Meet Biocom's 2017 Life Science Catalyst Award Winners

- Genetic Counselors in Biotech: Bringing the Clinic to Industry
- 1,000 Members Packs a Punch

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“They helped Takeda to understand the market, carefully consider all viable alternatives, and arrive at a custom solution with exceptional economic and other lease terms.”

David Weitz
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“They are the “go to” real estate team for the life science industry. I trust them and highly recommend them.”

Magda Marquet
Ph.D. Co-Chairman & Founder
Althea Technologies

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“C&W Life Sciences was a great partner for our company. Their specialization in life sciences real estate enabled us to get great space with flexible terms for our corporate headquarters.”

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Greetings and welcome to our fall 2017 issue of LifeLines, whose theme is the strength of our association as we reach the milestone of 1,000 members across the state of California. Much of this growth is attributable to retaining our valued members and greatly increasing our membership, especially through state-wide expansion over two years. Today, Biocom is seen as the premier life science advocacy organization in California by any significant measure, including membership size, breadth of programming, number of office locations and staff, savings for our members, and most importantly, our unequalled track record in accelerating the success of our life science community. As your president and CEO for more than 18 years now, I have been privileged to work with the most talented Board of Directors and employees to develop and pursue the strategies that have guided us to the position that we enjoy today.

At the same time, I continually reflect on how we have stayed true to our roots and maintained the pillars of the association that we established long ago—advocating for our industry, building networks, raising capital, providing key business services and building the professional workforce.

In the beginning, Biocom was the face of a new industry in San Diego, with the promise of creating a new arm of the economy in the field of therapeutics and device development. Our first members came together as a small group of company CEOs and service providers looking to network together both to explore opportunities to create business partnerships, and to work toward solving policy issues of common interest at the local level. These CEOs and service providers had come from Biocom’s predecessor organizations, the Biomedical Industry Council and the San Diego Biocommerce Association. This unique mix of business executives laid the foundation for the Biocom that exists today, albeit larger in membership and broader geographically. This unique structure continues to allow us to build the collaborative relationships for which we are known.

When I came to the association, San Diego had just been chosen to host the BIO Annual Convention of 2001. It was our opportunity to build a relationship with our national organization while showcasing our strength in life science for the first time to the world. After a successful BIO, our membership of about 300 companies and firms recognized that we needed to expand our advocacy efforts to Sacramento and Washington, DC. This occurred concurrent with the expanding presence of larger pharma and medical device companies in San Diego. They immediately saw our numerous beneficial services as an important aspect of Biocom’s value proposition. And we expanded our team accordingly, bringing in the expertise needed to operate within those spheres. With the growth of jobs in our industry at the time, we also responded to our members’ call for more certificate and degree programs in the biomedical sciences and in business. The goal was to create a larger employment pool, and hence we created the Biocom Institute, our professional affiliate. We realized the
importance of developing a “home-grown workforce” of employees within the community who would be trained and employed here. Very quickly, our membership ranks swelled.

By the time of the 2008 recession, Biocom had a membership of 500 firms. We recognized that fueling the continued growth of our industry during challenging economic times required new initiatives. Consequently, we placed greater strategic focus on helping our members obtain the funding that they needed to do their research and development. This led us to create our capital formation initiative, first as an annual venture capital conference and later as our Global Partnering Conference. We also launched a series of venture and pharma partnering days. Another result of the recession was a contraction in large pharma and biotech staffing, which ultimately led us to create our CRO group, comprising a talented pool of individuals and firms that could provide expert consulting services to our companies here in California and throughout the world. And, we continued to grow.

More recently, we have seen continued membership growth in each of our key clusters: in our long-time home base of San Diego (known for its innovative company creation), in our new hubs of Los Angeles and the San Francisco Bay Area, and overseas in Japan, where we established an office in Tokyo just last year. With close to 1,000 members, our greatest strength today is our ability to bring experienced best practices to cluster-building, and to connect those clusters here and around the globe. But I would like our members to know that Biocom is still an association that is owned by its members. Our success is due to the loyal financial support and engagement of our members. Our vision is and always has been, to be best-in-class for our members, providing unparalleled advocacy and business services. As you read through this issue of LifeLines, I know you’ll appreciate why Biocom at 1,000 members strong has a firm foundation beneath its feet that will provide solid direction for growth of our industry today and long into the future.
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Biocom will hit a major landmark before the end of 2017. It’s a milestone that few would have predicted more than 22 years ago, when our association was just beginning to affect momentous change in San Diego — yet one that will embolden our industry’s ability to make an even greater impact in the decades to come.

Biocom will soon reach 1,000 member companies, together encompassing more than 250,000 industry professionals who are connected to our hubs in San Diego, Los Angeles and the San Francisco Bay Area. That’s more than any other life science trade association in California, and puts Biocom’s size in the same ballpark as even the national industry organization for biotech.

Thoughtful, planned growth means quantity can correlate with quality, and that’s quite meaningful for an organization that’s on the ground working to influence legislation, advocate favorable policies, negotiate competitive purchasing programs and foster new business opportunities for its members.

“Whether it’s fewer than 100 or more than 1,000, our team will always have a singular focus: delivering unequalled value to our members across the state,” says Joe Panetta, president and CEO of Biocom, who’s seen the organization grow tenfold during his 18 years of leadership. “No matter their size, scale, scope or location, we work to accelerate success for our members as they seek to improve human health.”

To put it into perspective, here are five top reasons that a 1,000-company membership makes such a difference for every individual who is part of the Biocom community.
More Attention From Policymakers

Biocom was founded in 1995, built around an alliance of leaders who sought to educate local government officials about the biotech industry’s need for water amid a regional drought in Southern California. Its legislative scope has expanded vastly over the years, representing the life science industry’s interest on issues that span regulatory taxes, regional infrastructure and government grant-making.

At any moment, Biocom is actively monitoring critical issues affecting life science companies. In 2017, staff kept a keen eye on seven pieces of U.S. legislation and a whopping 64 pieces of state legislation.

Along with its growing membership comes greater respect in regional government, the State Capitol and in Washington, D.C., says Biocom Chief Policy Officer Jimmy Jackson. With members throughout the state, and especially in each of the large population centers, Biocom is able to successfully engage more policymakers as partners in growing the life science economy.

“We hope to help unify the California delegation and strengthen California’s economy on issues such as the importance of strong patent protection,” Jackson says. “Biocom will be able to communicate to elected officials from Los Angeles, Orange and San Diego Counties, and the Greater Bay Area how such protections are critical to company value and to the very existence of the life science clusters in and around their home districts.”

Connections at Every Turn

It’s not just shaking hands. It’s forming alliances, making friends and finding new star employees (or employers). Biocom orchestrated more than 150 networking and educational events in the past year throughout the state, says Shaye Exner, senior director of conferences and corporate sponsorships.

“Our events have evolved over the past 15 years based on the growth we have seen—and not just growth in our membership numbers, but growth in the diversity of companies we represent,” Exner says.

The increased membership growth, combined with the greater mix of companies and industry representation, has created a critical mass that’s enabled Biocom to branch out from all-inclusive events (think regular breakfast meetings that attracted 300-plus people) to more frequent, customized events that specialize in serving the needs of various industry specializations.

That said, Biocom finds there’s still a lot of value in holding events that draw a variety of member segments. “It creates an environment of cross-disciplinary collaboration,” Exner says.

Networking is important everywhere, of course, but it’s especially so in life science markets such as Los Angeles and San Francisco—cities where life science markets are geographically spread apart.

“As we all know, no one can make it in this industry by themselves,” says Dina Lozofsky, executive director of Biocom’s Los Angeles operations. “By connecting our L.A. members into the broader Biocom membership, we are helping them find potential partners, investors, mentors and service providers we all need.”

Major Discounts, Savings, and Leverage Across the Board

What do consumables to chemicals, fume hoods and cell lines have in common? They are from Fisher Scientific’s world’s-largest catalog of products and services available at exclusive discounted pricing for Biocom members. In just over a year’s time, nearly 400 member companies have chosen the Fisher contract with its breadth and depth of solutions to achieve over $50 million in savings.

And that’s on top of the significant Biocom Purchasing Group savings from life science industry service providers such as Cultura, Office Depot and UniFirst. On average, members save 15-25 times their membership dues through the Biocom Purchasing Group contract offerings.

“From a negotiating perspective, the difference between even 600 members and 1,000 members is night and day,” says Rick Fultz, who’s on the front lines of contract negotiations as managing director of the Biocom Purchasing Group. “A large pool of companies helps everyone. It provides life science companies of any size with more leverage, more partnerships, more of what every member needs to succeed.”

Meanwhile, members have embraced Biocom’s health benefits solution by signing up for Beyond Benefits, with over 250 enrolled life science companies representing over 20,000 employees and dependents in California. With a 96 percent client-retention average, and a 2017 decrease in rates, the program boasts choice and stability at an average of $1,000 in savings per employee per year.

“At 1,000 members strong, we carry a big stick at the negotiating table with current and potential suppliers,” says Fultz, who also serves as Biocom’s chief business officer. “Our ability to negotiate bottom-line-changing discounted contracts on behalf of our members is now strengthened tenfold.”

“AS WE ALL KNOW, NO ONE CAN MAKE IT IN THIS INDUSTRY BY THEMSELVES.”

- DINA LOZOFSKY, EXECUTIVE DIRECTOR, BIOCOM’S LOS ANGELES OFFICE

Continued on page 7
Experience How Everything We Do Has A Single Focus - Your Success

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Undivided Attention from Investors & Potential Partners

Consider this: Five years ago, in 2012, the Biocom Global Life Science Partnering Conference fostered 139 meetings over the course of the two-day event. This year, that number more than doubled, with 375 meetings between life science executives, bankers, venture capitalists and business development professionals from the leading pharmaceutical and biotech companies around the globe. “There is no question that our increased membership is what has made this annual conference one of the most productive and beneficial of the year for the member companies of Biocom,” said Jennifer Landress, senior vice president and chief operating officer. Recent partner day attendees include Eli Lilly, GSK, Vertex, Illumina and Bristol-Myers Squibb.

In addition, Biocom continues to expand its capital development efforts, working to connect members with funding from venture capitalists and other sources—both public and private. Among the many association resources centered on capital development, Biocom helps coach companies on how to set themselves apart from the crowd and unequivocally demonstrate they have the expertise, team and assets to meet today’s stringent investment criteria.

A Thriving CRO Ecosystem

Biocom launched its CRO initiative 10 years ago, in an effort to put San Diego on the map as a destination for outsourcing. Since then, outsourcing demand has exploded in our industry—and so has Biocom’s CRO membership.

Today, Biocom has more than 100 CRO/CMO member-companies, each one providing essential support to California’s life science ecosystem. Biocom has responded to this growth with a new series of CRO-specific events designed to help these members overcome common hurdles and expand their businesses, both through education and networking.

The centerpiece of Biocom’s CRO community is a website visited frequently by members around the world, www.BiocomCRO.org. The site serves as a tool for life science companies to identify a CRO that fits their specific project needs, with a directory that encompasses services for every stage of drug development. In the resources section, CRO members can post white papers, presentations, and press releases; a blog provides a forum for members to highlight notable activities.

And that’s not all...
More reasons we’re stronger with 1,000

Increased efforts to enhance the workforce of the future. For nearly 10 years, Biocom’s 501(c)(3) organization, the Biocom Institute, has ensured the sustainability of this vital industry and inspired the STEM leaders of tomorrow through student and teacher STEM outreach, entrepreneurial and workforce development programs, and veteran-focused mentorship programs.

More international ties.

Biocom’s size has been one determining factor in the partnerships it has forged with industry groups in Japan, China, the United Kingdom, France and Australia. For companies in California, this means easy access to new markets, new ideas and new opportunities across the globe.

Year-round discounts on an individual level. CorePower Yoga, The San Diego Museum of Art and Enterprise Rent-a-Car are among the 45 (and growing) participants of the Biocom Boost program, which gives employees of Biocom member companies access to exclusive, year-round discounts and benefits at many popular businesses across California.

Celebrating future generations. New in 2017, Biocom launched the Life Science Young Leaders program. Geared toward scientists, entrepreneurs, and recent graduates seeking to network and be inspired, the program energizes the next generation of biopharmaceutical industry leaders.

