

Big4Bio

SANDIEGO

YEAR IN REVIEW
2020



Welcome



2020 will be remembered as the year that everyone would like to forget. But the life sciences sector provided one of the few rays of hope in a very dark time.

Bringing not one but two vaccines to market in less than ten months is an unprecedented, if not

miraculous, feat. Researchers at companies large and small pivoted their diagnostic, vaccine and therapeutic programs to address the challenges of the pandemic. Venture investors stepped up, demonstrating their faith in the industry by more than doubling their investments in Boston life sciences companies.

This report crunches the numbers that tell the story of a sector rising to the occasion. As always, we couldn't do it without our data partners DealForma and JLL. We also thank MassBio for sharing their insights.

Stay tuned to Big4Bio's daily summary of industry newsletters [Big4Bio.com] to see how the pandemic, hopefully, plays itself out and how the industry moves forward.

Tilton Little, Executive Director, Publisher
Big4Bio



Industrialist Henry J. Kaiser is remembered for the adage, "Problems are only opportunities in working clothes." Perhaps it is fitting that the man who transformed healthcare delivery coined the phrase that so aptly sums up the life sciences sector in 'the year that has been like no other'.

For the life sciences industry, 2020 delivered both problems and opportunities in spades. Innovation and investment soared as the world confronted a pandemic the likes of which hasn't been seen in a century. Moderna, a previously stealthy Boston biotech company, became a household name. Diagnostics became sexy. Infectious disease therapeutics made headlines.

Crises can create sea-changes. The pandemic has spurred an explosion of innovation that, with hope, will be maintained well beyond the current crisis. But the pandemic has also put a spotlight on the industry that won't disappear after the current crisis. The industry needs to prepare for a new reality where they will be subject to much more public scrutiny.

For more than a dozen years, I have helped life sciences companies take control of their messaging and communicate with stakeholders who sometimes have competing or conflicting agendas. I can help you manage the new realities you may face in the coming year. To learn more, visit www.KMAandCo.com or email me at cassie@KMAandCo.com.

Cassie Arnold, Founder
KMA & Company

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Life Science Industry Market Facts

Overview

- San Diego is on par with Greater Philadelphia – a region that encompasses part of three states – when it comes to the number of life sciences companies in the region.
- In terms of employment, it enjoys a slight advantage (approximately 2,000 jobs) over Philadelphia.
- While posting the highest vacancy rate of any Big4Bio region, its rental rate compares favorably to rents in the San Francisco Bay Area.



1,734
Companies



71,626
Employees



\$124,271
Average Salary



5.7%
YOY Increase



10.7%
5-year Employment
Growth



22.5%
5-year
Enterprise Growth



\$1B
NIH Funding



15.2m sq ft
Real Estate
Inventory



10.3%
Lab
Vacancy Rate



\$52.56/sq ft (NNN)
Rest per Sq ft

(Data Source: JLL)

Top NIH Recipients (by number of grants)

960

University of
California, San Diego

209

Scripps
Institute

84

Salk
Institute

Top Covid-19 Stories

Given the predominance of COVID-19 news coverage in 2020, we have broken out our ranking of the top Big4Bio stories of the year into COVID-19 and non-COVID-19 related stories.

When it comes to COVID-19 coverage, exuberant claims and a deal gone bad caught the eyes of our readers.

In other news, a failed merger, a new plant, VC investments and a management shake-up topped the news.

1. COVID-19

Sorrento Therapeutics Sued Over 'False' Claims About Finding 'Cure' for COVID-19, Lawsuit Says

In June, investors filed a class action suit against Sorrento Therapeutics saying the company's leadership made false and misleading claims that it had developed a cure for COVID-19.

[Full Article >](#)

San Diego biotech looks to raise \$150M for COVID-19 vaccine work

In December, Arcturus Therapeutics announced it was offering nearly 1.37 million shares to raise \$150 million to fund clinical trials for a COVID-19 vaccine.

