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Hear what inspires and excites the 17 Biocom Life Science Catalyst Award winners
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Greetings and welcome to our fall 2018 issue of LifeLines! As I write this column, I am preparing to lead our Biocom member delegation once again to the annual BioJapan convention, which has grown to more than 15,000 participants. We will be participating in partnering sessions, networking meetings, and I will be representing our California industry as a presenter in the annual Biocluster Summit. I am very enthused about our international efforts to bridge California life science, but most of all about our Japan initiative, where we have 50 association members and a Tokyo office to serve our companies when they are in Japan. On this theme, two excellent articles on our Japan relationships from our partners at the Japan Bioindustry Association and Takeda Corporation, appear in this issue.

Biocom continues to expand our presence across the State, where we now have more than 1,100 member companies and firms. I was thrilled recently to cut the ribbon for the opening of our new Bay Area office in South San Francisco where I was joined by City Manager Mike Futrell, JLabs Biocom Board member Leslie Stolz and many members of our new Advisory Committee there. I look forward to the further success of the Bay Area operation and our team led by Michelle Nemits, and I anticipate investing much more of my time there in getting to know our 300+ members.

This issue of LifeLines focuses on the relentless pursuits by our life science companies to develop therapies and technologies to improve health and quality of life in the face of setbacks. In my 30 years here within the San Diego life science community, I have always marveled at the turn-around stories that I have witnessed with many of our now most successful companies.

One such company that I witnessed conquer true adversity is IDEC Pharmaceuticals, a company founded by pioneers Ivor Royston and Howard Birndorf to further develop monoclonal antibody technology. Former Biocom Chairman Bill Rastetter, who later became CEO, has talked about how the company was down to $3 million in tentative investment and was essentially dead; a miracle phone call to Tamar Howson at Smith Kline Beecham resulted in an infusion of cash that kept the company alive and eventually it produced one of the biggest cancer drugs ever, Rituxan®. Bill went on to merge IDEC with Biogen and Rituxan® continues to successfully treat non-Hodgkin’s lymphoma patients to this day.

Another incredible comeback that comes to mind is Amylin Pharmaceuticals. The company failed to show significant results in developing a drug to regulate insulin. In 1998, the board brought in Eli Lilly veteran CEO Joe Cook, who was forced to reduce their workforce by 75%. I remember sitting with Joe in an office with many empty desks after I came to Biocom in 1999. In 2002, Amylin was able to secure $325 million in funding from Eli Lilly to develop Byetta®, based on technology the company had licensed to create a synthetic version of Gila monster venom that contained GLP-1, which regulates insulin and glucagon. Under the
leadership of CEO Ginger Graham, Byetta® was approved by the FDA in 2005 and the company was successfully sold to Eli Lilly in 2012 by her successor and another former Biocom Chairman, Dan Bradbury.

Finally, I always marvel at the turn-around success of Neurocrine Biosciences. Neurocrine was founded in 1992, and unlike IDEC or Amylin, remains successful today under the leadership of long-time CEO Kevin Gorman. In 2002, Neurocrine was in an agreement with Pfizer to develop their experimental insomnia drug, Indiplon. The deal paid Neurocrine $100 million up front and $300 million if the drug met regulatory and sales goals. But the FDA did not approve the product and the company was forced to reduce its size and to give up much of the space in a newly-built campus in Carmel Valley. Gorman turned the company around with the development and commercialization of INGREZZA®, which was approved by the FDA for the treatment of tardive dyskinesia in 2017. Today, Neurocrine has a team of more than 400 employees and it is in the process of expanding the use of INGREZZA® to treat Tourette Syndrome.

It truly is remarkable to hear about the failures our life science companies have faced and how they’ve embraced loss and triumphed over devastating conditions.

Please enjoy this issue of LifeLines, and know that we strive to advocate each day on behalf of the California life science community within government centers here and in Washington, DC. I welcome our more than 150 new members across the State, and I invite you to take full advantage of all that we have to offer you as your most valued membership association.

Joe Panetta
President and CEO, Biocom
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A major generational shift is happening right now in the labs, offices and board rooms of California’s life science companies. The Millennial generation is swiftly ascending the corporate ladder—and, in many cases, creating their own paths upward—to make a unique and lasting mark on the industry.

At the same time, a new generation of science is taking hold, redefining how we treat and prevent disease. From CRISPR to CAR-Ts, today’s companies are using sophisticated new tools to tackle age-old problems, and possibly even create cures.

It all adds up to one of the most exhilarating times in the history of life science. This year’s Catalyst Award winners don’t just have a front-row seat to the excitement; they’re the ones making it happen. Through their professional work and personal passions, they’re sparking important changes that hold potential to improve lives all over the world.

For the third year, Biocom is honoring Southern California’s emerging industry leaders, calling attention the young women and men who’ve accomplished so much before turning 40. Their stories reflect our changing times and give us an encouraging glimpse into the future of healthcare.

These young scientists and executives are based in Southern California, but are shaping life science innovations that hold potential to impact lives globally.
INSPIRING L.A. SCIENTISTS TO STAY LOCAL

Carolina Amador, 28
President, Biotech Connection Los Angeles (BCLA)

Carolina is constantly reaching out to Ph.D. candidates and recent grads who are just beginning their careers. She knows it may be tempting for them to relocate to high-profile biotech hubs, but she and her team at BCLA work hard to keep them local—contributing to the increasingly vibrant science scene in L.A. She can relate to their journey because she’s a student, too; as a doctoral candidate at USC, she is designing molecules to study cancer mechanisms and treat disorders such as hearing loss. “We have true leaders in this city who are always happy and willing to help,” she says. “It’s so exciting to see all of us coming together to advance the biotech community in L.A.” A lover of life in all of its forms, Carolina is a vegan who also volunteers with organizations that rescue animals and empower young girls.

BUILDING L.A.’s BIOTECH BRAVING

Brian Benson, 31
Director of Entrepreneurship & Commercialization, California NanoSystems Institute (CNSI) at UCLA

Brian has set out to eliminate the hurdles that prevent life science startups from succeeding. He recently launched CNSI’s new incubator, Magnify, which provides move-in-ready lab and office space, mentorship, investor connections and other essential resources to early-stage companies. “Los Angeles is no longer a fly-over destination for life science innovation and investment,” he says. “There’s a lot of work ahead, but I’m excited to see how we turn these challenges into opportunities and transform L.A. into a world-leading biotech hub.” Brian’s penchant for speed goes beyond accelerating new businesses. While attending Loyola Marymount University, he was a crew chief and team manager for a drift racing team. The skills he gained help him today: “The racing industry is incredibly fast-paced, and to succeed one must be able to rapidly evaluate situations and implement critical solutions.”

CREATING THE ATLAS OF HUMAN CELLS

Long Cai, Ph.D., 38
Co-founder, Spatial Genomics; Research Professor, Caltech

Long is a professor of biology and biological engineering at the California Institute of Technology, and is the principle investigator of the Cai Lab, which focuses on single-cell systems biology. This year, the Harvard grad won two major research grants from the National Institutes of Health’s Human BioMolecular Atlas Program (HuBMAP), which seeks to build a detailed map of cells within the human body. Long and his Caltech collaborators are using the funding to generate high-resolution maps of healthy human organs and systems. Long launched the Center for Spatial Genomics to support these efforts and accelerate new technologies that evaluate spatial organization of different cells, including how they organize, specialize and cooperate. “We will be able to answer many long-standing questions in basic research and human health in the next decade,” Long says.
SEEING PATTERNS IN THE MICROBIOME

Stephanie Culler, Ph.D., 37
Co-founder and CEO, Persephone Biome

Why do the latest cancer drugs work for only a fraction of patients? Stephanie believes the answer lies in the gut. Her startup Persephone Biome is leveraging the rich metabolic capabilities of gut microbes to help develop more effective therapeutics. (One initiative called “Poop for the Cure” analyzes stool samples from cancer patients.) With a Ph.D. in chemical engineering from Caltech, Stephanie directs all discovery and product development activities. She’s also a recent graduate of the prestigious Y Combinator accelerator and presented at TEDx San Diego. Stephanie has over a dozen publications and patents on synthetic biology and microbial based technologies. But her body of work also includes music: The former member of the La Jolla Symphony nearly became a professional violinist.

