

# Quarterly Industry Update

As of March 31, 2017

Industry: Oncology Pharmaceutical

## Industry Summary

Cogent Valuation identified Oncology Pharmaceutical publicly traded companies, IPOs, and recent M&A transactions within the Oncology Pharmaceutical industry, which provides a basis for market and transaction pricing that can be used by your firm in estimating market sentiment and its impact on your firm's value. Over the last year since March 31, 2016, the median 52-week share price return of the Oncology Pharmaceutical industry was 17.1%. Between March 31, 2015 and March 31, 2017, the median EV/EBITDA multiple decreased from 18.2 to 7.6. Furthermore, the median price-to-earnings multiple decreased from 52.2 to 16.3 over the same period.

## Comparable Public Company Key Statistics

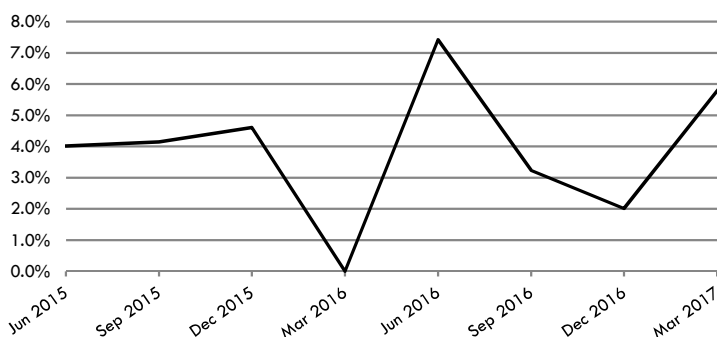
Median 52-Week Return	17.1%	Median EV/Revenue Multiple	3.6x	Median Price/Earnings Multiple	16.3x
Median 3-Year CAGR Return	15.5%	Median EV/EBITDA Multiple	7.6x	Median EV/Gross CF Multiple	13.2x

## Comparable Public Company Market Price Returns As of March 31, 2017

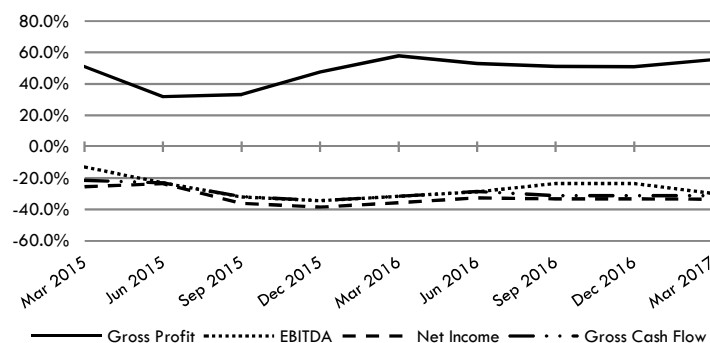
	YTD	3 Month	1 Year	2 Year	3 Year	5 Year	2016	2015	2014	2013	2012
Affimed N.V.	27.8%	27.8%	-38.5%	-39.6%	N/A	N/A	-74.7%	14.8%	N/A	N/A	N/A
Bellicum Pharmaceuticals, Inc.	-9.4%	-9.4%	32.0%	-27.0%	N/A	N/A	-32.8%	-12.0%	N/A	N/A	N/A
Calithera Biosciences, Inc.	255.4%	255.4%	103.3%	-16.1%	N/A	N/A	-57.6%	-62.1%	N/A	N/A	N/A
Globelimmune, Inc.	31.0%	31.0%	-81.8%	-77.2%	N/A	N/A	-92.5%	-49.0%	N/A	N/A	N/A
Incyte Corporation	33.3%	33.3%	84.4%	20.8%	35.7%	47.3%	-7.5%	48.3%	44.4%	204.8%	10.7%
Kite Pharma, Inc.	75.0%	75.0%	71.0%	16.7%	N/A	N/A	-27.2%	6.8%	N/A	N/A	N/A
Loxo Oncology, Inc.	31.0%	31.0%	53.9%	83.8%	N/A	N/A	12.9%	142.1%	N/A	N/A	N/A
Luye Pharma Group Ltd.	2.0%	2.0%	-21.8%	-29.3%	N/A	N/A	-43.1%	-19.1%	N/A	N/A	N/A
Merrimack Pharmaceuticals, Inc.	-24.5%	-24.5%	-63.2%	-49.1%	-15.1%	-13.0%	-48.4%	-30.1%	112.0%	-12.5%	N/A
Nektar Therapeutics	91.3%	91.3%	70.7%	46.1%	24.6%	24.3%	-27.2%	8.7%	36.6%	53.2%	32.4%
SciClone Pharmaceuticals, Inc.	-9.3%	-9.3%	-10.9%	5.2%	29.1%	9.2%	17.4%	5.0%	73.8%	16.9%	0.5%
Seattle Genetics, Inc.	19.1%	19.1%	79.1%	33.3%	11.3%	25.3%	17.6%	39.7%	-19.5%	72.2%	38.6%
Spectrum Pharmaceuticals, Inc.	46.7%	46.7%	2.2%	3.5%	-6.1%	-12.4%	-26.5%	-13.0%	-21.7%	-20.9%	-23.5%
Sucampo Pharmaceuticals, Inc.	-18.8%	-18.8%	0.6%	-15.9%	15.4%	8.1%	-21.6%	21.1%	51.9%	91.8%	10.6%
Tokai Pharmaceuticals, Inc.	-14.6%	-14.6%	-85.1%	-72.8%	N/A	N/A	-88.8%	-40.8%	N/A	N/A	N/A
Vertex Pharmaceuticals Incorporated	48.4%	48.4%	37.6%	-3.7%	15.6%	21.7%	-41.5%	5.9%	59.9%	77.3%	26.2%
<b>Median of Industry Public Companies</b>	<b>29.4%</b>	<b>29.4%</b>	<b>17.1%</b>	<b>-9.8%</b>	<b>15.5%</b>	<b>15.4%</b>	<b>-30.0%</b>	<b>5.5%</b>	<b>48.2%</b>	<b>62.7%</b>	<b>10.7%</b>

