

Fueling life sciences through transformative transactions

LOCUST WALK Q1 2020 REPORT

Global Trends in Biopharma Transactions

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FINDINGS AND PREDICTIONS

Introduction

Locust Walk is a global life science transaction firm. Our integrated team-based approach across capabilities, geographies, and industry segments delivers the right products, the right partners, and the most attractive sources of capital to get the right deals done for biopharma and medtech companies.

Each quarter, Locust Walk deal team members compile key statistics and trends on strategic transactions and financings. Our *Q1 2020 Report: Global Trends in Biopharma Transactions* applies the latest data to analyze current activities in the life sciences deal landscape.

In this report you can find an overview and analysis of the following across the biopharma market in the US, Europe, and Asia (Japan and China):

- Key performance indicators for the life science market
- IPO and private financing activity and performance
- Deal activity for strategic partnership and M&A
- A look ahead and our predictions of the future

Summary of biopharma findings and predictions (1/2)

US

- After a strong start to the quarter, the COVID-19 pandemic crisis has jolted public markets and the overall economy, affecting biopharma in several ways as companies grapple with lower stock prices and economic uncertainty
- Yet, while biopharma indices remain sensitive to macroeconomic influences, the impact has been significantly less severe than other sectors of the economy
- Behind the scenes, biopharma financing and deal activity remains robust as companies seek both dilutive and non-dilutive capital and companies with capital are aggressively seeking in-licensing to take advantage of potentially lower-priced acquisition opportunities
- Private financings rose in both total value and volume from Q4 2019, demonstrating that investor interest in private biopharma companies remains strong despite current public market volatility
- Conversely, M&A value dropped off significantly in Q1, experiencing a lack of “mega” deals that had been leading the charge in years past at least partially as a result of public equity prices being depressed for both buyers and sellers

Europe

- EU biopharma has built an attractive private financing market with continued participation from foreign investors and a strong clinical pipeline
 - Locust Walk expects the EU to bounce-back and recover following fallout due to COVID-19
- The COVID-19 scare has enabled multiple collaboration deals with EU companies leading the race to find a cure or vaccine
- Although M&A deals and IPO activity have been low, distressed valuations may allow EU biopharma leaders to purchase companies at a discount. Private biotechs will continue to pursue investment to enable higher valuations before going public

Summary of biopharma findings and predictions (2/2)

Japan

- While the Japanese stock market was heavily impacted by COVID-19, with the Nikkei 225 down -18.5% in Q1, pharma companies on TSE1 were down -5.5% on average
- The biotech sector took a greater blow, falling -23.3%, implying less appetite among investors for less-established companies
- However, the negative sentiment did not affect deal making, as the volume of deals in Q1 2020 doubled from the previous year
- While increasing number of deals have been struck for pre-clinical and research stage assets by the larger pharmaceutical companies, biotechs have also been active in closing deals with Chinese companies

China

- In the Chinese stock market, the healthcare sector was impacted less severely by the COVID-19 threat compared to the SSE Composite Index with SSE Composite Index falling -10.9% while the top 16 pharma companies listed in mainland China only dropped - 0.7% in the period between Jan 2 and Mar 31, 2020
- 3 biopharma companies went public in Q1, raising \$633M in total, with strong interest in biotech stocks displayed in the Shanghai and Hong Kong markets
- Despite the COVID-19 threat and shutdowns in many major cities, in-licensing deal volume kept up YoY, with 22 in-licensing deals being announced in Q1 (vs. 19 deals in Q1 2019)
- The COVID-19 outbreak has also led to several licensing deals and collaborations for candidates targeting COVID-19 in China

BIOPHARMA UNITED STATES

Biopharma United States overview (1/2)

Biopharma indices suffered due to the COVID-19 pandemic in Q1 2020, but still performed better than the S&P 500 and other sectors

- Following an exceptionally strong Q4 2019, biopharma indices fell 10.4-11.8% from the start of Q1, compared to the S&P which fell 20% from the start of Q1
- Locust Walk believes biopharma has not been as dramatically affected in the COVID-19 crisis because of the role the industry will play in finding treatments for the disease and the longer-term nature of drug development that underlies biopharma valuations

Biopharma IPOs had a strong start but slow end in Q1 2020, indicating the current 7-year IPO window may be closing

- While Q1 is typically a slower quarter for IPOs, Q1 2020 appeared headed toward record highs in the number of completed IPOs
 - COVID-19 fears delayed or cancelled many potential IPOs as the market significantly declined in March
 - Locust Walk believes the typical jump in number of Q2 IPOs may be delayed until Q3 or later if the COVID-19 crisis continues
 - Additionally, with an election year, Locust Walk expects higher volatility and uncertainty in the public market, causing companies to be more careful in timing their IPOs in 2020. Many companies may postpone Q2 or Q3 IPOs until after the election, pointing to a strong Q4 2020 and Q1 2021 as political risk is discharged and the economy and markets are hopefully in recovery
- Q1 was highlighted by a number of large IPOs, and many biopharma companies have a significant amount of cash on hand – a key factor that will help the industry ride through the COVID-19 market dislocations
- Performance of 2019 IPOs outperformed overall performance of biotech indices – a trend that is unusual when compared to IPO classes of previous years
 - Certain companies active in infectious disease such as Moderna and Vir Technology outperformed biotech indices as COVID-19 has put a spotlight on companies working on COVID-19 treatments and vaccines

Biopharma United States overview (2/2)

Q1 2020 private financings increased in number and value, almost doubling in aggregate value from Q4 2019

- Biopharma financings remain robust as the asset class continues to attract investment, with a strong focus in I-O, across a variety of stages from a wide range of investor types
- Long-term nature of drug development and timelines to value inflections provides private investors a different viewpoint from public investors, which, combined with a number of funds with dry powder, should enable private financings to continue in 2020
- Locust Walk has observed anecdotally that some funds are pausing on *de novo* financings to focus on opportunities already in front of them, but believes this pause is temporary and private financing activity will stay strong throughout 2020

Licensing deal volume and value experienced strong growth in Q1 2020 from Q4 2019, while M&A declined sharply

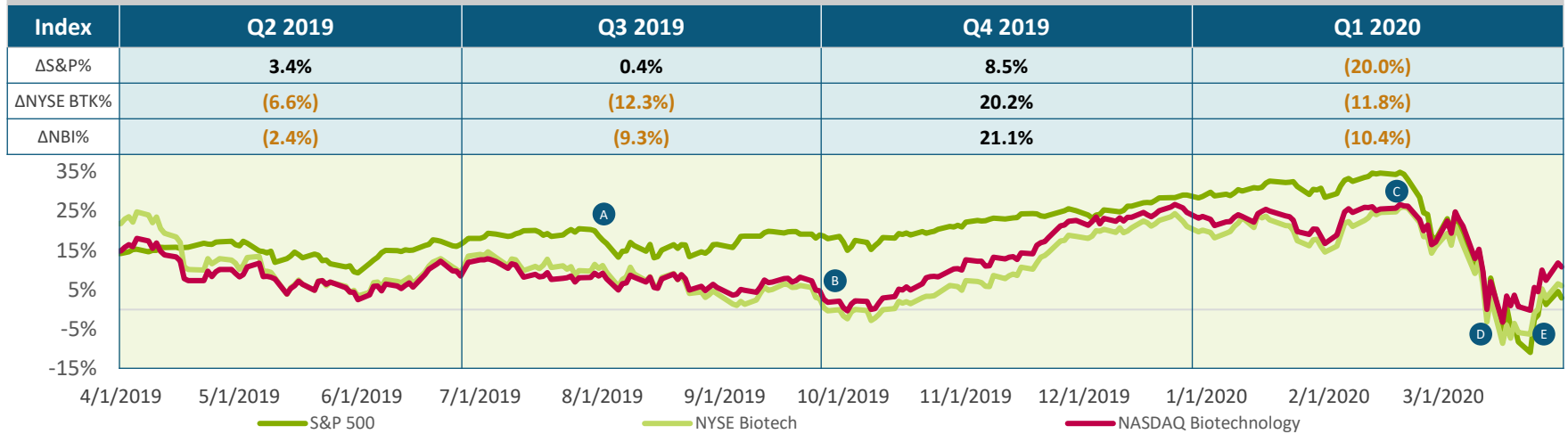
- Q1 2020 saw a shift in focus to licensing deals over large value M&A deals
- The decline in M&A may be driven by macroeconomic concerns, as all companies' stock prices are depressed, and mimics decreases in M&A across all technology sectors
- Discovery companies attracted the highest-value licensing deals, indicating Strategics remain interested in collaborating and co-developing therapeutic candidates from novel platforms

Locust Walk anticipates licensing deals to remain strong, and M&A volume to pick up in Q2 2020

- With volatile public markets and depressed stock prices, companies will seek non-dilutive sources of capital
- Companies without adequate cash runway will find themselves as attractive M&A targets or reverse merger candidates

Biotech indices suffered losses along with the overall market in Q1 2020 amidst the COVID-19 pandemic

Performance of Key Biopharma Indices



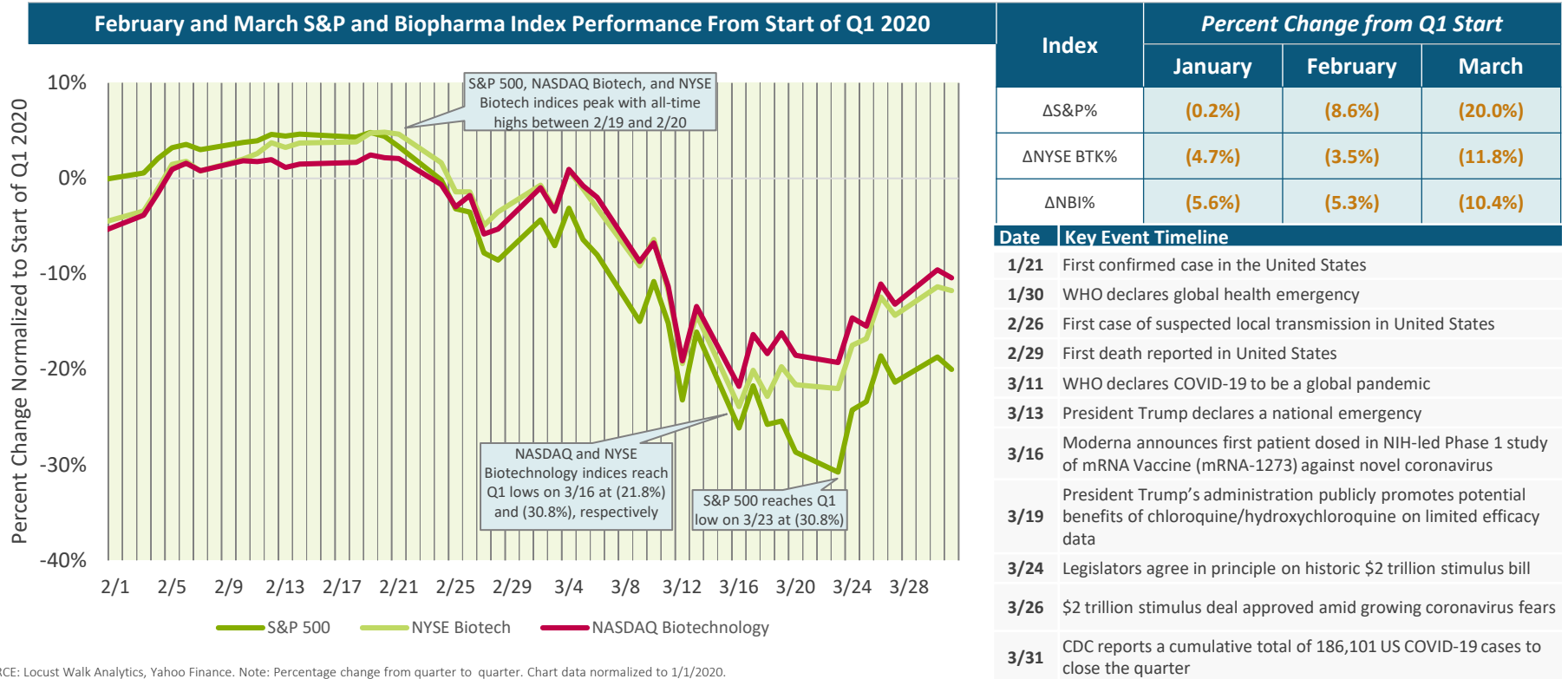
Key Events

- A** Stocks under pressure as Chinese yuan drops to weakest level in 10 years resulting from additional US tariffs
- B** Biopharma stocks underperform the S&P to end a rocky September, as proposed drug pricing legislation remains uncertain and impending large US layoffs from prominent biotechs including Novo Nordisk, GlaxoSmithKline, and Novartis are announced
- C** S&P 500 jumps to record highs in late February at a time in which there were only 13 reported US COVID-19 cases as of February 19th
- D** Fears of COVID-19 and an impending economic slowdown push the S&P 500 and US indices into a bear market on March 12, 2020 for the first time since the 2007-2009 Great Financial Crisis
- E** The public markets rebound as investors grew optimistic about the U.S. Government's response to the COVID-19 crisis

SOURCE: Locust Walk Analytics, Yahoo Finance
 Note: Percentage change from quarter to quarter. Chart data normalized to 1/1/2019.