TURNING UP THE HEAT ON CANCER

Punit Dhillon, 38
Co-founder and Director, OncoSec Medical

At OncoSec Medical, Punit is helping to advance new drugs that turn “cold” tumors “hot,” thereby stimulating the immune system to defeat disease. The company currently has six drugs in clinical trials, two of which are partnered with Merck. With a background in corporate finance, strategy, intellectual property licensing, mergers and acquisitions, and collaborations, Punit brings a strong business sense to everything he touches. He shares his wisdom with others as a co-founder and director of Young Entrepreneurship Leadership Launchpad (YELL), a not-for-profit and charitable organization based in Vancouver, B.C., where he also spends time as founding director of a healthcare investment firm. Punit also founded BeCancerPositive.org, an online community for cancer patients around the globe.

ELIMINATING THE LOGJAMS OF GENOMIC DISCOVERY

Joseph Dunham, Ph.D., 35
Co-founder, Chief Scientific Officer, SeqOnce Biosciences Inc.

Sample prep and library construction are often-overlooked bottlenecks of next-gen sequencing. By making these steps simpler and faster, Joseph believes genomic discovery will finally hit its stride and reach more markets. He’s focused on making this happen at SeqOnce Biosciences, the Pasadena company he cofounded in 2014 after finishing his Ph.D. in molecular biology at USC. “Next-generation sequencing technologies have opened up a whole new era of genomics and molecular biology,” he says. “The future is very bright as these technologies continue to drive scientific discoveries that will affect clinical diagnostics, research and healthcare.” In his free time, Joseph cultivates eight of the spiciest pepper plants, including the ghost and Carolina reaper peppers: “I use these unique flavors to enhance my cooking.”
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**Medscape Internal Data, 2018.
FORGING A NEW ROUTE TO BETTER MEDICINES

Stephen Fiacco, 38
Co-founder and CEO, EvoRx Technologies

Stephen launched EvoRx to answer a key question: How can we translate our growing knowledge of biology into effective medicines? EvoRx has created a drug discovery engine that seeks to provide a solution. “We use unique compounds called macrocyclic peptides to create new drugs that would be challenging to create by any other means,” he says. Stephen has partnered with multiple pharmaceutical companies to identify potential medicines, one of which is nearing clinical trials. An active dad, Stephen frequently visits Disneyland and travels worldwide to history-rich locales. He often marvels at how drastically healthcare will transform during his children’s lifetimes: “We are in a golden age of biotech,” he says. “Today we are treating, and sometimes curing, diseases that would have been death sentences only a decade ago.”

EDITING GENES FOR IMPACT

Valentino Gantz, Ph.D., 34
Co-founder and Director, Agragene Inc. and Synbal Inc.

Born out of his groundbreaking graduate research in the Bier laboratory at UCSD, Valentino developed an entirely new technology called “Active Genetics.” It’s a gene-editing platform that holds the potential to create better human therapies and fight insect-borne diseases—a growing problem globally. Realizing the real-world impact his research could have, Valentino co-founded two San Diego biotech companies built upon his research: Synbal is developing safer, more efficient cell-based treatments for patients with rare, genetic diseases; and Agragene provides new solutions for agriculture and insect pest management. But science isn’t the only thing that gets Valentino’s blood pumping; born into a family of artists, he devotes time to drawing, painting, photography and even glassblowing when he’s not in the lab at UCSD, where he continues to work as an assistant research scientist.

ASSISTING THE BLIND VIA AUGMENTED REALITY

Suman Kanuganti, MBA, 38
Co-founder and CEO, Aira Tech

In 2015, when Suman Kanuganti was earning his MBA at UCSD’s Rady School of Management, he struck up a friendship with a blind communications professional. Not long after, the idea for Aira was born. His company blends wearables technology, artificial intelligence and augmented reality with the interaction of highly trained remote human agents to provide assistance—anytime, anywhere—to people who are blind or have low vision. “We transform daily life into a liberated and fully independent experience,” he says. Using Aira, individuals gain immediate access to visual information, thereby enhancing their freedom and productivity. In September, Suman helped make his alma mater UCSD the first Aira-enabled university in the U.S.
TURNING MASSIVE DATA INTO POTENTIAL CURES

Tao Long, Ph.D., 36
Assistant Professor, Bioinformatics and Structural Biology, Sanford Burnham Prebys Medical Discovery Institute

The life science and tech industries are converging, and Tao is at the center of it all. She and her team at Sanford Burnham Prebys Medical Discovery Institute are making productive use of the vast datasets that result from DNA sequencing and other scientific advancements—combining fields such as biology, computer science and statistics to identify disease biomarkers. In designing and implementing the latest-and-greatest computational and machine learning approaches, Tao is revealing new clues about everything from cancer to the function of microbes in our gut. Outside of the lab, the sci-fi enthusiast is passionate about contributing her knowledge to local tech startups that are revolutionizing how we understand genomics and healthcare informatics. She’s also energized by exploring nature and building Lego masterpieces with her 4-year-old son.

REVOLUTIONIZING CELL-BASED ASSAYS

José Morachis, Ph.D., 36
President and Co-founder, NanoCellect Biomedical Inc.

From next-gen sequencing to gene editing, today’s cutting-edge technologies depend on scientists being able to analyze and separate individual cell types. Frustrated by the lack of modernization in the world of cell-based assays, José co-founded NanoCellect to improve upon the outdated and expensive technologies used in labs around the globe. He and his team developed the WOLF Cell Sorter, a microfluidic flow cytometry platform that gives biomedical researchers a compact and affordable way to analyze cells. Looking to the future of biotech in SoCal, José’s excited by the convergence of biology with fields like software and electrical engineering, artificial intelligence, microfluidics and even social media. Beyond the rollercoaster thrills of heading a startup, José enjoys spending time with his two-year old son and playing basketball.

PERSONALIZING THE LAB TO FUEL DISCOVERY

Taylor Moyer, 39
CEO, ManagedLab Services

After recognizing the inherent conflict of interest in the way life science distributors traditionally support the industry, Taylor founded ManagedLab Services in San Diego, embracing a more personalized model. Her company helps provide robust, data-driven programs to scientific and administrative staff, ultimately implementing better and more sustainable practices. With over 15 years in lab operations at companies such as Fisher Scientific and Biobit, Taylor has a keen eye for optimizing labs so they can churn out discoveries faster and smoother than ever before. Taylor also serves as president of the San Diego Entrepreneurs Exchange, an organization that provides life science support to emerging entrepreneurs, and she founded Boots in Bio, a nonprofit dedicated to training and placing veterans into careers in biotech.
PREDICTING TREATMENT RESPONSE FOR BLOOD CANCER

Chorom Pak, Ph.D., 30
President and CEO, Lynx Biosciences

Chorom recently launched Lynx to commercialize MicroC3, a cytomics-based platform she developed while earning her Ph.D. in molecular and cellular pharmacology from the University of Wisconsin-Madison. The technology, currently in multiple prospective clinical studies, seeks to rapidly predict how patients with blood cancers will respond to various drugs, and it provides clinicians with actionable readouts. She holds five patents for her discoveries and already has accumulated a decade of experience with hematological cancers and microfluidic platforms. Before creating Lynx, Chorom was the clinical and R&D lead at Cellectar Biosciences in Wisconsin, where she co-developed a drug against multiple myeloma and advanced it to Phase 2 trials.

GIVING BRAIN HEALTH A BOOST

Leo Petrossian, Ph.D., MBA, 37
CEO, Neural Analytics

Leo combines his scientific, engineering and business acumen to change the way brain conditions are identified and treated. “Brain health is significantly lagging behind other areas of healthcare,” he laments. “Our mission is to catalyze progress in this this area.” Neural Analytics uses a mix of robotics, machine learning and ultrasound technologies to shed light on one of the most complex parts of our body. A former engineer, Leo once thrived on designing and building products that quickly solve problems. Health care solutions, by contrast, take many years to solve, “which limits the incremental wins.” He compensates by building furniture in his free time. “I love to design pieces in my mind and then build them with my hands and use them daily thereafter. It’s incredibly satisfying.”