(Multiple year periods are calculated as the average annual return.)

## Median Quarterly Revenue Growth of All Oncology Pharmaceutical Companies



## Median Gross Profit, EBITDA, Net Income and Gross Cash Flow Margins



## Median Public Company Multiples of the Oncology Pharmaceutical Industry

Date:	3/31/2015	6/30/2015	9/30/2015	12/31/2015	3/31/2016	6/30/2016	9/30/2016	12/31/2016	3/31/2017
EV/Revenues Multiple	6.1x	5.3x	4.8x	5.0x	5.2x	3.4x	4.6x	3.8x	3.6x
EV/EBITDA Multiple	18.2x	18.0x	17.5x	13.2x	10.6x	12.0x	9.5x	8.2x	7.6x
Price/Earnings Multiple	52.2x	36.4x	25.8x	23.8x	18.5x	20.4x	18.2x	16.5x	16.3x
EV/Gross Cash Flows Multiple	45.5x	29.4x	24.9x	20.2x	15.1x	14.6x	15.1x	12.3x	13.2x

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# Quarterly Industry Update

As of March 31, 2017

Industry: Oncology Pharmaceutical



## Industry Initial Public Offerings (dollars in millions, except share prices)

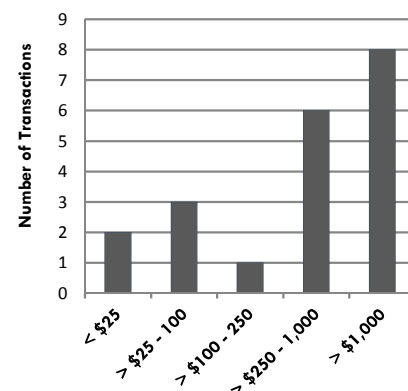
Offer Date	Company Name	Offer Price	Shares Offered	Amount Raised	Total Assets	Debt	LTM Revenues	LTM EBITDA	LTM Net Income	LTM Cash Flows
2/14/2017	Inventiva S.A.	\$8.99	5.7	\$50.8	\$60.1	\$0.8	\$13.0	(\$13.4)	(\$9.3)	(\$12.5)
12/2/2016	SillaJen, Inc.	\$12.84	10.0	\$128.4	\$126.5	\$35.5	\$5.3	(\$30.3)	(\$47.3)	(\$29.9)
11/23/2016	Alligator Bioscience AB (publ)	\$3.50	12.9	\$45.3	\$44.7	\$0.0	\$6.3	(\$4.7)	(\$8.0)	(\$2.0)
9/23/2016	NOXXON Pharma N.V.	\$0.00	0.1	\$3.2	\$787.6	\$142.0	\$884.5	\$158.0	\$86.4	\$178.2
8/8/2016	Noxopharm Limited	\$0.15	30.0	\$4.6	\$787.6	\$142.0	\$884.5	\$158.0	\$86.4	\$178.2
7/11/2016	Race Oncology Limited	\$0.15	21.5	\$3.2	\$786.5	\$173.4	\$865.3	\$156.2	\$87.5	\$175.2
5/18/2016	Merus B.V.	\$10.00	5.5	\$55.0	\$38.5	\$0.7	\$2.1	(\$20.0)	(\$25.2)	(\$19.9)
<b>Median of All IPOs</b>		<b>nm</b>	<b>nm</b>	<b>\$45.3</b>	<b>\$126.5</b>	<b>\$35.5</b>	<b>\$13.0</b>	<b>(\$4.7)</b>	<b>(\$8.0)</b>	<b>(\$2.0)</b>

