



**SMALL CAP BIOTECH
QUARTERLY SHAREHOLDER ANALYSIS**

FEBRUARY 2016



Holder Overview

SmallCap Biotech Company

Shareholder Overview



Top Institutional Holders							
Institution	Style	City	Recent Pos.	% Inst Shs	% Shs. Out.	Δ Change	Last Pos.
1 Fidelity Management & Research Company	Growth	Boston	2,641,292	16.5	15.0	230,271	2,411,021
2 Omega Fund Management (U.S.), Inc.	Alternative	Boston	2,138,872	13.3	12.1	0	2,138,872
3 HBM Partners AG	Growth	Zug	1,747,680	10.9	9.9	0	1,747,680
4 The Baupost Group, LLC	Alternative	Boston	1,544,498	9.6	8.8	0	1,544,498
5 Abingworth, LLP	Alternative	London	1,301,413	8.1	7.4	0	1,301,413
6 Tekla Capital Management, LLC	Aggressive Growth	Boston	762,581	4.8	4.3	0	762,581
7 Aisling Capital, LLC	Alternative	New York	682,680	4.3	3.9	0	682,680
8 Broadfin Capital, LLC	Alternative	New York	530,283	3.3	3.0	0	530,283
9 Interwest Partners	Venture Capital	Menlo Park	512,367	3.2	2.9	0	512,367
10 BlackRock Fund Advisors	Index	San Francisco	462,719	2.9	2.6	21,306	441,413
11 Brown Brothers Harriman & Company (Asset M	Value	New York	367,902	2.3	2.1	0	367,902
12 Great Point Partners, LLC	Alternative	Greenwich	355,459	2.2	2.0	(98,419)	453,878
13 The Vanguard Group, Inc.	Index	Malvern	351,266	2.2	2.0	16,942	334,324
14 Granahan Investment Management, Inc.	Aggressive Growth	Waltham	329,019	2.1	1.9	(11,269)	340,288
15 General American Investors Co., Inc.	Growth	New York	277,076	1.7	1.6	0	277,076
16 J.P. Morgan Asset Management (UK), LTD	Growth	London	216,902	1.4	1.2	0	216,902
17 Roumell Asset Management, LLC	Deep Value	Chevy Chase	199,555	1.2	1.1	(2,290)	201,845
18 State Street Global Advisors (SSgA)	Index	Boston	145,605	0.9	0.8	6,440	139,165
19 Lombard Odier Asset Management (USA) Corp	Specialty	New York	141,367	0.9	0.8	5,657	135,710
20 Northern Trust Investments, Inc.	Index	Chicago	133,820	0.8	0.8	8,898	124,922
21 New Enterprise Associates, Inc.	Specialty	Menlo Park	125,004	0.8	0.7	0	125,004
22 Sabby Management, LLC	Alternative	Upper Saddle River	122,613	0.8	0.7	5,567	117,046
23 Omega Advisors, Inc.	Alternative	New York	118,600	0.7	0.7	(23,500)	142,100
24 Prosgit Management, L.P.	Alternative	Dallas	89,282	0.6	0.5	0	89,282
25 Renaissance Technologies, LLC	Alternative	New York	83,813	0.5	0.5	(15,000)	98,813
Top 25 Holders			15,381,668	95.8	87.4	144,603	15,237,065