MAKING ANOTHER SMART BET

Drew Spaventa, MBA, 34
Founder, CEO, Singular Genomics

Drew is keeping the details of his latest venture under wraps, saying only that Singular Genomics is “addressing large unmet needs in the rapidly expanding sequencing market.” But based on his previous undertakings, we bet it will be big. Drew has built an impressive record of investment wins in a relatively short timeframe. He was a seed investor and part of the founding team of San Diego-based ecoATM, acquired for $350 million in 2013. Next, he was a seed investor and consultant at Edico Genome, which Illumina snapped up for $100 million this year. Now he’s bought in to a host of emerging biotech companies including Epic Sciences, Truvian Sciences, Omnimere, Oncentra Therapeutics, VelosBio and Aspen Neurosciences. “Starting with the sequencing of the genome 15-plus years ago, we are finally beginning to understand how human biology actually works,” he says. “We are learning more at a faster and faster rate, and I am incredibly excited to see how this evolves into impactful biotech and healthcare breakthroughs.” The avid surfer, skier and snowboarder also serves on the board of the San Diego Venture Group.
OVERCOMING HURDLES OF RNA MEDICINE

Arthur Suckow, Ph.D., 35
CEO, DTx

Arthur and his team at DTx are on a mission to make precision medicine a reality for patients. In creating RNA medicines that can control which genes are turned on and off in our cells, DTx is targeting a host of diseases caused by improper gene expression. Most of them are currently untreatable. A big hurdle for the RNA medicine industry has been safely delivering these therapies into cells that exist outside of the liver, but Arthur's company identified a lipidation technology that seeks to overcome this. Given the breadth of diseases caused by faulty gene expression, Arthur says the sky is the limit for DTx. When he’s not hard at work solving diseases, he plays soccer and mini-golf with his 2-year-old son and checks out live music (ideally, Nashville artists) whenever possible with his wife and friends.

TURNING CANCER INTO A LIVABLE CONDITION

Ryan Witt, 30
Vice President and Chief Operating Officer, Immix Biopharma

At Los Angeles-based Immix, Ryan is part of a team that hopes to turn cancer into a livable, chronic disease by targeting the mechanisms tumors use to resist today’s treatment options. “We’ve shown the ability to re-sensitize tumors to therapies using only a fraction of the typical dose,” he says. Ryan, who majored in business economics at University of California, Irvine, is also helping to champion a “rapid iteration” drug-development model at Immix that will allow researchers to rapidly and affordably tweak, deploy and learn until transformative results are clear. The dance-battler and recently-certified SCUBA diver brings optimism and persistence to his work. “The ideal of ending all suffering caused by diseases, infections and illnesses is truly possible during our lifetimes today,” he says. “If you don’t believe me, watch from the sidelines while we in the industry make it so.”
Since 2002, Prudential Overall Supply and Prudential Cleanroom Services continues to provide Biocom Members reusable textile products and services for rental, lease and direct purchase programs.
Improving the Policy Environment for You

This month’s Lifelines is all about the relentless pursuit to improve the human condition; it is a basic tenet of the Biocom policy team that it exists to ensure its members have the proper environment to accomplish this. It is a principle that guides most of what we do.

One of the most critical drivers of the life science industry is, obviously, basic research. And in the United States, the most critical element of that basic research is funding by the National Institutes of Health (NIH). In fact, one study showed that, for every one of the 210 drugs approved by the FDA from 2010 through 2016, NIH-funded research played some role in its progression from discovery to commercialization (most of it through discovery of biological mechanisms, not a drug candidate itself).1

Recognizing the critical importance of the NIH, Congress doubled funding for the agency between 1998 and 2003, which led to the historic sequencing of the human genome, among others. However, funding increases failed to keep pace with economic reality, and, for the next 13 years, the NIH suffered budget cuts, sequestration, and inflationary losses, which resulted in the agency losing nearly 25 percent of its purchasing power.

Adequate if not robust funding of the NIH has been and will always be one of Biocom’s highest policy priorities. Upon establishing a regular Washington D.C. presence in 2008, it was one of the first issues on which Biocom held a Congressional briefing, bringing many prominent San Diegans to Capitol Hill for a dialogue with Congress to explain that increasing NIH funding will save lives, fuel the economy, create jobs, and maintain the U.S.’s leadership in biomedical research. Over the years, Biocom’s staff continues to go to the Capitol to educate legislators about the value of medical research, one office at a time.

Biocom also works every year with the office of California Congresswoman Susan Davis, who is the Democrat in charge of negotiating an annual NIH funding request to the appropriators. We also engage our membership via our action center, which allows individuals to write to their legislators to support NIH funding increases.

Biocom’s advocacy, coupled with that of many other stakeholders in the research community, including life science, providers, and patient groups, has garnered support from both Republicans and Democrats in the House and the Senate. Together, we sent one unified message about the value of medical research which breached party-line priorities and changed the course of the agency’s budget.

As a result, funding for the NIH has been substantially augmented in the past few fiscal years: $2 billion in FY2016, $2 billion in FY2017, $3 billion in FY2018, and $2 billion in FY2019, bringing NIH’s budget to $39 billion.

These increases in NIH’s budget are funding several landmark research projects, including the Precision Medicine Initiative, the BRAIN Initiative, and the Cancer Moonshot Initiative. In addition, more money is going to grants to states. In FY 2018, the $3.9 billion that California received from the NIH supported over 8,000 research projects at research institutions and biotech companies throughout the state and generated more than $10 billion in economic activity.

In issues closer to home, in Sacramento, Biocom engaged strongly on a few issues of critical importance to the industry over the past few months. One huge win was the passage of SB 1121, legislation which clarified critically important HIPAA exemptions and clinical trial data privacy provisions that were adversely affected by a hastily passed law in July (this legislation was necessary to head off a citizens’ initiative from the November ballot). Without this correction in a very short (less than 4 week-) time window, conducting clinical trials in California would have been difficult, if not impossible. At first, the urgency of the message did not seem to be resonating with key legislators. But, with a strong resolve by a dedicated group, including Biocom, major boosts from Senator Richard Pan (a physician by training) and Senate President Pro Tempore Toni Atkins, among others, this corrective legislation was signed into law by Governor Brown.

On the local level, Biocom’s work is a study in persistence. The issues we deal with at this level are ones of zoning and basic regulation, often on an individual basis. Successful resolution relies on relationships with those in the bureaucracy as much as sound science. Our local government affairs department is constantly working with individual Biocom members to help resolve difficult and problematic issues, with a high rate of success.

Waking a Sleeping Giant

Inside the grassroots revolution that aims to make L.A. the world leader in life sciences.

If you were a biotech entrepreneur in L.A. just five short years ago, you probably had several conversations that went something like this:

You: I’m thinking of launching a biotech start-up in L.A.
Your Colleague: There’s no money in L.A.; go to the Bay or San Diego.
You: Why isn’t there enough biotech investment in L.A., given all its talent and resources?
Your Colleague: There’s not enough dealflow in L.A.
You: Why aren’t there enough start-ups to drive sufficient dealflow? We have all these great institutions producing plenty of valuable IP...
Your Colleague: There’s not enough lab space in L.A.; go to the Bay or San Diego.

You: Why don’t the biotech real estate developers just build more lab space in L.A. to absorb these companies?
Your Colleague: There’s not enough dealflow to demonstrate a sufficient rental market for major real estate investments.

For many innovators, this was the reality of starting a business in the L.A. area, and it was disheartening for many. Conventional wisdom said to pack up your assets and set off for another city where you might be able to find the money and resources to build and grow your start-up idea.

Five years later, the situation could not be more different. Los Angeles is now a major hub for life science innovation. L.A.’s reputation as a “biotech flyover country” is conclusively over, evidenced by several recent high-profile acquisitions and venture investments.

A large crowd gathered for L.A. Mayor Eric Garcetti’s Makers Summit and the Grand Opening of Lab Launch@ToolboxLA on October 1st, 2018.
The seeds of a grassroots revolution

What is remarkable about L.A.'s rapid transformation from net exporter of talent and technology into a growing center for bioscience innovation, is that this metamorphosis has been the aggregate product of many individual efforts, each taking their own approach to solving a particular part of the problem, all the while building a supportive entrepreneurial community that reflects Los Angeles' identity among the largest and most diverse metropolitan areas on Earth.