Q1 2020 was marked by rapid lows from COVID-19 fears, leveling out in mid-late March

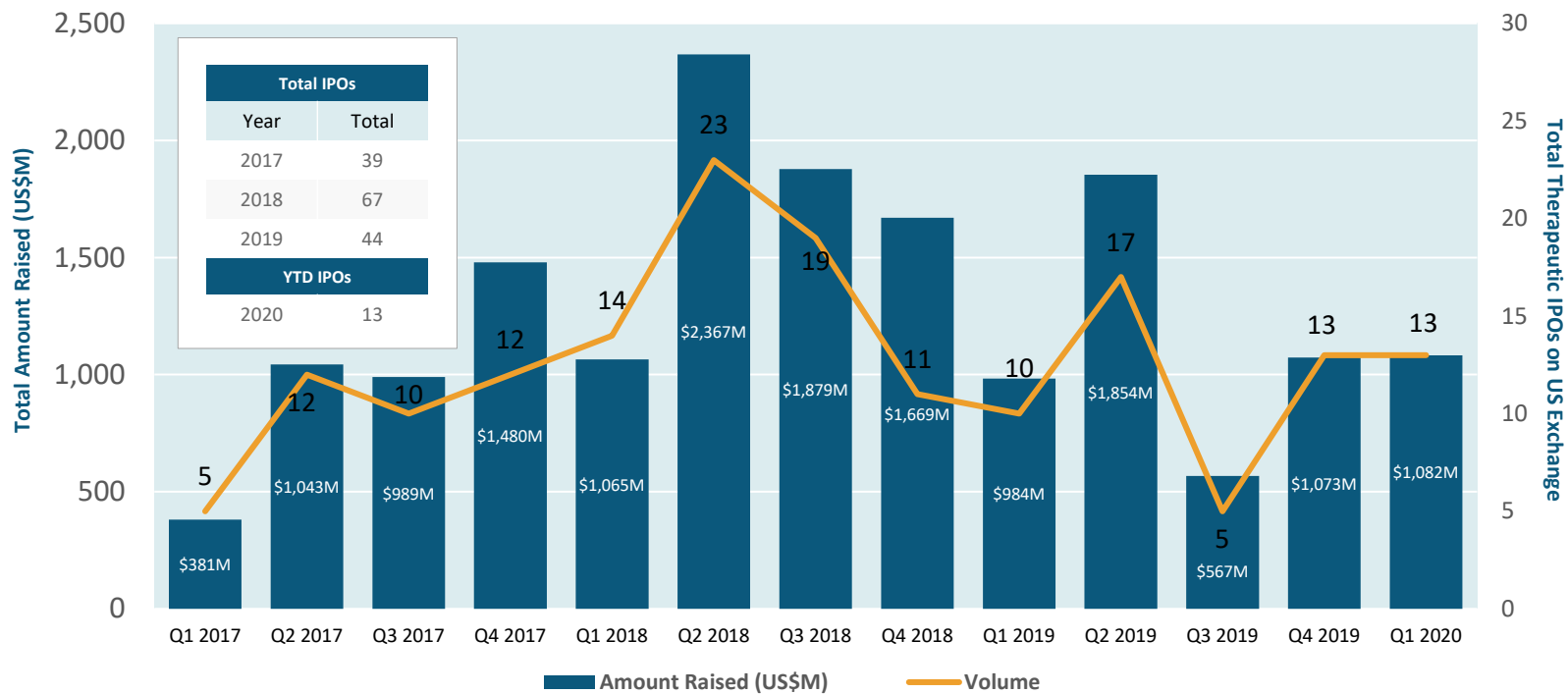
Despite heavy market declines, US biopharma indices fared significantly better than the S&P 500.



SOURCE: Locust Walk Analytics, Yahoo Finance. Note: Percentage change from quarter to quarter. Chart data normalized to 1/1/2020.

US biopharma IPOs plateaued in Q1 2020 with 13 total IPOs, the same number as the last quarter

Number of Biopharma IPOs and Aggregate Total Raised By Quarter



SOURCE: Locust Walk Analytics, Yahoo Finance

In Q1 2020, 13 biopharma companies filed for IPO across a variety of development stages (1/2)

Q1 2020 US IPOs									
Biopharma Issuer	Ticker	Therapeutic Area	Lead Phase	Deal Date	Price Range	Offering Price	Total Raise (\$M)	Price Change to 4/2	Market Cap (\$M) ¹
ADTx Therapeutics² Berwyn, Pennsylvania	ADTX NASDAQ	Immune suppression for organ transplants	Pre-clinical Ongoing	01/15/2020	\$5.50	N/A	N/A	N/A	N/A
Annovis Bio Berwyn, Pennsylvania	ANVS NYSE	Alzheimer's, Parkinson's and other neurodegenerative disorders	Phase 2 Ongoing	01/29/2020	\$6-\$8	\$6 Low	\$12	(68%)	\$847
Black Diamond Therapeutics Cambridge, Massachusetts	BDTX NASDAQ	Precision small molecules for various tumor types	Phase 1/2 Ready	01/30/2020	\$16-\$18	\$19 Above	\$201	(40%)	\$984
Arcutis Biotherapeutics Westlake Village, California	ARQT NASDAQ	Medical dermatology	Phase 3 Ready	01/31/2020	\$15-\$17	\$17 High	\$159	16%	\$783
Beam Therapeutics Cambridge, Massachusetts	BEAM NASDAQ	Blood disorders, lymphoma, AML, liver diseases, and other ocular and central nervous system disorders	Preclinical Ongoing	02/06/2020	\$15-\$17	\$17 High	\$180	(14%)	\$1,300
Revolution Medicines Redwood, California	SWTX NASDAQ	RAS and mTOR signaling tumor types	Phase 1/2 Ongoing	02/13/2020	\$14-\$16	\$17 Above	\$238	(19%)	\$695
Passage Bio Philadelphia, Pennsylvania	PASG NASDAQ	CNS Indications, dementia, Krabbe disease, and GM1 gangliosidosis	Pre-clinical Ongoing	02/28/2020	\$16-\$18	\$18 High	\$216	(34%)	\$261

SOURCE: Locust Walk Analytics, Yahoo Finance

(1) As of 04/02/2020 (2) Announced but not completed as of 04/03/20



In Q1 2020, 13 biopharma companies filed for IPO across a variety of development stages (2/2)

Q1 2020 US IPOs									
Biopharma Issuer	Ticker	Therapeutic Area	Lead Phase	Deal Date	Price Range	Offering Price	Total Raise (\$M)	Price Change to 04/02	Market Cap (\$M) ¹
Oric Pharmaceuticals² South San Francisco, California	ORIC NASDAQ	Various cancers	Phase 2 Ready	02/28/2020	N/A	N/A	\$86	N/A	N/A
Ayala Pharmaceuticals² Rehovot, Israel	AYLA NASDAQ	Rare cancers such as adenoid cystic carcinoma, triple-negative breast cancer, multiple myeloma, and T-ALL	Phase 2 Ongoing	03/06/2020	\$14-\$16	N/A	\$50	N/A	N/A
Lyra Therapeutics² Watertown, Massachusetts	LYRA NASDAQ	Ear, nose and throat (ENT) diseases	Phase 2 Ongoing	03/06/2020	N/A	N/A	\$57.5	N/A	N/A
Zentalis³ New York, New York	ZNTL NASDAQ	Various cancers	Phase 1/2 Ongoing	03/06/2020	\$16-\$18	\$18 High	\$165	N/A	N/A
Imara Inc. Boston, Massachusetts	IMRA NASDAQ	Sickle cell disease, beta thalassemia	Phase 2a Ongoing	03/12/2020	\$16-\$18	\$16 Low	\$75	5%	\$261
Keros Therapeutics² Lexington, Massachusetts	KROS NASDAQ	Blood and musculoskeletal disorders	Phase 1 Ongoing	03/16/2020	\$14-\$16	N/A	\$86	N/A	N/A

SOURCE: Locust Walk Analytics, Yahoo Finance

(1) As of 04/02/2020 (2) Announced but not completed as of 04/03/2020 (3) Completed 04/03/2020

Two mega-biopharma IPOs led to valuations of near \$1B or higher this quarter

		
Summary	Developing novel therapies that inhibit the RAS and mTOR pathways in various cancer types	Developing precision small molecule kinase inhibitors for various tumor types
Pipeline	<ul style="list-style-type: none"> RMC-4630, a Phase 1/2 selective SHP2 inhibitor for a range of tumor types being developed with Sanofi RMC-5552, a preclinical selective inhibitor of mTORC1 for several tumor types Preclinical mutant-selective RAS inhibitors that bind to RAS(ON) in several tumor types Preclinical SOS1 inhibitor for several tumor types 	<ul style="list-style-type: none"> BDTX-189, an oral Phase 1/2 ready small molecule targeting allosteric mutant EGFR and HER2 for various solid tumors Preclinical EGFR inhibitor for glioblastoma
Cash on Hand ¹	\$136M	\$78.6M
Amount Raised in IPO	\$238M	\$201M
Market Cap ²	\$1,300M	\$984M

SOURCE: Locust Walk Analytics, Yahoo Finance

(1) As reported on S-1 registration (2) As of 04/02/2020

Most Q1 2020 IPOs have dropped in value since going public and performed below biotech indices

Current Performance of 2020 Biopharma IPOs



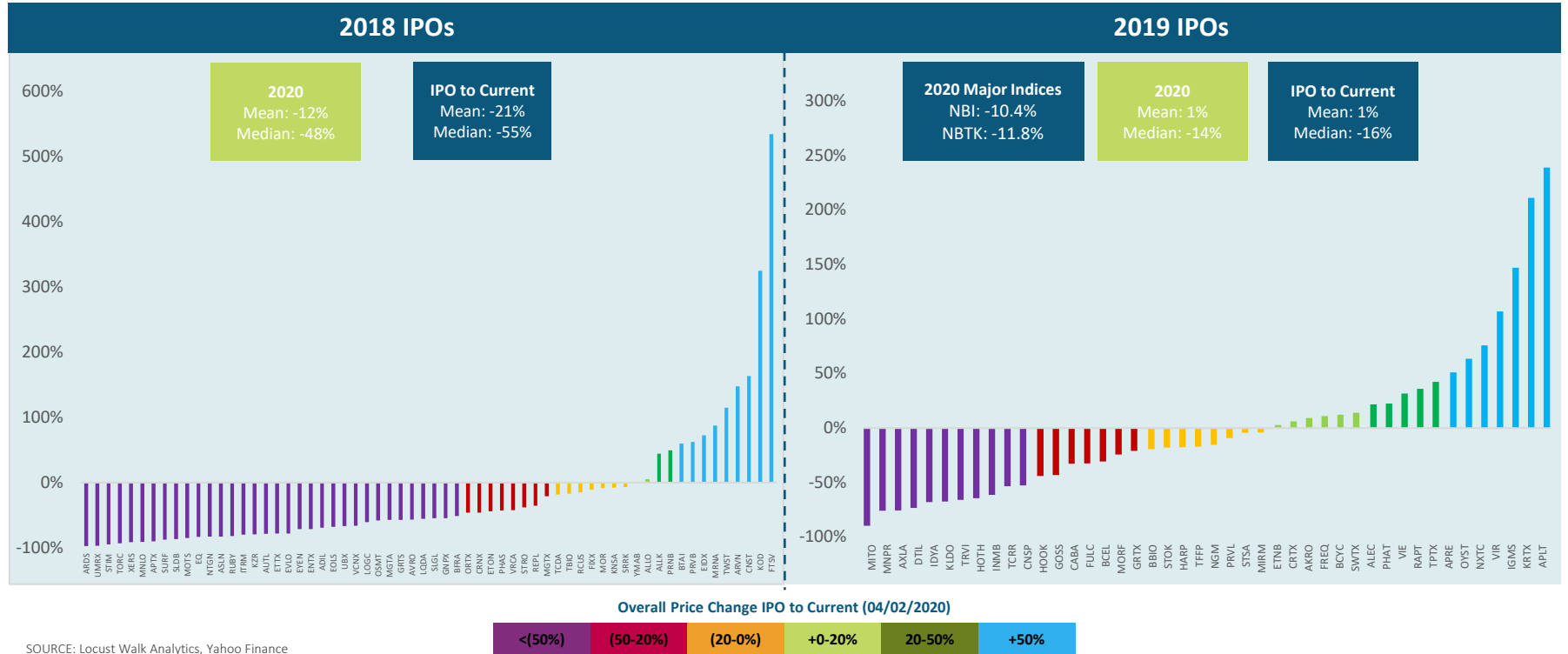
Overall Price Change IPO to Current (04/02/2020)



SOURCE: Locust Walk Analytics, Yahoo Finance
Price as of 04/02/2020

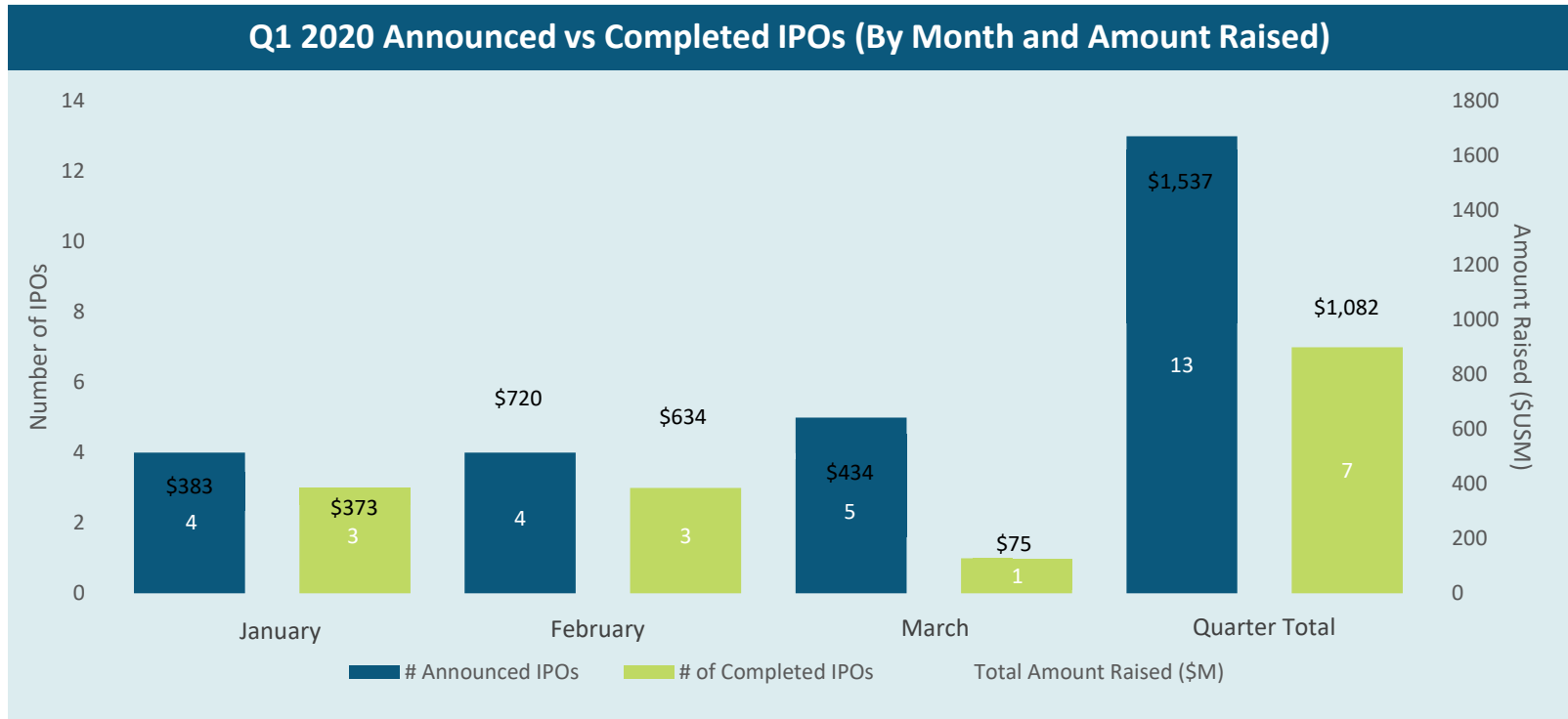
Class of 2018 IPOs have underperformed market trends, while 2019 IPOs have overperformed