Most Recent Holdings

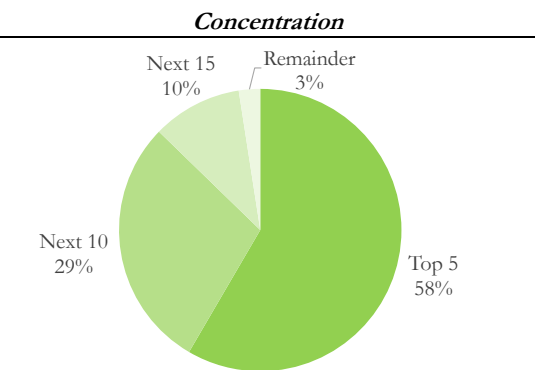
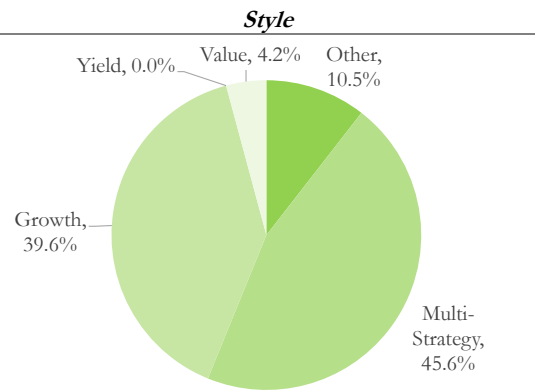
Source: Ipreo

Holder Overview

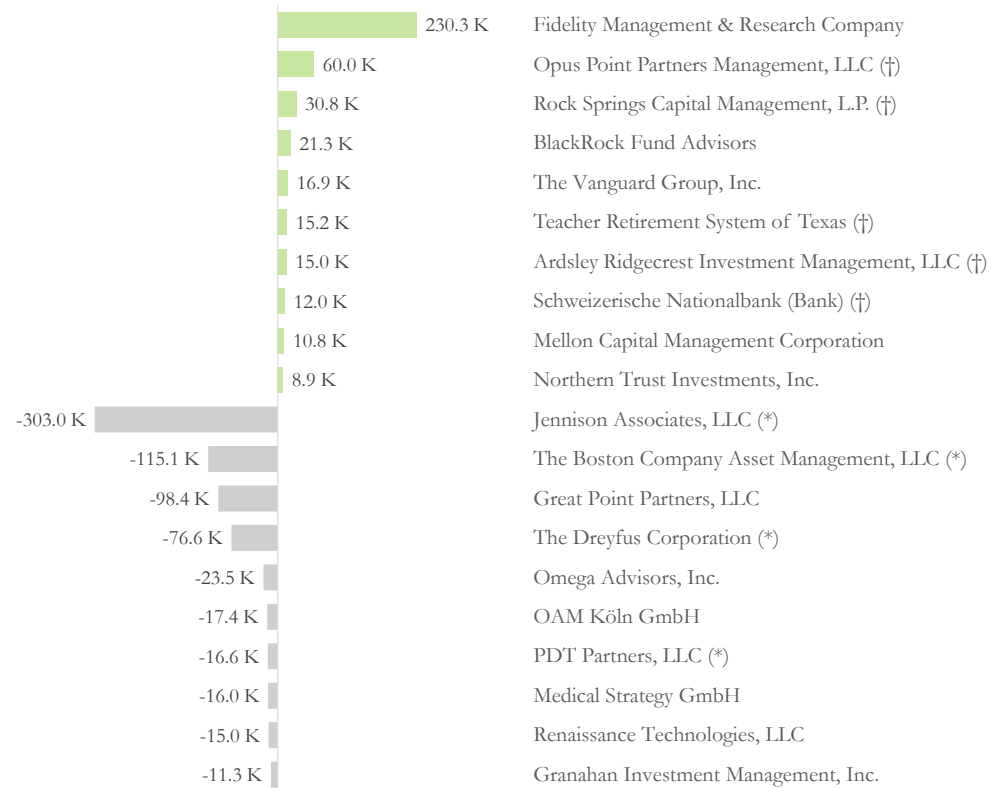
SmallCap Biotech Company
Shareholder Overview



Institutional Style and Concentration



Top Institutional Buyers / (Sellers)



† Denotes investor that initiated position
* Denotes investor that completely exited position
Most Recent Holdings
Source: Ipreo