[Full Article >](#)

San Diego biotechs have plunged into the fight against COVID-19. Here's what they're doing

In October, the San Diego Union Tribune offered readers a round-up of COVID-19-related efforts by San Diego area companies.

[Full Article >](#)

San Diego lab claims to have discovered a coronavirus vaccine in 3 hours — but testing it will take months

In February, Inovio Pharmaceuticals announced that their algorithm identified a vaccine that should be effective against COVID-19 within a matter of hours.

[Full Article >](#)

2. Non-COVID-19

Organovo Announces Termination of Merger Agreement with Tarveda Therapeutics

In April, Organovo announced it was calling off its proposed merger with Tarveda Therapeutics that had been announced in late 2019.

[Full Article >](#)

Merck KGaA adds to gene therapy manufacturing boom with €100M facility in California

Merck KGaA announced in April that it was opening a second gene therapy and viral vector factory in Carlsbad.

[Full Article >](#)

San Diego startups rake in \$933M in venture capital despite pandemic

In October, the PitchBook-National Venture Capital Association Venture Monitor reported that start-ups took in \$933 million in the third quarter, 68 percent of that total going to biotech and life sciences companies.

[Full Article >](#)

Gossamer Bio Announces Appointment of Faheem Hasnain as Chief Executive Officer

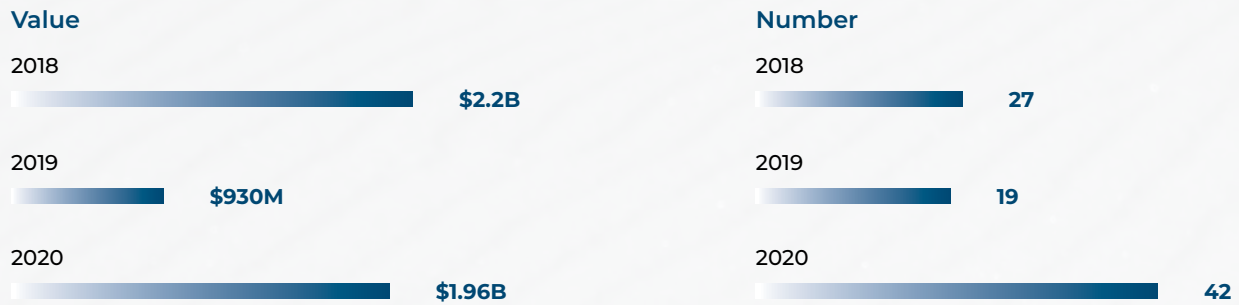
In November, the board of directors of Gossamer Bio announce that they are appointing company co-founder and chairman as chief executive officer and president.

[Full Article >](#)

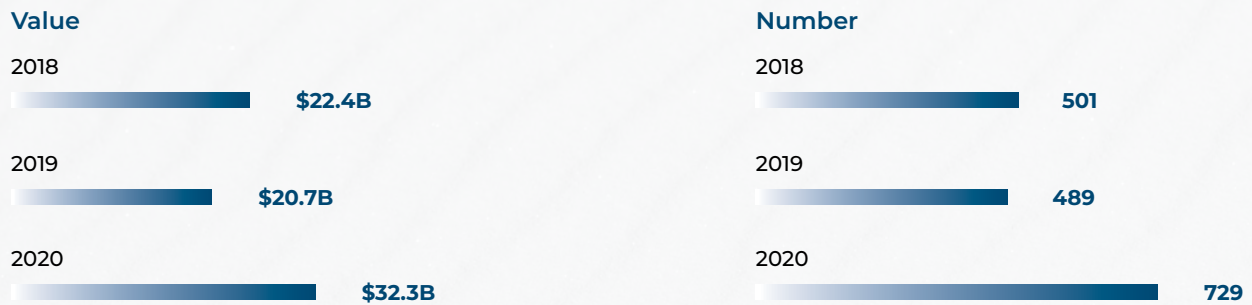
Financings

Last year, we attributed the drop in the value of deals between 2018 and 2019 to the anomaly of several mega-rounds in 2018. This year, investment rebounded to nearly 2018 levels with no individual deal topping \$250 million. When it comes to early-stage deals, the number of deals, at 23, easily surpassed the totals for the two prior years. When it comes to the value of those early-stage rounds, 2020's total was nearly double that of 2019, but still just over half of the 2018 benchmark.

