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OUTPERFORM

Reason for report:

EARNINGS

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LEERINK

ZAFGEN, INC.

2Q14 Recap: Beloranib Advancing into Three Trials Soon, CAO Data 1Q15

• **Bottom Line:** We are updating our model to reflect 2Q14 financial results and increasing our 2014/2015 R&D estimates to be in line with company cash burn expectations. 2Q OpEx of ~$6.0MM were slightly above our estimate of $5.1MM. With ~$134MM of cash on its balance sheet as of 6/30/14, ZFGN estimates it is positioned to fund the company for at least the next 24 months, which will take investors past various clinical catalysts for beloranib in Prader-Willi and craniopharyngioma-associated obesity. **Reiterate OP on ZFGN and $35 PT in 12 months.**

• **The Phase IIa study for beloranib in craniopharyngioma-associated obesity (CAO) is on track to report data in 1Q15.** The CAO trial will evaluate beloranib's efficacy and safety over the course of 4 weeks of placebo-controlled, blinded treatment, which will be followed by a 4-week open-label period thereafter. ZFGN is targeting enrollment of 14 patients with hypothalamic injury associated obesity, which mainly impacts patients with craniopharyngioma but also other patients which could be covered by a broader label.

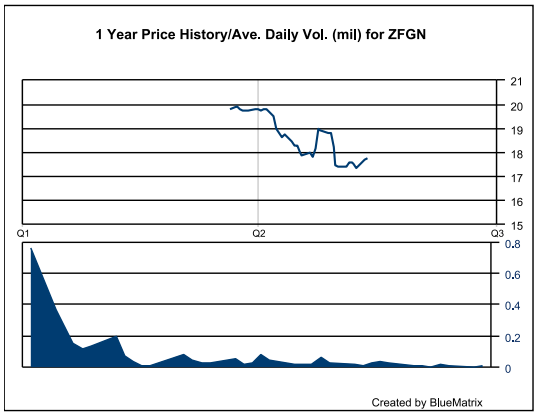
• **ZFGN on track to begin enrolling its pivotal study for beloranib in Prader-Willi syndrome by the end of 3Q14.** ZFGN's PWS pivotal trial program will be comprised of two clinical studies (one in the US and one in Europe), and will enroll up to 240 patients who will be evaluated for 12 months. Preliminary 6-month data from the US study could represent a key derisking catalyst and is expected by YE15. Powering assumptions for the beloranib pivotal study enable trial success even if the drug's effect size on hyperphagia is only ~50% as large as what was observed after 4 weeks in the Phase IIa, rendering us confident in our 70% probability-of-success assumption.

• **ZFGN has discussed with potential collaborators the possibility of partnering beloranib,** and expects talks to continue as beloranib moves through pivotal studies. ZFGN is confident in its ability to commercialize beloranib in the US and much of the EU, but may look to partner the drug in various other ex-US territories.

• **Longer term, beloranib's potential in the broader severe obesity market could drive considerable upside to our valuation,** but currently comprises only ~$4/share of our $35 PT. Label expansion to include the estimated ~16MM severe obesity patients in the US is likely to require large trials and the generation of a robust safety database. In the meantime, we believe that establishing broader proof of concept in orphan sub-populations offers a less risky and more rapid development path, and down the road could position ZFGN as a very attractive partnership or takeout target. ZFGN expects to start a Phase IIb study which includes a 1.8mg dose in 2H14 that will produce data in 2015.

Key Stats:	**(OTC Un:ZFGN)**
S&P 600 Health Care Index:	**1,298.82**
Price:	**$17.83**
Price Target:	$35.00
Methodology:	Probability-weighted DCF analysis
52 Week High:	$21.01
52 Week Low:	$17.06
Shares Outstanding (mil):	24.2
Market Capitalization (mil):	$431.5
Book Value/Share:	$0.00
Cash Per Share:	$5.24
Dividend (ann):	$0.00
Dividend Yield:	0.0%