2020 Performance of 2018 and 2019 Biopharma IPOs



SOURCE: Locust Walk Analytics, Yahoo Finance
 *As of 04/02/2020

March 2020 showed a decline in completed IPOs, suggesting that COVID-19 has shut the IPO window



SOURCE: Locust Walk Analytics, Yahoo Finance as of 04/02/2020

Biopharma United States – private financings

Q1 2020 saw an increase in the number of private financings and nearly doubled the total amount raised from Q4 2020

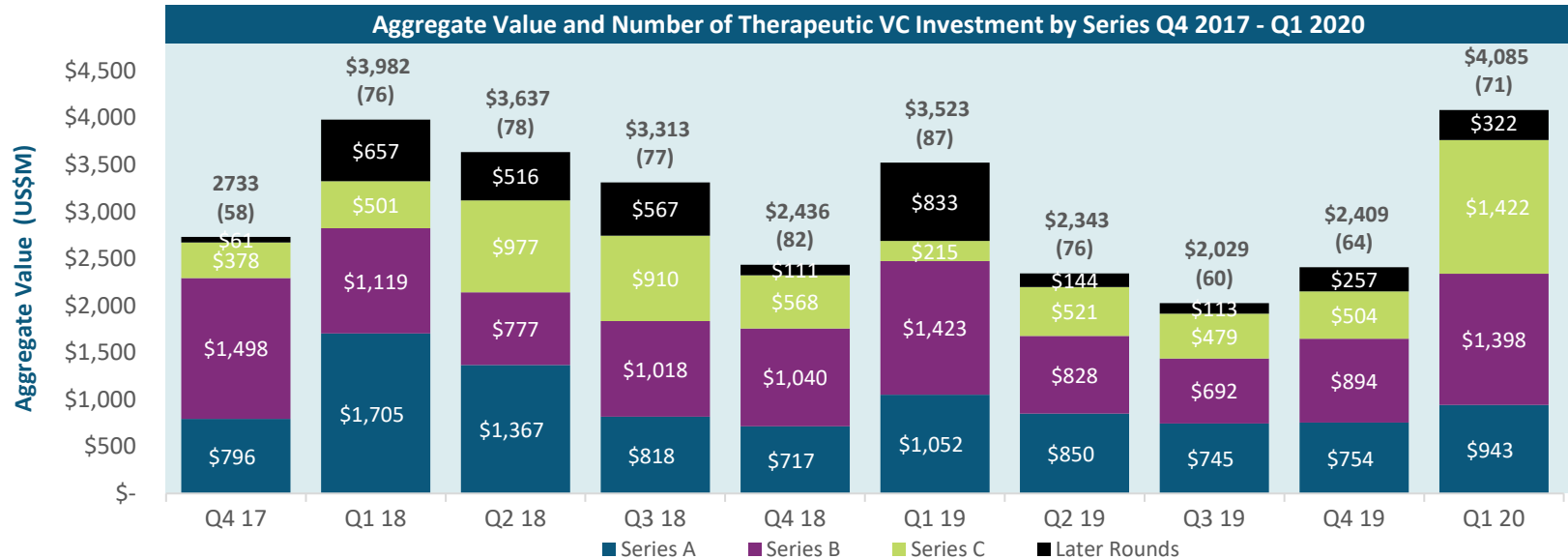
- The quarter showed early signs of a record-breaking year for biopharma private financings, with the amount raised in Q1 2020 representing nearly half the aggregate deal value of 2019
- Q1 2020 private financings were primarily concentrated in January and March, with over half of the quarter's aggregate deal value raised in March alone
- Anecdotally, some investors are prioritizing closing current deals in advanced stages over new opportunities, which potentially explains the upswing in the number and amount of dollars raised in March. This might spell a slowdown in Q2
- During the COVID-19 outbreak, investors who invest in both private and public biopharmas are likely to be focused in the near-term on managing their current public market investments and risk to their portfolio companies
- Recent closings of multibillion-dollar biotech funds suggest investors are eager to deploy capital and finance private companies in the coming months

Immunotherapy companies continue to attract the largest amounts of capital in the private markets

- Four of the top six largest capital raises of the quarter were for immunotherapy companies
- Lyell Immunopharma, a developer of next-generation cell therapies, raised the largest amount of capital with a \$493M Series C raise

Given market conditions, it is more important than ever for companies to have a dependable group of investors and advisors who can help navigate challenging markets

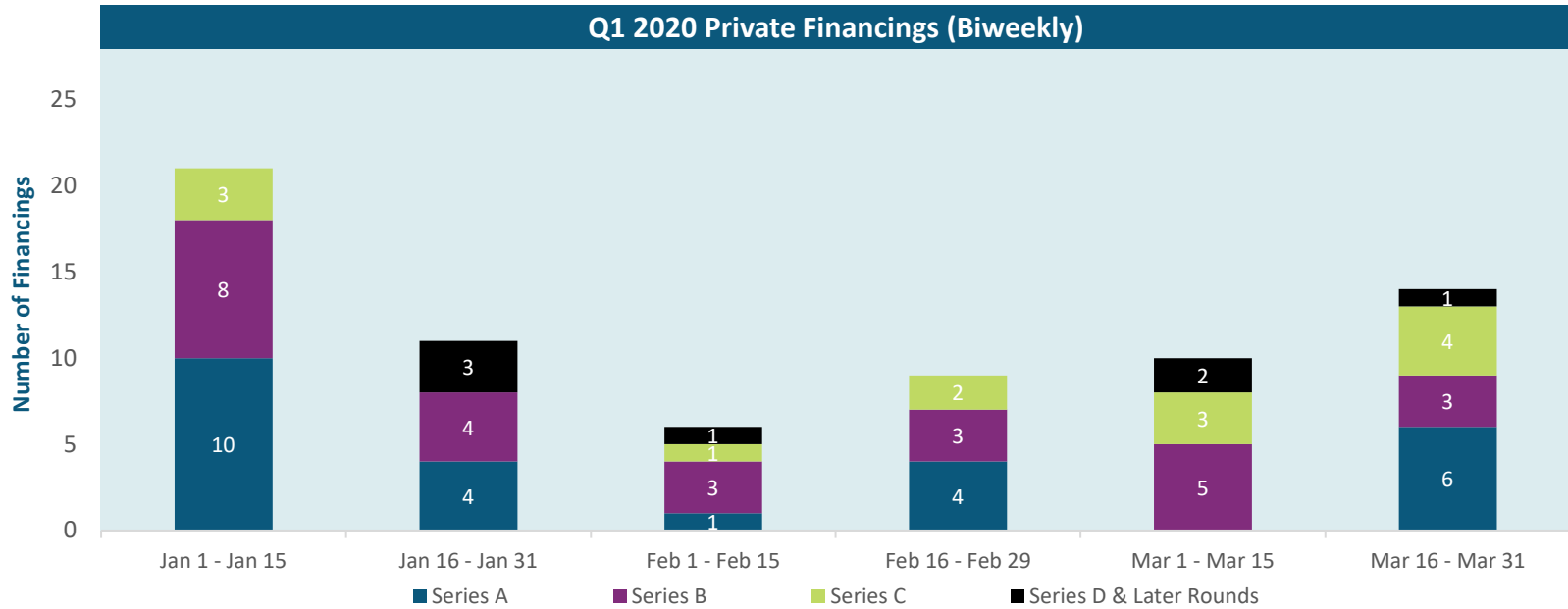
Aggregate value of private financings up from Q4 19 and prior Q1s, signaling a strong start to 2020



Deals (#)	2018					2019				2020
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
A	25	36	40	30	32	32	35	20	25	25
B	23	24	19	23	29	34	17	22	22	26
C	8	11	13	17	16	10	16	7	10	13
D & Later	2	5	6	7	5	11	8	11	7	7
Total	58	76	78	77	82	87	76	60	64	71

SOURCE: Locust Walk Analytics, Pitchbook; Methodology: All US series A, B, C, D, and later investments; therapeutics include drug delivery, drug discovery, pharmaceuticals, and select biotechnology companies; tools, devices, and diagnostics excluded

Following a quiet period post-JPM, private financings saw an uptick towards the end of March 2020



	Jan 1 – Jan 15	Jan 16 – Jan 31	Feb 1 – Feb 15	Feb 16 – Feb 29	Mar 1 – Mar 15	Mar 16 – Mar 31
Deal Value (\$M)	\$1,174	\$258	\$269	\$199	\$1,192	\$993

SOURCE: Locust Walk Analytics, Pitchbook; Methodology: All US series A, B, C, D, and later investments; therapeutics include drug delivery, drug discovery, pharmaceuticals, and select biotechnology companies; tools, devices, and diagnostics excluded

Immunotherapy companies were at the forefront of private financings in Q1 2020

High-Value Investment Rounds					
Company	Series	Raised (\$M)	Lead Investor	Therapeutic Area	Background
	C	\$493	Undisclosed	Cell Therapy/ Oncology	Lyell Immunopharma is developing cellular therapies for cancer with improved differentiation, functionality, and specificity over past approaches
	A	\$200	 ARCH VENTURE PARTNERS 	Oncology/Immuno- inflammation/Rare Disease	EQRx is a medicines company re-engineering the drug development process with the aim of bringing treatments to patients in a more efficient and cost-effective manner
	B	\$170	 INVUS 	Cell Therapy/ Gene Therapy	ElevateBio is a holding company of cell and gene therapy companies, including AlloVir and HighPassBio
	A	\$151	 HUDSON BAY CAPITAL 	Cell Therapy/ Oncology	Legend Biotech is developing CAR-T, TCR-T, and allogeneic cell therapies for the treatment of cancer, infectious disease, and autoimmune diseases
	B	\$125	WELLINGTON MANAGEMENT®	Hepatology	Aligos therapeutics is developing a new class of molecules that interact directly with disease-causing modalities for the treatment of chronic liver diseases
	D	\$120		Oncology	Nurix is developing novel immuno-oncology agents with the capability to control E3 ubiquitin ligases for the treatment of cancer

SOURCE: Locust Walk Analytics, Pitchbook

Biopharma US Q1 licensing volume and value saw a strong uptick, while M&A value declined

Q1 2020 licensing deal volume picked up from Q4 2019, while aggregate value more than doubled

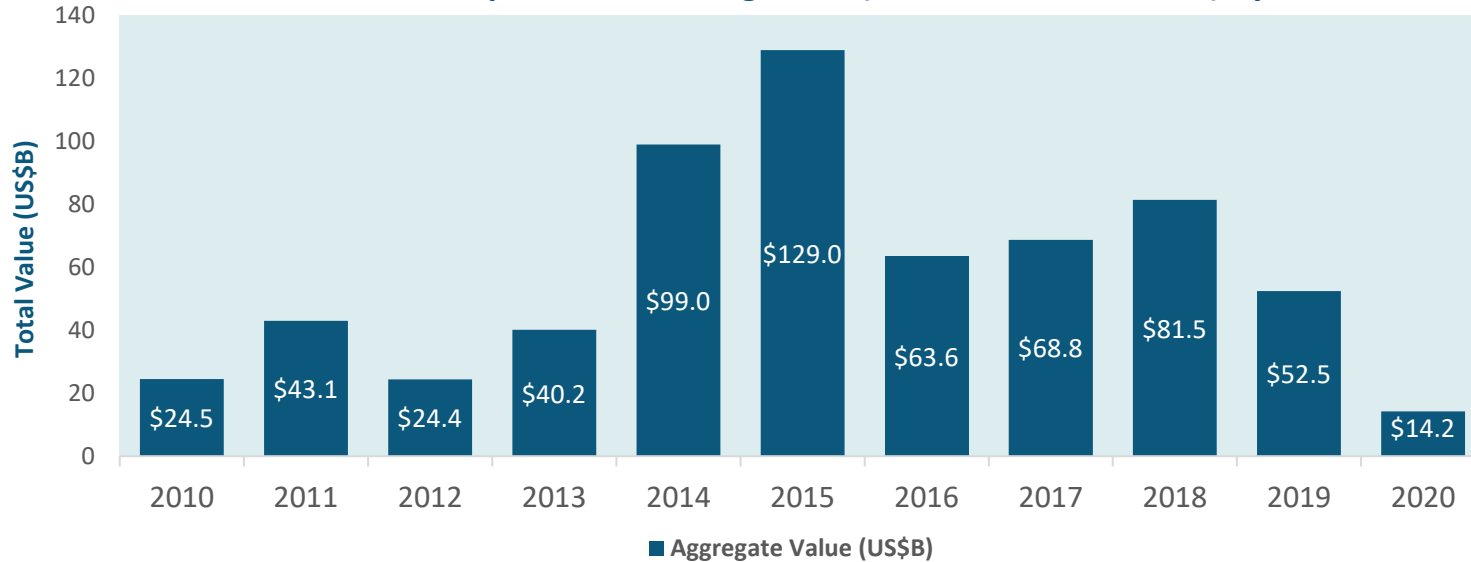
- M&A remained a driver of most BD transactions in 2019, though this dynamic appeared to shift in favor of licensing transactions.
- The highest-value licensing deals were concentrated in discovery spaces, indicating a continuation of the trend of strategic licensees focusing on earlier stage deals and gaining access to platform technologies from new innovative biotechs
- In line with previous years, licensing transactions in January accounted for two-thirds of all licensing deals for the quarter as companies finished up deals carrying over into the new year and in advance of the 2020 JPM Healthcare Conference
- Only ~15% of licensing deals for the quarter came during the month of March, suggesting a possible impact from COVID-19, though the long-term consequences and affects on US licensing may not be fully realized until the second-half of 2020
- While licensing deals in some therapeutic areas have the potential to lag due to COVID-19 development challenges, deal volume in anti-infectives, vaccine development and other therapeutics for COVID-related complications may continue to rise