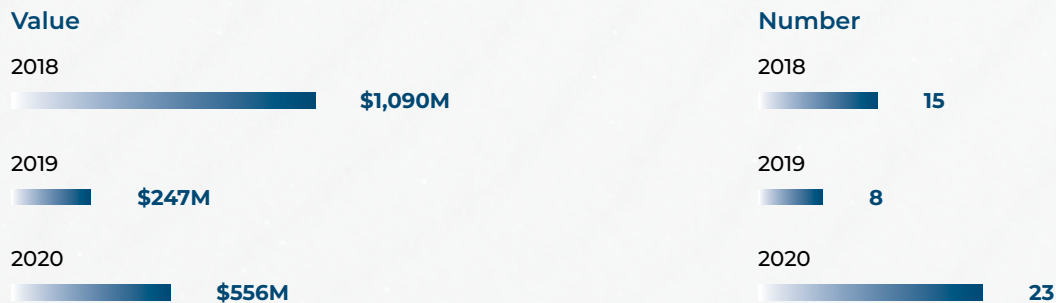
San Diego Venture Rounds (Biopharma, Medtech, Diagnostics)



All US Healthcare and Life Sciences Venture Rounds



San Diego Seed and Series A Rounds



Top three deals

- Cancer therapeutic company Erasca Inc. landed the biggest venture investment in the San Diego region. It took in a \$236 million Series B round in April.
- Ambrx Inc., a protein therapeutics company, closed a \$200 million investment in an unspecified round in November.
- VelosBio, another cancer company that was acquired by Merck, received a \$137 million Series B round in July.

M&A

The biggest acquisition was Merck's purchase of VelosBio for \$2.75 billion in cash announced in November.

The second biggest deal of the year was the acquisition of Pfenex by Ligand Pharmaceuticals. The \$516 million deal included an upfront payment of \$438 million with a potential for an additional \$78 million as a contingent value right if certain regulatory milestones are met by the end of 2021.

Rounding out the top three deals of 2020 was purchase of Solara for \$487 million. The acquisition will strengthen AdaptHealth's diabetes supply portfolio.

2021 Outlook

Once again, we asked our friends at Biocom California to share their insights on legislative and regulatory issues facing the life sciences sector.

State of Life Science Legislation

Our reflection on life science policy in San Diego begins, like every region, with a look back at the COVID-19 related challenges faced in 2020. While the pandemic continues to evolve, San Diego's life science environment remains shaped by the groundwork laid early last year, when Biocom California held listening sessions with then-Mayor Kevin Faulconer and companies working directly on COVID-19 diagnostics, treatments, and vaccines; he subsequently visited several member sites to see their work firsthand and understand their needs. The City of San Diego quickly acknowledged life science employees as "essential workers," so they could continue their important work to address the pandemic.

Biocom California regularly convened elected officials, regulators, and industry leaders to discuss priorities related to COVID-19. In addition, we brought together Environmental Health and Safety professionals to address employee screening and tracing, physical distancing, reporting, and other pandemic response issues.

Outside the pandemic, the work for a more innovation-friendly region continued. Life science leaders submitted their input throughout the year on issues like air emissions, hazardous material regulations, housing and transportation infrastructure supporting the industry, and utility access.

As the region continued to grow, San Diego City Council supported the industry through various land use issues in 2020, including the airport's environmental report certification, lifting deed restrictions at UC San Diego, a community plan amendment initiation for Towne Centre View, and the final passage of the plan to redevelop Costa Verde Center, which includes newly proposed life science space.