General: Diluted shares outstanding
Cash Per Share: On a net basis as of 2Q14



Dec Yr	1Q	2Q	3Q	4Q	FY Rev	1Q	2Q	3Q	4Q	FY EPS	P/E
2013A	--	--	--	--	0.0	--	--	--	--	($19.53)	NM
2014E - New	**0.0A**	**0.0A**	**0.0**	**0.0**	**0.0**	**($6.18)A**	**($2.96)A**	**($0.89)**	**($0.81)**	**($4.11)**	**NM**
2014E - Old	0.0A	0.0A	0.0	0.0	0.0	($6.18)A	($2.55)	($0.34)	($0.40)	($1.68)	NM
2015E - New	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**($0.86)**	**($0.90)**	**($0.95)**	**($1.00)**	**($3.71)**	**NM**
2015E - Old	0.0	0.0	0.0	0.0	0.0	($0.44)	($0.47)	($0.49)	($0.52)	($1.92)	NM

Source: Company Information and Leerink Partners LLC Research
GAAP EPS presented

INVESTMENT THESIS

We rate ZFGN Shares Outperform. Zafgen (NASDAQ: ZFGN) is a biopharmaceutical company dedicated to the development of medicines to address the unmet need in obesity, with an initial focus on two orphan diseases that offer a potentially streamlined development path and high margin business model. We believe that ZFGN has an experienced management team with an outstanding track record executing in the field of drug discovery and commercialization. ZFGN's lead asset, beloranib, is a MetAP2 inhibitor that has generated compelling Phase II data in Prader-Willi syndrome (PWS) and severe obesity on a number of clinically relevant endpoints, in our view, and is entering a PWS Phase III program beginning in 2H14. We project a 70% probability of PWS approval in 2017, and peak gross PWS sales of ~$700MM worldwide in 2029. Zafgen is also developing beloranib in craniopharyngioma-associated obesity (CAO), and data from a Phase IIa study is expected to be reported in 1Q15. We project 50% probability of CAO approval in 2018, and peak gross CAO sales of ~$440MM worldwide in 2029. The commercial opportunity presented by severe obesity holds the potential to be orders of magnitude larger than PWS and CAO, though ZFGN will likely need support from a larger partner to unlock its full potential. Thus, while severe obesity afflicts ~16MM Americans in the US, we solely model ~$140MM in peak beloranib sales in non PWS/CAO patients, though in a partnership/ acquisition scenario (P&A), ZFGN is likely to receive considerably more value for beloranib in high prevalence indications. In the meantime, we believe that establishing broader proof of concept in orphan sub-populations offers a less risky and more rapid development path, and over the long term could position ZFGN as a very attractive partnership or takeout target. Likewise, a second generation MetAP2 inhibitor in preclinical development for general obesity, and a novel chemical class MetAP2 inhibitor in preclinical development for NASH/diabetes could provide significant upside to our price target as clinical catalysts are realized.

VALUATION

We derive a ~$35 per share value for ZFGN using a 12% discount rate and a 2% terminal growth rate, representing a ~$860MM market capitalization. Our price target assumes a 70% and 50% probability of beloranib approval in PWS and Craniopharyngioma, respectively, which leads to our peak risk-adjusted sales estimates of ~$490MM and ~$220MM in each indication. We only model ~$140MM in peak sales in severe obesity, which we believe holds the potential to be very conservative if/when ZFGN generates pivotal beloranib data in orphan indications.

RISKS TO VALUATION

Risks to our valuation include disappointing clinical data, regulatory setbacks, dilution risk from an additional equity offering, and commercial shortfalls. Because ZFGN has only one late stage product, the occurrence of any of these could impact the stock significantly.