Q1 2020 M&A deal volume saw moderate declines from Q4 2019, while value dropped-off significantly

- Several “mega” deals drove overall 2019 deal value, while 2020 has yet to see any major \$5B+ acquisitions
- COVID-19 has put M&A deal activity largely on hold across all sectors as public buyers and sellers are less likely to push forward with depressed stock prices
- The COVID-19 crisis could induce a wave of potential deal making as smaller companies seek non-dilutive sources of capital and larger companies seek to pursue new opportunities at a potential discount during down markets

Biopharma licensing activity posted a strong Q1, putting it on track to surpass 2019 in both deal value and volume

US and WW Biopharma Licensing Deals (>\$50M Total Deal Size) By Year

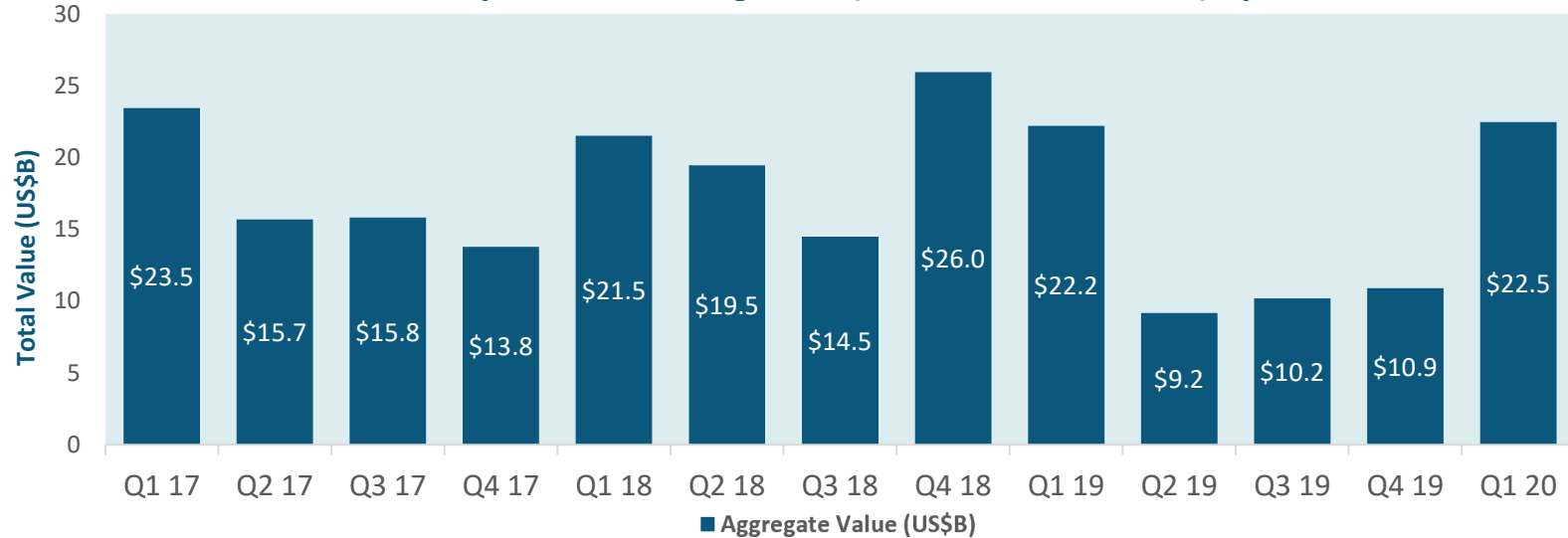


	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 YTD
Deal Volume	61	70	62	99	127	163	118	99	101	59	15
Average Deal Size (\$M)	\$402	\$615	\$394	\$456	\$779	\$791	\$539	\$695	\$760	\$705	\$948

SOURCE: Locust Walk Analytics, BioSciDB; *Locust Walk has altered methodology beginning Q3 2017; includes WW and US licensing deals for US-based licensors; ex-US regional deals are excluded

Q1 2020 US and WW licensing deal volume and value rose significantly from Q4 2019

US and WW Biopharma Licensing Deals (>\$50M Total Deal Size) By Quarter



	2017				2018				2019				2020
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Deal Volume	33	17	23	26	22	28	20	31	22	13	8	16	21
Average Deal Size (\$M)	\$711	\$923	\$688	\$530	\$979	\$695	\$724	\$837	\$1,009	\$706	\$1,274	\$682	\$1,070

SOURCE: Locust Walk Analytics, BioSciDB; *Locust Walk has altered methodology beginning Q3 2017; includes WW and US licensing deals for US-based licensors; ex-US regional deals are excluded

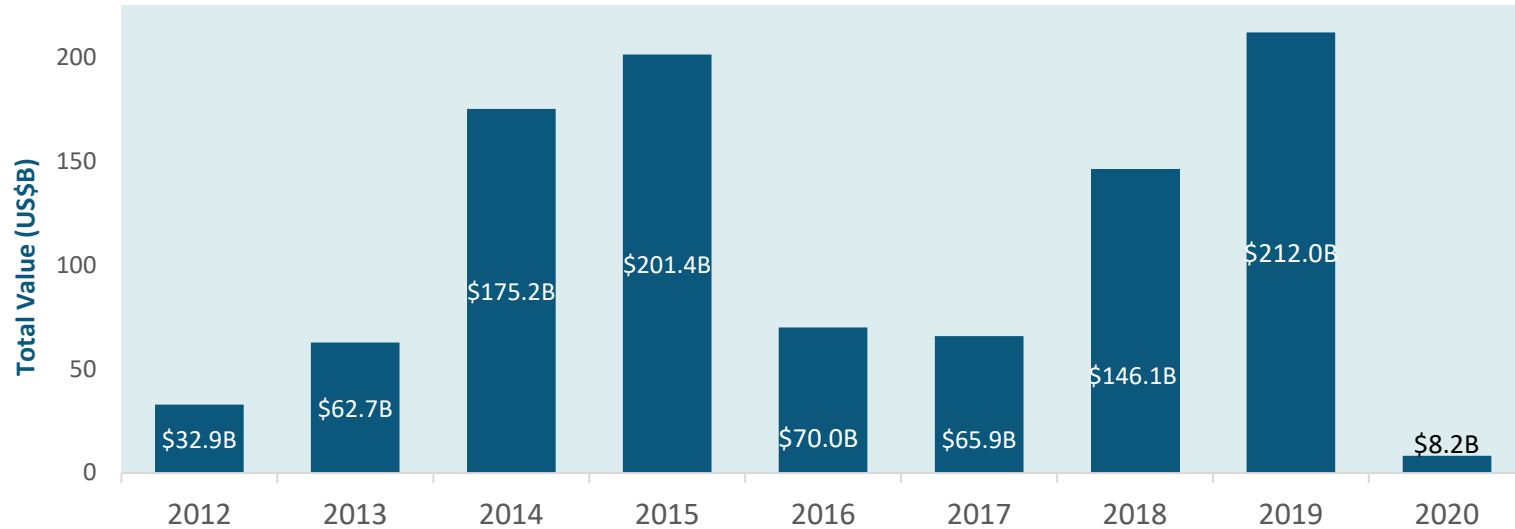
Q1 2020 highest-value licensing deals concentrated heavily in discovery-stage platform technologies

Q1 2020 Licensing Deals								
Licensee	Licensor	Date	Stage	Total Deal Size (\$M)	Upfront Cash/ Equity (\$M)	Total Milestones (\$M)	Therapeutic Area	Deal Subject
Biogen	Sangamo Therapeutics	02/2020	Preclinical	\$2,720	\$350	\$2,370	Central Nervous System	ZFP technology delivered via AAV including ST-501 for tauopathies and ST-502 for synucleinopathies
Sanofi	Nurix	01/2020	Discovery	\$2,555	\$55	\$2,500	Diversified	DELigase discovery platform to develop protein degradation therapies for three undisclosed targets
Astellas Pharma	CytomX Therapeutics	03/2020	Discovery	\$1,680	\$80	\$1,600	Cancer	T-cell engaging bispecific antibodies targeting CD3 and tumor cell surface antigens for cancer
Roche	Amunix	01/2020	Discovery	\$1,540	\$40	\$1,500	Diversified (non-oncology)	XTEN half-life extension technology to discover non-oncology products against undisclosed targets
Ionis Pharmaceuticals	Aro Biotherapeutics	01/2020	Discovery	\$1,400	Undisclosed	Undisclosed	Diversified	CENTYRIN technology to develop targeted cell-specific delivery of antisense oligonucleotides
BridgeBio	Atomwise	03/2020	Discovery	\$1,080	Undisclosed	Undisclosed	Diversified	AI-based discovery for up to 13 small molecule programs initially targeting Pellino proteins
Ionis Pharmaceuticals	Empirico	01/2020	Discovery	\$660	\$10	\$650	Genetic Diseases	Precision Insights Platform to identify targets for antisense oligonucleotide discovery
Gilead	Kyverna Therapeutics	01/2020	Discovery	\$588	\$18	\$570	Autoimmune	Synthetic Treg platform and synNotch technology to develop engineered T cells for autoimmune disease

SOURCE: Locust Walk Analytics, BioSciDB, Global Data. All values in (US\$M) unless otherwise noted.

M&A deal value was down sharply in Q1 2020, lacking the same high value acquisitions seen in 2019

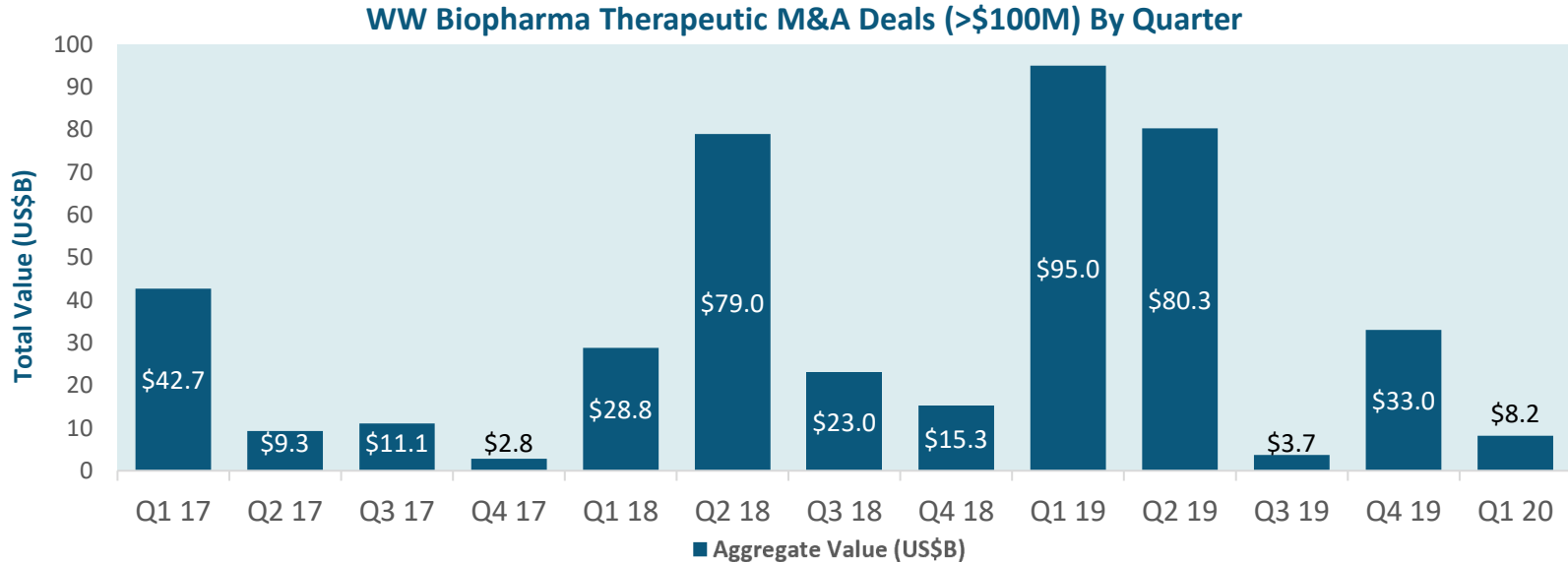
WW Biopharma Therapeutic M&A Deals (>\$100M) By Year



	2012	2013	2014	2015	2016	2017	2018	2019	2020 Total
Deal Volume	29	49	48	57	39	33	83	36	9
Average Deal Size (\$M)	\$1,135	\$1,279	\$3,649	\$3,533	\$1,794	\$1,997	\$1,760	\$5,889	\$911

SOURCE: Locust Walk Analytics, BioSciDB, Pitchbook, Yahoo Finance

Q1 2020 deal volume and value was down significantly from past Q1s



	2017				2018				2019				2020
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Deal Volume	11	10	6	6	7	13	50	13	6	9	7	14	9
Average Deal Size (\$M)	\$3,882	\$930	\$1,850	\$467	\$4,114	\$6,077	\$460	\$1,177	\$15,833	\$8,922	\$529	\$2,357	\$911

SOURCE: Locust Walk Analytics, BioSciDB, Pitchbook, Yahoo Finance

Q1 2020 saw a decline in US pharma M&A, with only two transactions exceeding \$1B in deal value

March 2, 2020



Gilead to Acquire Forty-Seven for \$4.9B

Gilead (NAS: GILD) announced a definitive agreement to acquire Forty Seven (NAS: FTSV) for \$95.50 per share in cash at a total transaction value of \$4.9B. The acquisition strengthens Gilead's immuno-oncology research and development portfolio with the addition of magrolimab, an anti-CD47 monoclonal antibody undergoing clinical development in MDS, AML, and DLBCL.