Kelly Quigley is Content Director at Canale Communications Inc.
As the availability and applications of genomic testing in healthcare has expanded, so have the number of biotech companies and laboratories offering products and services in this arena. In the past 10 years, this has coincided with an influx of genetic counselors into industry. Genetic counselors (GCs) are clinicians with advanced training in genetics, genomics and counseling. There are more than 4,000 certified genetic counselors in the United States. Historically, most GCs worked in clinical care and saw patients to evaluate family health history, counsel on risk of genetic diseases, discuss genetic testing options and provide psychological and social support, but the expansion of clinical genomic applications has led many more genetic counselors to seek opportunities within industry.

In 2002, only 14 percent of respondents to the National Society of Genetic Counselors (NSGC) Professional Status Survey said that they didn’t see patients. In 2016, that number increased to 31%. I attribute this change to the many genetic counselors who have demonstrated that our deep scientific and medical knowledge and our communication and counseling skills are valuable across industry, research, education, management and entrepreneurship. Genetic counselors’ training, ability to translate complex genetic concepts and deep understanding of the clinical applications of genomics has not gone unnoticed outside of the clinic and today genetic counselors hold diverse positions across industry.

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So what are genetic counselors doing in biotech? At Illumina, we have 17 genetic counselors working in multiple areas of the company. I asked a few of our genetic counselors to share how their training prepared them for these varied roles.

In our Medical Affairs team, genetic counselors focus on multiple areas of education, especially for clinicians. Genetic counselor and Senior Manager of Medical Education Lindsey Fosler said, “I rely heavily on my training as a GC. In my training, I learned how to effectively communicate and educate both healthcare providers and patients on complex concepts such as genetics.”

Many of Illumina’s genetic counselors, myself included, work in marketing and market development. GCs have a high degree of market awareness and extensive networks in the clinical genomics space. Our GCs also support and enable research that can answer critical questions about the utility of testing.

Genetic counselor Christin Coffeen is part of the Market Development team within Illumina’s Clinical Genomics Group focusing on Europe, Middle East and Africa. She told me, “Aside from the obvious breadth of genetics education that one receives in a genetic counseling program, one unique component of this training is the psychosocial/counseling courses – whether it be understanding different cultures and different personalities, explaining complex information in simple terms, or listening to and assessing the needs of an individual. All of these skills have proved immensely valuable in my role where I present complex genetic information to international clinical customers (labs and healthcare providers), listen to the concerns and assess the needs of these international clinical customers, and represent the clinical voice of our customers to my Illumina colleagues.”

Diana Tuman, who is a genetic counselor and Senior Manager, Product Marketing echoed Christin and Lindsey. “Having a GC background provided me with a great genetics foundation and understanding of the clinical space, patient challenges as well as clinician pain points. This allowed me to not only provide scientific-based content, but also help in the launch of new genetic products and services that are most relevant to Illumina customers and downstream patient care.”

I may be a bit biased, but my experience suggests that genetic counselors add value across specialties in a biotech company. When you can bring the voice of the clinician, the patient and their family further up the development pipeline, it supports the development of the best and most clinically applicable products and services. To learn more about genetic counseling visit the National Society of Genetic Counselors consumer page at aboutgeneticcounselors.com.
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“I’m representing Biocom’s one thousand members from clusters throughout the state of California.”

It’s hard to fully wrap one’s head around what representing 1,000 members means. Most of all, it is a huge responsibility. Our team must understand the unique needs of each of the business sectors of Biocom’s membership, and we have to stay aware of how those needs might shift between the geographic regions. In the policy arena we have always prided ourselves that a local government issue (water availability) was a key driver behind Biocom’s founding.

On federal and state issues, we now represent member companies, both small and large, spanning the breadth of the state, especially in each of the large population centers. We can discuss how an issue such as proposed cuts to the NIH will affect everything from companies to university-based research in the Greater Bay Area, Los Angeles, Orange and San Diego Counties, and the expanded effect that it will have in the service economy of each of those regions.

The knowledge bank that 1,000 members gives Biocom is also invaluable in establishing best practices. As we continue to build on success and partnerships at the local government level, and add to examples of those successes, this sends an important message across the state. It reinforces the message among policy makers that Biocom is an organization that will help them demonstrate their seriousness about helping business succeed and creating local jobs.

Over the past few months, Biocom’s Washington office has focused on the repeal of the medical device tax. The 2.3 percent excise tax on the sale of medical devices has been suspended by Congress for two years, ending at the end of this year. Following Congress’ inability to pass legislation repealing the Affordable Care Act (ACA), which would have included repealing the medical device tax, Biocom redoubled its efforts to bring elimination of the device tax to the forefront. The Biocom action center on our website features a medical device tax action alert, which enables you to write to your elected officials to support a full repeal of the tax.

Earlier this summer, Congress passed legislation to reauthorize the Food and Drug Administration (FDA) user fee agreements. Timely reauthorization of the agreements was an important victory for our industry because it will ensure that the FDA has the resources it needs to review products faster and improve the pre- and post-market approval process, among others. Lastly, Biocom continues its efforts to educate Congressional leaders and their staff and connect them to industry. In the past four months, we have organized several educational briefings about the use of genomics in oncology, federal investment in biomedical research, and drug pricing, and hosted a reception on Capitol Hill with the Healthcare Institute of New Jersey and Congressional Life Science Caucus.

On the state level, this summer was one of intense activity. Bills mandating advanced notification of drug price increases (SB 17) and significantly narrowing how patient prescription drug price assistance programs may be conducted by manufacturers (AB 265) were considered. Although versions of both bills were signed into law by Governor Brown, Biocom played a key role in an industry coalition which secured significant changes in both bills as they moved through the process. Member activation on the price notification legislation, including a BIO small company sign-on letter that Biocom circulated to our small board level companies, was key to securing these changes, as SB 17 was one of the most heavily lobbied and contentious bills this year. Biocom worked very closely with member companies and our industry partners at BIO, PhRMA and CLSA to attempt to defeat or amend these bills.

In regional efforts, roundtables were held for Biocom members with Mayor Kevin Faulconer of San Diego and Mayor Eric Garcetti of Los Angeles. Biocom partnered with the California Biotechnology Foundation for very well received “Biotech 101” sessions with staff members of elected officials in Los Angeles and San Diego. Our Bay Area member engagement continued with a Sustainability Workshop in September, while San Diego members have benefitted from an informational series (complete with certification) focusing on life science company needs developed by SDG&E.

Finally, Biocom thanks the almost 100 elected officials and Biocom members who came out for our Biocom PAC Annual Elected Officials Reception at the beautiful i3 campus of Illumina in San Diego (view pictures in the Members in Action section). Our heartfelt thanks to Signature Sponsor Genentech and Host Sponsor Illumina for their continued support of this event.

Jimmy Jackson is the Senior Vice President and Chief Policy Officer for Biocom. He oversees government affairs and public policy for the organization.

The 2017 Life Science Catalyst Award winners are bringing fresh thinking to some of health care’s biggest problems.

Life science industry veterans remember what the world was like before biotechnology redefined the way we solve disease and other global challenges. But for the winners of this year's Biocom Life Science Catalyst Awards, biotech has been around for at least as long as they have.

They were born during the industry’s formative years, starting in the late 1970s, and earned their undergraduate degrees around the same time that the human genome was first sequenced. And today, they are the young leaders shaping the industry’s future.

The Catalyst Awards, now in their second year, honor life science professionals in Southern California who have made their mark on the industry before the age of 40. These women and men are applying their unique perspectives and skillsets to solve colossal problems that affect people around the world, with goals to diagnose disease faster, end cancer recurrence, help doctors make sense of big data…and the list goes on.

And even though they can’t remember the birth of biotech, they’re solving these major problems with the same level of passion and drive that have been hallmarks of the industry from the start.

Evaluated by a committee of executives and board members from Biocom; thought leaders in the Los Angeles life science industry; and members of the San Diego Venture Group, this year’s winners represent the best of emerging life science innovators across Southern California. These are the young executives, scientists and scholars who will take us to tomorrow.

ENABLING FASTER HEALTHCARE DECISIONS

Francie Barron, Ph.D., 36  |  Vice President of Biology and Regulatory Affairs, Nanomedical Diagnostics

Francie, the senior biological and medical sciences expert at Nanomedical Diagnostics, has been molding the company’s success for more than two years, working with teams to develop innovative new products that enable cutting-edge life science research, drug discovery and portable diagnostic and health-monitoring platforms. Her goal is to help healthcare providers make clinical decisions in a timely fashion so clinical outcomes improve. “This looks like creating point-of-care testing that can diagnose infectious disease earlier and track how the body metabolizes drugs to give real-time information to the healthcare provider,” says Francie, who completed her post-doctoral fellow at Stanford University School of Medicine, performing research using induced pluripotent stem cells. Francie also works closely with local high school science educators to expose kids to STEM careers, and has helped create a robust internship program with college students. When she's not in the office, she's often in the water: “I'm an active scuba diver, and the deepest dive I ever did was a wreck dive at Australia’s Great Barrier Reef…40.1 meters!”

12  Biocom LifeLines Fall 2017
FEATURED STORY

GETTING TO THE HEART OF THE MATTER
Karen Christman, Ph.D., 39 | Professor of Bioengineering, University of California, San Diego; Scientific Co-founder, Ventrix Inc.

Karen is working on many fronts to improve quality of life for cardiovascular disease patients using biomaterials-based regenerative medicines. A prolific scientist in the field of tissue engineering and regenerative medicine—with more than 70 publications and 100 invited talks to date—Karen also is a visionary entrepreneur and devoted mentor to dozens of current and former students at UCSD. As co-founder of Ventrix, Karen guided initial scientific research for a novel biomaterial scaffold and advanced it into a product, VentriGel, that’s now being tested in the clinic for cardiac repair. Her work has been recognized by many well-known institutions including the National Institutes of Health, Wallace H. Coulter Foundation, the American Heart Association and the Tissue Engineering and Regenerative Medicine Society.

INNOVATING BIOThERAPEUTICS AT FULL FORCE
Brendan Eckelman, Ph.D., 39 | Co-founder, Chief Operating Officer and Vice President of Biotherapeutics, Inhibrx LP

Brendan is co-founder of the small biotech company Inhibrx, which is quickly developing drugs that span oncology, infectious disease and inflammatory conditions. He leads therapeutic development and scientific operations, along with holding critical responsibilities in corporate strategy execution. That’s no small task considering Inhibrx plans to file seven INDs in the next 18 months. After earning his Ph.D. in molecular pathology from UCSD School of Medicine, Brendan performed graduate research at Sanford Burnham Prebys Medical Discovery Institute and before joining the Genomics Institute of the Novartis Research Foundation as a research investigator. Now at Inhibrx, he’s focused on keeping the innovation engine churning, free of bureaucratic barriers. The end goal: “Annually advance multiple new therapeutics into clinical development, which are capable of surpassing the ever-raising efficacy bar.”

TACKLING HEALTH CARE CONTROVERSIES HEAD-ON
Dov Fox, J.D., 35 | Professor of Law, University of San Diego School of Law

Dov knows the sticky issues of biotech like no one else. “My writing and teaching in law and bioethics tries to make progress on the controversies of our time and the challenges that lie ahead, from health care reform and translational medicine to brain imaging and gene editing,” he says. The Yale Law School grad publishes his opinions in a range of publications and actively influences policy through submissions of governmental agency comments and amicus briefs, frequent op-eds and speeches on biotech and bioethics. Dov also serves as director of USD’s Center for Health Law Policy and Bioethics, which he was active in founding with Stephen C. Ferruolo, the law school dean. “Central to the success of USD’s Center for Health Law Policy & Bioethics are partnerships among dozens of leading institutions of research, innovation, and practice,” he says.
ENDING CANCER RELAPSE AND RECURRENCE
Zachary Hornby, M.S., MBA, 38  I  Chief Operating Officer, Ignyta Inc.

