMI Biointeractive and Univ. Utah's Learn Genetics are good for non-majors and some majors level stuff too.

From Barbara Juncosa (MiraCosta College):

- Some virtual labs (really animations to watch), but they do have a cell culture one: <https://vlab.amrita.edu/>

From Diana Vance (Grossmont College):

- https://docs.google.com/spreadsheets/d/18iVSlE0qKjj58xcR8dYJS5rYvzZ4X1UGLWhI3brRzCM/htmlview?sle=true&urp=gmail_link

From Jennifer Garner (Ventura College):

- <https://abc11.com/6017902> Students feeling financial crunch can get free internet from these companies and possibly others if these aren't available in your area.
- <https://www.cdc.gov/mobile/applications/sto/> solve the outbreak interactive activity on CDC website

From Jen Carmichael (San Diego Mesa College):

- Cox is doing the same. COX Internet:
https://newsroom.cox.com/cox_internet_changes_to_assist_students_-_remote_workers

From Dominique Ingato (MiraCosta College):

- A massive list of resources for teaching remotely:
<https://docs.google.com/spreadsheets/d/1VT9oiNYPyiEsGHBoDKlwLIWAsWP58sGV7A3oLuEUG3k/htmlview?usp=sharing&sle=true#>

From Michelle Stieber (Cerritos College):

- Education companies offering free subscriptions/resources:
<http://www.amazingeducationalresources.com/>

Free or low-cost internet access: As California Community Colleges move classes and services online, access to reliable internet service is critical. Below is a list of several reduced companies providing free or low-cost internet access during the current emergency.

- **Comcast:** Effective Monday, March 16, 2020, Comcast is offering two months of free to Internet service through the [Internet Essentials program \(Links to an external site.\)](#). This offer is available to new and existing customers. Additionally, [Xfinity WiFi hotspots \(Links to an external site.\)](#) are now available free of charge to the public.
- **AT&T:** AT&T is providing free access to its [WiFi hot spots \(Links to an external site.\)](#) throughout the country.
- **Charter:** Charter is offering [free Spectrum broadband and Wi-Fi access \(Links to an external site.\)](#) for 60 days to households college students who do not already have a Spectrum broadband subscription and at any service level up to 100 Mbps. To enroll call 1-844-488-8395. Additionally, all WiFi hotspots are now free of charge.
- **T-Mobile:** T-Mobile is providing unlimited data to all current customers who have plans with data for the next 60 days. It will also provide additional data to mobile hotspot users.

- **Verizon:** Verizon is [waiving late fees and suspending service termination \(Links to an external site.\)](#) for customers negatively impacted by the global crisis.
- **California Connects:** California Community Colleges students are [eligible for this mobile hotspot service \(Links to an external site.\)](#), powered by Sprint, which offers nationwide 4G LTE connectivity and allows users to connect up to 10 WiFi enabled devices for up to 10 hours on a single charge for only \$19.99 a month.