Our team at Lab Launch arose from a series of meetups between local entrepreneurs who shared a passion for building bioscience in L.A. We realized that without adequate R&D space, it would be impossible to build a sufficient pipeline of locally-based companies that would attract investment and attention to the area. We incorporated as a non-profit organization with the goal of providing affordable, accessible lab space for start-ups.

One of the key insights that our team had is that L.A. is not like other cities. Unlike San Diego or Boston, L.A. lacks a singular economic center, instead, looking more like a collection of cities with different centers of gravity spread out across a vast region. The same is true with all of L.A.'s top academic institutions and medical centers. Reflecting this reality, we resolved to create a network of more intimate spaces that could serve the entire region by hosting start-ups close to their own neighborhoods.

From the very beginning, Lab Launch was a bootstrapped operation. As biologists ourselves, we understood the need to provide a clean, high-quality research environment, while finding creative ways to keep the cost of facilities as low as possible so that start-ups could minimize their upfront expenses. Through adaptive reuse of existing facilities and mastering the art of procuring used and refurbished lab equipment, we have been able to achieve significant savings that are directly passed down to start-ups.

A new ecosystem of innovation

Since the first Lab Launch opened in Monrovia in 2015, we have served over 25 companies who have collectively raised over $3 Million in subsequent investments, and have expanded to Chatsworth, with more locations on the way.

In this short time, we have been privileged to witness the growth of a biotech community, as several groups have each made strides in magnifying the success of LA biotech: Biotech Connection - LA (BCLA) has been transformative in creating a more networked and sociable community of bioscience professionals. New training programs, such as LA BioStart and LA Biotech Leaders' Academy, are preparing the next generation of innovators. Incubators are under construction at LA Biomed and Cal State LA, along with private sector projects such as HATCH in the new L.A. County-supported “East LA Biotech Corridor.” Our new team at BioBuilt is working to accelerate and capitalize early stage companies, with hands-on mentorship, training, and funding.

With support from Biocom’s LA team, together with new VC funds and opportunities for entrepreneurs, the future is looking bright. Our community is strong, connected, and hungry to continue L.A.'s transformation into a true 21st-Century hub of biotech excellence!
Biocom Celebrates the Grand Opening of Bay Area Office

On September 21st, we officially opened our Biocom Bay Area office in South San Francisco. We celebrated with many of our San Diego leaders and staff, and with officials, members and partners from all around the Bay. Our Grand Opening was a milestone marking our official statewide presence—adding South San Francisco to our other California offices in San Diego and Los Angeles. The occasion also provided an opportunity to reflect on the journey we took getting to this exciting milestone.

For years Biocom partnered with the Northern California life science association formerly known as BayBio. In late 2015 we integrated approximately 50 of their former members when BayBio merged with the California Healthcare Institute. With a sudden influx of Bay Area members, Biocom instantly became a statewide life science association.

The path from that day in 2015 to our Grand Opening has been an amazing journey. We explored every corner of the Bay Area and connected with countless people and entities within our life science ecosystem. We met with companies—large and small—to learn about their technologies, their employees, their goals, and their needs. We connected with service providers to gain an understanding of how we can work together to collectively add greater value to the thousands of Bay Area industry companies who depend on us. And, we met with elected officials, economic development agencies and support organizations to hear their perspectives and identify ways in which we can collaborate.

San Francisco is known for many things—innovation, world-class universities, culture, awesome sports teams, fog, sourdough bread, and much more. This draws people in from all corners of the earth. Lots of wonderful people—but lots of people means lots of traffic.

I think the most important thing we’ve learned to date is that although the San Francisco Bay Area is geographically a relatively small place, the traffic is terrible at almost any time of day. This fact makes it difficult to find a “hub” or geographic “center” to which all people can gravitate.

Biocom is well-known for bringing people together. We do this

“THE BAY AREA LIFE SCIENCES INDUSTRY NEEDS THE KIND OF PROGRAMMING THAT BIOCOM PROVIDES.”

- RACHEL HAURWITZ, PRESIDENT & CEO OF CARIBOU BIOSCIENCES

On September 21st, we celebrated the Grand Opening of our Bay Area office with a ribbon-cutting ceremony alongside Biocom’s Bay Area Advisory Board and members of the Biocom Board of Directors.
through executive gatherings, conferences, committee meetings where peers can share best practices with each other, networking and much more. With no single geographic epicenter here in the Bay Area, it was challenging to know where to host events to ensure that most people can get there. Our final challenge was to decide where to plant our flag for our new Bay Area home.

We decided to base our office in South San Francisco, the “birthplace of biotech.” For our events, however, we decided that the best way to interact with our members is to take our events to them. You see, the Bay Area is not one super-cluster of life science activity, but rather many somewhat well-defined micro-clusters. So, we customized our programming to these micro-clusters, making the content and networking meaningful for the people attending.

We recently hosted a well-received workforce development event in Hayward where we showcased five East Bay biotech-related academic programs that are graduating future workers for our member companies. The programs ranged from high school biotech certificates to a Masters in Translational Medicine at UC Berkeley.

We host quarterly Human Resources Roundtable meetings where HR professionals can connect with their peers and share best practices and we hold these in two locations—one on the peninsula and one in the East Bay—so more of our members are able to attend and engage.

We held a commercialization boot camp intensive day-long seminar in Fremont, where much of the Bay Area life science manufacturing takes place.

We’ve even held informal happy hour meet-ups in Berkeley, San Francisco, Santa Cruz, and Davis, in order to bring people in those areas together.

Hosting events around the Bay has had its share of complexities, but our team partners with local organizations and experts to maximize the impact of each event and bring as many people together as possible. And the strategy has paid off. At our Grand Opening celebration, 33 Bay Area cities were represented—a gratifying testament to the importance of “getting out there.” And although we have a South City office, we’ll still be on the road, in the neighborhoods where our members are, so we can continue to listen, learn and support them.
Takeda Creates an Open-Innovation Ecosystem for Life Science in Shonan, Japan

Takeda Pharmaceuticals recently opened a state-of-the-art research facility in Shonan, in the southern area of Tokyo, Japan. External researchers and companies may now join in collaborative work there. The Shonan Health Innovation Park (iPark) aims to create a vibrant, open innovation ecosystem in which researchers with diverse backgrounds and projects will translate cutting-edge science into innovative solutions for the benefit of patients. This move is intended to fast-track scientific discovery by nurturing an entrepreneurial culture and supporting startup companies.

In the pharmaceutical industry, there has been major disruption to the traditional R&D model. We see a move away from in-house factory-style and toward a format of ecosystem that embraces distributed innovation. According to research, there are two essential factors for a successful ecosystem: 1) presence of anchor tenants; and 2) diversity of players. Anchor tenants, such as MIT and Harvard University in Boston, played a key role in the initial stage of that region’s ecosystem by attracting other players and creating a network. To expand the ecosystem, however, these anchors should not dominate relationships. Instead, they should ensure diverse connections form freely among these players.

Successful science parks across the world have neutrality of management and strong science brands in common. The management of the park will be independent from any party, to avoid bias in tenant selection and limitations on their exit options. It takes much effort to create a strong science brand, to attract qualified tenants, and to create a collaborative environment. Therefore, the investing owner of the park needs to share the vision and long-term goals of the ecosystem. In the case of Shonan iPark, our management team works independently from Takeda R&D in tenant selection and support, while Takeda is committed to the long-term success of the park.

Shonan iPark will offer many services to set up their businesses successfully including science mentorship with experienced Takeda researchers to connect the tenant to the researcher’s network, facilitating knowledge-sharing for drug discovery and development. Tenants can also obtain access to the venture capital networks through individual introductions and pitch events. Business training is also provided to prepare for start-up and to refine business plans.

The park started its operation officially in April 2018, and more than 20 companies have already joined in. The park recruits bio-venture companies, pharmaceuticals, academia, funding bodies, and public agencies to create a new model of collaboration. The open, collaborative culture will attract many external researchers who will be eager to be members of the ecosystem.