January 10, 2020



Lilly Acquires Derm. Focused Dermira for \$1.1B

Eli Lilly (NYSE: LLY) and Dermira, Inc. (NAS: DERM) entered into a definitive acquisition agreement for \$18.75 per share, or approximately \$1.1 billion, in an all-cash transaction. Lilly expands its portfolio with the addition of lebrikizumab, an IL-13 antibody in Phase 3 for the treatment of moderate-to-severe atopic dermatitis, and QBREXZA® for hyperhidrosis.

January 13, 2020



Pfizer Acquires Phase 1 CNS-penetrant Small Molecule Inhibitor from Biogen for \$710M

Biogen (Nasdaq: BIIB) and Pfizer (NYSE: PFE) signed an asset purchase agreement, in which Pfizer acquired a novel Phase 1 CNS-penetrant small molecule inhibitor of casein kinase 1 (CK1), for the treatment of patients with behavioral and neurological symptoms across various psychiatric and neurological diseases. Biogen will pay Pfizer \$75M upfront plus potential milestones of up to \$635M, and royalties.

February 26, 2020



Takeda Acquires Pvp Biologics for \$330M Following Phase 1 Study of TAK-062

Takeda acquired US based Pvp Biologics for \$330M in cash following the conclusion of a Phase 1 PoC study of TAK-062 for the treatment of uncontrolled celiac disease. TAK-062 is a potential best-in-class, highly potent super glutenase, and adds a second investigational therapy to Takeda's pipeline for the treatment of uncontrolled celiac disease.

SOURCE: Locust Walk Analytics, BioSciDB, Pitchbook, Yahoo Finance

Q1 2020 saw 11 new drug approvals, a decrease from the year-high 21 new drug approvals in Q4 2019

Approvals

Ayavakit To treat adults with unresectable or metastatic GIST Blueprint Medicine 01/20	Nexletol To treat adults with heterozygous familial hypercholesterolemia Esperion Therapeutics 02/20	Sarclisa To treat multiple myeloma Sanofi 03/20
Tepezza To treat thyroid eye disease Horizon Therapeutics Ireland 01/20	Vyepti To treat migraines Lundbeck 02/20	Isturisa To treat adults with Cushing's disease Novartis 03/20
Tazverik To treat epithelioid sarcoma Epizyme Inc. 01/20	Barhemsys To prevent nausea and vomiting after surgery Acacia Pharma Ltd. 02/20	Zeposia To treat relapsing forms of multiple sclerosis Celgene 03/20
Pizensy To treat chronic idiopathic constipation (CIC) in adults Braintree Labs 02/20	Nurtec ODT To treat migraine Biohaven Pharmaceuticals 02/20	

SOURCE: Locust Walk Analytics, FDA Website

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BIOPHARMA EUROPE

Biopharma Europe - private financings

Q1 2020 saw a continuation of a strong deal volume and size of private financings in Europe

- 29 private financings were completed in Q1, with a total raise of \$569M
- The largest financing was UK-based Immunocore's \$130M Series B round to develop its' T-cell receptor immuno-oncology platform and fund its' clinical-stage trials in chronic Hep B and PRAME. The raise included an international group of new investors and was led by the US PE firm General Atlantic, showing the continued interest of US investors in EU private biotech companies
- French vaccine developer, Valneva, raised \$85M in a private financing led by US investors Deerfield and OrbiMed
 - US investors are no longer shy of taking the lead in financings of strong EU biotech companies, which have the pipeline and the management team to go public at NASDAQ at a later time
 - Valneva plans on filing on Nasdaq later this year to co-fund its Lyme disease program – continuing the trend of EU-based companies accessing financing options in the US prior to going public
- The investment climate for EU biotech is continuing to be favorable as EU VCs can raise new funds
- Most notably in Q1, LSP raised a \$600M fund to invest in solely EU life science companies
 - This is the largest investment of its type in Europe – LSP will invest in 15-18 predominantly private EU life science companies – a testament to the growing confidence in innovation from the EU life science and biotech companies
 - Interestingly, strategic investors like American and Japanese pharma companies, BMS and Otsuka, were among the largest investors in the fund

Biopharma Europe – public financings

As in 2019, the strong EU private markets were offset by weaker public markets, continuing the trend from previous years

- There were no biopharma IPOs in Q1 2020 in Europe
- One secondary biopharma offering was completed in Q1 2020
 - Autolus Therapeutics, a UK-based clinical-stage biopharma company, raised \$80M a week before presenting positive data on one of its CAR-T candidates
- However, EU public markets are still open for higher valuation companies (ie. Denmark's Genmab 2019 IPO of \$582M) though there are few such companies in Europe
- Considering the impact of COVID-19 on the public market in Q1 2020, it's difficult to see that many companies will go public or raise money in a secondary offering in Europe in 2020
- Locust Walk expects that stronger biopharma companies in Europe will continue to access financing options with US investors, either in a private cross-over round or pursuing an IPO on NASDAQ later in 2020

Biopharma Europe – COVID-19 – programs and deal activities

While some EU biopharma transactions were disrupted in late Q1 2020 due to COVID-19, multiple collaborations for potential vaccines and treatments have emerged as companies realign the high unmet need that emerged in this pandemic

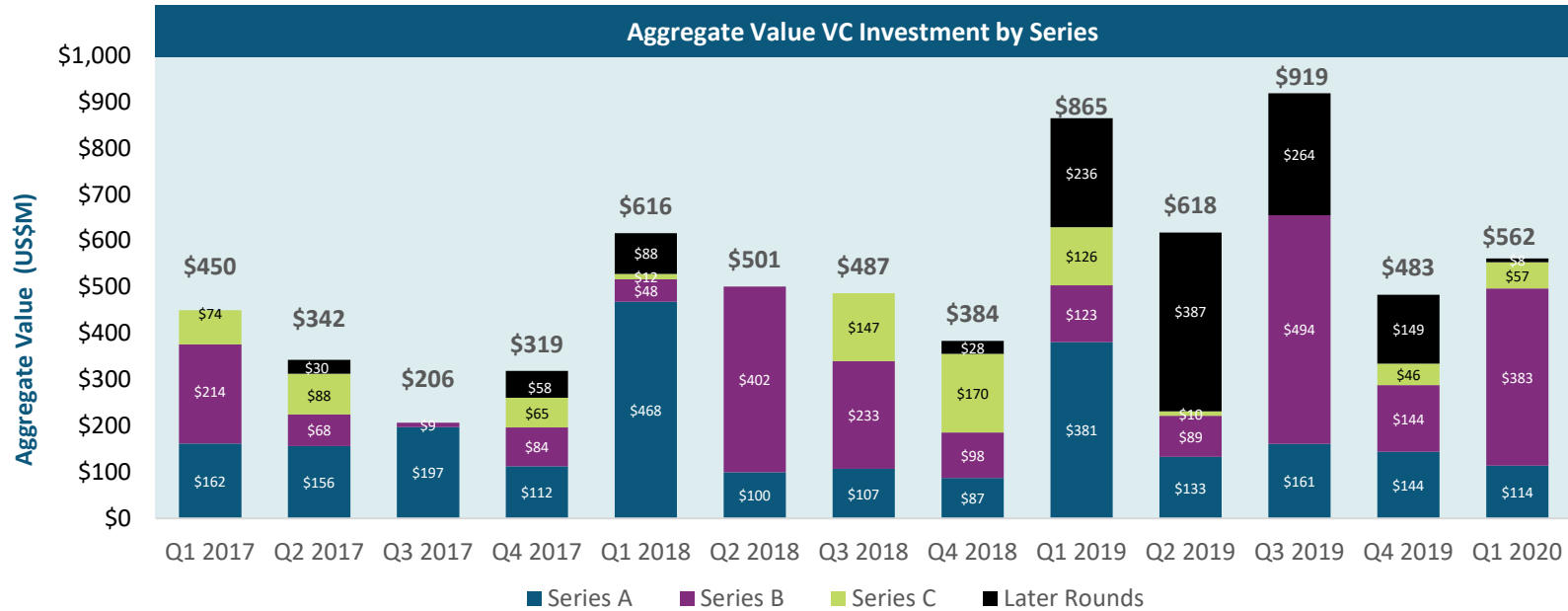
- BioNTech and Curevac from Germany are developing mRNA-based vaccines against COVID-19
 - CureVac is developing the vaccine in-house and will start clinical trials in June
 - BioNTech has entered two collaborations to develop their pre-clinical mRNA-based vaccine for COVID-19 (Project Lightspeed)
 - A global deal with Pfizer, except China, where rights are licensed to Fosun
- Sanofi entered two vaccine collaborations for the novel coronavirus:
 - 1) With the US government to develop a recombinant DNA vaccine
 - 2) Expanding its current infectious disease program with Translate Bio for an mRNA vaccine
- UK-based GSK struck a \$250M equity and collaboration deal with Vir Biotechnology to find “coronavirus solutions” using mAbs
- Swiss-based Roche is very active on the diagnostic and treatment front – Its SARS-CoV-2 test has been tagged with an FDA Emergency Use Authorization for testing for COVID-19 and Roche is ramping up its production to supply millions of tests per month. It is also increasing production for Actemra since China’s National Health Commission added its IL-6 inhibitor to its updated COVID-19 treatment guidelines in early March
 - There was anecdotal clinical evidence in China and Roche is working with the FDA to start a Phase 3 DB RCT to study Actemra in hospitalized patients with severe COVID-19 pneumonia – several clinical trials testing Actemra in COVID-19 are already underway in China

Biopharma Europe – COVID update and outlook

Predictions and insights on COVID-19 implications for EU biopharma

- The COVID-19 scare will reignite interest in infectious diseases, which has historically not been a corporate priority for biopharma
- While the EMA has been hesitant to approve any existing treatments as repositioned or repurposed COVID-19 treatments, there will be treatment options available on European or national level prior to approved treatments based on positive Phase 3 results from current or future pivotal clinical trials
- More companies will report clinical trial delays as about 30 pharma and biotech companies have announced delays in recent days. Across the industry, all ongoing trials, irrespective of indication or location, will be impacted, if not in terms of patient enrollment and treatment but also in data collection or biomarker analysis as many in vitro Dx labs are closed or working on COVID-19 tests
- Delay in critical clinical results will impact the financing plans of EU biotech companies and they will need to be careful in order to address delays and uncertainty in delivering results for future fundraisings
- Despite the delayed clinical trials and readouts and a decrease in transaction volume across all therapeutic areas, given the current strength of the EU private financing market with continued foreign investors and a strong clinical pipeline – Locust Walk expects EU biotech companies to bounce-back and recover from the current market downturn

Robust private financing market in the EU continues in Q1



	Q1 2017	Q2 2017	Q3 2017	Q4 2017	Q1 2018	Q2 2017	Q3 2018	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020
Deals (#)	18	18	10	15	17	17	17	11	32	16	42	33	29
A	11	11	9	7	11	8	9	4	22	9	22	20	14
B	6	3	1	5	4	9	7	3	3	3	8	5	9
C	1	3	-	2	1	-	1	3	1	1	-	2	3
D & Later	0	1	-	1	1	-	-	1	6	3	12	6	3
Total	18	18	10	15	17	17	17	11	32	16	42	33	29

SOURCE: Locust Walk Analytics, Yahoo Finance

Strong licensing and M&A transactions in Q1 2020

Key M&A Transactions

- Following their Q3 '19 IPO which raised \$150M, Germany's BioNTech acquired Boston based Neon Therapeutics for \$67M in an all-stock deal. The acquisition will add an immunotherapy pipeline to BioNTech's mRNA therapies, by leveraging Neon's platform to sequence patients' tumors to identify neoantigens leading to personalized neoantigen vaccines such as NT-001

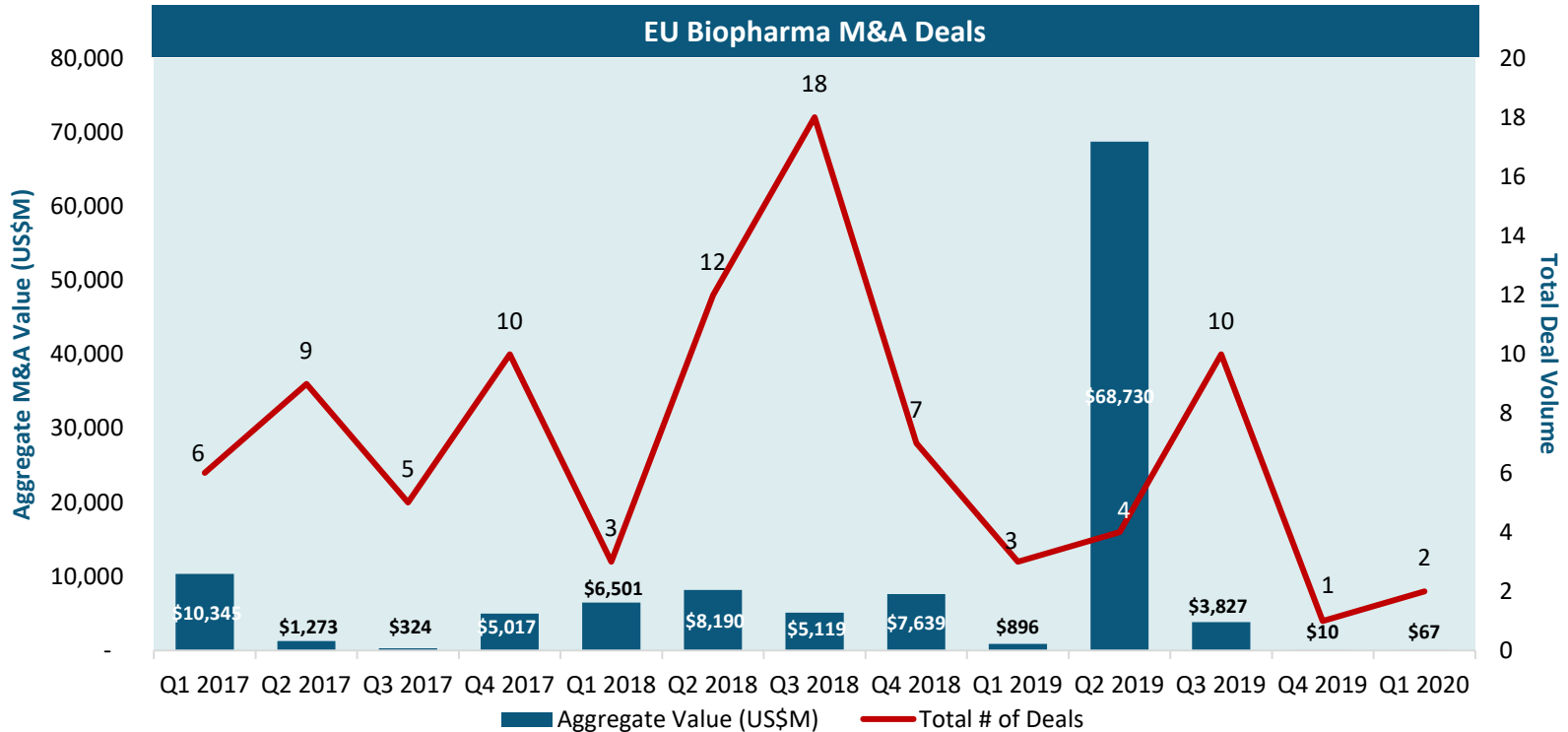
Key Licensing Transactions

- European licensing deals in Q1' 20 continue to emphasize pharma companies' interests in novel cell therapy platforms and other immuno-oncology approaches. Specifically, larger overall transactions values like Genentech/Bicycle (\$1.7B), AZ/Silence (\$4B) GSK/Immatics, and Astellas/Adaptimmune (\$900M) highlight the increasing trend in heavily back-ended, discovery/pre-clinical deals which give large pharmas innovative platforms and multiple shots to target cancer

