Annual Report 2020
Accelerating Life Science Education & Workforce Development
Reflecting on a Year of Challenges and Opportunity

2020 was a year of enormous challenges and pain but we also experienced light and hope. The challenges are obvious, the worldwide pandemic which has upended every part of our lives, economic devastation, and educational challenges that we couldn’t have imagined even a few years ago. We also had the pain of acknowledgment of inequity within our society and the frustration of those who have been the recipients of racism and discrimination. But amid the crisis there has been light and hope.

Light has been shown in places that were previously dark. Sometimes having light shine into dark places can be uncomfortable but it also eventually allows us to see what we have overlooked. Unconscious bias, racial inequity, cultural devaluation have all been brought into the light and with that comes awareness of how we as individuals and as business can bring about change.

Hope has come in many ways this year. The global acknowledgment that science and the life science industry plays a crucial part in advancing humanity and improving life on this planet. Life science companies have worked tirelessly and successfully on finding a vaccination for COVID and have done it without compromise to the integrity of the process and regulations, which are among the most stringent in the world. Life science companies have stepped up to commit to real changes to hiring practices and support given to people of color and others who have been marginalized. We can and will follow through to assist the industry in these efforts.

As you review all of the accomplishments and challenges for the institute in 2020, we hope you will see it as we do, a start to a stronger workforce with access and opportunity for all.
Strengthening Life Science Teacher Education

Supporting teachers with high-quality professional development, equipment, and hands-on curricula.
Biocom Institute has partnered with Illumina and the Illumina Foundation to advance the Illumina Genomic Discoveries Educator Program & Curriculum. Using Illumina’s latest sequencing technologies, this comprehensive program allows teachers and students the opportunity to learn and connect with the world of genomics. Biocom Institute provided virtual training to 10 San Diego high school teachers, refreshed the curriculum and lab protocol, and created a video training component for teachers and students. Learn more about Illumina Genomic Discoveries here.
“The Genomics Discoveries Training was a one-week training experience that prepares educators to bring the cutting-edge technology of next generation sequencing to our classrooms. The layout of the training was succinct and to the point, with very effective explanations and activities that helped me have confidence in taking the lessons back into my classroom. The collaboration between Biocom Institute and Illumina brought together key components of teaching experience, workforce development and of course the technology and expertise that Illumina provides in the world of genomics. If you want your students to experience a real-world application of science, this is an exciting opportunity you definitely want to participate in.”

Tania Pena, Clairemont High School
Amgen Biotech Experience

This year Biocom Institute welcomed ABE-San Diego to its portfolio of programs, enriching our suite of biotechnology teaching resources and adding hundreds of trained teachers to our community of practice. ABE-San Diego is supporting teachers during virtual instruction by providing training and support with LabXchange online resources. As our teachers begin in-person and hybrid instruction, we look forward to providing a modified set of materials for in-class or teacher-demo activities.

Life Science Industry Speaker Series for Educators

Biocom Institute launched the Life Science Industry Speaker Series for Educators. This series is an opportunity for educators to connect with industry experts and access relevant resources for their classrooms. Our first keynote speaker was Ashley Van Zeeland, Illumina’s VP of Product Integration and Customer Collaboration, who spoke about her professional journey and how genome sequencing is accelerating our response to the global pandemic. Followed by a showcase of virtual resources Illumina offers educators. View here.