Aiding in the development of the local community is also one of our goals. We work closely with officials in Kanagawa prefecture, in which two other science parks are located. Under the collaboration memorandum, we share the facilities and conduct joint events for tenant recruitment. Shonan iPark does not limit our partnerships to those in Japan, and is open to the global community, such as with Biocom, to be the primary gateway for local ventures to establish footholds overseas.

Open innovation can be a solution for the decreasing productivity in healthcare R&D. We aspire to become the first hotspot in Japan, where talented researchers with innovative ideas will gather from all over the world, and their ideas will be connected together to become the largest benefactor for patients globally.

Takeda has been a Biocom member for many years, and its presence in the San Diego life science community is strong. Now that Shonan Health Innovation Park also has joined Biocom membership, we look forward to establishing an even deeper, productive and collaborative relationship with Biocom and the life science community across California.

Toshio Fujimoto, MD, is the General Manager of the Shonan Health Innovation Park in Japan.
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"Life Science Investors Betting on L.A.!

For those of us in the life sciences industry in L.A., those are amazing, astonishing, and wonderfully welcome words. We plan to shout it from the rooftops. Los Angeles is now an investment magnet.

The latest addition to the L.A. area life sciences investor community represents a major milestone in the evolution of the region. Beth Seidenberg, a former Kleiner Perkins partner, and Sean Harper, a recently retired Amgen executive launched a $320M fund that is focused on L.A.. The headline from Endpoints News on September 5th says it all: “...veteran VC Beth Seidenberg unveils a $320M fund and a unique focus on...wait for it...L.A.”!

So, that’s the good news. But wait, the REALLY good news is that Westlake Village Biopartners is not alone in basing significant life sciences VC dollars in the L.A. area. As recently as three years ago, we had just a few funds of this type in L.A.. Now, we have more, including Embark Ventures, Act One Ventures, Upfront Ventures, Kairos Ventures, Fulcrum 2020, Wavemaker Three-Sixty Health, and OCV Partners.

Of particular note to me is Upfront Ventures—they have been an L.A. institution for more than 20 years, investing in the tech side and being very vocal about their support for, and belief in, the L.A. innovation industry (#LongLA). They have now started investing in the life sciences and we welcome them. It is another great indication that L.A. has much to offer the venture capital community.

Importantly, this momentum has sparked an overall increase in L.A. life sciences investment from out of area investors. According to the PwC | CB Insights Healthcare Moneytree Report, the L.A./OC area has been in the top five investment regions in the U.S. for five out of the last six quarters! And, the trend is definitely on an upward trajectory—investment in the region in the first quarter of 2018 was 50% higher than the same quarter in 2017.

Los Angeles is in the spotlight and we love it. The energy and excitement of the life sciences industry in L.A. is powerful and it is expanding like a super-nova. You bet investors are betting on L.A.

Not only is this great for the region from an investor and growth perspective, but it also validates the tremendous strength, scale, and scope of the life science industry in L.A. Many of us pound the pavement relentlessly, telling anyone who will listen that we are a life science cluster to be reckoned with. This new major commitment from Westlake Village Biopartners is big news, bringing national attention. Hopefully, many more investors will be interested in learning more about our cluster and the amazing innovation occurring at our startups, universities and research hospitals.
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Hiring Our Heroes

**Per-se-ver-ance** (noun): the persistence to achieve something despite difficulties, failure, or opposition: STEADFASTNESS.

In our opinion, if there is one group of people that best personifies perseverance, it is the military.

One powerful illustration can be found in the depiction of the true story of Carl Brashear in the film *Men of Honor*. Carl joins the Navy in 1948 and overcomes racism, a lack of any formal education past the 7th grade, and the amputation of his leg to achieve the designation of the first African American Navy Diver, a reinstatement to Active Duty and promotion to Master Diver. Admittedly, this is an extreme example, but one that proves service members are well-accustomed to overcoming adversity.

Concurrently, as life science companies are relentlessly working to improve the human condition, some have figured out that hiring tenacious military veterans can play an important and mutually beneficial role.

Companies looking to hire in today’s aging workforce find that it goes beyond just filling the gap. The leadership, teams and specialized skills that an organization chooses to execute has a direct impact on its bottom line. To help ensure the right talent is in place, Biocom Institute has made it a goal to educate California life science companies on why adding veterans to their workforce is not just a good idea, but also good for business.

Biocom Institute’s Veterans Initiative started as a grassroots effort four years ago and has grown into a former service member-led conduit for career opportunities supporting local veterans transitioning to civilian life. The group provides awareness and assistance for veterans interested in finding a pathway into the life science industry through mentorship programs, career fairs, job skills workshops and access to a variety of industry professionals and executives.

The San Diego military population transitions roughly 15,000 service members, officers and command staff every year that are exceptional candidates already possessing the sought-after leadership qualities based on their ability to meet deadlines, motivate and supervise teams as well as work in extreme conditions.

A strong work ethic and dedication are just a few of the characteristics that veterans bring back to the civilian lifestyle. They are disciplined team players, organized, collaborative and dependable; all talents that make it advantageous for life science companies to hire them for anything ranging from leadership and project management to being part of a team that needs to adapt, problem-solve and work with ambiguity in a cyclical industry.

And yet, despite all of these core strengths, it is not always easy for veterans to transition into life sciences. Individuals like Active-Duty Captain Kathy Kerrigan, a seasoned senior executive with 15+ years as an HR Naval Officer with a chemistry, law and business education, who is also a proven leader in strategic manpower, team building, empirical decision-making, resource planning, and policy development, are finding that transitioning to a comparable position in the life science industry takes a lot of perseverance:

“I am transitioning after a very rewarding career and looking forward to a second career in life sciences. However, I am finding this pursuit very challenging because I don’t fit the standard applicant for jobs within the industry. I have overcome challenges in my career and succeeded in everything that I have set out to do, but this endeavor is different.”

Kathy’s hope is that the Biocom Institute can be the resource she needs to help bridge the gap from defense to life sciences: “Biocom Institute has taken the lead on helping veterans and continues to get more companies involved in this initiative. Based on the recent turnout at a BI Veterans event, I am encouraged this will gain momentum and more in the industry will recognize the value military veterans bring to the table. I am grateful to those veterans/CEOs that have tried to open doors. My passion is truly to be within the life sciences sector and I know I will be a valuable asset to any company that gets to know me.”

This Veterans Day, we believe it’s important to not only thank veterans for their service, but also to continue to provide opportunities and resources to find meaningful civilian employment. Biocom Institute openly invites all former military service members to join our LinkedIn groups ‘Biocom Veterans SoCal Group’ and ‘Biocom Veterans NorCal Group’ or email Leandra Boysen at lboysen@biocom.org to participate in this initiative and share in the sense of service and purpose that’s so critical to veterans and those in the life science industry.

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“I am transitioning after a very rewarding career and looking forward to a second career in life sciences. However, I am finding this pursuit very challenging because I don’t fit the standard applicant for jobs within the industry. I have overcome challenges in my career and succeeded in everything that I have set out to do, but this endeavor is different.”

ACTIVE-DUTY CAPTAIN KATHY KERRIGAN

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**“BIOCOM INSTITUTE HAS TAKEN THE LEAD ON HELPING VETERANS AND CONTINUES TO GET MORE COMPANIES INVOLVED IN THIS INITIATIVE.”**

By Liisa Bozinovic, Executive Director, Biocom Institute

Liisa Bozinovic is the Executive Director of the Biocom Institute.
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Human-Centered Design – A Value Proposition for Medical Technology

From “zero to commercial” in two years—a savings of at least $5 million and three-to-four years research and development—that is the return on investment BioFluidica CEO Rolf Muller, Ph.D., attributes to human-centered design.

Muller, a successful veteran of the biotech industry, engaged with DDSTUDIO and its human-centered design process when developing BioFluidica’s liquid biopsy device because experience taught him that engineering a product that functions isn’t enough to fuel success. Medical technology also needs to satisfy the wants and needs of its users in a way that stokes their desire for it.