Ignyta, as a precision medicine oncology company, is trying to eradicate residual disease in defined cancer populations. And Zach is one of its secrets weapons. “I’m personally interested in trying to help the company achieve its goal while providing a work culture that makes Ignyta a fun, meaningful and fulfilling place to work,” he says. He wants employees to “feel good about not only what they did that day, but also how they did it and who they did it with.” His approach seems to be working, as he has helped the company gracefully scale from fewer than 10 employees to a public company with more than 110 employees globally. Zach also leads the global development team for the company’s lead drug candidate, entrectinib. Prior to his current role, Zach excelled at Fate Therapeutics, Halozyme, Neurocrine Biosciences and other biotech companies. “I like the collaborative spirit and positive energy in SoCal,” he says. “People in San Diego seem to love living and working here, and therefore bring positive energy to both components of their lives.” In his free time, Zach is working towards his goal to visit every country in the world. “To date, I’ve visited 102 countries on six continents.”

CREATING THE NEXT GENERATION OF WEARABLES
Patrick Mercier, Ph.D., 32  I  Assistant Professor, Electrical and Computer Engineering, University of California, San Diego

As principal investigator of UCSD’s Energy-Efficiency Microsystems Lab, Patrick leads a research team that’s inventing and developing miniaturized electronic systems that interact with the body in new and interesting ways—for example, by measuring glucose levels in sweat or monitoring neural tissues at very high spatial resolutions. “One of the big challenges we are trying to address is building more functionality into wearables,” says the MIT grad. “Current wearables offer an exciting look into continuous, real-time activity of a user; however, this information is not that useful clinically.” He’s changing that. With physiochemical sensors, wearables offer a more comprehensive look into real-time wellness. Patrick says there’s no better place to be for his research than San Diego. “The life sciences field is not only very strong, but the high-tech wireless industry also has a big footprint,” he says. “Southern California is well positioned to be at the forefront of these intersecting industries.”

REVERSING GENETIC DISEASE WITH RNA
David Nelles, Ph.D., 28  I  Chief Technology Officer & Co-founder, Locana Inc.

Is it possible to reverse genetic disease by targeting RNA? That’s what David is trying to find out. “Decades of effort have culminated in genome engineering, but many genetic diseases are best addressed on the level of RNA rather than DNA,” he says. In this new field of transcriptome engineering, David is already a leader, having been part of the team that developed one of the first means to target RNA in living cells using CRISPR. His groundbreaking work, which made headlines across the U.S. earlier this year, started in the UCSD School of Medicine and continues now at Locana, a company he co-founded. “UCSD has been very supportive and integral to our efforts to translate science into treatments for human disease,” says David, whose educational background includes material science and engineering.
USING WHOLE-GENOME SEQUENCING TO SOLVE RARE-DISEASE MYSTERIES
Ryan Taft, Ph.D., 39  |  Senior Director, Scientific Research, Illumina Inc.

Children with rare genetic disorders often wait five to seven years in the U.S. and Europe before receiving a definitive diagnosis. That’s not acceptable to Ryan, an entrepreneurial scientist with a doctorate in genomics and computational biology. “My goal is to completely eliminate this diagnostic odyssey,” he says. Working with Illumina, he wants to make whole-genome sequencing the standard-of-care for every child who would benefit from it. Ryan has helped Illumina expand its iHope philanthropic program, which has already donated whole-genome sequencing services to more than 100 families in need of answers, and he’s active with multiple rare disease organizations worldwide. “I grew up here in San Diego, and it is strangely delightful to have moved back after many years away,” Ryan says. “I never would have thought San Diego would become one of the hottest spots on the planet for biotech, and that I would be a small part of it.”

TRANSLATING ACADEMIC DISCOVERIES INTO CLINICAL RESULTS
Matt Tremblay, Ph.D., 37  |  Vice President, Business Development, The Scripps Research Institute; Chief Operating Officer, California Institute for Biomedical Research

Matt is working to speed the development of life-saving medicines and change the way we think about funding nonprofit research. The chemist was among the first employees to join Calibr in 2012, as a principal investigator seeking new therapies for metabolic, cardiovascular and autoimmune diseases. But his business aptitude gained attention from the top ranks, and he was soon asked to play a more central role in operations. Recently promoted to COO at Calibr, Matt has been instrumental in establishing collaborations with organizations such as BMS, Pfizer, Wellcome Trust and The Bill & Melinda Gates Foundation. He has helped Calibr quickly become one of the most well-known translational research institutes in the world; and now, his new dual role at TSRI is helping to set a new standard for collaborative research. “I like the collegial nature of the San Diego life sciences scene,” Matt notes. “I’ve had the privilege of meeting people who were wildly successful in their own pursuits, but who engaged me as a colleague, offered advice freely and took genuine interest in what we were doing.”

TAKING L.A. RESEARCH FROM LAB TO MARKET
Thomas Lipkin, Ph.D., 37  |  Head of New Ventures, University of California, Los Angeles Technology Development Group

Thomas has his finger on the fast pulse of L.A.’s biotech startup scene. Through his role at UCLA, he ushers early-stage academic research from bench to market, requiring him to work closely and productively with UCLA faculty, graduate students and post-docs. His New Ventures group also provides services through its “Startup-in-a-Box” program, which supports portfolio companies that have licensed intellectual property from UCLA; offerings include legal, insurance, banking and even human resources. “The Milken Institute recently ranked UCLA No. 1 nationally in our number of startup companies, which speaks to the entrepreneurial nature on campus and helps seed the future of biopharma here in L.A.,” says Thomas, who has a Ph.D. in cell biology and pathology. Thomas says he’s on a constant hunt for talented entrepreneurs and consultants for UCLA projects. “While building a stronger life science community here in L.A. is challenging, I’m excited to know there are talented and similarly-minded people here,” he says.
HARNESSING AI TO HELP DOCTORS ACT ON BIG DATA
Yan Liu, Ph.D., 38  |  Associate Professor, Viterbi School of Engineering, University of Southern California

Yan is developing novel machine learning models that help the doctors decipher big data so they can provide better care to patients. “I feel very fortunate to be at a unique intersection between artificial intelligence and life science,” says Yan, who pioneered fundamental technologies in machine learning for health care, including innovations for improved ICU care, cancer care and drug-intake monitoring. She currently works closely with Samsung to develop deep learning solutions for new-generation smart care of diabetes patients; her lab will help create wearable health devices with artificial intelligent technologies. She also holds six patents as outcomes of her research work, with four more patent applications in review. Yan says her best inspiration is a very special human: “Raising my daughter teaches me a lot about how human beings learn languages, acquire knowledge and socialize with others, which serves as great guidance for me to develop more effective machine learning models.”

DEMOCRATIZING BIOMEDICAL DIAGNOSTICS
Aydogan Ozcan, Ph.D., 38  |  Chancellor’s Professor at University of California, Los Angeles; Professor, Howard Hughes Medical Institute

Aydogan, armed with a doctorate in electrical engineering from Stanford, is on a mission to “democratize biomedical imaging, sensing and diagnostics tools and technologies so that advanced measurements that are normally restricted to resource-rich laboratories and institutions can be conducted in resource-limited environments, including in developing countries.” Aydogan holds 34 issued patents and more than 20 pending patent applications for inventions in telemedicine, mobile health, nanoscopy, wide-field imaging, lensless imaging, nonlinear optics, fiber optics and optical coherence tomography. Notably, he pioneered lightweight, 3-D-printed smartphone attachments that can diagnose diseases such as malaria and HIV and detect pathogens in water. These mobile devices are portable and cost-effective, making them practical for use in biomedicine as well as environmental monitoring in rural and resource-poor areas.

ADDRESSING AN OVERLOOKED EPIDEMIC IN WOMEN’S HEALTH
Tanya Petrossian, Ph.D., 33  |  Chief Executive Officer, EndoCyclic Therapeutics; Principal, Building Block Advisory Group

Los Angeles Mayor Eric Garcetti recently named Tanya as one of his three picks for the city’s Entrepreneur in Residence program, but that was far from her most notable achievement of 2017. The UCLA grad also launched EndoCyclic Therapeutics, where she’s working to develop the first non-hormone therapeutic for endometriosis, the leading cause of infertility and disability in women during their reproductive years. Not long after earning her Ph.D. in biochemistry and molecular biology, Tanya dove into key business roles at Affymetrix and Ayasdi in the Bay Area. Since then, she also created Building Blocks Advisory Group, which works with life science startups and investors to bring great ideas to market. Tanya attributes her impressive work ethic to her years as a nationally ranked swimmer, where she learned to set goals, endure tough workouts and “sacrifice fun to reach a bigger goal.”
INJECTING ENERGY AND STRUCTURE INTO L.A.’s BIOSCIENCE CLUSTER
Marie Rippen, Ph.D., 30 | Chief Executive Officer, Lab Launch

Marie has been key in developing a vibrant bioscience cluster in the L.A. area. As CEO of a nonprofit known as Lab Launch, she’s helping L.A.’s scientists and entrepreneurs advance their ideas in affordable, high-quality labs, and with access to a supportive innovation community. Marie holds a Ph.D. in genetics and molecular and cell biology, giving her an excellent understanding of what cutting-edge scientists want and need. But she’s proven to also think (and act) like an entrepreneur. Marie is the creator of the Biotech Entrepreneurship Coalition, or BEC, a group that creates new opportunities for young scientists to learn about the real-life challenges and opportunities offered by entrepreneurship. “My central question is: how can we accelerate life science innovation here in L.A.?” she says. “L.A is such a different kind of biotech hub from the traditional model; it’s exciting to see how we can make those differences work in our favor.” Marie also is an avid salsa dancer. “I started in college and danced with a performance team through most of graduate school.”

Science That Inspires

The Life Science Catalysts inspire us, but who inspires them?
When asked them to name their favorite scientists, here’s a sampling of what they said.

“Marie Curie. She fought to overcome so much to do research in an academic environment that did not encourage women to excel. It is an inspiration and a reminder of how much women have gained in the years since Dr. Curie did her work. I hope to break more ceilings in STEM for more women to succeed by mentoring those just beginning their careers.” — Francie Barron

“Peter G. Schultz (director of Calibr and president and CEO of The Scripps Research Institute). He is the ultimate no-holds-barred thinker and doer.” — Matt Tremblay

“The famous physicist Richard Feynman. His interest in understanding the underpinnings of the natural world was only matched by his passion for communicating his science as broadly as possible.” — David Nelles

“Whichever ancient Greek scientist first posited that the Earth is round because, if not that individual, I surely would have fallen off the Earth by now during my travels.” — Zachary Hornby

“Dr. Oliver Smithies. He won the Nobel Prize for genetically engineering mice, but he also was the first person to develop gel electrophoresis. The story is that he came up with the idea when watching his mother use starch to iron his father’s shirts. He advanced science in many ways.” — Tanya Petrossian

“Marie Skłodowska Curie. She is the first female Nobel Prize Winner and the first person who won the Nobel Prize twice, but what strikes me most is her dedication to scientific work and her courage as a person in time of difficulties and personal loss.” — Yan Liu

Marie Curie
Marie Curie, née Maria Skłodowska, was born in Warsaw on November 7, 1867, the daughter of a secondary-school teacher. Curie’s early researches were often performed under difficult conditions, laboratory arrangements were poor. Overcoming these challenges, Marie and her husband were awarded the Nobel Prize for Physics in 1903, for their study into spontaneous radiation. In 1911, she received a second Nobel Prize, this time in Chemistry, in recognition of her work in radioactivity.
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Emerging Biotechnology and Biopharma are Revolutionizing Patient Care

It is no secret that the biotechnology and biopharmaceutical industries are the future of personalized health care. Advances in fields such as neurology (e.g., proteomics) and cardiology (e.g., microRNA-based therapies) are driving predictive, prognostic, and therapeutic progress. Innovation has been especially rapid in oncology, with the development of technologies like genome editing, next generation sequencing, and cancer immunotherapies based on diverse mutations.

Yet while physicians are highly strategic and effective learners, few are currently equipped to integrate novel discoveries or newly-launched biotechnology products into clinical practice. This knowledge and skills lag is especially evident in areas such as genomics. Many physicians are frank about their lack of familiarity with genomic testing options or specific indications for particular tests; several surveys report that physicians are unable to distinguish between genomic sequencing and array-based genotyping, as well as unprepared to interpret and utilize genomic information in clinical practice. A recent study found that even among oncologists—a medical specialty with a high proportion of early adopters—at least one third had not ordered tests to guide treatment for patients with non-small cell lung cancer based on the tumor’s genetic profile.