Later in the year, the city's mayoral candidates met with a group of Biocom California board members to share their city priorities in advance of the November election, won by Todd Gloria. The new mayor's immediate top issue will of course be the pandemic, and we predict housing and homelessness to be major focuses for him as well.

Life science legislative priorities for 2021 include ensuring our industry has a leading voice in the University Community Plan Update, which will dictate the development of the largest geographic segment of the San Diego life science hub for the next twenty years.

On the utility side, the future of how San Diego provides gas and electric utilities will have implications on the cost of and access to resources. Climate Action Plans proposed by the city and county to reduce greenhouse gas emissions will be closely watched by the life science industry for cost-benefit and regulatory language.

All local governments will face major budget shortfalls due to the pandemic, and we will closely monitor whether business will be subjected to new taxes and fees to fill the gaps. Meanwhile, government officials are sure to continue to update public health orders related to the ongoing pandemic, and to focus on vaccine rollout and public safety. Keeping up with these constantly changing local orders, often with very short implementation windows, will be one of the greatest challenges industry companies face.

Summary

2020 saw record levels of investment and innovation. It also saw a divisive presidential election, economic turmoil, and a social justice awakening.

After a year like 2020, it seems foolhardy to make predictions, but here goes. A Biden administration should bring healthcare and drug pricing reform, now informed by the experience of the pandemic. That will be a focus on the resilience of both our healthcare delivery system and pharmaceutical and device supply chain. The concept of 'equity' will play a prominent role in all policy decisions.

The life sciences sector may not enjoy the unprecedented levels of funding it saw in 2020, but the momentum of the last year should ensure investment remains at historically high levels. Generalist investors who have avoided the sector in the past will be more comfortable as a result of all of the visibility the sector and the nuts of bolts of drug development and commercialization has received during the pandemic.

But that increased visibility brings its own challenges. A bright light has been shown on the 'sausage making' of clinical trials and drug development. Going forward stakeholders from politicians to administrators to patients will expect and demand more visibility into, and influence over, how therapies are developed and brought to market.

Year-in-Review Data and Information Partners





Wow, what a year thinking back over the past 12 months. As a company we quickly went into an action as the world around was in such a state of upheaval. So, I thought I would share some of our year's accomplishments and how remarkable it's been.

After we shut down the office on March 12th, we moved seamlessly into virtual mode without missing a beat. One thing we did almost immediately was to create and sustain a community of leadership in thought and action. On March 18th, one week after our shut down, we began weekly town halls to create an environment for peers to share ideas on how to navigate the challenges. We continued our tradition of holding monthly Clinops breakfasts and moved our Speaker Series virtual. The growth and collaboration in our community was astounding. Over the course of the past 8 months, we held 35 virtual events with over 3000 attendees as we shared insights on navigating the pandemic!

We created a new offering to respond to the pandemic supporting our clients who were impacted by the clinical trials interruption. We have been working with leading clients who have embraced the goal of resilient clinical trials with a focus on data access and analytics, decentralized trial technology and services, and risk management, and we joined Decentralized Trial & Research Alliance as a founding member to bring technology into mainstream practice.

Our clients sought our expertise on more than 30 COVID related programs and efforts, and our work has paved the way for 6 FDA approvals this year alone, bringing new treatments for multiple types of cancers, cardiovascular, ultra-rare and rare diseases to patients without treatment.

Our efforts will never stop as we continue to support our community and push innovation forward!

Laurie Halloran
CEO, Halloran Consulting



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the Vivarium.**

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■ **OnSite**

Your Science, Your Facilities: Explora BioLabs designs and manages your onsite vivaria and provides supporting services.



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Marsh & McLennan Agency has teamed up with AlphaStaff and Biocom to design a co-employment solution that offers world-class payroll and HR solutions, rich benefit programs with stable rates, and an exclusive, life-science focused risk pool.

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