ZFGN P&L ($MM) GAAP	2013	1Q14	2Q14	3Q14E	4Q14E	2014E	1Q15E	2Q15E	3Q15E	4Q15E	2015E	2016E	2017E	2018E	2019E
Beloranib PWS	-	-	-	-	-	-	-	-	-	-	-	-	4.0	46.5	126.6
Beloranib Craniopharyngioma	-	-	-	-	-	-	-	-	-	-	-	-	-	8.3	28.7
Beloranib Severe Obesity	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Revenue (p/w)	-	-	-	-	-	-	-	-	-	-	-	-	**4.0**	**54.9**	**155.3**
COGS	-	-	-	-	-	-	-	-	-	-	-	-	0.4	5.5	15.5
R&D	9.6	3.3	4.7	17.0	15.0	40.0	16.0	17.0	18.0	19.0	70.0	60.0	61.8	61.8	54.4
SG&A	4.2	1.2	1.3	3.0	3.3	8.8	3.6	3.8	4.0	4.1	15.5	21.7	30.0	38.4	54.4
Operating Expenses	13.8	4.5	6.0	20.0	18.3	48.8	19.6	20.8	22.0	23.1	85.5	81.7	92.2	105.7	124.2
Operating Income	(13.8)	(4.5)	(6.0)	(20.0)	(18.3)	(48.8)	(19.6)	(20.8)	(22.0)	(23.1)	(85.5)	(81.7)	(88.2)	(50.8)	31.1
Interest Income (Expense)	-	(0.0)	(0.4)	(0.2)	(0.2)	(0.9)	(0.2)	(0.2)	(0.2)	(0.2)	(0.8)	(0.4)	(0.3)	-	-
FX Gains/Losses	(0.2)	0.1	0.0	-	-	0.1	-	-	-	-	-	-	-	-	-
Total Other Income (expense)	(0.2)	0.1	(0.4)	(0.2)	(0.2)	(0.8)	-	-	-	-	-	(0.4)	(0.3)	-	-
EBT	(14.0)	(4.5)	(6.4)	(20.2)	(18.5)	(49.7)	(19.6)	(20.8)	(22.0)	(23.1)	(85.5)	(82.1)	(88.5)	(50.8)	31.1
Tax	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Comprehensive Income (Loss)	(14.0)	(4.5)	(6.4)	(20.2)	(18.5)	(49.7)	(19.6)	(20.8)	(22.0)	(23.1)	(85.5)	(82.1)	(88.5)	(50.8)	31.1
Accretion of Covert. Preferred	(0.2)	(0.0)	(0.0)	-	-	(0.1)	-	-	-	-	-	-	-	-	-
Net Income (Loss)	**(14.2)**	**(4.5)**	**(6.4)**	**(20.2)**	**(18.5)**	**(49.7)**	**(19.6)**	**(20.8)**	**(22.0)**	**(23.1)**	**(85.5)**	**(82.1)**	**(88.5)**	**(50.8)**	**31.1**
Diluted EPS	**$ (19.53)**	**$ (6.18)**	**$ (2.96)**	**$ (0.89)**	**$ (0.81)**	**$ (4.11)**	**$ (0.86)**	**$ (0.90)**	**$ (0.95)**	**$ (1.00)**	**$ (3.71)**	**$ (3.15)**	**$ (3.10)**	**$ (1.72)**	**$ 1.02**
Basic Shares Outstanding	0.7	0.7	2.2	22.7	22.8	12.1	22.9	23.0	23.1	23.2	23.1	26.1	28.6	29.6	30.6