Physician Exposure to Emerging Biotech is Limited

Physicians may be unprepared for the biotechnology revolution for many reasons. First, there is no standardized approach to educating physicians on genomics or other biotechnology innovations. Second, many physicians are simply overwhelmed by the volume of new clinical information they must process and evaluate as part of their commitment to ongoing performance and quality improvement. Third, physician exposure to new molecule information—via clinical studies, professional conferences, and contact with pharmaceutical representatives—is decreasing. And while conventional and social media marketing strategies play a role in providing information to clinicians about the benefits and risks of biotechnology agents, physicians have become increasingly cautious of promotional tactics. This wariness poses a barrier to knowledge uptake and clinical application of emerging and newly-launched biotechnologies and agents.

In contrast, online continuing medical education (CME) is a demonstrably effective option for preparing physicians to integrate emerging biotech discoveries into clinical practice, as physicians want high-value education rooted in science, in formats that match their learning preferences.

CME as a Change Agent

CME is a leading vehicle of knowledge transfer and behavioral change in clinical settings. Online CME personalizes learning,
by collecting data about gaps in knowledge and skill through pre-activity assessment of participants, delivering unbiased, scientifically rigorous educational content via formats that are clinically-relevant, interactive and participatory. Regardless of lifecycle stage, this approach has proven to be especially effective for raising awareness among physicians about emerging agents and technologies prior to approval, as well as preparing them to appropriately evaluate integration of novel therapies and interventions into clinical practice post-approval. Notably, physicians value CME because influential educators—like Eric Topol, MD, Professor of Genomics at the Scripps Research Institute and Editor-in-Chief, Medscape—are able to translate science into actionable, evidence-based strategies in the clinic.

Case Study: Identifying Gaps and Improving Clinical Impact in an Underdiagnosed Disease State

Prior to the 2016 launch of Nuplazid (pimavanserin), the first drug approved to treat Parkinson disease psychosis (PDP), San Diego-based ACADIA Pharmaceuticals wanted to identify what psychiatrists and neurologists understood about this condition.

Medscape Education measured physicians' knowledge and skills via a baseline survey (n = 1274). Results showed significant gaps in knowledge about the hallucinations and delusions associated with PDP, as well as low awareness about the effects of standard treatments on these symptoms, and of clinical data regarding new agents. Subsequently, Medscape created a CME curriculum that focused on PDP epidemiology and pathophysiology, disease detection and diagnosis, and medication mechanisms of action.

An outcomes assessment demonstrated that physicians exposed to the education improved their awareness of PDP, and were equipped to use the latest agents for managing Parkinson disease-related psychosis.

Preparing Physicians to Implement Innovation

Healthcare is changing rapidly. The shift toward personalized medicine, grounded in a spectrum of life science technologies from genetic engineering, to cell therapy, to DNA sequencing, to pharmaceutical agents, means that physicians will need to be well informed about these discoveries. Independent online CME delivers high-value information to millions of healthcare professionals, and provides an unbiased and effective mechanism to not only raise awareness about emerging biotechnology innovations and agents, but also prepare physicians to apply these innovations to clinical practice in ways that improve patient health.

Doug Kaufman is Vice President of Medscape Education (dkaufman@medscape.net).
Exploring Life Science Opportunities in China

Biocom has a unique position as an international ambassador for the California life sciences industry. We have methodically developed our advocacy for investment in California, as well as our efforts to build bridges between our members and life science clusters around the globe. Our strategic partnerships in Japan, the UK, France and Australia have yielded numerous opportunities for our members to connect to international sources of investment, collaboration and commercialization.

China has been an area of exploration for a number of years, with Biocom CEO Joe Panetta visiting several times to assess the life science ecosystem, build partnerships with biotech clusters in several Chinese cities, and see how we might connect to the potentially huge opportunities available there. Our CEO also keeps a keen eye on the necessary market maturity that enables responsible and effective collaboration with China. In September, I had the opportunity to participate in the Bay Area Council’s (BAC) Sixth Annual Life Science Delegation to China. I got a first-hand glimpse into the life science landscape in the cities of Shanghai, Hangzhou and Nanjing.

“In 2007, the Bay Area Council established a business development platform between China and San Francisco/Silicon Valley with the goal of accessing the growing markets of China and encouraging investment into our region. More than 300 companies, universities and government organizations have utilized the Bay Area Council platform over the past ten years,” explains Del Christensen, Chief of Global Business Development for the BAC.

Participating in this year’s BAC Life Science Delegation were myself and
- Dr. Jay Keasling, CEO of Joint BioEnergy Institute (JBEI) and Demetrix, Professor at UC Berkeley
- Dr. Omri Drory, Head of Corporate Development, Twist Bioscience
- Dr. Geoff Nosrati, Chief of Staff, Aduro Biotech
- Dr. Jeff Cox, Faculty Director and Professor, UC Berkeley Center for Rare and Emerging Diseases
- Annie Lin, Program Coordinator, UC Berkeley Center for Rare and Emerging Diseases
- Michelle Moskowitz, Director of Advocacy and International Relations, UC Berkeley Office of Government and Community Relations
- Akash Bakshi, Assistant Director of Technology Analysis and Marketing, UC Berkeley
- Paul Gadiock, Senior Attorney, Arent Fox

Each of us was there to explore opportunities for our respective companies or institutions; some for collaborations on technology, manufacturing or research, and some for investment or other partnerships. According to Dr. Keasling, “China is the largest energy market on the planet and a place that is embracing renewable energy. As such, China is an important market for JBEI’s technologies.”

We frequently hear that the Chinese economy is booming—even when it’s growing slower than expected. But seeing first-hand mile after mile of newly-built skyscrapers and apartment buildings for the rapidly developing urban, educated working class really brings home the enormity of it all. Our tour took us to three major industrial cities in the southern part of China—Shanghai, Hangzhou and Nanjing—and each city had the hum and buzz of people on the move.

We met with municipal party officials, university professors and administrators, investors, entrepreneurs, incubators and companies. Each location, each meeting, each person seemed well aware of the strength and scope of the California life science industry and presented an enthusiastic and optimistic invitation to collaborate. Some expressed interest in forging partnerships with California cities and regions to bring outsourced research,
testing, or clinical trials and manufacturing resources from their hometown companies to advance certain innovative technologies. Others detailed their desire to build or acquire life science incubators and startups in the Bay Area. Several prospective investors were keen to learn about Biocom’s Global Partnering Conference scheduled for February 28 – March 1, 2018. Others laid out the services that they can provide to US companies looking to set up shop in China.

Dr. Drory of Twist Bioscience added, “China has the scale, know-how and ambition to be a world leader in many industries and have put life sciences as a priority. Life science, biotech and synthetic biology is flourishing in China and it becomes a big market for Twist. We are looking for customers and partners in China to work with in unlocking this huge market.”

In all, it seemed as though this region of China is eager to engage and ready to further grow this sector of their economy and having the BAC platform in place makes the learning curve a little less steep. We encourage Biocom members who are interested in exploring partnerships in China to connect with us as we continue to explore how and where we can assist with seizing the opportunities that exist between our two countries.

Michelle Nemits is the Director of Business Development in the Bay Area.
2017 has been a great year for the advancement of our industry in Los Angeles. Some of the highlights of our progress:

- Local industry leaders had the opportunity to meet with LA Mayor Eric Garcetti to discuss the needs of our industry and how we can all work together to support growth in the region.
- There were several important FDA approvals, including approval of the first drug in nearly 20 years for sickle cell, an inherited disease in which abnormally shaped red blood cells can’t properly carry oxygen throughout the body, which can cause severe pain and organ damage. The drug was developed at Emmaus Medical Inc., a spin out from Biocom member LA Biomed.
- We launched a new entrepreneur bootcamp with Biocom member Cal State Los Angeles and other regional partners. The LA Biostart program is federally funded by an i6 Challenge grant.
- Los Angeles to host 2028 Olympics (I had to throw that one in!)

But, most important of all, we’ve seen an uptick in funding for our industry in this region and a landmark acquisition of LA-based Kite Pharma, Inc. by Gilead Sciences, Inc.

On August 28th, Gilead and Kite announced that Gilead would be acquiring the LA-based industry leader in the emerging field of cell therapy, which uses a patient’s own immune cells to fight cancer. This was the first major acquisition in our region by a US big pharma company and the largest ever pre-commercial biopharma acquisition. Can Kite do for Los Angeles what Hybritech did for San Diego? That remains to be seen, but Kite’s journey in Los Angeles is a great example of what can be done here—from the roots of the founders and science at UCLA to IPO to acquisition by Gilead. As Dr. Belledegrun said in a thank you note to his supporters:

“...In a span of just a few short years, we grew from fewer than 10 employees to almost 700. The company’s value increased 2300% from the time of our IPO to nearly $12 billion with the acquisition by Gilead Sciences.”

While highly publicized, this deal is not the only one of note from the LA region. According to the Q2 PwC/CB Insights Healthcare Moneytree Report (http://www.pwc.com/us/us/lifesciencesmoneytree), a quarterly report that covers US Venture Capital funding for healthcare related industries, the LA/OC region was third in the nation in the first two quarters of 2017 in the number of funding deals and the total value of the deals in our industry. (Note that Q3 data was not yet available at the time of writing this article). In Q1 of 2017, LA/Orange County funding was up 220% to $246M compared with funding for this sector in Q4 of 2016, with the number of deals also up by 160% from the prior quarter. See the graph of Q2 data below.
Some exciting examples of 2017 deals:

- Biocom member Ritter Pharma, a leading developer of novel therapeutic products that modulate the human gut microbiome, announced the closing of its public offering of approximately $23 million. They are working on a drug has the potential to become the first FDA approved treatment for lactose intolerance.

- Biocom member Immix Biopharma Inc., announced the close of their Series A on August 28th. The funds will be used to complete a phase 1b clinical trial for their lead candidate, Imx-110.

- SetPoint Medical, a biomedical technology company developing a bioelectronic therapy for chronic inflammatory diseases, secured $30 million in Series D equity financing.

- Sienna Biopharmaceuticals received $40 million in financing AND launched an IPO in 2017. They are a clinical-stage biopharmaceutical company focused on innovations in medical dermatology and aesthetics.

- Biocom member ImaginAb, who is developing an imaging agent for imaging changes in cell tumors, recently raised $8M.

- Science 37, which is helping streamline the world of clinical trials by making them more convenient for participants, closed a $29 million Series C to fuel the company’s expansion.

- Biocom member IndiMolecular, Inc., a developer of protein catalyzed capture agent (PCC) biotechnology for research tools, diagnostic agents, and PET imaging, raised $11.5M in June in a Series A funding that was led by M Ventures (Merck Ventures BV, a subsidiary of Merck KGaA).

I can’t wait to see what the future holds for this industry in 2018, but the LA area is clearly gaining momentum and more of the recognition we need to attract capital to our region.

Dina Lozofsky is the Executive Director of the Biocom Los Angeles office.

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1,000-Times Stronger: 
Our Commitment to Workforce Development

My work life started at the age of 10 with a neighborhood paper route. I was responsible for the daily delivery of 80 papers. Next came a job as a camp counselor, and then as a summer lifeguard. Finally, I applied for my first summer college internship. I bombed my panel interview and didn’t get the job. When I finally got accepted into an internship program at General Motors it was an eye-opening experience. I was the front-line supervisor on the second shift in a steering component factory. I can’t say that I overly enjoyed the experience, but I learned more in one summer about communication, negotiation, motivation and supervision than I did from everything I’d done to that point. The next two summers spent as a General Motors intern were invaluable experiences on many fronts, not the least of which was that I realized I did not want to be a front-line supervisor in a union-based manufacturing plant or go into marketing.

Perhaps it was that first internship that got me hooked on workforce development; I sure recognized the need to treat my education like a job, find internships, hone my soft skills, embrace career development and more. I thought it was all about getting the right training. But I was wrong. It’s not about internships and instruction. It’s so much more. I agree with former Labor Department Secretary Thomas Perez who said, “we can no longer afford to simply ‘train and pray.’”