Empathy for the end-user in their unique environment is the cornerstone of human-centered design. What does that look and feel like in the context of medical technology’s bottom-line? Muller summed it up nicely when he joined me, IntelliGuard CEO Gordon Krass, and TruMed Systems CTO Joe Milkovits, on a panel about the topic at Biocom’s Device Fest: “Your technology may do incredible things, but if the user doesn’t use it, the technology doesn’t matter.”

The experts at Ernst and Young agree. The firm’s 2018 Pulse of the Industry report states that to succeed despite the pressures of reimbursement and rapidly evolving technologies, “companies must evolve their focus from product-centric to the consumer experience.”

De-mystifying Human-Centered Design

I proposed the Device Fest panel as a forum for medical device executives to share their experiences and the value they’ve found with human-centered design. They also addressed the misperception that human-centered design is a fuzzy concept. Far too often companies with a cutting-edge technology focus on engineering a product that could be the best solution, but neglect the user’s daily rituals and emotions.

Good design isn’t just about making a product aesthetically pleasing. As DDSTUDIO CEO Charles Curbbun tells clients: “When human-centered design is done right, the product starts to disappear and the experience takes over, allowing users to get into the flow.”

Human-Centered Design in Action

Biocom members Illumina, Hologic and Synthetic Genomics offer many examples of human-centered design empowering product development. Human-centered design is equally beneficial for smaller companies, as voiced by those who spoke at Device Fest.

Muller said that in a scheduled brainstorming session, BioFluidica’s team proposed ditching plans to create their own processing system for its proprietary chips that hold the patient sample. Alternatively, they could use an already FDA-approved system from Hamilton Robotics. That out-of-the-box idea worked, resulting in the massive savings in time and money.

TruMed Systems incorporated human-centered design into its first generation AccuVax Vaccine Management System, a refrigerator/freezer storage and inventory system for handling vaccines in the doctor’s office. It has since gathered valuable data to incorporate in its second-generation product, Milkovits said. Visiting offices where AccuVax would be used was invaluable, he said.

“We learned the important difference between a 28-inch-wide machine that fits through doors and into cubicles, versus a 36-inch device that doesn’t do either,” he said. That knowledge influenced many subsequent decisions, he added. Prototypes of multiple iterations allowed nurses to provide insightful analytics. We also learned increased height would enhance capacity, while internal changes would make the machine easier to build and more reliable, he said.

IntelliGuard’s Linked Visibility Inventory System, which uses RFID technology to track and inventory drugs used in surgery, had its cross-functional product development team build empathy for hospital pharmacists and anesthesiologists through extensive research, Krass explained. Team members shadowed anesthesiologists at work, including a software engineer who spent the day in hospital pharmacists and anesthesiologists through extensive research, Krass explained. Team members shadowed anesthesiologists at work, including a software engineer who spent the day in

Tracy Manning is the Chief Strategy Officer at DDSTUDIO.
Congratulations to the 2018 Biocom DeviceFest
Five in 5 in the Hot Seat Winner, QT Medical!

Biocom congratulates presenter, Ruey-Kang Chang, MD, MPH, founder and CEO of QT Medical, on winning this year’s Five in 5 in the Hot Seat challenge! QT Medical is a medical device startup which aims to make high quality 12-lead electrocardiogram (ECG) available to everyone.

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Invitae: Increasing Access to Genetic Testing to Accelerate Research, Improve Patient Care

Belief in the potential for genetics to improve health resulted in one of humanity’s most important achievements—the decoding of the human genome. That achievement ushered in a new era, one in which medicine can be meaningfully guided by understanding our DNA. Whether by diagnosing previously misdiagnosed genetic diseases or by dramatically improving our ability to treat them, genetic information has become central to the future of healthcare.

At Invitae, our team is pulling that future into the present. Invitae’s mission is to bring comprehensive genetic information into mainstream medical practice to improve the quality of healthcare for billions of people. Our goal is to aggregate most of the world’s genetic tests into a single service with higher quality, faster turnaround time and lower prices. We have developed one of the industry’s most advanced medical genetics portfolios, offering high-quality, low cost testing across a wide array of conditions, from cancer genetics to rare diseases and many more.

As researchers continue to advance breakthroughs for genetic diseases, ensuring patients get genetic testing and counseling early is becoming ever more essential. Despite the dramatic advances that are making genetic testing routine, the use of the resulting information within the healthcare system in ways that significantly improve patient care remains too limited.

Within rare diseases in particular, patients and their clinicians often spend years frustrated with diagnostic odysseys that yield too few answers and waste time with ineffective treatments. Set against the rapid acceleration of breakthrough treatments for genetic diseases, this gap between patients and effective treatment becomes all the more unacceptable. After all, breakthroughs are only as good as our ability to get them to the patients who will benefit.

Invitae is working with biopharmaceutical companies to develop unique programs that reduce barriers to genetic testing to get patients an accurate diagnosis and information they need to identify possible treatments or clinical trials. Our deep expertise in genetics, including hard-to-diagnose rare diseases, yields testing and programs that help patients get an accurate diagnosis sooner.

We know that an early, accurate diagnosis can lead to earlier intervention and better medical outcomes for a wide variety of conditions. Increasingly we also see on-market therapies or late-stage clinical trials that are only accessible to patients who have access to their genetic information. These programs are designed to help close the gaps between knowledge and action.

Invitae’s network of collaborations:

- Removes barriers to testing, allowing patients to receive an accurate diagnosis quicker
- Improves clinical trial recruitment
- Runs streamlined clinical trials based on high-quality genetic testing results
- Ensures clinicians and patients have access to genetic information required to evaluate treatment opportunities
- Increases understanding of the natural history of disease using patient-reported outcomes and clinical records

Our sponsored testing programs are aimed at increasing the use of early genetic testing to aid diagnosis, particularly in rare diseases, by providing genetic testing at no cost for patients who meet eligibility criteria. Companies including Alnylam, BioMarin and Biogen have programs that are helping reduce the time to diagnosis for patients, shaving as much as two years off.

In drug development, greater access to genetic information can mean better, faster clinical research. From providing insights into disease natural history and patient journey via patient registries to genetic testing programs for clinical trial protocols, we’re working with researchers, advocacy groups and biopharmaceutical companies to create unique programs that reduce the barriers to and increase the impact of genetics in drug development.

Looking ahead, the need for a well-designed network which ensures patients can easily access their genetic information and use it to improve their health and guide their medical care will only increase. Novel collaborations like ours ensure the era of genetics results in improved drug development, disease diagnosis and patient care.

Katherine Stueland is chief commercial officer of Invitae, a genetics company bringing genetic information into mainstream medicine to improve healthcare for billions of people.
upcoming

BIOCOM EVENTS

Don’t miss the following Biocom events happening across California:

JPM 101: Preparing for the JP Morgan Healthcare Conference
November 19th | JLABS SSF
South San Francisco, California

Novo Nordisk Partner Day
November 19th | The Alexandria at Torrey Pines
San Diego, California

Life Science Young Leaders: 10 Habits of a Successful Young Leader
December 5th | The Alexandria at Torrey Pines
San Diego, California

Breakfast with Biocom: Capital Market Updates and Current Considerations in the Life Sciences Industries
December 6th | The Alexandria at Torrey Pines
San Diego, California

Biocom Purchasing Group Member Appreciation Holiday Party
December 6th, 2018
The Patio Marketplace at Axiom
San Diego, California

Biocom CFO Holiday Networking Reception
December 12th
The Alexandria at Torrey Pines
San Diego, California

Bay Area Facilities/EH&S Workshop – A Panel Discussion with Regulatory Agencies
February 6th, 2019 | Genentech
South San Francisco, California

Bay Area Facilities/EH&S Workshop – A Panel Discussion with Regulatory Agencies
February 6th, 2019 | Genentech
South San Francisco, California

Communicate with Purpose
February 20th, 2019 | Biocom Bay Area
South San Francisco, California

Biocom Global Life Science Partnering Conference
February 26th to February 28th, 2019
The Lodge at Torrey Pines
San Diego, California

San Diego Festival of Science and Engineering EXPO Day
March 2nd, 2019 | Petco Park
San Diego, California

San Diego Festival of Science and Engineering STEM Week
March 2nd to March 10th, 2019
Events taking place all over San Diego County
San Diego, California
A popular topic among board rooms spanning startups to corporations alike is this notion around ‘purpose’. Why does a company do what they do, and why should anyone care? What drives innovation and a passion for the cause?