Diluted Shares Oustanding	0.7	0.7	2.2	22.7	22.8	12.1	22.9	23.0	23.1	23.2	23.1	26.1	28.6	29.6	30.6

Source: SEC Filings and Leerink Partners Research

ZFGN BS & CFS ($MM) GAAP	2013	1Q14	2Q14	3Q14E	4Q14E	2014E	1Q15E	2Q15E	3Q15E	4Q15E	2015E	2016E	2017E	2018E	2019E
Net Cash	**35.5**	**31.1**	**126.9**	**107.3**	**89.5**	**89.5**	**70.8**	**51.7**	**31.2**	**9.6**	**9.6**	**33.8**	**50.5**	**12.4**	**54.3**
Cash & Equivalents	35.5	38.5	134.2	119.7	101.9	101.9	82.8	62.6	41.2	18.5	18.5	38.6	54.2	12.4	54.3
Debt	-	7.4	7.4	12.4	12.4	12.4	12.0	11.0	9.9	8.9	8.9	4.7	3.7	-	-
Change in Cash	**25.6**	**3.0**	**95.8**	**(14.5)**	**(17.8)**	**66.4**	**(19.1)**	**(20.2)**	**(21.5)**	**(22.7)**	**(83.4)**	**20.1**	**15.6**	**(41.8)**	**41.9**
Operating Cash Flow	**(15.0)**	**(4.0)**	**(6.9)**	**(19.0)**	**(17.4)**	**(47.5)**	**(18.0)**	**(19.1)**	**(19.4)**	**(19.7)**	**(76.3)**	**(70.7)**	**(73.7)**	**(31.8)**	**51.9**
Net Income (Loss)	(14.0)	(4.5)	(6.4)	(20.2)	(18.5)	(49.7)	(19.6)	(20.8)	(22.0)	(23.1)	(85.5)	(82.1)	(88.5)	(50.8)	31.1
SOE	0.4	0.2	0.4	1.2	1.1	2.8	1.6	1.7	1.8	1.8	6.8	7.4	9.2	10.0	10.9
D&A	0.0	0.0	-	-	-	0.0	-	-	0.8	1.6	2.4	4.0	5.6	9.0	10.0
Other	(1.4)	0.3	(0.9)	-	-	(0.6)	-	-	-	-	-	-	-	-	-
Investing Cash Flow	**(0.0)**	**(0.0)**	**-**	**-**	**-**	**(0.0)**	**-**	**-**	**(1.0)**	**(2.0)**	**(3.0)**	**(5.0)**	**(7.0)**	**(10.0)**	**(10.0)**
CapEx	(0.0)	(0.0)	-	-	-	(0.0)	-	-	(1.0)	(2.0)	(3.0)	(5.0)	(7.0)	(10.0)	(10.0)
Other	-	-	-	-	-	-	-	-	-	-	-	-			
Financing Cash flow	**40.6**	**7.0**	**102.7**	**4.5**	**(0.3)**	**113.8**	**(1.0)**	**(1.0)**	**(1.0)**	**(1.0)**	**(4.2)**	**95.8**	**96.3**	**-**	**-**
Equity Issuance (Buyback)	40.8	0.4	102.7	-	-	103.1	-	-	-	-	-	100.0	100.0	-	-
Debt Issuance (Retirement)	-	7.4	-	4.5	(0.3)	11.5	(1.0)	(1.0)	(1.0)	(1.0)	(4.2)	(4.2)	(3.7)	-	-
Other	(0.2)	(0.8)	-	-	-	(0.8)	-	-	-	-	-	-	-	-	-