Predictions and Insights

- While the EU has historically participated in fewer M&A transactions, in the past two quarters, there may be an opportunity for large European players equipped with healthy balance sheets to purchase smaller companies at a discount given many biotech's current distressed valuations
- On the heels of several large pharma companies announcing that many of their pivotal clinical trials are no longer enrolling patients, we suspect that companies may turn to leverage advanced platform technologies to discover new targets or approaches
- In order to prioritize cash conservation, Q2 and Q3 of 2020 will likely see a weakening of pharmaceutical business development and licensing transactions

Q1 '20 maintained the trend of both low M&A value and total deal value as seen in Q4 '19



M&A deals – Acquirer or target company are headquartered in Europe

SOURCE: Locust Walk Analytics, Yahoo Finance; NOTES: Q1 2020 Total Deal Volume includes the announced Galecto PharmAkea merger, but not in Aggregate M&A value as the deal financials were not disclosed

Q1 saw several high-value, early stage transactions centered around novel approaches to cancer

Licensee	Licensor	Completion Date	Indication	Total Deal Size (\$M)	Upfront (\$M)	Comments
Lilly	Sitryx	3/20	Autoimmune diseases	\$880	\$60	Lilly licensed exclusive worldwide rights to up to four preclinical autoimmune therapeutics, two of which were Sitryx's lead projects
AstraZeneca	Silence	3/20	Cardiovascular, Renal, Metabolic, Respiratory diseases	\$4,080	\$80	Collaboration leveraging Silence's siRNA platform to discover candidates to target tissues for cardiovascular, renal, metabolic, and respiratory diseases. AstraZeneca to lead clinical development and commercialization post phase 2
Pfizer	BioNTech	3/20	COVID-19	\$325	\$120	BioNTech and Pfizer will collaborate on R&D to develop BioNTech's mRNA vaccine for COVID-19. Pfizer gained the rights to develop and commercialize the vaccine ex-China
GSK	Immatics	2/20	Oncology	\$600	\$50	GSK and Immatics to collaborate on discovery and development of TCR therapeutics for multiple cancer indications. GSK gained the development and commercial rights for two initial programs with the option to license future candidates out of the collaboration
Roche/Genentech	Bicycle	2/20	Oncology	\$1,700	\$30	Genentech and Bicycle will collaborate on discovery and pre-clinical work of bicyclic peptides for immuno-oncology therapies. Genentech will be responsible for development and commercialization in the clinical stages
Astellas	Adaptimmune	1/20	Oncology	\$900	\$50	Adaptimmune will leverage their target identification platform to discover three targets and develop CAR-T and TCR t-cell approaches. Astellas is funding the work through phase 1, and both companies can develop/commercialize the assets further either in collaboration or separately
Incyte	MorphoSys	1/20	Oncology	\$2,000	\$900	Incyte licensed MorphoSys' anti-CD19 antibody tafasitamab, an asset which has near-term approval potential and has demonstrated CAR-T like efficacy in lymphoma patients

SOURCE: Locust Walk Analytics, Yahoo Finance

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BIOPHARMA ASIA

Japan overview—COVID-19 may have impacted the stock market but not the pace of deals

Fear of COVID-19 impacted the Japanese stock market, and the pharma and biotech sectors were similarly affected

- While the Nikkei 225 was down -18.5% in Q1 2020 (Jan 6 to Mar 31), major pharma companies listed on TSE1 only saw a -5.5% drop
- During the same interval, biotech stocks were down -23.3% on average, suggesting that investors are more wary towards higher risk stocks or companies with less stable earnings

Deal volume is off to a solid start in 2020

- Japanese companies reported 10 deals >\$10M in Q1 2020, doubling from 5 in Q1 2020
- Japanese biotechs have also been active in deal making, as SanBio and Carina Biosciences out-licensed China rights to their pre-clinical assets to Chinese companies
- Total deal size amounted \$4.6B in Q1 2020, which is lower than 2019 value, but this is due to the large \$6.9B deal between Daiichi Sankyo and AstraZeneca for Enhertu (DS-8201)

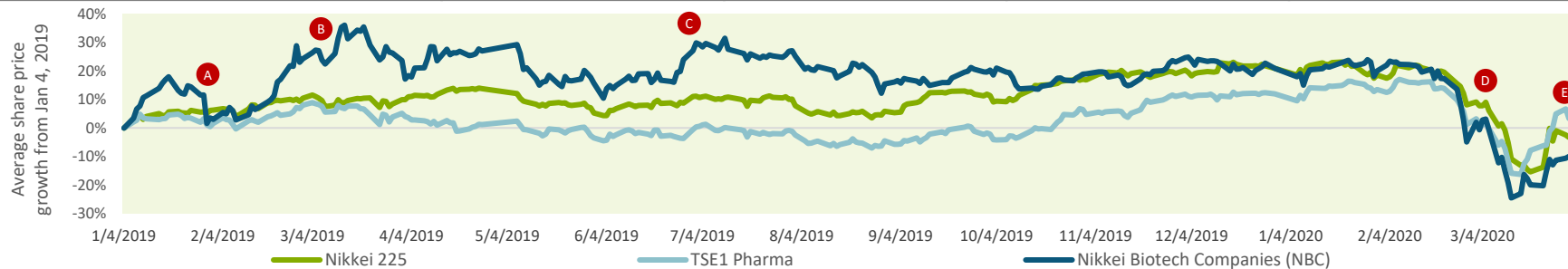
In the industry, developments in gene therapy continues to be an area of interest

- In March, MHLW approved Novartis' gene therapy agent, Zolgensma for spinal muscular atrophy, and all eyes are on the price it would command which may take awhile. Zolgensma will be the second gene therapy product to be priced after Collategene of AnGes
- Among Japanese pharma, Daiichi Sankyo entered a strategic partnership with Ultragenyx for gene therapy manufacturing technologies for \$225M total deal size, demonstrating active interest from top Japanese companies in novel modalities

Japanese pharma and biotech stocks were not immune to the impact of COVID-19

Q1 2020 and Historical performance of key market indices

Δ since Jan 2019	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020
ΔNikkei 225(%)	8.4%	8.8%	11.2%	18.6%	21.7%
ΔTSE1P (%)	3.9%	(3.6%)	(2.2%)	11.9%	3.4%
ΔNBC (%)	26.2%	23.9%	19.7%	21.0%	(10.0%)



Key Event

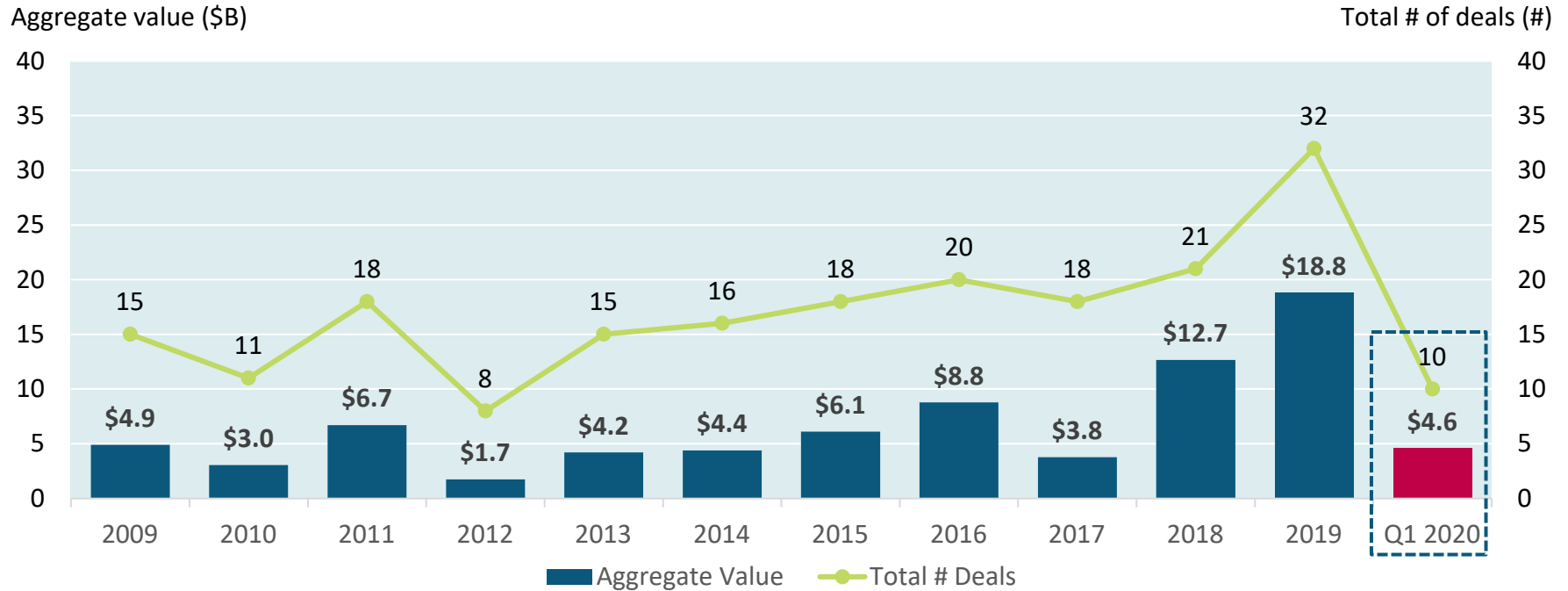
- A** Sharp market drop attributed to “SanBio Shock”: Announcement of SanBio’s failure in Ph2b trial of SB623 for chronic ischemic stroke led to a -8.1% drop in the MOTHERS Index
- B** AnGes saw an 87% increase in stock price after receiving conditional approval for its HGF gene therapy drug, and was expected to re-ignite interest in NBC stocks
- C** Carina Biosciences announced a deal with Gilead for immuno-oncology R&D collaboration on June 25, raising its share price >400% towards the end of Q3 2019
- D** Concern over COVID-19 outbreak caused the entire Japanese market to fall; pharma recovering at a faster pace than the market while investors are more cautious towards the riskier biotech sector
- E** Mar 31, 2020: Nikkei 225, TSE1P, and NBC closed at -18.5%, -5.5% and -23.3%, respectively, since the beginning of 2020

Note: Index growth based on change from Jan 4, 2019 price. MOTHERS (Market of the high-growth and emerging stocks) = the stock market at the Tokyo Stock Exchange for emerging businesses, including Sosei Group, Brightpath Bio, and Solasia.

SOURCE: Locust Walk Analytics, Yahoo Finance Japan

Total deal size in Q1 2020 amounted to \$4.4B, total deal value and volume is on pace with 2019

Biopharma licensing deals >\$10M (based on announced deal size)

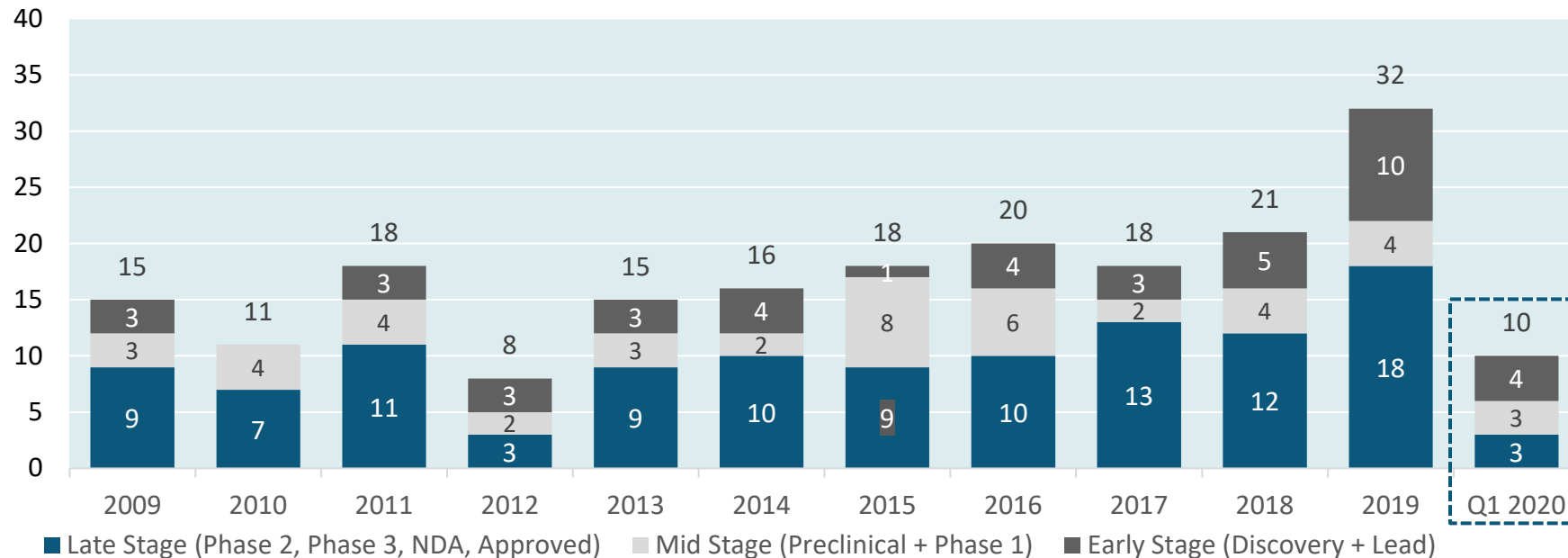


Note: Only including deals where deal size is disclosed.
SOURCE: Locust Walk Analytics, BioSciDB, Globaldata

Early stage programs account for the largest share of deal making in Q1 2020

Biopharma licensing deals >\$10M (based on announced deal size)

Number of deals (#)



Note: Only including deals where deal size is disclosed.