Historical Ownership



SmallCap Biotech Company Historical Ownership Analysis



Historical Ownership

Institution	Shares Held (000s)		Shares Held (000s)							
	Current	Location	Q4 '15	Q3 '15	Q2 '15	Q1 '15	Q4 '14	Q3 '14	Q2 '14	Q1 '14
1 Fidelity Management & Research Compar	2,641	Boston	2,641	2,411	2,411	1,821	1,735			
2 Omega Fund Management (U.S.), Inc.	2,139	Boston	2,139	2,139	2,139	2,139	2,139			
3 HBM Partners AG	1,748	Zug	1,748	1,748	1,748	1,768	1,768			
4 The Baupost Group, LLC	1,544	Boston	1,544	1,544	1,544	1,735	1,735			
5 Abingworth, LLP	1,301	London	1,301	1,301	1,301	1,301	1,301			
6 Tekla Capital Management, LLC	763	Boston	763	763	691					
7 Aisling Capital, LLC	683	New York	683	683	683	683	683			
8 Broadfin Capital, LLC	530	New York	530	530	530	260	260			
9 Interwest Partners	512	Menlo Park	512	512	512	512	512	165	165	165
10 BlackRock Fund Advisors	463	San Francisco	463	441	408	4	12	12	12	12
11 Brown Brothers Harriman & Company (A	368	New York	368	368	368					
12 Great Point Partners, LLC	355	Greenwich	355	454	415					
13 The Vanguard Group, Inc.	351	Malvern	351	334	310	226	219	34	27	25
14 Granahan Investment Management, Inc.	329	Waltham	329	340	141	75				
15 General American Investors Co., Inc.	277	New York	277	277	277	67				
16 J.P. Morgan Asset Management (UK), LT	217	London	217	217	217	217				
17 Roumell Asset Management, LLC	200	Chevy Chase	200	202	208	212	231	187	162	169
18 State Street Global Advisors (SSgA)	146	Boston	146	139	106					
19 Lombard Odier Asset Management (USA)	141	New York	141	136	140					
20 Northern Trust Investments, Inc.	134	Chicago	134	125	19			2	2	2
21 New Enterprise Associates, Inc.	125	Menlo Park	125	125	174	174	174	174	174	174
22 Sabby Management, LLC	123	Upper Saddle River	123	117	56					
23 Omega Advisors, Inc.	119	New York	119	142	140					
24 Prosgnit Management, L.P.	89	Dallas	89	89	89	89	89	89		
25 Renaissance Technologies, LLC	84	New York	84	99	104	39	23	24	19	7
26 Turner Investments, L.P.	61	Berwyn	61	53						
27 Opus Point Partners Management, LLC	60	New York	60							
28 TIAA-CREF Investment Management	58	New York	58	66	58					
29 Geode Capital Management, LLC	49	Boston	49	48	45	11	10	3	3	4
30 BlackRock Advisors, LLC	46	New York	46	48	54	1	1	2	1	1
31 USAA Asset Management Company	43	San Antonio	43	43	11					
32 Rock Springs Capital Management, L.P.	31	Baltimore	31							
33 BNY Asset Management	28	New York	28	36	29	6	5	1	1	1
34 OAM Köln GmbH	24	Cologne	24	41	41	40	38			
35 California State Teachers Retirement Syst	23	West Sacramento	23	22	22					
36 Medical Strategy GmbH	22	Neussäss	22	38	38	38	36			
37 Charles Schwab Investment Management,	17	San Francisco	17	17	17					
38 Virtus ETF Advisers, LLC	16	New York	16							
39 Teacher Retirement System of Texas	15	Austin	15							
40 Ardsley Ridgecrest Investment Management	15	Stamford	15							

Green and red cells indicate an increase or decrease of ownership from prior quarter, respectively.

Blank cells indicate positions less than 500 shares.