Source: SEC Filings and Leerink Partners Research

ZFGN DCF Analysis	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	TV
Cash Flow From Operations ($MM)	(47)	(76)	(71)	(74)	(32)	52	98	168	206	248	274	295	314	331	347	354	184	101	
Cash Flow From Investing ($MM)	(0)	(3)	(5)	(7)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	
Net Borrowing (Repayment) ($MM)	4	(4)	(4)	(4)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Free Cash Flow ($MM)	(43)	(83)	(80)	(84)	(42)	42	88	158	196	238	264	285	304	321	337	344	174	91	933
Discount Periods	-	0.50	1.50	2.50	3.50	4.50	5.50	6.50	7.50	8.50	9.50	10.50	11.50	12.50	13.50	14.50	15.50	16.50	
NPV FCF ($MM)	(22)	(79)	(67)	(64)	(28)	25	47	76	84	91	90	87	83	78	73	66	30	14	144

Sum NPV FCF ($MM)	728
Net Cash 2Q14	127
Implied ZFGN Mkt Cap ($MM)	**$ 855**
ZFGN Per Share Value	**$ 35.29**

Cost of Equity	12%
TG Rate	2%
Diluted Shares Oustanding	24.2

Source: Leerink Partners Research

Prader Willi Syndrome Revenue Model	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E
PWS Patients in the US	7,500	7,568	7,636	7,704	7,774	7,844	7,914	7,985	8,057	8,130	8,203	8,277	8,351	8,426	8,502	8,579	8,656	8,734
% >12 years old	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
US PWS Patients >12 yr/old	3,750	3,784	3,818	3,852	3,887	3,922	3,957	3,993	4,029	4,065	4,102	4,138	4,176	4,213	4,251	4,289	4,328	4,367
% treated with Beloranib	0.0%	0.0%	0.0%	1.0%	8.0%	16.0%	21.0%	25.0%	28.0%	30.0%	32.0%	33.0%	34.0%	35.0%	35.0%	35.0%	17.5%	7.0%
PWS Patients on Beloranib	-	-	-	39	311	627	831	998	1,128	1,219	1,312	1,366	1,420	1,475	1,488	1,501	757	306
Annual Cost of Therapy	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000
Gross Revenues ($MM)	$0.0	$0.0	$0.0	$5.8	$46.6	$94.1	$124.6	$149.7	$169.2	$182.9	$196.9	$204.9	$213.0	$221.2	$223.2	$225.2	$113.6	$45.9
%<12 years old	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
US PWS Patients <12 yr/old	3,750	3,784	3,818	3,852	3,887	3,922	3,957	3,993	4,029	4,065	4,102	4,138	4,176	4,213	4,251	4,289	4,328	4,367
% treated with Beloranib	0.0%	0.0%	0.0%	0.0%	1.0%	8.5%	16.0%	21.0%	25.0%	28.0%	30.0%	32.0%	33.0%	34.0%	35.0%	35.0%	17.5%	7.0%
PWS Patients on Beloranib	-	-	-	-	39	333	633	838	1,007	1,138	1,230	1,324	1,378	1,433	1,488	1,501	757	306
Annual Cost of Therapy	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000
Gross Revenues ($MM)	$0.0	$0.0	$0.0	$0.0	$5.8	$50.0	$95.0	$125.8	$151.1	$170.7	$184.6	$198.6	$206.7	$214.9	$223.2	$225.2	$113.6	$45.9
Approval Probability	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%
US P(w) Beloranib PWS Revenues	**$0.0**	**$0.0**	**$0.0**	**$4.0**	**$36.7**	**$100.9**	**$153.7**	**$192.8**	**$224.2**	**$247.6**	**$267.0**	**$282.4**	**$293.8**	**$305.2**	**$312.5**	**$315.3**	**$159.1**	**$64.2**
PWS Patients in the EU	12,000	12,108	12,217	12,327	12,438	12,550	12,663	12,777	12,892	13,008	13,125	13,243	13,362	13,482	13,604	13,726	13,850	13,974
% >12 years old	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
EU PWS Patients >12 yr/old	6,000	6,054	6,108	6,163	6,219	6,275	6,331	6,388	6,446	6,504	6,562	6,621	6,681	6,741	6,802	6,863	6,925	6,987
% treated with Beloranib	0.0%	0.0%	0.0%	0.0%	2.5%	4.0%	6.0%	8.0%	11.0%	13.0%	15.0%	16.0%	17.0%	18.0%	19.0%	20.0%	10.0%	4.0%
PWS Patients on Beloranib	-	-	-	-	155	251	380	511	709	846	984	1,059	1,136	1,213	1,292	1,373	692	279
Annual Cost of Therapy	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000
Gross Revenues	$0.0	$0.0	$0.0	$0.0	$14.0	$22.6	$34.2	$46.0	$63.8	$76.1	$88.6	$95.3	$102.2	$109.2	$116.3	$123.5	$62.3	$25.2
%<12 years old	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
US PWS Patients <12 yr/old	6,000	6,054	6,108	6,163	6,219	6,275	6,331	6,388	6,446	6,504	6,562	6,621	6,681	6,741	6,802	6,863	6,925	6,987
% treated with Beloranib	0.0%	0.0%	0.0%	0.0%	0.0%	2.5%	4.0%	6.0%	8.0%	11.0%	13.0%	15.0%	17.0%	18.0%	19.0%	20.0%	10.0%	4.0%
PWS Patients on Beloranib	-	-	-	-	-	157	253	383	516	715	853	993	1,136	1,213	1,292	1,373	692	279
Annual Cost of Therapy	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000
Gross Revenues ($MM)	$0.0	$0.0	$0.0	$0.0	$0.0	$14.1	$22.8	$34.5	$46.4	$64.4	$76.8	$89.4	$102.2	$109.2	$116.3	$123.5	$62.3	$25.2
Approval Probability	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%
EU P(w) Beloranib PWS Revenues	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$9.8**	**$25.7**	**$39.9**	**$56.3**	**$77.2**	**$98.3**	**$115.8**	**$129.3**	**$143.1**	**$152.9**	**$162.8**	**$172.9**	**$87.3**	**$35.2**
WW Beloranib Gross Sales	$0.0	$0.0	$0.0	$5.8	$66.5	$180.8	$276.6	$356.0	$430.5	$494.1	$546.8	$588.2	$624.1	$654.5	$679.0	$697.5	$351.9	$142.0
WW Beloranib P(w) Sales	**$0.0**	**$0.0**	**$0.0**	**$4.0**	**$46.5**	**$126.6**	**$193.6**	**$249.2**	**$301.4**	**$345.9**	**$382.8**	**$411.8**	**$436.9**	**$458.1**	**$475.3**	**$488.2**	**$246.3**	**$99.4**

Assumptions	
Beloranib US Cost	$150,000
Beloranib EU Cost	$90,000
Probability of Approval	70%