SOURCE: Locust Walk Analytics, BioSciDB, Globaldata

Key licensing deals involving Japanese companies or Japan-only regional rights in Q1 2020

Licensing deals in Q1 2020							
Licensor	Licensee	Date	Therapeutic Area	Stage	Upfront (\$M)	Deal Size (\$M)	Deal Background
Numab Therapeutics	Ono	2020/03	Oncology	Discovery	NA	\$267	Option to acquire exclusive worldwide rights to develop and commercialize an immuno-oncology drug candidate leveraging Numab's platform technology
SanBio	Ocumension	2020/03	Ophthalmology	Preclinical	\$6	\$77	Ocumension obtained China rights to SanBio's modified mesenchymal stem cells with initial focus in retinitis pigmentosa and dry AMD (SB623), and optic neuritis (MSC2 cells)
Carna Biosciences	BioNova Pharmaceuticals	2020/03	Hematology oncology	Preclinical	NA	\$205	BioNova to in license Greater China rights to AS-1763, a next-generation non-covalent BTK inhibitor, for the treatment of B-cell malignancies
CG Oncology	Kissei	2020/03	Oncology	Phase 2 completed	\$10	\$140	Licensed Japan and other Asian rights (ex-China) to CG0070 which is studied in combination with immune checkpoint inhibitors in bladder cancer and other solid tumors; Kissei also made \$30M equity investment
Evox Therapeutics	Takeda	2020/03	Rare disease	Preclinical	\$44	\$882	Multi-target collaboration involving Evox to develop up to 5 protein replacement and mRNA therapies, and Takeda to assume responsibility for clinical development
CytomX Therapeutics	Astellas	2020/03	Oncology	Discovery	\$80	\$1680	Collaboration to utilize CytomX's Novel Probody® Technology Platform for CD3 bispecific targets for treatment of cancer
Adaptimmune	Astellas	2020/01	Oncology	Discovery	\$50	\$897.5	Co-develop and Co-commercialize of up to 3 Stem-Cell Derived Allogeneic CAR-T and TCR T-Cell therapies to treat cancer
Dermavant Sciences	Japan Tobacco	2020/01	Autoimmune/ Dermatology	Phase 3	\$60	\$113	License Japan rights to tapinarof (therapeutic aryl hydrocarbon receptor modulating agent) for psoriasis and atopic dermatitis in Japan
aTyr Pharma	Kyorin	2020/01	Rare disease	Phase 2	\$8	\$175	License Japan rights to ATYR1923 for interstitial lung diseases
Charles River	Takeda	2020/01	Various therapeutic areas	Discovery	NA	\$170	Multi-year drug discovery collaboration to identify and develop preclinical candidates in Takeda's 4 core areas: oncology, gastroenterology, neuroscience, and rare disease

Note: Only including deals where deal size is disclosed.

SOURCE: Locust Walk Analytics, BioSciDB, Globaldata

China overview – Despite the COVID-19 threat, deal making continued to be active

In the Chinese stock market, the healthcare sector was impacted less severely by the COVID-19 threat compared to the SSE Composite Index

- SSE Composite Index¹ fell -10.9% while the top 16 pharma companies listed in mainland China² only dropped -0.7% in the period between Jan 2 and Mar 31, 2020
- Strongest performers during this period were Apelo Pharma (+50.3%) and Fosun (+21.5%)

3 biopharma companies went public in Q1, raising \$633M in total

- I-MAB, a late clinical-stage oncology/autoimmune biotech company, completed its IPO in NASDAQ and raised \$104M
- Bio-Thera Solutions which develops novel biologics and biosimilars for oncology/autoimmune disorders, raised \$241M in Shanghai STAR Board
- InnoCare, which focuses on oncology and autoimmune disorders, raised \$288M in Hong Kong, after pricing its offering at the top end of its marketing range
- Other companies, such as AkesoBio, Nanjing Legend Biotech has filed for IPO while Junshi Biosciences has been approved for a dual listing on Shanghai STAR Board and HKEX

Despite the COVID-19 threat and shutdowns in many major cities, in-licensing deal volume was up YoY in Q1 2020, with 22 in-licensing deals announced (vs. 19 deals in Q1 2019)

1. SSE Composite Index (Shanghai Stock Exchange Composite Exchange); 2. Top 16 companies listed in mainland China includes: Guangzhou Baiyunshan, China Meheco, Shanghai Pharma, Fosun Pharma, Hengrui, Kelun, Buchang, Huadong Medicine, North China Pharma, Jumpcan Pharma, Zhejiang NHU, Tasly, Yunnan Baiyao, CONBA Pharma, Taiji Group, Apelo Pharma
SOURCE: Locust Walk Analytics, Chinabio today, Yahoo finance.

Top mainland China-listed pharma stocks outperformed SSE Composite Index in Q1 2020

Historical performance of SSE Composite Index and selected top pharma stocks listed in mainland China

	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020
ΔSSE Composite Index %	25.4%	20.8%	17.8%	23.7%	11.6%
ΔSelected top Chinese Pharma listed in mainland China %	32.6%	19.3%	24.8%	31.6%	32.6%



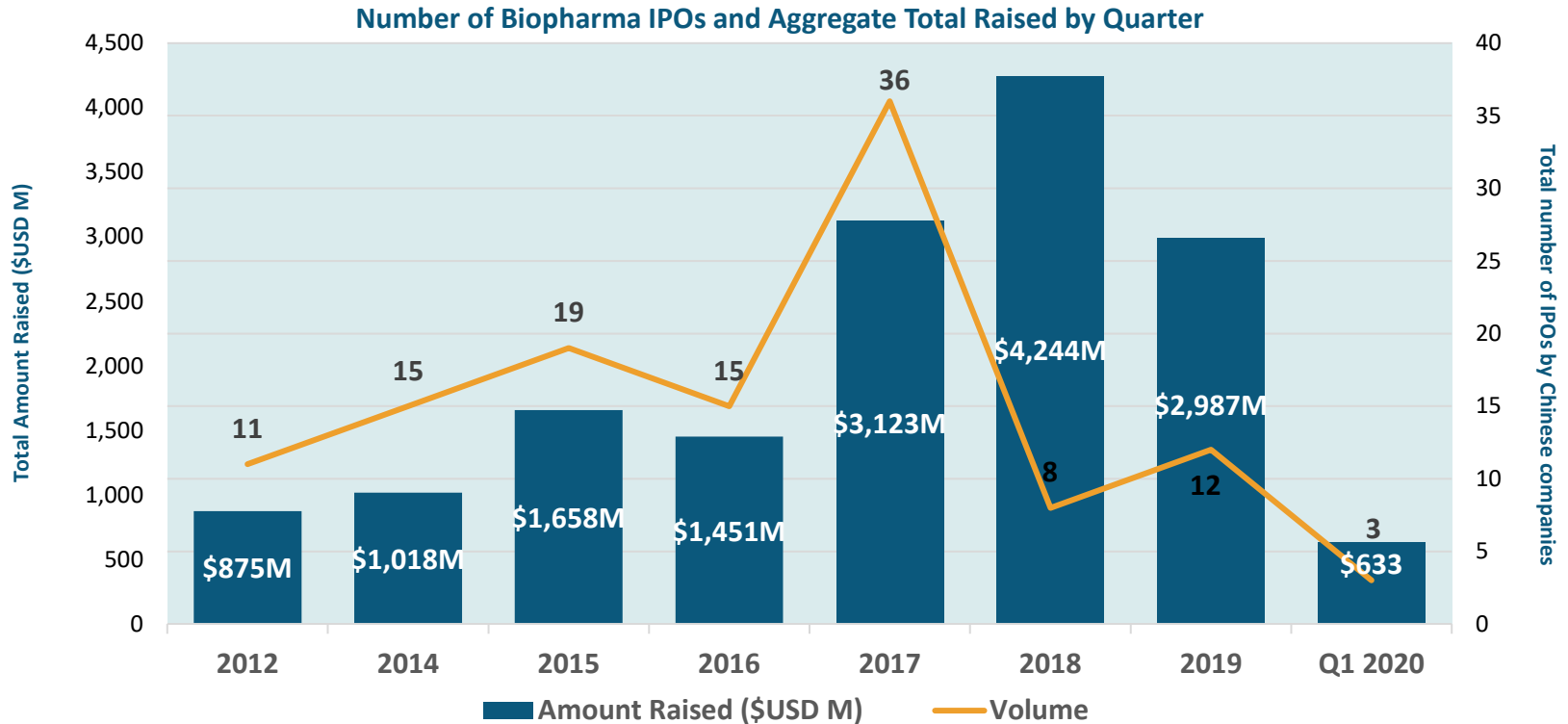
Key Event

- A** Chinese government approved QFII to invest up to \$300B (which was \$150B before) in China equity market which contributed to the strong performance in Q1 2019
- B** Chinese gov. to audit 77 pharmaceutical companies (including major companies e.g. Hengrui) after Kangmei Pharmaceutical was found to commit a +\$4B financial fraud
- C** Several major companies such as Hengrui, Baiyunshan and North China Pharma reported strong +20% operating profit growth YoY in their mid-year report, raising investor sentiment in the pharma sector
- D** While the overall market was negatively impacted by the Wuhan lockdown on Jan 23, pharma stocks quickly rebounded as expectations shifted to the health care sector
- E** SSE Composite Index closed at -10.9% while on average, top Chinese pharma companies only dropped by -0.7% since Jan 2, 2020

Note: Index growth based on change from Jan 2, 2019 price. QFII = Qualified Foreign Institutional Investor

SOURCE: Locust Walk Analytics, Yahoo Finance

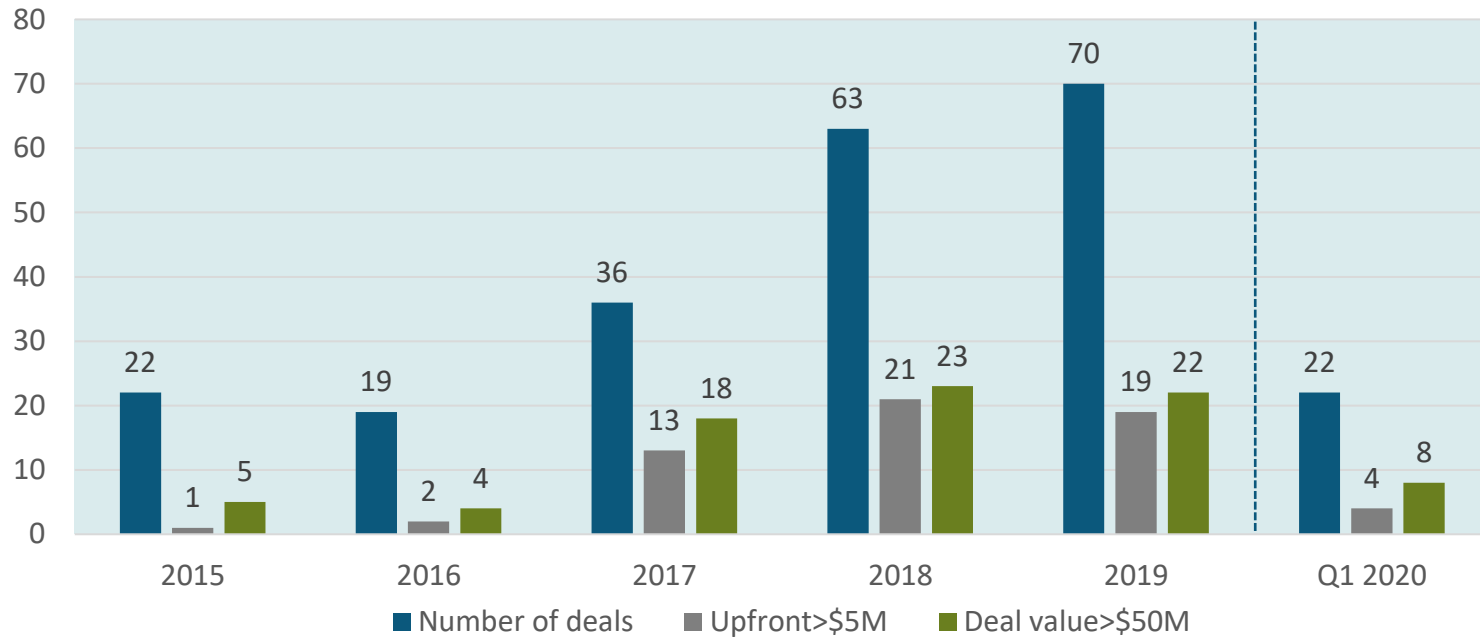
3 biopharmas went public in Q1 in NASDAQ, Shanghai STAR Board, and Hong Kong, respectively



SOURCE: Locust Walk Analytics, ChinaBio Today, BioSciDB, Globaldata

Despite the COVID-19 outbreak, in-licensing activity by Chinese biopharma is off to a brisk start

Trend of in-licensing deals in China (number of deals)



SOURCE: Locust Walk Analytics, ChinaBio Today, BioSciDB, Globaldata

Q1 2020 transactions highlighted by ophthalmology and infectious disease deals

While licensing for oncology continues to be the key focus in China, 2020 started off with notable activities in specialty areas such as ophthalmology and infectious diseases, including several assets targeting COVID-19