Peer Holding Comparison



SmallCap Biotech Company

Crossholdings Analysis Shows Ample Institutional Investor Penetration Opportunities

Institutional Crossholders in Company and Peer Groups

Institution	Style	Equity AUM	City	State	Co		Total Peer Holdings		
					Position (\$M)	Δ Position (\$M)	Position (\$M)	Δ Position (\$M)	# Peers Held
1 Fidelity Management & Research Company	Growth	\$803,471 M	Boston	MA	50.1	4.4	210.4	147.7	3 / 4
2 Quaker BioVentures, Inc.	Venture Capital	\$280 M		PA			121.2	0.0	1 / 4
3 Intersouth Partners	Venture Capital	\$166 M	Durham	NC			103.2	0.0	1 / 4
4 Wellington Management Company, LLP	Value	\$423,060 M	Boston	MA			73.2	4.1	2 / 4
5 Wasatch Advisors, Inc.	Aggressive Growth	\$13,085 M	Salt Lake City	UT			69.3	13.2	1 / 4
6 Aisling Capital, LLC	Alternative	\$575 M	New York	NY	13.0	0.0	63.5	0.0	1 / 4
7 Mediphase Management Company, LLC	Venture Capital	\$60 M	Newton	MA			59.6	(6.1)	1 / 4
8 TimesSquare Capital Management, LLC	Aggressive Growth	\$15,936 M	New York	NY			56.6	23.2	1 / 4
9 Excel Medical Ventures, LLC	Venture Capital	\$54 M	Boston	MA			53.8	(2.2)	1 / 4
10 Goldman Sachs Asset Management, L.P. (U.	GARP	\$108,442 M	New York	NY			47.6	28.5	2 / 4
11 Palo Alto Investors, LLC	Alternative	\$1,797 M	Palo Alto	CA			36.6	36.6	1 / 4
12 FIAM LLC	Growth	\$23,252 M	Smithfield	RI			27.8	11.6	2 / 4
13 Granahan Investment Management, Inc.	Aggressive Growth	\$2,903 M	Waltham	MA	6.2	(0.2)	26.1	2.9	2 / 4
14 Ontario Teachers Pension Plan Board	Value	\$15,985 M	Toronto				26.0	0.0	1 / 4
15 CPP Investment Board	Growth	\$49,628 M	Toronto				19.8	19.8	1 / 4
16 Great Point Partners, LLC	Alternative	\$230 M	Greenwich	CT	6.7	(1.9)	19.5	8.2	1 / 4
17 Highland Capital Healthcare Advisors, L.P.	Growth	\$558 M	Dallas				16.5	8.7	2 / 4
18 Voya Investment Management Company, L	Growth	\$44,852 M	New York	NY			15.9	3.3	2 / 4
19 General American Investors Co., Inc.	Growth	\$1,187 M	New York	NY	5.3	0.0	15.4	10.1	1 / 4
20 CMEA Ventures	Venture Capital	\$99 M	San Francisco				15.3	0.0	1 / 4
21 Invesco Advisers, Inc.	Growth	\$179,638 M	Atlanta	GA			13.1	0.0	1 / 4
22 Levin Capital Strategies, L.P.	Alternative	\$5,685 M	New York	NY			12.7	0.3	1 / 4
23 OrbiMed Advisors, LLC	Alternative	\$12,248 M	New York				12.7	0.0	1 / 4
24 Longwood Capital Partners, LLC	Alternative	\$188 M	Portola Valley	CA			11.8	7.9	2 / 4
25 Domain Associates, LLC	Alternative	\$487 M	Princeton	NJ			11.6	0.0	1 / 4
26 Omega Fund Management (U.S.), Inc.	Alternative	\$182 M	Boston	MA	40.6	0.0	11.0	0.0	1 / 4
27 Venrock Associates	Venture Capital	\$410 M	Palo Alto	CA			10.0	0.0	1 / 4
28 Millennium Management, LLC	Alternative	\$43,781 M	New York	NY			9.6	(14.9)	3 / 4
29 Peregrine Capital Management, Inc.	Growth	\$3,211 M	Minneapolis	MN			9.2	1.3	1 / 4
30 Opaley Management, Inc.	Alternative	\$261 M	Cambridge	MA			9.1	(2.1)	3 / 4
31 TIAA-CREF Investment Management	Growth	\$255,050 M	New York	NY	1.1	(0.2)	8.7	(0.2)	2 / 4
32 J.P. Morgan Investment Management, Inc.	Growth	\$246,025 M	New York	NY			8.2	0.0	1 / 4
33 Arch Venture Partners	Venture Capital	\$782 M	Chicago	IL			8.1	0.0	1 / 4
34 EcoR1 Capital, LLC	Alternative	\$267 M	San Francisco	CA			8.1	0.0	1 / 4
35 Versant Venture Management, LLC	Venture Capital	\$353 M	San Francisco	CA			7.4	0.0	1 / 4