Biocom Institute is excited to be rooted in workforce development for the life science industry and continuing to support programs that can help people far beyond simple training. 2018 marks our 10-year anniversary and I’m more excited than ever because it dovetails with achieving 1,000-member status for Biocom. The Biocom Institute can point to plenty of accomplishments over the past decade, such as training and retraining hundreds of individuals for various careers in the life science industry, providing unique and engaging STEM experiences to tens of thousands of San Diego’s kids every year, hosting an annual data analytic hackathon ( with 220% YOY increase in student participation) and, working to inform and assist hundreds of military veterans considering a transition to the life science industry. Mostly though, we are excited at the scale and scope of Biocom’s membership and look forward to engaging with ALL of Biocom’s California-based industry member companies. We have seen and felt their unwavering commitment to workforce development.

A study by McKinsey & Company, Education to Employment: Designing a System that Works, raised the question: how can a community move its young people from education to employment? Students are graduating with the financial burden of student loans and yet can’t find a job. Employers have open positions that can’t be filled because they can’t find candidates with the right skills. Fewer than half of students and employers believe that new graduates are adequately prepared for entry-level positions.

Our education partners can’t do it alone. Companies must be more closely connected to the academic institutions and students, and that’s where Biocom Institute can help. While we have our “go to” partners that always come through when a school group wants to take a tour of a biotech company, or one of our veterans needs a mentor, or a teacher makes a request for a STEM professional in the classroom, we need more. We need you.

To industry members: this is a call to join us. 2018 will bring new campaigns to engage with workforce initiatives. We will work for you and with you. There are a variety of programs and services where you can participate and contribute. We promise it will be rewarding and fun. And it will serve your needs, no matter the size of your company.

Together we’ll put the California life science industry on the map as the industry and region with the most coordinated, comprehensive and effective workforce development initiatives around. You can start by reaching out to us. Let us know who your best contact is within your company to connect with on this effort. Get in touch directly: lbozinovic@biocom.org. I’d love to hear from you.

Liisa Bozinovic is the Executive Director of the Biocom Institute.
What’s New on the Completely Revamped Biocom Website

By now, you may have noticed our website, Biocom.org, has undergone a substantial makeover. Your eyes aren’t deceiving you—it has. We’ve completely revamped our site to give our growing membership faster and easier access to the resources they need, all while giving site visitors a cleaner, more modern, mobile-first user experience, no matter what information they’re looking for.

Those interested in our public policy initiatives can now easily track bills in our State and Federal Legislation of Interest sections. Members can stay up to date on the latest life science policies we’re lobbying for and against at the local, state, and federal levels in the stunning new Policy Priorities section. In the new Action Center, members can make their voices heard year-round on the life science issues that matter most.

The new Biocom.org also features a simpler Events and Networking section. Once clicked, the events and networking tab sends visitors to our events calendar, where members can filter Biocom’s 150+ annual proprietary events by location, date, and topic, or choose to see additional events hosted by Biocom members and partners. It’s also easier to view Biocom’s committee offerings. Our dedicated Committees page gives you a top-down view of categories, and individual committee pages showcase committee missions, guidelines, responsibilities, and join contacts.

In the new Capital Development section, highlights include the ability to submit funding and partnering inquiries year-round, view upcoming Partner and Venture Days around California, as well as information on participating companies, and gain invaluable information specific to life science startups in California.

Members can also get savings news and information whenever they need it, all in one place, in the new Purchasing Group section. The new Savings Portfolio gives each of Biocom’s 30 vendors a place to post discounts and updates, and savings categories give members savings insights specific to Lab, HR/Finance, Facilities/Operations, Data/Communications, and Travel.

For members and corporate leaders looking to get involved in the community, Biocom Institute’s revamped section features dedicated STEM, Veterans, Workforce and Entrepreneurship, and Professional Development sections. Members can contact Biocom Institute year-round for corporate and individual give-back and volunteer opportunities, and invest their own development with discounted member courses for life science professionals.

News resources are also easier than ever to access, with a Biocom Newsroom featuring media resources, a brand new blog-style home for Biocom’s newsletter, the Biocommunique (BCQ), and sections for Biocom news releases, Biocom in the News, and Biocom Viewpoints.

Finally, the new Biocom.org employs a secure HTTPS-encrypted browsing experience, a personalized Our Team page, 100% original content and stunning graphics reflect on Biocom’s 20+ year commitment to the life science industry and commitment to California’s life science future.

We invite you to explore the new website at Biocom.org today for an entirely new experience.
Everyone in business knows the power of networking and building relationships. It’s incredible how a simple conversation over coffee can lead to an introduction to someone who will fund your company. The beauty of building an assortment of relationships is that you never know when it will yield a significant connection. At Biocom, specifically within the Capital Development pillar, our goal is to facilitate building these relationships between our nearly 1,000 members and investors, large pharma, big biotech and other individuals who can help accelerate a company’s success. These connections not only benefit our members but they benefit the California life science ecosystem at large.

As I build my own relationships, it is important to listen to what is being said relative to funding for companies. The life science ecosystem is evolving and the avenues that large pharma in particular are exploring for filling their pipelines are changing. No longer is the core focus on internal research, pharma are networking more broadly and evaluating technology earlier—looking at partnerships with academia and early stage companies and building relationships with venture funds. There is a growing demand to just know what is going on.

As I have talked with various representatives of large pharma and venture funds, they all tell me the same thing: it is critical to the success of their business to know people and what they are working on so when something becomes relevant they can move on it. They want to/need to build a network of individuals that they can quickly get to the technology.

At Biocom, and in particular with our Partner Days and Venture Days programs, we aim to do just that. We broker opportunities for individuals in specific therapeutic areas to connect with members and learn about what they are working on. In 2017 alone, we have held Partner Days with GSK DPAc, Vertex Pharmaceuticals, Illumina, Boehringer Ingelheim, and Eli Lilly. We have done Venture Days with Taiho Ventures, Astellas Ventures, Takeda Ventures, SR-One, Longitude Capital, Illumina Ventures, Novo Ventures, and RiverVest. These events have taken place in San Diego, in Los Angeles and in the Bay area—and companies have participated in these events from throughout the State of California.

Through Biocom’s ability to unite the statewide ecosystem we made 200 direct connections so far this year. That does not include the countless connections and introductions when schedules don’t align. It is important to focus on the relationship building through events like these, and although it is difficult to measure specific deals, the value of the introduction and the conversation is priceless.

In all of these events, Biocom creates the avenue for members to tell their story and to build or nurture an existing relationship. We will continue to calendar more of these opportunities.

To ensure that you are in the know, make sure to bookmark this webpage: www.biocom.org/s/capital-development/.

Advice from the Experts
Snippets of advice given throughout the year from various panels and presentations that Biocom has organized:

- When pitching, you need to have a clear concept and vision with lots of data to back it up. Plus, good people and a solid hypothesis.
- The more that entrepreneurs are educated, the better armed they are to go into discussions.
- Ask questions before you begin your pitch and listen to the response—this will help set the course for the conversation.
• The most important introduction is the warm introduction to a funding partner who can help facilitate connections.
• Be prepared to talk about your differentiation strategy. How will your concept move the needle?
• Always a plus to have clinical data.
• Have a well thought out strategy and be concise when telling it.
• The goal is to get beyond the initial 30 minute meeting—you want to get whomever you are meeting with excited about the mechanism and you want to get an invitation to tell more about what you are doing. Remember, some of the individuals you are meeting see 2,000 ideas a year! You need to say something in 30 minutes that makes them want to talk to you again.
• Do not spend time on the size of the market or outlining the problem in specific area.

In addition to general oversight of the organization, Jennifer spearheads Biocom’s international outreach, capital development, and marketing efforts.

• Don’t be frustrated by a No—it may just mean No at the moment. It’s good practice to stay in touch, keep an open dialogue and send new data as it becomes available. That No could quickly become a Yes when the time is right.
1,000 Members Means Millions More in Savings

A group purchasing organization (GPO), in its simplest form, is an entity that is created to leverage the purchasing power of a group of businesses to obtain favorable pricing, terms, and conditions from suppliers in exchange for access to a large potential opportunity. If done correctly, it is simple math; the better the opportunity for suppliers, the better the programs and savings for the customers.

Our team has been hard at work renegotiating on our members' behalf with every new milestone: 600 members in 2014; 750 in 2015; 850 in 2016; and now today, on the doorstep of 1,000. Each major milestone means more leverage, which means better deals. Together, we grow stronger and prosper.

Our mantra of ‘member-focused, member-vetted, member-driven’ has continued to allow us to translate member feedback into solutions and positioned us as the strongest GPO in this industry. Together with our members, this simple but powerful equation of leverage and member participation translates into critical operational excellence for everyone.

June Lombardi, Senior Director of Procurement for the Scripps Research Institute, agrees, “Biocom Purchasing Group’s ability to leverage the purchasing power of their large member base has unlocked a level of competitive pricing impressive even for an institute of my size, and is a GPO we can trust to negotiate with our best interests in mind.”

Representing almost 1,000 members, we can negotiate on behalf of hundreds of millions of dollars of spend, resulting in contracts so competitive they are now utilized by even our biggest members. It’s a testament of just how impactful the deals have become. Our Thermo Fisher Scientific contract alone has almost 400 members enrolled. While this is great news for Thermo Fisher Scientific, it is also creating another positive effect in the marketplace.

The feverish pace at which new suppliers are calling to be part of the savings portfolio has accelerated rapidly in direct response to our recent growth. Our contracts team is hard at work fielding those calls and facilitating routine advisory check ins with our members as we chart a path for new contract areas.

Wherever those conversations lead, we are confident the contracts that we will be able to negotiate over the next few years will continue to provide increasingly critical bottom-line savings for our members.

“What I love about the Biocom Purchasing Group contracts are the unique terms and conditions negotiated,” says Wendy Hernandez, Director of Corporate Procurement for NuVasive. “For us, the best pricing is only one side of the equation. We’re always looking for the best overall cost of doing business, and that means pairing effective cost management with best-in-class industry partners and exceptional service. Biocom always delivers and is standing by to ensure we are happy with the endorsed supplier.”

Just as people are often recognized as the most important asset of a company, our members are ours. We’ve had the privilege of serving some of our members since the beginning in 1995; many more for over 15 years, and many new ones who are just starting to experience the incredible goals we can accomplish together.

The best businesses are agile, flexible, and adaptable. They are always on the lookout for best practices and embrace continuous improvement. Luckily for us, we’re surrounded by luminaries on a daily basis. We’re proud to have the opportunity to raise the bar together, and we’re looking forward to unlocking the next level of potential at our one thousand member milestone heading into 2018.
Get a Jump Start on Tax Reform

The road to tax reform is proving difficult, which complicates business and individual tax planning. Many may have approached 2017 in expectation that next year might be more tax-friendly. In reality, the details on when, how and what reforms will be passed are murky. Fortunately, there are steps to take now to anticipate and prepare for future changes. It starts with understanding what types of tax reforms may be coming.

What We Know of the Tax Reform Plans
The “Big Six”—House Speaker Paul Ryan, Senate Majority Leader Mitch McConnell, Finance Chairman Orrin Hatch, National Economic Director Gary Cohn and Treasury Secretary Steven Mnuchin released an outline of their tax reform plan on September 27. The Unified Framework for Fixing Our Broken Tax Code (Unified Framework) contains many of the provisions of previous tax reform proposals, including the House Republican Blueprint, and the Trump Administration’s plan.

It collapses individual tax brackets into three groups, nearly doubles the standard personal tax deduction, and eliminates the Alternative Minimum Tax (AMT). The Unified Framework also enhances the child tax credit. Itemized deductions, other than charitable contributions and mortgage interest, are repealed, as are estate taxes and the generation-skipping transfer tax. In the framework, the corporate tax rate is lowered to 20 percent. Pass-through entities will be subject to a top rate of 25 percent, with a reference that the final tax reform would include measures to prevent the recharacterization of personal income into business income for high income earners looking to reduce their top tax rate. Trump had previously proposed a 15 percent rate for both corporations and pass-through entities.

Businesses would be able to immediately expense capital investments made after Sept. 27, 2017, for five years. What would happen to other business tax provisions is less clear. The framework specifically eliminates the Section 199 domestic manufacturing deduction. It preserves the research and development (R&D) tax credit and incentives for low-income housing. The C corporation deduction for interest expense would be limited, and whether it would be available for pass-through entities would be weighed by future committees. Dividends from foreign subsidiaries would receive a 100 percent exemption. Foreign earnings that have accumulated overseas would be deemed repatriated. The tax rate for repatriated earnings was not identified, but the Unified Framework specifies that illiquid assets would be subject to a lower rate than cash assets.