As a subsidiary of Biocom, the Biocom Purchasing Group is always aligned with Biocom’s core mission of accelerating life science success. Every program, initiative and contract in the Biocom Purchasing Group is motivated by our collective ability to accelerate the life science industry and our success is measured by our members’ ability to compete globally and positively impact the human condition.

Our ‘purpose’ at the Biocom Purchasing Group has an even more granular, and tangible application: we exist to serve our members. We come to work every day to secure the deepest discounts on the products and services our members use most in an effort to increase their run rate and improve their bottom line. We operate on the currency of trust and perceived value and there is no middle ground.

This innate ‘purpose’ is how we have been able to evolve with our members over the last 20 years. It’s what fuels our team’s innovation for better solutions every day.

A GPO (group purchasing organization) just getting off the ground takes safe bets in building a contract portfolio. They operate on the opinion of a few, hoping for the benefit of many. And in an effort to survive, they sometimes entertain partnerships which support their fiscal viability above all else.

A successful GPO, by comparison, fully comprehends that there is power not only in the aggregation of its members but also in the congregation of its members. By convening frequently with our members and empowering them to be the decision-making body for our GPO, we are able to serve them with purpose quite naturally.

The life cycle of a Biocom Purchasing Group program involves many touchpoints with our members. Its concept is created from trends realized in our formal member feedback system and quarterly member advisory committee meetings throughout the state. Once formalized, the decision to move forward with an RFP is voted on by our governing Biocom Purchasing Group Board of Directors (BOD), which as of 2018, includes representatives from every region we serve. If the BOD is in agreement, an RFP committee is assembled by our Contracts team and includes knowledgeable and relevant industry experts from San Diego, Los Angeles, Orange County and the Bay Area. Finally, after the industry’s most rigorous RFP process (just ask Fisher Scientific), a winning service provider is selected and an incredible program is introduced to our members. This type of commitment to excellence takes time. And for the most part, donated time. Time away from work for our members. Time after work from our Board of Directors. The opportunity cost of time from our dedicated Contracts team. It’s a commitment made by both the Biocom Purchasing Group and our members for the relentless pursuit of preferable procurement solutions.

Over 525 members enrolled on our Fisher Scientific lab supply agreement and 265+ members representing over 23,000 covered lives on our Beyond Benefits Trust are the results of the amazing contract negotiations made by some of California’s best and brightest Biocom members who came together during Advisory Committee meetings, Biocom Purchasing Group Board of Directors meetings, and RFP Committee meetings, up and down the state.

We strive to be the best partner in purchasing for our members and to secure the deepest discounts possible across all 30 of our contracts, and we realize this would not be possible without the dedication and involvement of our members. We are actively recruiting for additions to our Biocom Purchasing Group Advisory Committees in each of the regions we serve for 2019. If you, or anyone in your company, are interested in sharing experiences and expertise across the lab, facilities, operations, HR, finance, data, communications, travel or IT worlds, please contact Matt D’Angelo at mdangelo@biocom.org.

We take pride in our open lines of communication and have invested heavily over the years in the systems, technology and human capital necessary to be able to adapt to new initiatives depending on feedback from our members. They have the industry intel; we have the purchasing platform. Together, we are a force to be reckoned with, and a powerhouse in California’s global life science success.

Rick Fultz is Chief Business Development Officer of Biocom and Managing Director of the Biocom Purchasing Group.
Solving Unmet Needs in Academic Technology Commercialization: Building the UCLA Innovation Fund

At leading universities across the country, three primary issues prevent successful technology commercialization and startup creation: 1) Lack of experienced industry executives to provide actionable feedback, 2) a dearth of seasoned entrepreneurs or project managers to drive a given project forward, and 3) lack of capital to fund translational research that cannot come from traditional grant sources. To overcome these deficits, universities have been creating Proof of Concept funds to enhance the commercial potential of academic projects. These internal funds are used to determine commercial viability of a given technology and bridge the gap between academic research and industry/VC interest. The aim is to more quickly move a technology from the lab into the market and reduce the risk for investors or licensees.

UCLA pursued and received funding from California State Bill AB2664 in 2016 to support campus innovation and entrepreneurship efforts. A portion of the $2.2M UCLA received seeded the new UCLA Innovation Fund. This proof of concept fund is housed within the tech transfer office, UCLA Technology Development Group (TDG) and managed by our New Ventures team.

Our capital is coupled with 1) an external, industry-specific Advisory Panel, to lend business insight, 2) internal, peer-reviewed scientific diligence, and 3) paid access to mentors/advisors/consultants to help drive project strategy and articulate key project-specific milestones. Our preference is to outsource work to Contract Research Organizations (CROs) and minimize funding work in our on-campus labs. Through targeted internal investing, we aim to help nascent projects translate into products, increase financial returns to the University, and generate additional funds to facilitate new licensing deals and the creation of new startup companies. In time we anticipate these new companies will hire local talent and generate jobs here in Los Angeles.

The UCLA Innovation Fund was piloted in the fall of 2016, and overnight our New Ventures team morphed into “mini-CEOs” of projects—we became operators. Over the past two years, the UCLA Innovation Fund has broken down campus silos and evolved. In 2017, the UCLA Innovation Fund sourced projects through a campus-wide open call for proposals and were sourced from: The David Geffen School of Medicine (DGSOM), Division of Life Sciences, Division of Physical Sciences, Henry Samueli School of Engineering and Applied Science (HSSEAS), and the UCLA School of Dentistry. In three years, we have received over 200 applications from entrepreneurial faculty members. Once submitted, projects are peer-reviewed by UCLA faculty for scientific merit, and TDG assesses the intellectual property. We then invite external Advisory Panelists from pharma and venture to physically come to UCLA to help us identify fundable projects, articulate key experiments to conduct, and aid in creating realistic development timelines/milestones.

Once funding decisions are made internally at UCLA, then the real work begins to leverage entrepreneurs in our network, build out realistic development plans, and forge relationships with CROs to further develop selected projects. Each project receives up to $200k. The funding is not a grant and is actively managed by the New Ventures team to advance the science to meet industry-defined project milestones. Funding is heavily tranched and project funding ceases should milestones not be met.

New Ventures has accelerated fourteen projects to date—seven therapeutics and seven in MedTech (i.e., medical devices, diagnostics, research tools, and digital health). Five projects have “exited”—one has spun out into a newly created startup company while four failed to meet commercial milestones.

Projects are accelerated for 12-18 months, allowing Advisory Panel members to track progress over time, often building rapport and familiarity not just with the science, but with the team. Independent of the project funding, the UCLA Innovation Fund has helped create a new local network by importing industry representatives and VCs.

More philanthropic money is necessary to develop a sustainable Proof of Concept fund. Efforts are underway to solicit donations to raise $50M for the UCLA Innovation Fund. In addition to funding from the state of California, significant capital has also come from campus. Our new fund is “evergreen,” whereby any financial returns will flow back into the fund to support additional projects.

By creating programmatic initiatives to further develop academic research and move technologies further down the value-chain, future startups will be better poised for success and our licensable technologies are more de-risked. We are continually looking for entrepreneurs, advisors, mentors, and service providers for our projects. This success will result in life-saving products, job creation, workforce retention, community engagement, and ultimately, an increase in local economic development in LA.

By Thomas Lipkin,
Director of New Ventures, UCLA TDG

Thomas Lipkin is Director of New Ventures at UCLA TDG and received a Biocom Life Science Catalyst Award last year.
Japan Bio-industry Association (JBA) is Japan’s only nationwide bio-organization and was established over 75 years ago (1942). JBA contributes to bio-industry and related industries in the fields of health, environment, and agriculture. To that goal, one of the most important priorities of JBA is to formulate and advance specific public policies through science-based reviews of regulations as well as to create strategies to strengthen collaboration between industry, academia and government. Furthermore, to encourage the exchange of vital data and information, we realize that cooperation and communication with like-minded organizations throughout the world is of paramount importance. We are keenly aware of the value of providing free access to information regarding new technologies and products to all those who are interested in opportunities for innovation. JBA will enhance the development base and platform functions of bioindustry, to contribute to the international competitiveness of the bioindustry in Japan.