K-12 Life Science/Biotech Educator Group

The K-12 Life Science/Biotech Educator Group is a community space for educators to share knowledge, resources and connect with others who are passionate about Life Science and Biotech education. Educators are encouraged to share links, post questions, and collaborate in this group to help support the community.
Life Science Educator Industry of Practice Survey

Biocom Institute conducted its first annual survey of California life science/biotech educators on teaching practices and classroom and professional development needs. The survey results will be used to stimulate discussions and action with educational leaders, industry partners, and other life science ecosystem stakeholders to support K-12 Life Science education. Results of this report can be found here.
Inspiring the Next Generation of Life Science Leaders, Innovators & Scientists

Providing students with opportunities to collaborate directly with life science professionals and gain hands-on experience in meaningful projects.
Biocom Institute launched the Life ScienceXP program for students across California. Our fall sessions titled “The Power of Soap”, focused on how we can assist our superhero scientists as they battle COVID-19. We engaged virtually with over 120 kindergarten through second grade students from Mount Everest Academy and King Chavez Academy of Excellence both in San Diego, with hands-on learning, remote kits, and books provided for every student. We had guest “superheroes” Aaron-Christensen-Quick, Ph.D from Inovio Pharmaceuticals and Jeane Wong from J. Craig Venter Institute who shared their awesome world of science with our young learners. Each Life ScienceXP event is unique with appropriate curriculum for every age from preK-12.
Rachel Finney  
Teacher at Mount Everest Academy  

“I still think about what a cool experiment and experience that was for the kids (and adults!) I will be showing the trick to my family at Christmas. Thank you for the experience!”

Principal Gabe Collins  
King Chavez Academy of Excellence  

“The challenges posed by distance learning were no match for the Power of Soap! Our TK-2nd grade students were captivated by the demonstrations and the hands-on opportunities facilitated by Ms. Jeane. I can think of no better time to educate our students about this critical topic and no better way to make it more engaging.”
Industry Experts in the Classroom

As a part of Biocom Institute’s efforts to bring life science industry experts into classrooms across California, in October, Valentin Doering, Project Director and Bay Area Business Unit Manager at IPS-Integrated Project Services, LLC, presented to Hayward Unified School District’s biomedical pathway seniors at Tennyson High School and Hayward High School. He spoke to the students about his experience in designing, developing, and building bioscience facilities. Biomedical students were fully engaged with thoughtful questions. This program allows companies regardless of location to reach classrooms and inform the next generation about careers in the life science.

CCAP STEM Pathways Grant

Biocom Institute serves on the Steering Committee to connect students to internships for the newly formed Biotech Career Jumpstart Program, funded by the CCAP STEM Pathways Grant from the California Community Colleges Chancellor’s Office (CCCCO). It deploys in cohort models grade-appropriate college and career preparation/development programs integrated with basic skills and counseling to create a flexible, individual-centered college and career readiness solution for participants. This year, the first cohort received 36 applicants from three middle schools. By April, 20 were accepted. To date, six virtual activities have taken place, including industry chats, a STEM career panel, and hands-on STEM activities by way of take-home science kits and synchronous lab instruction.

SALK Virtual Internships

Biocom Institute partnered with Salk Institute’s Introduction to Research Science and Communication Virtual High School Internship Program. Over 400 student forms from 9 states and 3 countries were received. 81 students from 42 different schools were selected. The 4-week virtual program was designed to expose high school students to common laboratory practices, the latest Salk research, and guided professional development. This program took the well-developed and successful aspects of the in-person program and translated them into a virtual program allowing more students to participate. 98.6% of participants felt they gained or improved skills to support them in future academic and/or STEM careers and 100% felt satisfied with the quality of the internship program.
Helping Veterans Transition From Military to Life Science

Providing veterans with access to a variety of life science industry professionals, executives and industry-focused career development resources.
Veterans Symposium

Biocom Institute hosted its annual Veterans Life Sciences Symposium virtually on November 17th. The Symposium consisted of two panels, a keynote speaker and three industry speakers who shared their experiences and knowledge about working in the life science industry. Six Biocom Member companies sponsored and participated in this event. Veterans and transitioning military from across California attended sessions on, translating military experience into a civilian resume, career pathways and opportunities in the life science industry, and heard from CEO’s and veteran executives about their own career journey. The symposium also included a pre-symposium event for women and a virtual happy hour.