Source: Company Presentations and Leerink Partners Research

Craniopharyngioma Revenue Model	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E
Craniopharyngioma Patients in the US	6,260	6,316	6,373	6,431	6,488	6,547	6,606	6,665	6,725	6,786	6,847	6,908	6,971	7,033	7,097	7,160	7,225	7,290
% with post-treatment hypothalamic dysfunction	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
beloranib craniopharyngioma candidates	3,130	3,158	3,187	3,215	3,244	3,273	3,303	3,333	3,363	3,393	3,423	3,454	3,485	3,517	3,548	3,580	3,612	3,645
% treated with Beloranib	0.0%	0.0%	0.0%	0.0%	2.0%	6.0%	13.0%	18.0%	24.0%	29.0%	32.0%	34.0%	36.0%	38.0%	40.0%	40.0%	20.0%	10.0%
Patients on Beloranib	-	-	-	-	65	196	429	600	807	984	1,095	1,174	1,255	1,336	1,419	1,432	722	364
Annual Cost of Therapy	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000
Gross Revenues ($MM)	$0.0	$0.0	$0.0	$0.0	$9.7	$29.5	$64.4	$90.0	$121.1	$147.6	$164.3	$176.2	$188.2	$200.4	$212.9	$214.8	$108.4	$54.7
Approval Probability	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
US P(w) Beloranib Cranio Revenues	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$4.9**	**$14.7**	**$32.2**	**$45.0**	**$60.5**	**$73.8**	**$82.2**	**$88.1**	**$94.1**	**$100.2**	**$106.4**	**$107.4**	**$54.2**	**$27.3**
Craniopharyngioma Patients in the EU	14,850	14,984	15,119	15,255	15,392	15,530	15,670	15,811	15,953	16,097	16,242	16,388	16,536	16,684	16,835	16,986	17,139	17,293
% with post-treatment hypothalamic dysfunction	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
beloranib craniopharyngioma candidates	7,425	7,492	7,559	7,627	7,696	7,765	7,835	7,906	7,977	8,049	8,121	8,194	8,268	8,342	8,417	8,493	8,569	8,647
% treated with Beloranib	0.0%	0.0%	0.0%	0.0%	1.0%	4.0%	8.0%	12.0%	16.0%	20.0%	22.0%	24.0%	26.0%	28.0%	30.0%	30.0%	15.0%	7.5%
Patients on Beloranib	-	-	-	-	77	311	627	949	1,276	1,610	1,787	1,967	2,150	2,336	2,525	2,548	1,285	648
Annual Cost of Therapy	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000
Gross Revenues ($MM)	$0.0	$0.0	$0.0	$0.0	$6.9	$28.0	$56.4	$85.4	$114.9	$144.9	$160.8	$177.0	$193.5	$210.2	$227.3	$229.3	$115.7	$58.4
Approval Probability	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
EU P(w) Beloranib Cranio Revenues	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$3.5**	**$14.0**	**$28.2**	**$42.7**	**$57.4**	**$72.4**	**$80.4**	**$88.5**	**$96.7**	**$105.1**	**$113.6**	**$114.7**	**$57.8**	**$29.2**
WW Gross Beloranib Craniopharyngioma Revenues	$0.0	$0.0	$0.0	$0.0	$16.7	$57.4	$120.8	$175.4	$235.9	$292.5	$325.1	$353.2	$381.7	$410.7	$440.2	$444.1	$224.1	$113.0
WW P(w) Beloranib Craniopharyngioma Revenues	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$8.3**	**$28.7**	**$60.4**	**$87.7**	**$118.0**	**$146.2**	**$162.6**	**$176.6**	**$190.8**	**$205.3**	**$220.1**	**$222.1**	**$112.0**	**$56.5**

Assumptions	
Beloranib US Cost	$150,000
Beloranib EU Cost	$90,000
Probability of Approval	50%

Source: Company Presentations and Leerink Partners Research

Product	Event	Timing
Beloranib	Initiate US Phase III PWS Trial	2H14
Beloranib	Initiate Phase IIb Severe Obesity Trial	2H14
Beloranib	Phase IIa Craniopharyngioma Data	1Q15
ZGN-839	File NASH/Type II Diabetes IND	1H15
Beloranib	6 Mo. Phase III PWS Data	4Q15