Peers Include: Tetrphase Pharmaceuticals, Inc. (TTPH), Cempra, Inc. (CEMP), Achaogen, Inc. (AKAO), Nabriva Therapeutics AG ADR (NBRV)

Peer Holding Comparison

SmallCap Biotech Company

Crossholdings Analysis Shows Ample Institutional Investor Penetration Opportunities



Institutional Crossholders in Company and Peer Groups

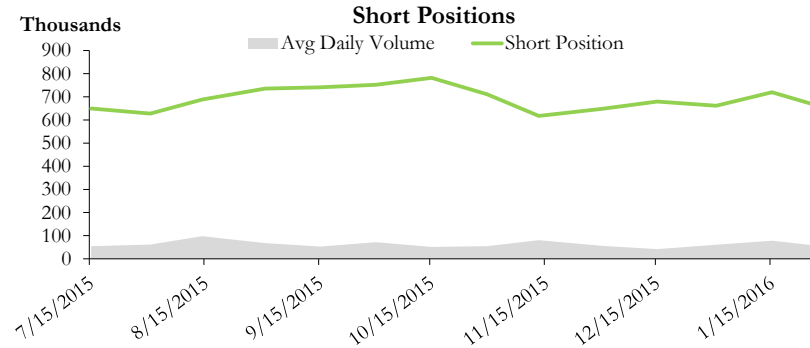
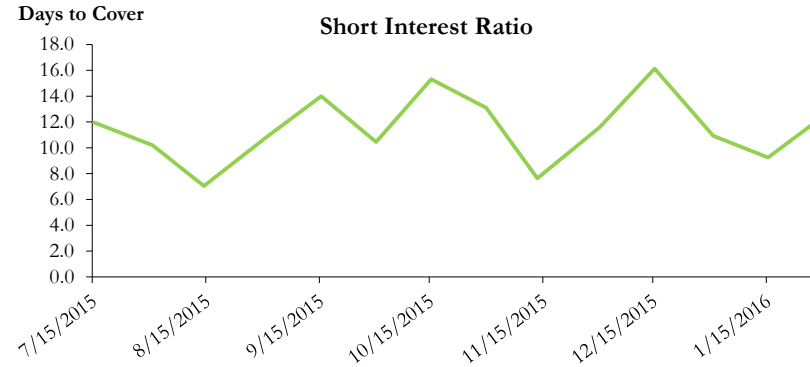
Institution	Co	Total Peer Holdings			Current Position (\$M)			
	Position (\$M)	Position (\$M)	# Peers Held	TTPH	CEMP	AKAO	NBRV	
1 Fidelity Management & Research Company	50.1	210.4	3 / 4	21.5	175.3	13.6	0.0	
2 Quaker BioVentures, Inc.		121.2	1 / 4	0.0	121.2	0.0	0.0	
3 Intersouth Partners		103.2	1 / 4	0.0	103.2	0.0	0.0	
4 Wellington Management Company, LLP		73.2	2 / 4	50.3	0.0	0.0	22.9	
5 Wasatch Advisors, Inc.		69.3	1 / 4	0.0	69.3	0.0	0.0	
6 Aisling Capital, LLC	13.0	63.5	1 / 4	0.0	63.5	0.0	0.0	
7 Mediphase Management Company, LLC		59.6	1 / 4	59.6	0.0	0.0	0.0	
8 TimesSquare Capital Management, LLC		56.6	1 / 4	0.0	56.6	0.0	0.0	
9 Excel Medical Ventures, LLC		53.8	1 / 4	53.8	0.0	0.0	0.0	
10 Goldman Sachs Asset Management, L.P. (U.S.)		47.6	2 / 4	0.2	47.4	0.0	0.0	
11 Palo Alto Investors, LLC		36.6	1 / 4	0.0	36.6	0.0	0.0	
12 FIAM LLC		27.8	2 / 4	0.0	27.7	0.1	0.0	
13 Granahan Investment Management, Inc.	6.2	26.1	2 / 4	5.7	20.4	0.0	0.0	
14 Ontario Teachers Pension Plan Board		26.0	1 / 4	0.0	26.0	0.0	0.0	
15 CPP Investment Board		19.8	1 / 4	19.8	0.0	0.0	0.0	
16 Great Point Partners, LLC	6.7	19.5	1 / 4	19.5	0.0	0.0	0.0	
17 Highland Capital Healthcare Advisors, L.P.		16.5	2 / 4	0.0	13.8	0.0	2.7	
18 Voya Investment Management Company, LLC		15.9	2 / 4	0.2	15.7	0.0	0.0	