More than 90 percent of participants rated this event very good or excellent and 80% said they would recommend this event to a fellow veteran.
**Veterans Career Fair**

On October 22nd, Biocom Institute held its first virtual Veterans in Life Sciences Career Fair. California veterans took advantage of the opportunity to meet, network, and interview with HR and Talent Acquisition representatives from Biocom member companies- Thermo Fisher Scientific, Twist Bioscience, Neurocrine, Amgen, Tandem Diabetes, Ajinomoto Bio-Pharma Services, and Illumina. These companies provided a unique and invaluable experience for veterans, allowing direct interaction, resume reviews and interviews for open positions. Ninety percent of participants who completed the post event survey said they would be very likely to recommend the career fair to other veterans and 100% rated the event very good or excellent.

**Veterans Military Fellowship**

Despite the challenges of 2020, Biocom Institute had 14 fellows and 14 mentors as a part of the Military Fellowship. The program welcomed current and former military members to a yearlong life science career exploration, giving them exposure to the life science industry and a deeper understanding of career options in this growing sector. Fellows met virtually with their mentors, who provided networking and development opportunities. Fellows also had their resumes reviewed and participated in an exclusive virtual career fair, as well as in mock interviews with life science talent acquisition specialists. The Fellowship provides a holistic approach to addressing skills gaps, hiring and job search challenges, and a unique, direct connection between veterans and the life science industry.

**Vets In BioPharma Panel in Sacramento**

Executive Director Karmin Noar joined Bre Cameron, Amgen’s Veteran Employment Program Manager and Nick Weathers, Helmet to Hardhats’s Western Regional Manager on a Veterans in the Biopharma industry panel to provide Veterans Service officers information about the industry generally, but more specifically about how our organizations are helping veterans through hiring practices, mentorship and networking, support of their employees, and through philanthropy. CACVSO (California Association of County Veteran Service Officers) is an organization that advocates for and provides services to veterans across California.
"The Biocom Institute Military Fellowship Program has provided knowledge and professional networking opportunities that enable me to pursue a career transition with confidence during a very uncertain time. This program will help me transfer the values that guided my military career to a new vocation of serving others in the life sciences industry."

- William Harold Nesbitt
Accelerating Diversity, Equity & Inclusion in the Life Science Industry

Partnering with industry, government, education and others to promote diversity, equity and inclusion in the life science industry and develop talent pipelines for a more diverse, inclusive and educated life science workforce.
335 California life science companies participated in Biocom Institute’s first biennial DEI survey

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<th>Survey Respondents’ Companies by Subsector</th>
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<td>Research &amp; Lab Services</td>
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<td>Medical Devices &amp; Diagnostic Equipment</td>
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<td>Other</td>
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Biocom Institute’s Diversity, Equity & Inclusion Report

Biocom Institute launched our first biennial report, “Diversity, Equity and Inclusion in California’s Life Science Industry,” to share the state of Diversity, Equity, and Inclusion (DEI) across life science companies in California. We collected information from more than 300 life science companies in California. The full report can be found [here](#).
Partnership with Thermo Fisher Scientific’s Latino/Hispanic Heritage Employee Resource Group

On October 2nd, Biocom Institute and Thermo Fisher Scientific’s Latino Hispanic Heritage Employee Resource Group teamed up to connect over 100 local college students with a career panel of Thermo Fisher Scientific professionals, to hear their stories. The event was held on National Manufacturing day, to highlight the industry.

Diversity + Inclusion Symposium with McDermott & Bull

In February, Biocom Institute partnered with McDermott & Bull to host 40+ Human Resources Executives from the Healthcare + Life Sciences industry for an engaging conversation with authors, keynote speakers, and D+I subject matter experts Patti Perez and Pedro David Espinoza.