What Businesses Can Do Now
Businesses can prepare for the possibility of a future lower corporate tax by looking at strategies to defer income and accelerate deductions for 2017. Accelerating purchases to take advantage of the Section 179 expensing election and bonus depreciation may be another option to consider. Manufacturers currently using the Section 199 deduction may want to ensure they are claiming the maximum deduction for the 2017 year.

Multinational organizations should consider undertaking an earnings and profit (E&P) study. An E&P study can help determine the amount that would be subject to repatriation. Steps may be taken now to reduce the E&P that would be taxed under tax reform.

What You Can Do to Prepare for Individual Tax Changes
Similarly, individuals can prepare for the possibility that lower individual tax rates may be coming. Individuals may want to defer income and accelerate deductions for 2017. Consider maximizing deductible expenses such as charitable donations and state and local income and property taxes while keeping an eye on AMT considerations.

If possible, individuals should delay making gifts that would trigger transfer taxes. They should also evaluate the impact on their estate plans of a potential loss of stepped-up basis due to repeal of the estate tax. The loss of the deduction for interest expense may also affect estate planning, and individuals should consider the use of debt in the estate if the deduction is no longer available.

Stay Tuned
Many questions remain about the Unified Framework, chief among them how the proposed tax cuts would be financed. The lingering uncertainties may mean the reforms outlined will not affect 2017. Businesses and individuals can still be prepared by considering existing opportunities to reduce their tax burden for 2017. A tax advisor can help navigate the uncertainty and optimize business and individual tax plans.

Yi Yang is a Tax Director in the San Diego office of CBIZ and MHM. She specializes in corporate tax provisions.
As we travel the road to 1,000 members, the horizon is full of opportunities for STEM. It’s a rich road, full of twists, turns, thrilling curves, and seat-belt-tightening moments of exhilaration. A quick look in the rear view mirror gives us a glimpse of what has flown past, and a glance forward leads us onward to the next destination for STEM in our community.

In 2008, Biocom’s roster was close to 500 members. That same year, the Biocom Institute was incorporated as a 501(c)3. The mission? To build a better workforce for the life science industry. Meanwhile, the Biocom Institute got connected with something called “The San Diego Science Festival.” Little did we know that this 2008 festival would be labeled the “largest multicultural, multigenerational, multidisciplinary celebration of science ever seen on the West Coast,” with Biocom Institute in the leadership role.

In its inaugural year, the Science Festival was a collection of 500 events held across San Diego County. It lasted a month and culminated with the first-ever EXPO Day on April 4, 2009 in Balboa Park. A record-breaking crowd of 50,000 people attended. Well, along with the crowds came traffic (sometimes the road to 1,000 needs some Cal-Trans road-widening). According to one media statement, “the backup of cars on Interstate 5 waiting to exit for Balboa Park stretched five miles.” Event planners quickly made the fix the following year by moving EXPO Day to Petco Park, with plenty of public transportation routes and lots of parking. More importantly, the traffic jam reflected the tremendous demand for public science events, revealing a craving among students, teachers, and parents for high-quality STEM experiences and exposure.

In the following years, we traveled the road and our journey became a collective movement to integrate science into everyone’s day-to-day culture. A movement that has put a little sexy into the word “STEM”, and transformed the definitions of “nerd” and “geek” from stereotypes to smart and strong. As we’ve accelerated our efforts, we’ve made this industry and its career paths accessible to men and women of all races and socio-economic backgrounds.

So how do we keep moving forward and remain a leader in this movement? First, we continue to cultivate conversations that bring recognition to how science changes lives every day. Second, we recognize and capitalize on the fact that geographically, science (and advancement) is truly right here in our own backyards. San Diego is a hotbed for innovation, offering a unique collaborative spirit, a high concentration of world-class research institutions, and a strong foundation to create and build new companies. Today, as we lead the San Diego Festival of Science & Engineering, we will continue to be a catalyst and collaborator, showing students and parents how science, technology, engineering and math translate to promising careers and fuel our economy. Also, we keep an eye on the road ahead: stay tuned for new STEM outreach programs in our other life science clusters across the state in 2018.

Local leader Larry Bock is a hero to those of us in STEM, here in San Diego; we are proud of his vision. We are also proud of our community’s success in being awarded seed funding from the National Science Foundation. We are grateful to many others—especially to our early pioneering partners at UCSD.

We have listened to the community and grown with the times: our major STEM initiatives now occur across one week, and our signature event is now called the Festival of Science & Engineering. We now claim more than 70,000 participants. We are proud to be the primary K–12 STEM initiative of the Biocom Institute and are thankful that the Biocom leadership understood the significance of keeping this Festival moving forward for San Diego and its families.

Though we will always have the honor to say we were one of the country’s first(s), there are now more than 50 science festivals taking place throughout the United States, from rural areas to major cities. Join us March 3–11, 2018 to help honor the past, celebrate the present and strengthen the future for the next 10 years of the San Diego Festival of Science & Engineering! Visit us at www.lovestemsd.org.

Sara Pagano is the Managing Director of the Biocom Institute Festival of Science & Engineering.
It Takes More Than Home Runs to Succeed

Baseball Hall of Famer and local San Diego legend Tony Gwynn said, “The minute you’re satisfied with where you are, you aren’t there anymore.” During my 15-year tenure at Biocom, Tony’s words rang true: when I look back at where Biocom was 15 years ago and then to where it is today, soaring to 1,000 members, I ponder the gifted right-fielder’s philosophy. As a veteran of the Biocom Events team I have seen our organization achieve growth and greatness—always with a team approach, and always with a laser-focus on our members.

Just as it takes singles, doubles, triples, and home runs to have a winning season, it takes small, medium, large, and global events to achieve success for our life science industry. At Biocom, we had 6 employees when I started. And while we mostly hit regular singles and doubles, that led to well-timed triples and keen-eyed home runs. Today, we are a state-wide staff of 48, with a 60-person board, and offices around the world, making Biocom the largest life science trade association in the United States by membership and staff. It took time, experience, skill, dedication, wisdom, and a deeply committed team of industry veterans with decades of experience to achieve this milestone.

In my first year at Biocom, I could recite all of our members by name. If someone asked if company Y was a member, I would know immediately. I would know at least 1 or 2 people from that company to introduce you to. I would know what therapeutic area that company was working in and what round of financing they were in. I knew all this because the year was 2002 and we only had about 200 members.

I get asked all the time, how is it being at the same job for 15 years? Don’t you get bored? Don’t you want to try something new? And what I can honestly say is that 2017 has been the best year of my professional career. The growth of this organization to almost 1,000 members has created an environment that fosters collaboration, ingenuity, motivation, creativity and most important to me, excitement. Let me explain why...

Events are the cornerstone of most trade associations. They aim to provide their members with networking, education, idea-sharing, and access to best practices and brightest minds. Events provide a forum for members to exchange ideas and develop new ways to accelerate life science industry success. I have seen more experienced members help newer ones; I have watched new partnerships form, I have seen deals get done, and I have watched milestones reached and products approved. I have cheered hundreds of industry home runs.

For those of you who can remember back, Biocom once held not-to-be-missed monthly breakfast meetings. These events were recognized as the “meet ups” for the biotech industry in San Diego. The topics were broad, and if you were in the life science community, you simply had to be there. Back then, Biocom organized just one annual conference each year, CALBIO. This was an opportunity to stay abreast of the advancements in the biotech industry in San Diego. We also held quarterly executive receptions. Bringing our leaders together to connect has always been a primary focus. Everyone knew each other, everyone supported each other. It was “a small world” back then.

Fast forward 15 years and we have seen our membership grow not just in numbers but also in diversity and geography. 1,000 members came to us for the promise that only Biocom can provide: we swing for the fences on behalf of our members. Biocom’s growth has changed our strategy completely when it comes to developing programs for our members. Gone are the days of “one-size-fits-all” events. As a statewide organization representing all segments of life science, we are now organizing specialized events that target the diverse companies that make up our membership. Precision medicine, big data, genomics, digital health, combination products, AI, cybersecurity, chemistry outsourcing, workforce development, and capital development are just a few of the areas where Biocom provides customized events. Furthermore, we are a traveling team: our events are now up and down the coast, across the country and across oceans. We also target industry leadership with programs for CEOs, CFOs, CIOs, HR heads, and Business Development professionals. We no longer connect the mighty few in our backyard. Our events now link across time zones and create collaborations around the world. 10 events per year and one regional conference became 150+ events a year and five major conferences, including our flagship Annual Global Partnering Conference. Six well-known employees have become 48 valued colleagues. 200 members have become 1000. Bored? I promise you I’m not. The great thing about change is that it keeps you flexible, fluid and open to new ideas. Change makes you smarter. Every time you are forced to adapt, you learn new skills. Change forces you out of your comfort zone and into new experiences. I am more energized and passionate about my job 15 years later than I ever expected.

In the immortal words of Miley Cyrus, “Change is a thing you can count on. I feel so much younger now.”

Shaye Exner is Senior Director of Conferences and Corporate Sponsorship for Biocom.
BIOCOM PAC ANNUAL ELECTED OFFICIALS RECEPTION

Illumina’s picturesque i3 campus provided a beautiful setting for this year’s Biocom PAC Elected Officials Reception. Biocom members had the opportunity to chat with policy makers in a warm, relaxed setting and educate them about the industry and the advances being made. Our special thanks to Signature Sponsor Genentech and Host Sponsor Illumina for making the incredibly successful event possible.
BIOCOM’S OPEN HOUSE + SUPPLIER SHOWCASE:
On July 20th, Biocom hosted over 600 members at Brian Malarkey’s Farmer & the Seahorse for the Annual Biocom Open House + Supplier Showcase and an unforgettable evening on the Torrey Pines mesa. The energy in the crowd was magnetic as members navigated through the Game of Life (Science), visiting with suppliers in uniquely crafted on-site activations, experiencing food & drink pairings from regions in California, unlocking prizes and soaking in the sweet sounds of summer from Biocom member band, Chicken Wire, and local artist Mike Mydral and his Trio.
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BIOCOM DEVICEFEST & DIGITAL HEALTH SUMMIT:
Biocom held the 10th annual DeviceFest this year with a digital health focus. The event delivered on its promise to provide thought provoking panel discussions and case studies on reimbursement, behavior modification, funding strategies, and a pulse of the industry from EY. The audience participated in voting for this year’s Five in 5 in the Hotseat winner and crowned Braykion the hottest device company in California.
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COMMITTEE CORNER

Biocom’s 15 committees provide valuable networking, the chance to plan future Biocom events, and a forum to discuss critical issues within the industry. We are excited to announce the launch of committees in Los Angeles and the Bay Area for even more opportunities for our members to get involved with Biocom and the life science community. In this LifeLines, we are featuring the Facilities Committee and we hope to spark your interest in joining a committee where you can share your skills, knowledge, and expertise.

**CRO Committee**
This committee was formed to build a unique support network between industry companies and CRO’s. The committee is comprised of representatives that have expertise in discovery, development, manufacturing, clinical research and/or marketing of therapeutic, device and diagnostic products. Committee members help to identify ways that industry members can work with CRO’s to strategize about their specific needs.

Interested in joining? Contact Kira Jenkins at kjenkins@biocom.org
Name: Zane Hirtzel  
Job title: Senior Account Executive  
Favorite movie: Heat  
Favorite book: The Lord of the Rings  
Favorite quote: “Luck is what happens when preparation meets opportunity.”  
Favorite TV show: Breaking Bad  
Favorite restaurant or meal: Thai  
Favorite city: Auckland, NZ  
Favorite actor/actress: Al Pacino  
Favorite thing to do on the weekends: Hangout with my kids and friends  
What CD can we find in your car: Tool  
Favorite hobby: Fitness  
Favorite website: www.nzherald.co.nz  
Favorite spot in Southern California: Corona Del Mar  
First job: Cashier  
Favorite part of your job: Helping clients  
If you could have another career, what would it be: A stock trader  
Why did you start working in your industry: Interested in news and public relations.