On a local level, our mission will be expanded to help organize and develop regional associations for bio-industries in Japan. As an example of such endeavors, we hold BioJapan, an annual conference that comprises exhibitions, seminars for academia and industry, and business-to-business matching.

Japan Now

Japan has one of the most developed biotechnology sectors in the world, as evidenced by the high number of patents filed. The number of small to mid-sized companies is estimated at about 1,700 in 2018 and several foreign firms are now trying to enter the market. Moreover, the government is supporting R&D and has passed several new laws and guidelines to support a national strategy by the Prime Minister’s Office (cabinet).

Japan is the third largest pharmaceuticals market in the world and because of the country’s aging population, there is a continuous increase in societal healthcare awareness. Japan has several internationally operating research companies that are actively looking for collaboration opportunities with new and innovative pharmaceutical companies. The healthcare and medical industries make up the majority of the biotechnology sector in Japan, and its expansion is an integral part of the growth strategy of Prime Minister Abe’s administration. The government plans to formulate a new national biotechnology strategy by summer 2019.

Targeting Open Innovation

The Japan government organizes the potential of technological innovations in drug discovery by biotechnology and summarizes the direction for Japan. The importance of open innovation is increasing in the field of drug discovery, especially in this era of new industry creation. The government now recognizes and measures the efforts that help to build Japan’s ecosystem. JBA is promoting the administration of the round-table conference, where the building of an ecosystem of drug discovery support is a top priority.

To improve current situations and implement full-fledged open innovation, it is essential to seek a variety of partners in an open manner both in Japan and overseas. Business matching with parties around the world has become increasingly important.

JBA has been putting initiatives into practice and promoting open innovation in Japan through BioJapan and Regenerative Medicine Japan, JBA’s international partners, support from venture groups and academia, and other capital development efforts.

New and Promising Approach to Open Innovation

Now, the movement towards the creation of a new ecosystem has begun with cooperation between industry, academia, and the Japanese government.

Traditionally, we had created a small and closed cluster of local communities, which had been led by the governmental knowledge base or industrial base in the capital. However, what is happening now is that private global pharmaceutical companies are working together with the government with the united goal to become a world-class life science ecosystem. The Kanto area is the largest base for drug discovery and there is much growth within the area, including the creation of the iPark, led by Takeda Pharmaceutical.

Support for Globalization and Global Networking

Throughout Japan and engrained within the Japanese culture, there is an awareness to recognize the mutually beneficial relationships held around the world, especially in California. We have built a strong relationship with Biocom and Biocom’s network in the last five years and we look forward to forging even closer relationships between life science companies in Japan and California.
Biocom is proud to honor and recognize our dedicated members who are celebrating long-term anniversaries with us this year. We greatly appreciate the loyal membership of the following companies and their help to ensure that the life science industry remains a strong and vibrant sector of California’s economy.
BIOCOM OPEN HOUSE + SUPPLIER SHOWCASE

On June 21st, Biocom had the pleasure of hosting over 600 Biocom members for the 2018 Biocom Open House + Supplier Showcase. What an unforgettable evening on the Torrey Pines mesa! The crowd navigated through our California Dreaming experience, visiting with suppliers to hear about special savings they offer exclusively to Biocom members while they enjoyed food and drink pairings from regions in California. We also raffled off some fabulous prizes and soaked in the sweet sounds of summer from San Diego's local Beach Boys tribute band, Surfs Up.

MEMBERS IN ACTION
DEVELOPING
WORLD-CLASS
LIFE SCIENCE REAL ESTATE
FOR TOMORROW’S
INNOVATIONS
BIOCOM PAC ELECTED OFFICIALS & CANDIDATES RECEPTION:
This was our 16th year bringing together officials from the City, County, State, and Federal levels of government together with our members. We were pleased to have so many influential officials and candidates speak directly with our members about their life-changing research, therapeutics, and technologies. Officials who participated this year included Congressman Scott Peters, Assemblymember Todd Gloria, Supervisor Kristin Gaspar, Council President Pro Tem Barbara Bry, and several others. Special thanks to our Signature Sponsor, Genentech, and our Host Sponsor, Illumina, for allowing us to utilize their beautiful i3 campus.
WE MAKE LIFE CHANGING PLACEMENTS
SO OUR CLIENTS CAN CHANGE LIVES!®

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The Lodge at Torrey Pines | San Diego, California
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**BIOCOM MEMBERSHIP**

Wamberg Genomic Advisors
Wellspring Biosciences
WideType
Wildcat Discovery Technologies
World Fusion Co., Ltd
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Xcell Unity
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AtheaDx
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Dianaes
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IRRAS
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Neurvana Medical
NucleusHealth
NuFACE
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REVA Medical
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ReVive Solutions*
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Suneva Medical
Symes America
Tandem Diabetes
Tenumo Cardiovascular Systems
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Tory International America, Inc.*
Tristan Technologies
Trovagen
Verrix, LLC*
Viseon
WE Bridge Ventures*
Withealth, Inc.*
Xtant Medical

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Biomedical Manufacturing Network
Covington & Burling
Innovative Advancement
Qualcomm
San Diego Gas & Electric

NON-PROFIT

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Arizona State University - SkySong Innovations*
Bay Area Council
Biomedical Manufacturing Network
Cal State University, Los Angeles Cellir
California State University,
San Marcos
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Chan Zuckerberg Biohub
Children’s Hospital LA CIRM
City of Berkeley Office of Economic Development
City of Hope
City of South San Francisco*
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CSJ, CSUPERB Program
East Bay Economic Development
GlycoAnalytics, UC San Diego
GMTO Corporation
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Hong Kong Trade Development Council
Human BioMolecular Research Institute
Huntington Medical Research Center
IDA Ireland
Institute for Biomedical Sciences
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
Larta Institute
Lawrence Family Jewish Community Center
Life Science Innovation Network Japan
Los Angeles Area Chamber of Commerce
Los Angeles Biomedical Research Institute
Los Angeles EDC
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Magnify
MiraCosta College Biotech Program
Molecular Medicine Research Institute
Mt. 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 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
Scripps Health
Scripps Health*
Scripps Research
SDSU, Graduate & Research Affairs
SRI International
Summit for Stem Cell Foundation*
UC San Diego Office of Innovation & Commercialization
UC Division of Continuing Education*
UCI’s Office of Research
UCLA School of Medicine
UCLA Technology Development Group
UCSD Office of Research Affairs*
UCSD, Department of Bioengineering
UCSD, Office of Advancement
UK’s Department for International Trade
University of San Diego
USC MESH Academy
USC Stevens Center for Innovation
Western University of Health Sciences
Zhuhai Commercial Service,
Zhuhai Office of Economic Development

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Alacrita Consulting
AMN Healthcare
Arvis
Astrix Technology Group*
AV Systems
Azur Group
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Big Block Realty
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BioSurplus
BioTix
Blue Sky Broadcast
Blue Sky Marketing Group
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Buchalter, APC
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Burger Construction
C3 Risk & Insurance Services
Caliber Associates
California Manufacturing Technology Consulting
Cardinal Health Regulatory Sciences
CBRE
Chubb Group of Insurance Companies
Cision/PR Newswire
City Wide Maintenance
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Corning
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GE Life Sciences*
Global Source Ventures
Grande Colonial
Ground Zero Pharmaceuticals
Gunderson Dettmer
H.G. Fenton Company
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HCP Life Science Estates
Health N You*
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Morrison & Foerster
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Sartorius
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Sheppard Mullin Richter & Hampton
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Silicon Valley Bank
Slone Partners
Softinnova Ventures
Square 1 Bank
SunWest Bank*
T3Advisors
Technical Safety Services
Telepacific Communications
The University of Tokyo Edge Capital Co.
Transwestern*
TriNet
TUV SUD America
Underwater Kinetics
Unifirst
UPS
Vault Bioventures

* New Members from June to October 2018

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- Biostatistics
- Biotechnology Project Management
- Brewing
- Drug Discovery
- In Vitro Diagnostics
- Quality Assurance and Control
- Regulatory Affairs