19 General American Investors Co., Inc.	5.3	15.4	1 / 4	0.0	15.4	0.0	0.0	
20 CMEA Ventures		15.3	1 / 4	15.3	0.0	0.0	0.0	
21 Invesco Advisers, Inc.		13.1	1 / 4	0.0	13.1	0.0	0.0	
22 Levin Capital Strategies, L.P.		12.7	1 / 4	0.0	12.7	0.0	0.0	
23 OrbiMed Advisors, LLC		12.7	1 / 4	0.0	0.0	0.0	12.7	
24 Longwood Capital Partners, LLC		11.8	2 / 4	0.0	7.8	0.0	4.0	
25 Domain Associates, LLC		11.6	1 / 4	0.0	0.0	11.6	0.0	
26 Omega Fund Management (U.S.), Inc.	40.6	11.0	1 / 4	0.0	0.0	0.0	11.0	
27 Venrock Associates		10.0	1 / 4	0.0	0.0	10.0	0.0	
28 Millennium Management, LLC		9.6	3 / 4	7.9	0.0	1.5	0.2	
29 Peregrine Capital Management, Inc.		9.2	1 / 4	0.0	9.2	0.0	0.0	
30 Opaley Management, Inc.		9.1	3 / 4	0.0	6.2	0.7	2.1	
31 TIAA-CREF Investment Management	1.1	8.7	2 / 4	2.8	5.8	0.0	0.0	
32 J.P. Morgan Investment Management, Inc.		8.2	1 / 4	0.0	8.2	0.0	0.0	
33 Arch Venture Partners		8.1	1 / 4	0.0	0.0	8.1	0.0	
34 EcoR1 Capital, LLC		8.1	1 / 4	0.0	0.0	0.0	8.1	
35 Versant Venture Management, LLC		7.4	1 / 4	0.0	0.0	7.4	0.0	

Peers Include: Tetrphase Pharmaceuticals, Inc. (TTPH), Cempra, Inc. (CEMP), Achaogen, Inc. (AKAO), Nabriva Therapeutics AG ADR (NBRV)

Short Interest

Co US Equity

Date	Short Position	Avg Daily Volume	SI Ratio	SI % Float
1/29/2016	654,324	53,589	12.21	5.59
1/15/2016	719,828	77,794	9.25	6.15
12/31/2015	661,071	60,499	10.93	5.65
12/15/2015	679,820	42,141	16.13	5.81
11/30/2015	647,702	55,962	11.57	5.54
11/13/2015	617,438	80,785	7.64	5.28
10/30/2015	711,126	54,239	13.11	6.10
10/15/2015	781,920	51,079	15.31	6.71
9/30/2015	751,696	71,940	10.45	6.45
9/15/2015	741,074	52,930	14.00	6.36
8/31/2015	735,583	67,996	10.82	5.40
8/14/2015	687,896	97,685	7.04	5.05
7/31/2015	627,168	61,475	10.20	4.61
7/15/2015	649,526	54,322	11.96	4.77