Name: Steve Li  
Job title: Business Development Executive  
Favorite movie: Inception  
Favorite book: The Tipping Point, by Malcolm Gladwell  
Favorite quote: “Don’t take life too seriously, you’ll never get out of it alive.” – Elbert Hubbard  
Favorite TV show: Big Bang Theory  
Favorite restaurant or meal: Mastro’s Steakhouse  
Favorite city: Rome  
Favorite actor/actress: Denzel Washington  
Favorite thing to do on the weekends: Going to the beach in the summer and snowboarding in the winter.  
What CD can we find in your car: I don’t play CDs in the car. I play Pandora stations.  
Favorite hobby: Playing sports  
Favorite website: Google  
Favorite spot in Southern California: Laguna Beach  
First job: McDonald’s  
Favorite part of your job: Going to different parts of the world.  
If you could have another career, what would it be: Veterinarian  
Why did you start working in your industry: Loved helping to make people feel better.
**Premium Member Spotlights**

Name: Alan B. Spatz  
Job title: Managing Director

Favorite movie: Its Complicated  
Favorite book: Great Gatsby  
Favorite TV show: Homeland  
Favorite restaurant or meal: Cassoulet  
Favorite city: Los Angeles  
Favorite actor/actress: Steve McQueen

Favorite thing to do on the weekends: Find something new to do in Los Angeles  
What CD can we find in your car: Dreamer by Eliane Elias  
Favorite hobby: Art history  
Favorite website: Ebay  
Favorite spot in Southern California: Los Angeles  
First job: Putt Putt Golf, Cincinnati Ohio  
Favorite part of your job: Creatively overcoming deal and negotiating obstacles to help clients achieve their transaction goals.  
If you could have another career, what would it be: Hosting California's Gold  
Why did you start working in your industry: Wanted to be involved in many different types of businesses.

Name: Debra Prol  
Job title: Life Science Specialist, Client Advocate (Property & Casualty)

Favorite movie: Good Will Hunting  
Favorite book: The Da Vinci Code  
Favorite quote: "When you talk, you are only repeating what you already know. But if you listen, you may learn something new." – Dalai Lama  
Favorite TV show: Modern Family  
Favorite restaurant or meal: Merriman’s  
Favorite city: Boston  
Favorite actor/actress: Leonardo DiCaprio / Sandra Bullock  
Favorite thing to do on the weekends: Walk on the beach with my family.  
What CD can we find in your car: Fisher Price Sing-Along Classics, but if I had a CD of mine in the car it would probably be Jack Johnson.  
Favorite hobby: Paddle boarding  
Favorite website: Biocom (of course)  
Favorite spot in Southern California: La Jolla  
First job: Lifeguard / Swim instructor  
Favorite part of your job: Helping my clients solve problems, and watching them bring lifesaving products to market.  
If you could have another career, what would it be: Travel blogger  
Why did you start working in your industry: I had an opportunity to join AIG’s underwriting training program. It was a great learning opportunity, and lead me to find a specialty that I was passionate about.
Biocom LifeLines Fall 2017

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AM Chemicals
Ambxys Biotechnology
Amgen
Amphend BioPharma*
AmphiBiosciences
Amplix Pharmaceuticals
Amprior*
Amyris
Angiocrine Bioscience
Animantis
AnaptysBio
Animal Cell Therapies
Annam Biosciences*
Ansun Biopharma
Antiva Biosciences
Applied StemCell*
Apricus Biosciences
Aquinox Pharmaceuticals
Aramis Biosciences
Arcturus Therapeutics
Ardea Biosciences
Aries Pharmaceuticals
Armethon
Armorx
Artha Biosciences
Arslan Kasei Pharma
AskGene Pharma*
Assembly Biosciences*
Aspyran Therapeutics
Astellas Pharma
Ategra Biotherapeutics
Atia BioSystem
ATyr Pharma
Audences Therapeutics
August Therapeutics
Aukera*
Avarin Pharmaceuticals*
Avantient
Avellas
Avenzoar Pharmaceuticals
Averyx Therapeutics
Avidity Biosciences
Avidya Biosciences
Bachem Americas
Balance Therapeutics
BASF
Belotera
BioAtla
BioCeryx
Biologent
Biomatrica
Biomysx
BioNano Genomics
Bioniz Therapeutics
Bioisbrx
BioWb
BlackThorn Therapeutics
Blade Therapeutics
Boehringer Ingelheim
Bolt Therapeutics*
BP Biosciences Center*
BroMics
Bristol-Myers Squibb
Calcimedica
Caribou Biosciences
Casebia Therapeutics
Catalaise
Cayuga Biotech
CeleCare Therapeutics*
Celecare Therapeutics
Cell Care Therapeutics
Celtics Therapeutics
Cello Therapeutics*
Cellular Research
Center for Aquaculture Technologies
Ceutix Labs*
Channel Medsystems
Chubu Technology Licensing Office
Chugai Pharma USA*
Cibus
Circle Pharma*
Circuit Therapeutics
Coherus Biosciences
Contract Biotics
Coyote Bioscience USA
Cripes Pharmaceuticals
CureMatch
Curata Pharmaceuticals
CytoVale
CV Sciences
CytoxM Therapeutics
Dare Bioscience
Dart Neuroscience
Decoy Biosystems
DEL Biopharma
Demetrix*
Dermata Therapeutics
Diagnostics for the Real World*
DICE Molecules SV, LLC*
DiscoverX Corporation*
DNA Link USA
DNAnix
DoDo OmniData
Dovetail Genomics
EA Pharma Co., Ltd
Edico Genome
eFFECTOR Therapeutics
Elicy Therapeutics
Elaxis
Emerald Cloud Lab
Emerald Health Biotechnicals*
Emerald Health Pharmaceuticals*
eMolecules
EndoCyclic Therapeutics
EndoRx Pharmaceuticals
Epexus Biotechnologies
Esper Therapeutics
Eton Bioscience
Evofem Biosciences
EvoRx Technologies
Expression Systems*
EZ Labs
F1 Genomics*
F1 Oncology
Fabrus
Fate Therapeutics
FibroGen
Fluoresprobe Sciences
Forge Therapeutics
Forte Seven*
Fress Therapeutics*
Galena Biopharma
Geltor
Genalyte, Inc.
Genelux Corporation
Genentech
Genlantis
Genoa Pharmaceuticals
Genomica
Genovo Corporation
GenSignia Life Sciences
Gerion Corporation*
GliaxSmithKline
Global Biotechnologies
GlyTech
GreeneCh Biosciences
GWR Instruments
Halcyone Therapeutics
Harpoon Therapeutics
Helix
Heron Therapeutics
Histogen
Horizon Pharma USA
Human Longevity
Huya Biosciences International
IdeaBay Biosciences
IGM Biosciences*
Ignite Immunotherapy
Imimmix Biopharma
Immunity and Me*
ImaginAb
Inception Sciences
Indica*
IndiBio
Indi Molecular
Inhibix
INNOCART
InnoPep
Innovative Cell Technologies
InnoViva
Innovus Pharmaceuticals
Inovio Pharmaceuticals
InSilixa
Integrated DNA Technologies
Intercept Pharmaceuticals
International Stem Cell
Intrexon Corporation
Intrinsc LifeSciences
Invetech
Invtaius Corporation*
InvivoGen
Ionis Pharmaceuticals
Iovance
IRBCt
Isimmune
Jecure Therapeutics
Karma Biotechnologies
Kindred Biosciences
Koniku
Kureha Corporation*
Kura Oncology
Kyowa Hakko Kirin California
Lab Launch
La Jolla Biologics
La Jolla Pharmaceutical Company

* New Members from May 2017 to October 2017
Ligand Pharmaceuticals
Leading Biosciences
LeXent Bio
Lin Bioscience
Linkage Bioscience
Lumen Biosciences
MabVax Therapeutics
MAPP Pharmaceuticals
Maverick Therapeutics
MAX BioPharma
MediGenome
MatrSys Biosciences
Maverick Therapeutic
Meditope Bioscience
MEI Pharma
Meiji Seika Pharma
Memphis Meats
Menarini Silicon Biosystems
Mercaptor Discoveries
Metacrine
MindWerkBio
Miraculex
Mirati Therapeutics
Molecular Assemblies
Molecular Response
Molecular Sthethoscope
Monsanto
Multimeric Biotherapeutics
Myokardia
Myovant Sciences
Nagano Science USA
NantWorks
NeuCyste
Neurocrine Biosciences
NeuroGenetic Pharmaceuticals
Neurocrine Biosciences
NeuCyte
Nagano Science USA
Myovant

CRO/CMO

3D1 Holdings
Abiogenes
ABL
Absorption Systems
Abzena*
Accelogen
Accenture Accelerated RD
Acepix Biosciences*
Advaxis Therapeutics*
Agility Clinical
Alkahest
Alphora Research
Alliance Protein Laboratories
Al&Biomedical
American Peptide Company
AnaBios
Annovon Bioscience
Novi
Nencis
Nuclear Biologies*
Nuredis
Nuria
OBI Pharma USA
Obsdido Therapeutics
Ocera Therapeutics
Ocucurex Therapeutics
Ohr Pharmaceutical
Omnix
Oncentral Therapeutics
Optimum Therapeutics
Ora Biosystem*
Oxregene Therapeutics
Orygami Therapeutics
OrPro Therapeutics
Oxonomy
Oxford Bio Therapeutics
Pacira Pharmaceuticals
Paci Pharmaceuticals
Paralline*
Patara Pharma
Pathway Genomics
Peptide Logic*
Perfect Day*
Persephone Biome*
PersImmune
Phenex
PharmAkea
Phenovig
Phoenix Molecular Designs*
Fimera
Flex Pharmaceuticals
Plant Therapeutics
Polyomav
PolyPeptide Laboratories
Poseida Therapeutics
Precision Nanosystems US*
PrimaPharma*
PrimeGen BioTech
Primity Bio
Primordial Genetics
Principia Biopharma
Procure Life Sciences*
Progenics Biosciences
Proteica*
Prowit
PvP Biologics
QED Bioscience
QLSF Biotherapeutics
Quay Pharmaceuticals Limited
Relex Pharmaceuticals*
Regude Biotechnologies
Regulas Therapeutics
REKA Health
REM Biotherapeutics*
RempeX Pharmaceuticals
Renew Biologics
Renova Therapeutics
Repertoire Genesis
Reset Therapeutics*
Retrophin
Retox Virox
REVOLUTION Medicines
Ribioscience
Ridgeline Engineering
RIFT Biotherapeutics
Ritter Pharmaceuticals
Rohto Pharmaceutical
RoSight
Sahara Energy
Samumed
Samsara Sciences
Sangiane Biosciences
Sanofi
Scripps Laboratories
Second Genome
Senomyx
Senté
Sentyl Therapeutic
SeqOnce Biosciences
Seracon Pharmaceuticals
Seventh Wave*
Single Cell Technology*
Singlera Genomics
singular Bio
Sillalene Biotherapeutics
Solstice Biologics
Sophins Bio
Sorrento Therapeutics
SOVA Pharmaceuticals
Stason Pharmaceuticals*
Steimmune
Stemonix
Sunesis Pharmaceuticals
Sun Genomics
Sunovion Pharmaceuticals
Surozen*
Switch Bio*
Syndex*
Synovia Life Sciences*
Synthetic Genomics
Takeda Pharmaceuticals U.S.A.
Tanabe Research Laboratories
Tarere Therapeutics
Target Discovery
TCRCure Biopharma*
T-Cure Bioscience*
TEGA Therapeutics
Tempo Therapeutics
Tenova Pharmaceuticals
Theravance
Thesan Pharmaceuticals
Tizona Therapeutics
TL Biolabs
Tocagen
Tonbo Biosciences
Toohb Corporation*
TP Therapeutics
Trace-Ability, Inc.
Traction Pharmaceuticals
Tragara Pharmaceuticals
Trefoil Therapeutics
Trianni
Triphase Accelerator
Triton Algae Innovations
Truvian Sciences, Inc.
Twist Bioscience Corporation
UCB
Ultima Genomics
US Specialty Labs
Valtari Bio
Vantari Genomics
Vaxion Therapeutics
VeloX Biosystems
Ventura Bio Center
Veredezyme
Verify Life Sciences
Verogen*
Vermardi
Vertex Pharmaceuticals
Vet-Stam
ViaCyte
Vical
Vigil DiX*
Viking Therapeutics
Viracta Therapeutics
Vital Therapies
Vineti
Vir Biotechnology*
Viscident Bioscience*
Vividion Therapeutics
Wambergen Genomic Advisors*
Wellspring Biosciences
Wildcat Discovery Technologies
World Fusion Co., Ltd*
Xcell Biosciences
Xcell Unity*
Xencor
Yokogawa Electric
Zavante Therapeutics
Zosano Pharma