Source: Company Presentations and Leerink Partners Research

Disclosures Appendix

Analyst Certification

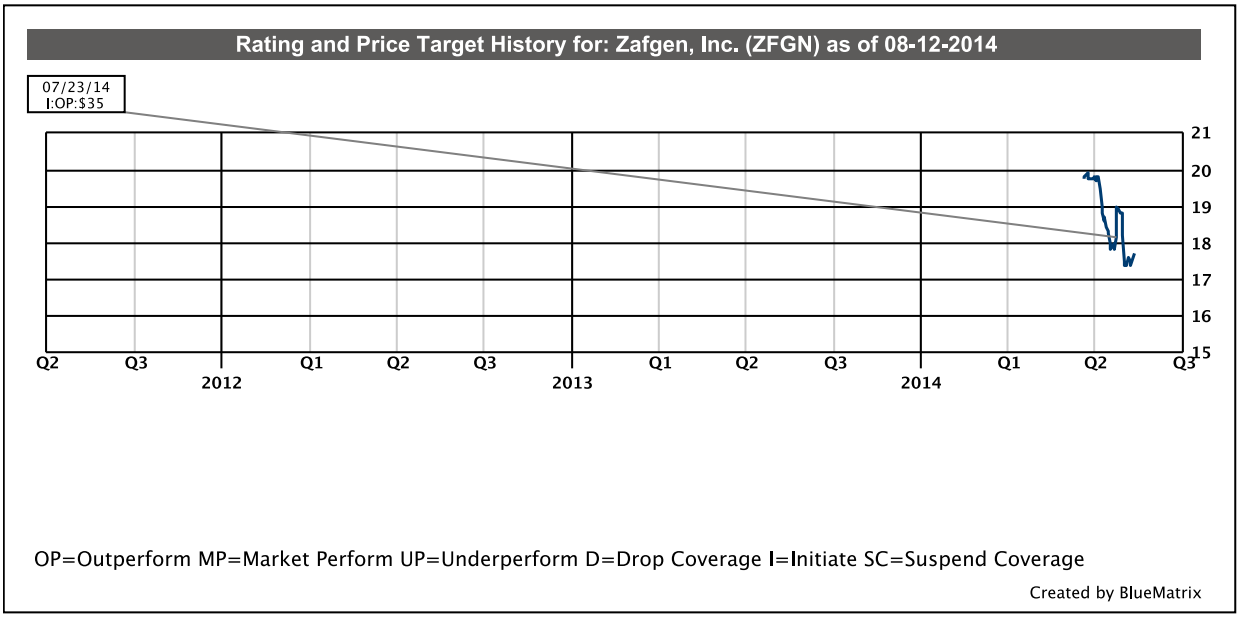
I, Joseph P. Schwartz, certify that the views expressed in this report accurately reflect my views and that no part of my compensation was, is, or will be directly related to the specific recommendation or views contained in this report.

Valuation

We derive a ~$35 per share value for ZFGN using a 12% discount rate and a 2% terminal growth rate, representing a ~ $860MM market capitalization. Our price target assumes a 70% and 50% probability of beloranib approval in PWS and Craniopharyngioma, respectively, which leads to our peak risk-adjusted sales estimates of ~$490MM and ~$220MM in each indication. We only model ~$140MM in peak sales in severe obesity, which we believe holds the potential to be very conservative if/when ZFGN generates pivotal beloranib data in orphan indications.

Risks to Valuation

Risks to our valuation include disappointing clinical data, regulatory setbacks, dilution risk from an additional equity offering, and commercial shortfalls. Because ZFGN has only one late stage product, the occurrence of any of these could impact the stock significantly.



Distribution of Ratings/Investment Banking Services (IB) as of 06/30/14			IB Serv./Past 12 Mos.	
Rating	Count	Percent	Count	Percent
BUY [OP]	138	69.00	50	36.20
HOLD [MP]	62	31.00	2	3.20
SELL [UP]	0	0.00	0	0.00

Explanation of Ratings

Outperform (Buy): We expect this stock to outperform its benchmark over the next 12 months.

Market Perform (Hold/Neutral): We expect this stock to perform in line with its benchmark over the next 12 months.

Underperform (Sell): We expect this stock to underperform its benchmark over the next 12 months.The degree of outperformance or underperformance required to warrant an Outperform or an Underperform rating should be commensurate with the risk profile of the company.

For the purposes of these definitions the relevant benchmark will be the S&P 600® Health Care Index for issuers with a market capitalization of less than $2 billion and the S&P 500® Health Care Index for issuers with a market capitalization over $2 billion.

Important Disclosures

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Leerink Partners LLC makes a market in Zafgen, Inc.

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