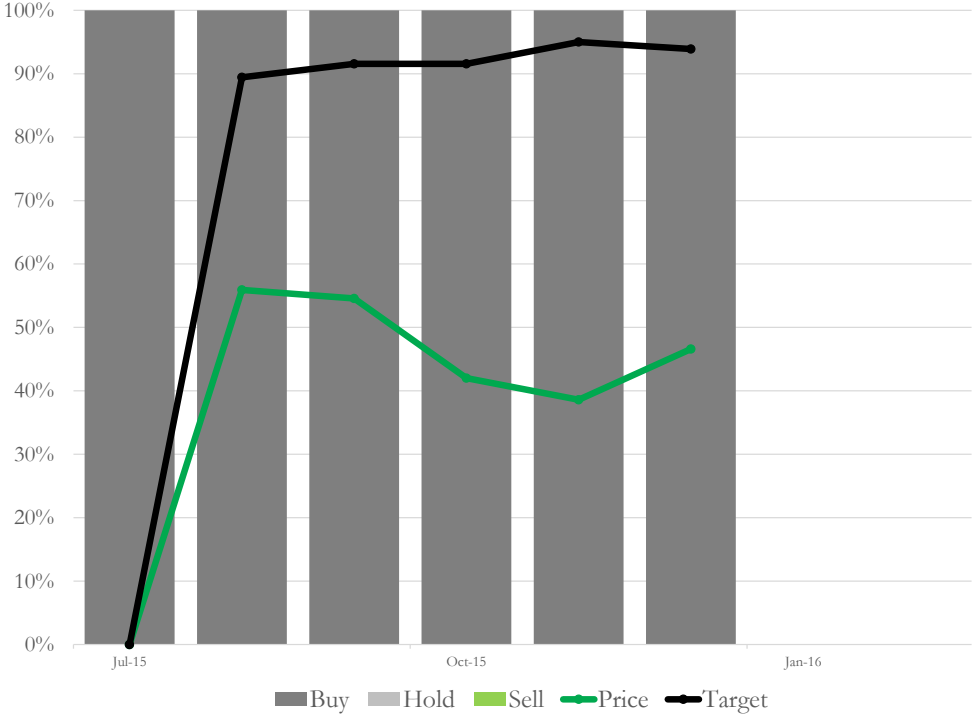
Source: Bloomberg

Sell-side Sentiment Analysis



Co US Equity

Analyst Rating History vs. Price/Target



Analyst Firm	Analyst Name	Rating
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\$45	Leerink Partners LLC	Paul Matteis	Outperform
	Guggenheim Securities	Louise Chen	Buy
	Gabelli & Co	Kevin Kedra	Buy
\$40	BTIG LLC	Hartaj Singh	Buy
	Ladenburg Thalmann & Co	Robert C Hazlett	Buy