BIOCOM MEMBERSHIP

Cellecta
Cato Research
Catalent
Catalaize
Cassia
Bioserv Corporation*
Bio-Edge
BioBlocks
BioAuxilium Research
Behavioral Pharma
Bavarian Nordic
Biowallusium Research
BioBlocks
Bioclinova
Bio-Edge
Bioserv Corporation*
Catalaize
Calent
Calot Research
Collecta
Champions Oncology
Charles River Laboratories
ChemDiv
ChemPartner
Cleave Biosciences
Clover Biomedical Systems*
CMIC Holdings Co*
CNBE*
Covance*
Crown Bioscience San Diego
Cytelegen
Davos Chemical
DDSTUDIO*
Diagnostics
Drug Delivery Experts
Enplas Americas*
eStudySite
Explora BioLabs
Genea Biosciences
Global Blood Therapeutics
Grand River Aseptic Manufacturing
Hamamatsu Pharma Research
Hamari Chemical San Diego Research Center
HD Biosciences
HTD Biosystem*
HTL Biotechnology*
ImmuNordica
Infinite Chemical Analysis Labs*
IMG Health
InClinica, Inc.
Integrium Clinical Research
inVentiv Health Clinical
InVivo*
InSy*
JRF Global*
KaloBio Pharmaceuticals
Lab Launch
LakePharma*
Linear Clinical Research*
Linical USA
Lovelace Biomedical
Lucidant Polymers
Medicorex
MedSource
MEDIARS
MicroConstants
MFI Research

Biocom LifeLines Fall 2017 43
BIOCOM MEMBERSHIP

My Chem LLC
Nanosyn
Neox USA
Neuropore Therapies
Neuroservice
Neuro-Sys
Norac Additives
Norac Pharma*
Novastyle*
Ontolitics Biotech
PharPoint Research
PharmaDirections
PharmaLegacy
Pharmapace
Pharmaron
Pharma Test Services
ProSciento
Praviti
PSI CRO
Peracyp
Qoolabs
QPS
Quadrants Scientific
Quay Pharmaceuticals Limited
R2M Pharma*
Rapid Novor
Reco Gantivestne*
ReoLab
Reveal Biosciences
Rho
Robarts Clinical Trials
RoGen
SD Chem
Shang Pharma Innovation*
SeqOne Biosciences
SG Scientific
Shamir Insight, Inc.
Sherpa Clinical Packaging
Solana Biosciences*
South Bay Biomics
SRD Co., LTD*
STa Pharmacueticals
Starfish Medical
Stem Express
SureClinical
SyrnetaCHCR
TCR Medical Corporation
Therapeutics
Tioga Research
Tokion
Toyota Tusho Corporation
Trillium International
Uqula, Inc.
Vala Sciences
Ventura Bio Center
VIRAPUR
Vista Biologics Corporation*
Wax-It Histology Services
Zensun USA
Zagen

BillionToOne
Biocept
BioDx
BioFluidica
Biological Dynamics
Biomerca
Biospecific
BioTheranostics
Bio Trace Medical
BlueNovo Biosystems, Inc.
Breathe Technologies
Brain Biometrics
Burl Concepts
Canary Health
Cell Idx
CeloNova BioSciences
Ceteris
Chapter Diagnostics*
ChromaCode
Click Diagnostics
Cliniqa Corporation
CombMatrix
Competition
Confirm Biosciences
CTK Biotech
CVAC Systems
Cytom Therapeutics
DermTech International
DexCom
Diadexus
Dorsa Vi USA
Drawbridge Health*
DNA Electronics
Eliar Medical Corporation
Emerge Diagnostics
Endologix
Entra Health
Epic Sciences
Epitope Diagnostics
Fallbrook Engineering
Fresca Medical
GenomeDx Biosciences
GenWay Biotech
GIMDX
Glaikou Corporation
Glyens
Harbor Med Tech
Heart Metabolics USA
Hitachi Chemical Research Center
Ichor Medical Systems
Ignyta
Imagination Biosystems
ImpliedMed
ImProMed*
ImThera Medical
Inari Medical
Inceptus Medical
INova Diagnostics
Interpreta
Interventional Spine
Inviscose Technologies
Ionian Technologies
KFX Medical
Kurin
Luminex Corporation
Lumira
MARDX Diagnostics
Mass Spec Lab
MERU VASImmune*
Micell Technologies
Millennium Health
Minerva Surgical
Nano Imaging Services
Nanomedic Diagnostics
NeuroStructures*
Neuvana Medical
NucleusHealth
NuFACE
Omnio
OncoSec Medical
Organovo
Patient Safe Solutions
Precision Diagnostics
Profusa
Prometheus Laboratories
Pulse Biosciences
Q-Bridge Solar
Qico
QT Medical
Quidel
Quinn Medical
Rebound Therapeutics
ReCo Medical
Renew Medical
ReShape Medical
REVA Medical
ReVision Optics
Simplify Medical
Sirigen
Solekai Systems
Sonendo
Specific Technologies
SpectraScience
Spinal Elements
Suneva Medical
Symex America
Tandem Diabetes
Terumo Cardiovascular Systems
Corporation
Tokai Medical Products
Transcend Medical
Tristan Technologies
Trovagen
Xtant Medical

NON-PROFIT

American Cancer Society, Border
Sierra Region
Biomedical Manufacturing Network
Calibur
California NanoSystems Institute (CNSI)*
California State University, San Marcos
Cal State University, Los Angeles
Chan Zuckerberg Biohub
Cedars-Sinai Medical Center Office of
Technology Transfer
Children’s Hospital LA*
CIRM
City of Berkeley Office of Economic
Development*
City Of Murietta
CONNECT
Consulate of Canada
CSU, CSUPERB Program
Drugs & Diagnostics
Tropical Diseases
East Bay Economic Development
GlycoAnalytics, UC San Diego
Hayward Chamber of Commerce
Human BioMolecular Research
Institute
Huntington Medical Research Center
IDA Ireland
Institute of Engineering in Medicine
Institute of Quantitative Systems
Pharmacology (IQSP)
J. Craig Venter Institute
Kaiser Permanente
Keck Graduate Institute*
La Jolla Bioengineering Institute
La Jolla Institute for Allergy &
Immunology
Lawrence Family Jewish Community
Center
Life Science Innovation Network
Japan
Los Angeles Biomedical Research
Institute
Los Angeles EDC
Low Medical Research Institute
MiraCosta College Biotech Program
Molecular Medicine Research
Institute
ML San Jacinto College
Pasadena Bio Collaborative
Incubator*
PhRMA
Point Loma Nazarene University
PRISM
Rady School of Management, UCSD
Salk Institute for Biological Studies
San Diego Biomedical Research
Institute
San Diego Blood Bank
San Diego Clinical and Translational
Research Institute, UCSD
San Diego Community College District
San Diego County Water Authority
San Diego Employers Association
San Diego Regional Chamber of
Commerce
San Diego Regional Economic
Development Corp.
San Diego Supercomputer Center
(UCSD)
San Diego Workforce Partnership
Sanford Burnham Prebys Medical
Discovery Institute
Scottish Development International
Scirpis Health
Scirpis Institution of Oceanography
Scirpis Research Institute
SDSU, Graduate & Research Affairs
Society for Brain Mapping &
Therapeutics
SRI International
Torrey Pines Institute for Molecular
Studies
UC San Diego Health
UC San Diego Extension
UC San Diego Office of Innovation &
Commercialization
UCI’s Office of Research
UCLA Technology Development Group
UCSD, Department of Bioengineering
UCSD, Office of Advancement
UK Department for International
Trade
University of San Diego
USC Stevens Center for Innovation
Western University of Health Services
Zhuhai Commercial Service, North
America

* New Members from May 2017 to October 2017

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**BIOCOM MEMBERSHIP**

**INDIVIDUAL**
Antoinette Azevedo  
Carol Gallagher  
Dan Burgess  
Deeky Goodrich  
Donna Janson  
Elliot Parks  
John Kavanagh  
Peter Prouss  
Richard Ledford  
Stan Kim

**KEY PROVIDER**
Covington & Burling  
Cushman & Wakefield  
Innovative Advancement*  
Qualcomm  
San Diego Gas & Electric

**PROVIDER**
2Connect  
C3 Risk & Insurance Services  
4G Clinical  
AER Travel  
AMN Healthcare  
Arabis*  
AVI Systems*  
Azzur Group  
Bench International*  
Bionest Partners  
BioSurplus  
BioTx  
Blue Sky Broadcast  
Blue Sky Marketing Group*  
Bridgewest Capital Management  
BSM USA*  
Buchanan Ingersoll & Rooney  
Burger Construction*  
Caliber Associates  
California Manufacturing Technology Consulting  
Cambridge Research Biochemicals  
Cardinal Health Regulatory Sciences  
CBRE  
Chubb Group of Insurance Companies  
City Wide Maintenance*  
Cohn Reznick LLP  
Controlled Contamination Services  
Coming  
CryoPort  
CSM  
Cymer  
Dassault Systems Bovia Corp  
Delawie  
Dentons  
Doveling & Yahnke  
DPR Construction  
Echo Laboratories  
Elsevier  
Essen Bioscience  
Ferguson Pape Baldwin Architects  
Fisher & Phillips  
Fjord Ventures  
Fluidigm Corporation  
Forward Ventures  
Fragomen, Del Rey, Bernsen & Loewy  
Full Spectrum Analytics  
Genstar Technologies  
Global Source Ventures  
GMI Building Services  
Golden EHS Consulting  
Grande Colonial  
Ground Zero Pharmaceuticals  
Gunderson Dettmer  
Halbert Construction  
Halloran Consulting Group  
HCP Life Science Estates  
Heritage Global Partners*  
H.G. Fenton Company  
Hyatt Regency La Jolla at Aventine  
IMEC  
J.T. MacMillan Photography  
Jones Lang LaSalle  
Kaneva Corporation  
Kilroy Realty  
Knoblee, Martens, Olson & Bear  
Layer 3 Security Services  
Leadership Edge  
LemonTree Partners*  
Leverage Concierge  
Life Science IT  
Lonza AG  
Managed Laboratory Services  
Marken  
Mark Hurtt Consulting  
Mayer Hoffman McCann  
McDermott, Will & Emery  
Medline Industries  
Medscape Education (Web MD)  
MB Worldwide Chauffeured Services  
MI-Box Moving & Mobile Storage of SD  
Morrison & Foerster  
Navigator Business Solutions  
Objective Capital Partners  
Occupational Services  
Office Troops  
Oxford Finance  
Pall ForteBio  
Praxis Life Sciences  
PR Newswire  
Prevost Construction  
Procopio, Cory, Hargreaves & Switch  
Project Management Advisors  
Providential Real Estate  
Prudential Cleanroom Services  
Qiagen*  
Retirement DNA  
Robert Half  
Rx International*  
Sartorius  
Savills Studley  
ScaleMatrix  
SecureDocs  
Seismic Software  
Sequoia Consulting Group  
Sharp Business Systems  
Sheppard Mullin Richter & Hampton  
Shred-it  
Siemens Industry*  
Silicon Valley Bank  
Slone Partners  
Solfinnova Ventures  
Square 1 Bank  
Stradling Yocca Carlson & Rath  
TCI America  
Technical Safety Services  
Telepacific Communications  
The Newport Group  
The University of Tokyo Edge Capital Co.  
Transnetix  
Trials.ai  
TriNet  
TUV SUD America  
Unanet  
Unifirst  
UPS  
Vault Bioventures  
VDP Direct  
Veolia  
Watson Biologics USA  
Weka.IO  
Zayo Group  
Zef Scientific  

* New Members from May 2017 to October 2017

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