ABE Equity, Access and Engagement

The Amgen Biotech Experience Program Office has created an Equity, Access, and Engagement (EAE) working group with the goal of combating structural racism and inequity in biotech education. ABE-San Diego is one of the leading participating sites in this group, and we plan to pilot a program that empowers and engages our local Title 1 schools.
Accelerating Life Science Workforce Development

Developing industry recognized certificates and certifications through partnerships with K-16, institutes of higher education, and training providers.
Biocom Institute Career Lab

Launching in early 2021 this job portal will serve as the California life science industry’s go-to resource for job postings, career success stories, thought leadership and industry best practices. Get ready to discover your next career and join us where the life science community meets the talent it needs to thrive.
**Bioscience Technician Credential**

Standardization in education and training for the life science industry technical jobs has taken a big leap forward with the Bioscience Technician Credential. The creation of the testing for this industry-approved credential was led by LA Valley College, LA Mission College, and our industry member Grifols, and validated through several member companies. The credential will be awarded to graduates of bioscience/biotechnology programs who demonstrate proficiency across a range standardized, industry-defined core competencies. The testing protocol which was funded and received oversight through the Verdugo Workforce Board will launch in 2021.

**South Bay Apprenticeship Program**

Biocom Institute successfully participated in a South Bay Workforce Investment Board grant submission to fund apprenticeship programs in Los Angeles to create career pathways in Bioscience. The program will provide an important resource to employers and increase job seekers’ access to well-paid careers in the Life Science industry. For more information visit: www.sbwib.org/bioflex

**NIIMBL Grant**

Santa Clara University successfully led a grant submission for The National Institute for Innovation in Manufacturing Biopharmaceuticals (NIIMBL) funding to establish a West Coast Biomanufacturing Consortium for Automation and Data (BIOCAD). Biocom Institute is proud to be part of this project that will create programming and career pathway opportunities in the Bay Area.
Cal State Consortium

Biocom Institute partnered with the Chancellors office of the California State Universities PaCE program to form a consortium dedicated to developing and providing certificate programs for the Life Science industry throughout the State of California. Current campus consortium members, Cal State Fullerton, Cal State Long Beach, and Cal State LA are developing industry recognized Biocom Institute approved curriculum that will provide students with a consistent experience in education and learning outcomes across all participating campuses. Biomanufacturing and Cyber Security are the first two certificates scheduled to be launched in 2021.

Innovations in Graduate Education

With support from Biocom Institute, Principal Investigators at Scripps Institution of Oceanography (SIO) are proposing a National Science Foundation Innovations in Graduate Education program. Piloting Authentic Industry Project Based Learning to Improve Graduate Student Career-relevant Skills and Decision Making, Biocom Institute will work with SIO PhD students to develop new, tailored career resources that will become publicly available through the BI Career Lab.
Career Development Opportunities to Enhance Life Science Workforce

Providing custom and vetted training programs to advance the current workforce.
From Laboratory to Leadership

Part of our professional development portfolio for life science industry members includes The Leadership Edge’s signature life science program From Laboratory to Leadership. This program is designed to help science-minded managers transition into capable business leaders by developing core management skills needed to fully leverage a company’s most significant resource, human capital.

Caltech Strategic Marketing Course

Biocom Institute has partnered with Caltech CTME to create a strategic marketing course designed for startups through midsize companies who want to participate in a hands-on course to develop a personalized marketing plan for their organization. Participants will receive one-on-one support and mentorship from marketing experts in the life science industry. The first cohort started in September and the next will begin in January of 2021.

2Connect

2Connect focuses on developing the most confident and engaging presenters in business. Whether participating in a small group training or one-on-one coaching, you’ll gain real-world experience that allows you to present with confidence, clarity and results.
In August, Biocom Institute launched its new website: www.biocominstitute.org to showcase all of the new programs and opportunities the community and industry have to contribute to life science education and workforce development.
Sponsorship & Company Engagement

Providing companies the opportunity to support the community in a meaningful way, support Biocom Institute’s work, and allow the opportunity for employees to engage in fulfilling, enriching volunteer experiences while receiving a host of recognition benefits and increased brand awareness within the community.
Thank You

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