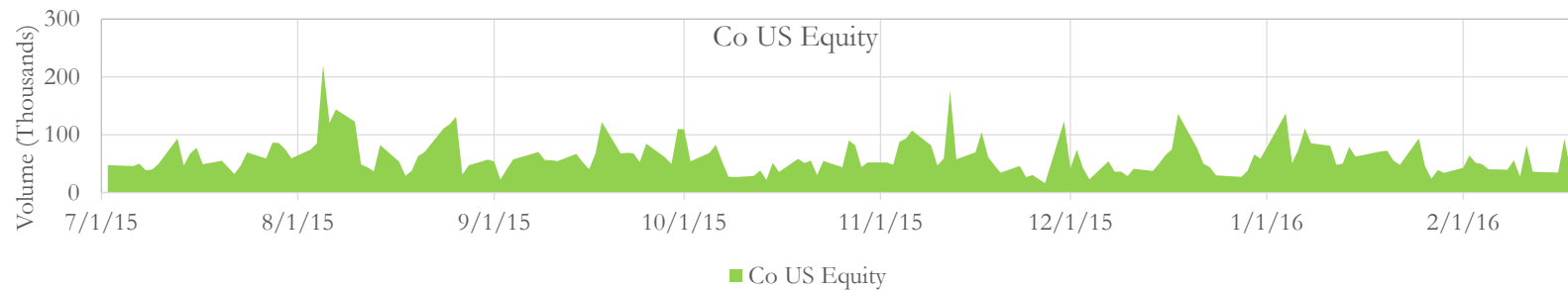
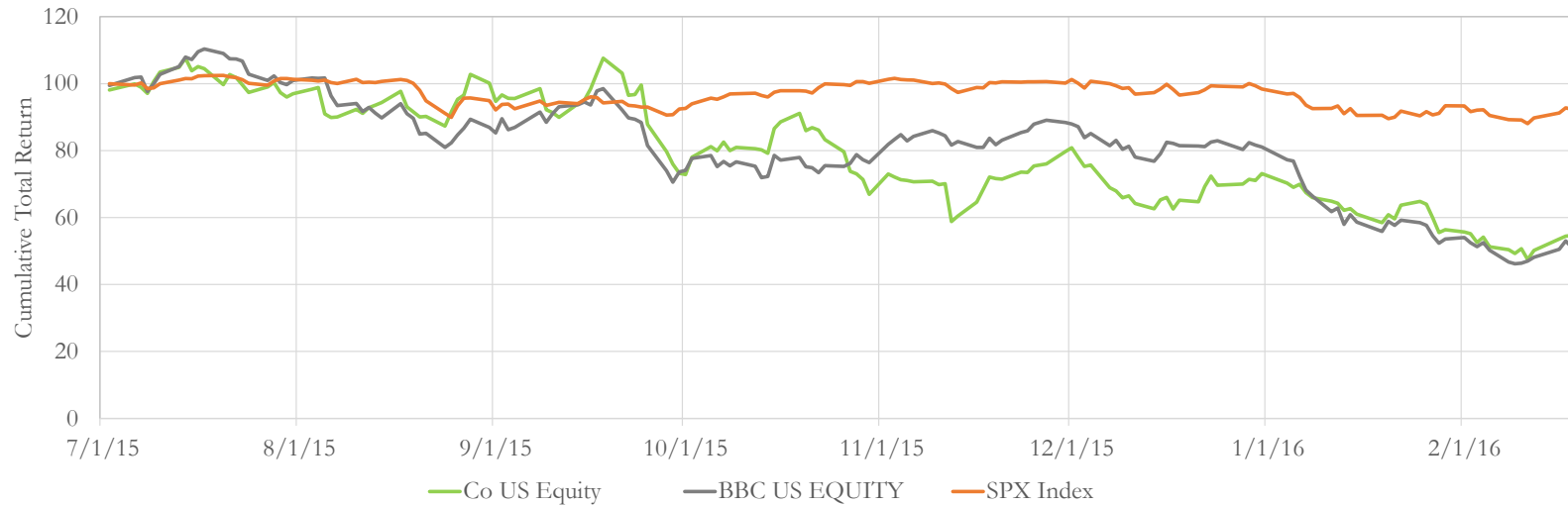
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\$30
\$25
\$20
\$15
\$10
\$5
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Source: Bloomberg

Performance



Co US Equity vs. BBC US EQUITY vs. SPX Index



The Bioshares Biotechnology Clinical Trials Index (Nasdaq: BBC) comprised solely of pure-play biotechnology companies with an asset in Phase 1 to Phase 3 clinical trials and is therefore representative of the performance of the biotechnology companies with no approved products. Most biotechnology indexes include non-biotech companies and are dominated by large companies with approved products. The BBC should also reflect the volatility of clinical-stage companies, which is typically greater than those with approved products.