- Oncology deals include: SciClone Pharma to pay \$4M upfront for Tarveda Therapeutics' PEN-866, with total deal value up to \$79M
- Ocumension Therapeutics, an ophthalmology specialty company, in-licensed DEXYCU from Eyepoint Pharmaceuticals, and obtained Chinese rights to 2 pre-clinical stage cell therapy programs from SanBio to expand its pipeline
- Deals for COVID-19 targeting programs include:
 - Fosun's \$50M equity investment and up to \$85M milestone payment for China rights to BNT162, a pre-clinical mRNA vaccine
 - Beijing Advaccine collaborating with Inovio Pharmaceuticals to develop INO-4800 in China
 - Beijing Zhonghua Investment Fund Management and Sinotek-Advocates International Industry Development, in collaboration, in-licensed an li-Key peptide vaccine vaccine from Generex Biotechnology

Notable financing activities in the healthcare sector in Q1 2020

- Ping An acquired a 2% stake of Japan's Shionogi for \$311M as a strategic partnership to enter the pharmaceutical sector. The two companies are slated to form a JV that plans to focus on data driven drug discovery for the central nervous system
- Abbisko Therapeutics raised \$70M in a series C financing led by Singapore's Temasek
- Harbour BioMed secured \$75M in a Series B+ round to advance its clinical-stage biologics for cancer and immunological diseases

SOURCE: Locust Walk Analytics, ChinaBio Today, BioSciDB, Globaldata

Key China in-licensing deals in Q1 2020

Licensor	Licensee	Asset	Area/Indication	Date	Stage	Upfront (\$M)	Total deal (\$M)
Flexion Therapeutics	HK Tainuo	ZILRETTA®	Orthopedics (knee OA)	2020/03	Approved	\$10	\$42.5
SanBio	Ocumension	SB623; MSC2 cells	Ophthalmology (dry AMD; optic neuritis)	2020/03	Preclinical	\$6 ¹	\$77
Tarveda Therapeutics	SciClone Pharma	PEN866	Oncology (various solid tumors)	2020/03	Phase 1/2a	\$4	\$79
BioNTech	Fosun Pharma	BNT162	Infectious disease (COVID-19)	2020/03	Preclinical	\$0	\$135 ²
BioNova Pharmaceuticals	Carna Biosciences	AS-1763	B-cell malignancies	2020/03	Preclinical	NA	\$205
Clearside Biomedical	Arctic Vision	XIPERE™	Ophthalmology (macular edema associated with uveitis)	2020/03	NDA	\$4	\$35.5
EyePoint Pharmaceuticals	Ocumension	DEXYCU®	Ophthalmology (post-operative inflammation following ocular surgery)	2020/01	Approved	\$2	\$14
EUSA Pharma	BeiGene	SYLVANT®; QARZIBA®	Autoimmune (idiopathic multicentric Castleman's disease); Oncology (neuroblastoma)	2020/01	Approved	NA	\$160+ nondisclosed upfront
Targovax	IOVaxis Therapeutics	TG01; TG02	Oncology (Mutant RAS solid tumors)	2020/01	Phase 1/2; Phase 1b	\$3	\$103
Shield Therapeutics	Beijing Aosaikang	Feraccru®/Accrufer®	Hematology (iron deficiency with or without anemia)	2020/01	Approved	\$11.4	\$62.8
Leap Therapeutics	BeiGene	DKN-01	Oncology (various solid tumors)	2020/01	Phase 2	\$3	\$138

1. Initial investment for preclinical and manufacturing development; 2. Including \$50M equity investment and \$85M milestones.

Note: Only including deals where deal size is disclosed

SOURCE: Locust Walk Analytics, Globaldata, ChinaBio Today

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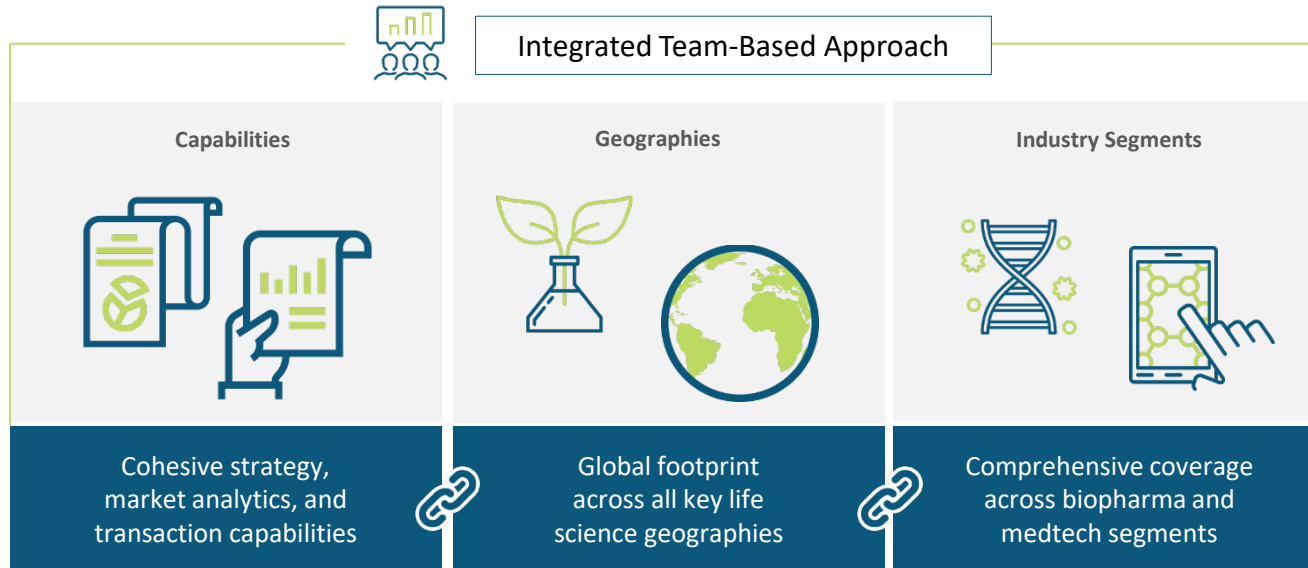
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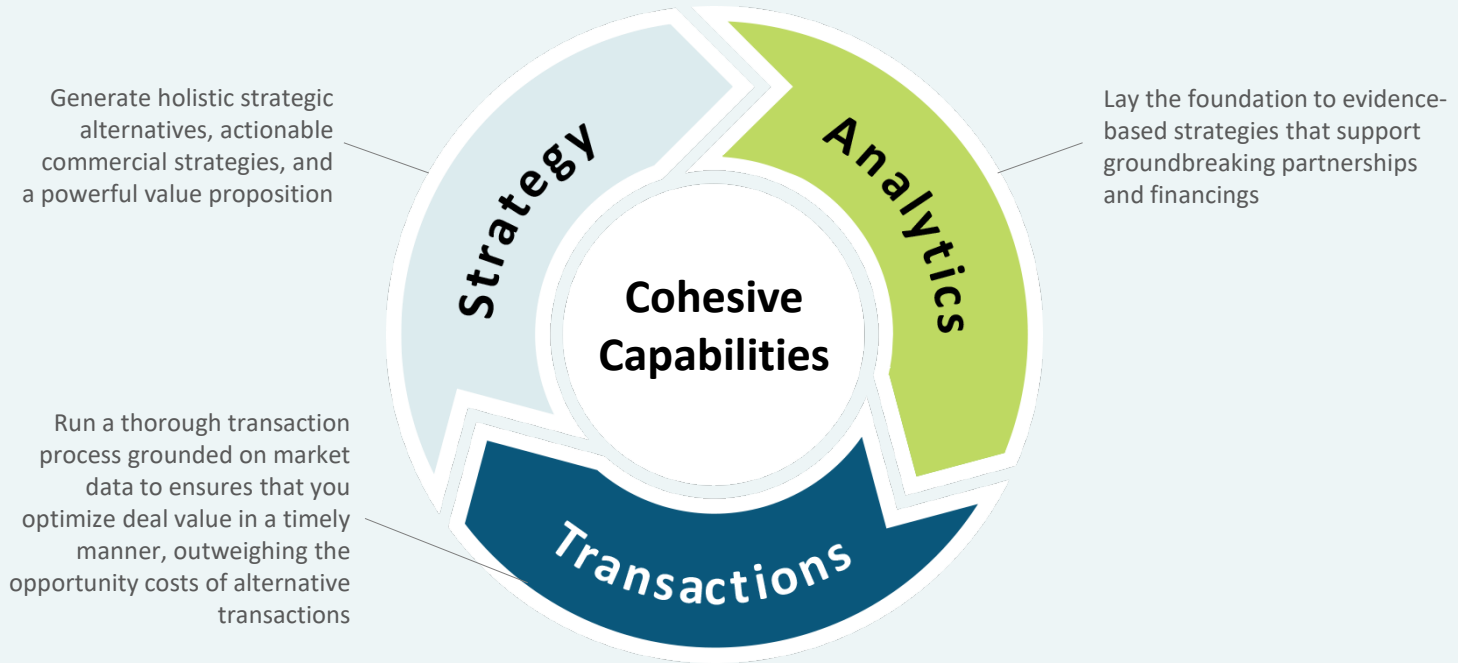
ABOUT LOCUST WALK

Locust Walk is a global life science transaction firm

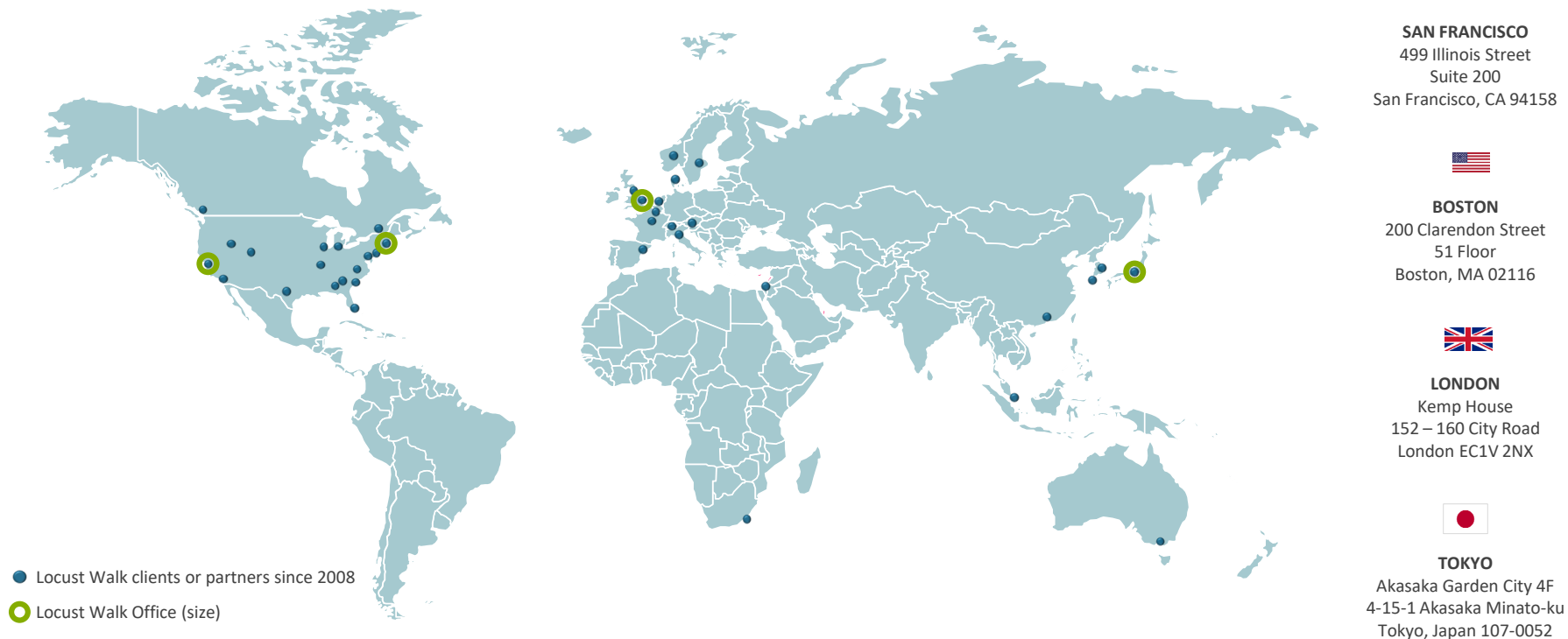
Our integrated team-based approach across capabilities, geographies, and industry segments delivers the right products, the right partners, and the most attractive sources of capital to get the right deals done for biopharma and medtech companies.



Locust Walk's cohesive combination of strategy, market analytics, and transaction capabilities means that you have one integrated team focused on your entire deal process



Locust Walk maintains a global footprint across all key life science geographies



Locust Walk is the only firm to integrate strategy, market analytics, and transaction capabilities on a global scale, from both biopharma and medtech perspectives

Capabilities

Cohesive strategy, market analytics, and transaction capabilities

- One integrated team focused on your company's entire transactional life-cycle.
- Track record of addressing key strategic questions for companies at the corporate, portfolio, and asset levels; we have the experience to execute all deal types, from licensing to M&A to IPO advisory to PIPEs to private raises.
- Foundational, evidence-based market analytics capabilities that support groundbreaking deals and partnerships.
- Focused strategic capabilities that generate novel alternatives, actionable strategies, and powerful value propositions.

Geographies

Global footprint across all key life sciences geographies

- On-the-ground presence in all major life sciences markets across the United States, Europe, and Asia.
- Offices are staffed with local teams, who also have experience working around the globe.
- Maintaining a global presence enables us to tap into a combination of deal sources regardless of where they reside, so that your deal isn't limited by geographical borders.

Industry Segments

Comprehensive coverage across biopharma and medtech segments

- Strong understanding of the nuanced differences (and similarities) between biopharma and medtech: value drivers, risk-profiles, time-horizons, transaction preferences and precedents, and deal structures

BioPharma



Our BioPharma team has completed over 40 transactions at Locust Walk across a range of therapeutic areas, modalities, and all stages of development and marketed products.

MedTech



Our Medtech team brings deep, segment-specific experience from over 25 transactions across various therapeutic areas and care settings for medical devices, diagnostics, tools, and digital health companies.

Convergence

Our strong understanding of both the biopharma and medtech segments enables our team to identify and maximize the convergence opportunities that many innovative life science companies have top-of-mind.

Locust Walk's leadership team includes successful life science operating, investing, and transaction executives



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CEO & Co-Founder | Boston

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- Healthcare Banking: **UBS**
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