nm: not meaningful, N/A: not applicable

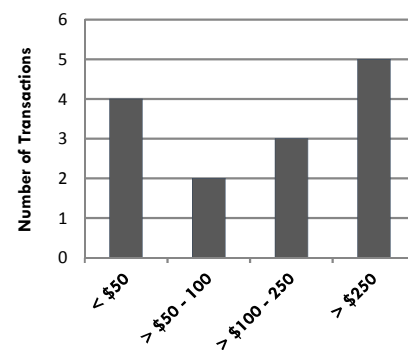
## Recent Merger and Acquisition Transactions for a Majority Stake (dollars in millions)

Transaction Date	Target	Acquirer	Transaction Size	% Bought	LTM Revenues	EV/Revenues
3/16/2017	Thallion Pharmaceuticals, Inc.	Taro Pharmaceuticals Inc.	\$2.0	100%	\$2.3	0.9x
2/15/2017	ARIAD Pharmaceuticals, Inc.	Takeda Pharmaceuticals	\$5,451.5	100%	\$186.2	27.6x
2/15/2017	ARIAD Pharmaceuticals, Inc.	Takeda Pharmaceuticals U.S.A.,	\$5,451.5	100%	\$186.2	27.6x
12/29/2016	Tetralogic Pharmaceuticals	Medivir AB	\$195.8	100%	N/A	N/A
11/29/2016	Kolltan Pharmaceuticals, Inc.	Celldex Therapeutics, Inc.	\$373.3	100%	N/A	N/A
10/29/2016	Infinity Pharmaceuticals	Verastem, Inc.	\$28.0	100%	N/A	N/A
10/21/2016	Genesis Care Ltd	Macquarie Group Limited	\$1,700.0	74%	N/A	N/A
9/27/2016	Medivation, Inc.	Pfizer Inc.	\$14,330.9	100%	\$1,027.1	13.6x
9/7/2016	Sequenom Inc.	Laboratory Corp. of America	\$426.1	100%	\$114.6	3.2x
7/14/2016	RedoxTherapies Inc.	Juno Therapeutics, Inc.	\$10.0	100%	N/A	N/A
7/5/2016	Cormorant Pharmaceuticals AB	Bristol-Myers Squibb	\$520.0	100%	N/A	N/A
6/3/2016	Baxalta Incorporated	Shire plc	\$36,219.9	100%	\$6,148.0	5.7x
12/4/2015	DARA BioSciences, Inc.	Midatech Pharma Plc	\$30.7	100%	\$2.4	8.8x
10/7/2015	AstraZeneca PLC, Caprelsa	Genzyme Corporation	\$300.0	100%	\$48.0	6.3x
7/23/2015	Sigma-Tau Pharma	Baxter International Inc.	\$900.0	100%	\$100.0	9.0x
5/26/2015	Pharmacyclics, Inc.	AbbVie Inc.	\$19,950.0	100%	\$816.1	23.4x
3/20/2015	EUSA Pharma, Inc.	Essex Woodlands Health	\$34.0	100%	\$27.0	1.3x
2/28/2014	Paladin Labs Inc.	Endo International plc	\$1,777.9	100%	\$263.0	5.8x
12/4/2013	Agila Specialties Private	Mylan, Inc.	\$1,850.0	100%	\$255.0	7.3x
10/24/2013	Optimer Pharmaceuticals	Cubist Pharmaceuticals	\$773.8	100%	\$76.9	9.1x
<b>Median of the 20 M&amp;A Transaction Targets</b>			<b>\$646.9</b>	<b>100%</b>	<b>\$150.4</b>	<b>8.0x</b>

### Size of M&A Transactions



### LTM Revenues Reported



### Definitions of Financial Terms Used in this Quarterly Industry Update:

Enterprise Value (EV): Market Value of Equity + Market Value of Debt - Cash

Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA): Profitability metric sometimes also referred to as operating profit or operating earnings.

Gross Cash Flows: Net Income + Depreciation and Amortization Expense

Latest Twelve Months (LTM): Financial information is as of the latest twelve months through the date of this Quarterly Industry Update.

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