Zafgen, Inc. (ZFGN)

Reports 2Q14 Financial Results and Clinical Updates

MARKET OUTPERFORM | Price: $17.83 | Target Price: $31.00

MARKET DATA

Price	$17.83
52-Week Range:	$17.06 - $21.01
Shares Out. (M):	22.7
Market Cap ($M):	$404.7
Average Daily Vol. (000):	8.0
Cash (M):	$134
Cash/Share:	$5.91
Enterprise Value (M):	$296
LT Debt (M):	$0

Source: Thomson Reuters and JMP Securities LLC

FY DEC		2013A	2014E	2015E
Revenue ($M)	1Q	$0.0	$0.3A	--
	2Q	$0.0	$0.0A	--
	3Q	$0.0	$0.0	--
	4Q	$0.0	$0.0	--
	FY	**$0.0**	**$0.3**	**$0.0**
EPS	1Q	($4.94)	($5.82)A	--
	2Q	--	($2.96)A	--
	3Q	--	($0.66)	--
	4Q	--	($0.84)	--
	FY	**($19.53)**	**($10.29)**	**($2.15)**
Previous FY		NC	($15.64)	($2.09)

Source: Company reports and JMP Securities LLC

STOCK PRICE PERFORMANCE

INVESTMENT HIGHLIGHTS

Clinical progress on track for multiple data read-outs in 2015 with a solid balance sheet following successful IPO; reiterate Market Outperform rating and $31 price target on Zafgen. Zafgen reported 2Q14 earnings roughly in line with our estimates. The company ended the quarter with $134MM in cash, following the successful completion of its IPO in June, and expects to end 2014 with greater than $95MM. The company remains on track to have results from three clinical trials in 2015 for its lead development candidate beloranib. These include the Phase 2a trial in patients with obesity associated with hypothalamic injury, including craniopharyngioma-associated obesity (1Q15), the first of two planned Phase 3 trials in Prader-Willi syndrome (2H15), and the Phase 2b trial in severe obesity in the general population (2H15). Our $31 target is derived though a sum-of-the-parts NPV analysis of beloranib in PWS and in craniopharyngioma-associated obesity.

Phase 3 trial in PWS data remains on track for YE2015. Zafgen remains on track to initiate the first of two Phase 3 trials (ZAF-311) in the U.S by the end of 3Q14 with six-month primary efficacy and safety results available by 2H15. The primary endpoints will be total body fat mass (% change from baseline as measured by DEXA) and hyperphagia-related behavior (as measured by PWS-HQ), with success in either viewed as acceptable for regulatory approval. Secondary endpoints include body weight, LDL-C, HDL-C, C-reactive protein, skin-picking behavior, and quality of life. A second Phase 3 trial, to be conducted in Europe, is expected to initiated in 1H15, following final agreement with regulatory agencies on the protocol. We believe positive results from these trials should support approval in these and other rest-of-world geographies.

Phase 2 trial in obesity passes 50% enrollment. The company has enrolled more than half of the target 14 patients, in the Phase 2a trial (ZGN-221) for beloranib in hypothalamic-injury associated obesity. The trial is enrolling at four centers, two of which are in the U.S. and two in Australia. The primary endpoint for this trial is change in body weight and additional endpoints include metabolic risk markers (cholesterol, triglycerides, CRP), assessments of hunger, and quality of life. We continue to anticipate data in 1Q15.

Additional pipeline updates. Management remains on track to initiate ZAF-203, a Phase 2B efficacy and safety study of beloranib for severe obesity in Type II diabetes patients, by YE 2014. Enrollment is targeted for ~100 subjects and initial results are anticipated in 2H15. The company also reiterated that it plans to file an IND by 1H15 for ZGN-839, its next generation MetAP2 inhibitor. Target indications for ZGN-839 could include NASH and Type 2 diabetes.

Jason N. Butler, PhD
jbutler@jmpsecurities.com
(212) 906-3505

2Q14 FINANCIAL SUMMARY

Zafgen reported 2Q14 net income of ($6.4MM), in line with our ($6.3MM) estimate. The company reported no revenue, also in line with our expectations. Total operating expenses were $6.0MM, slightly lower than our estimate of $6.3MM. R&D expenses were $4.7MM, compared to our estimate of $4.9MM. SG&A expenses were $1.3MM, versus our estimate of $1.4MM. Cash and equivalents totaled $134.2MM as of June 30, 2014 and the company guided to YE2014 cash in excess of $95MM. Management stated that current cash is sufficient to fund operations for ~24 months.

We have updated our model (Figure 1) to reflect the 2Q14 financial results.

FIGURE 1. 2Q14 Earnings Summary and Changes to Our Model

ZFGN	2Q14			2014 est.			2015 est.		
	JMP old	Cons	Actual	JMP old	Cons	JMP new	JMP old	Cons	JMP new
Revenue	**0.0**	**n/a**	**0.0**	**0.3**	**0.1**	**0.3**	**0.0**	**0.0**	**0.0**
R&D	4.9		4.7	37.1		35.6	40.8		39.1
SG&A	1.4		1.3	5.8		5.5	6.9		6.6
Total operating expense	6.3		6.0	42.9		41.1	47.7		45.8
Net income (loss)	**(6.3)**	**n/a**	**(6.4)**	**(42.6)**	**(39.8)**	**(41.2)**	**(47.7)**	**(53.3)**	**(45.7)**
Shares outstanding (diluted)	0.8		2.2	11.5		11.9	22.8		22.8
EPS (diluted)	**($8.37)**	**n/a**	**($2.96)**	**($15.64)**	**($2.57)**	**($10.29)**	**($2.09)**	**($2.5)**	**($2.15)**

Source: JMP Securities LLC, Company reports

Company Description

Zafgen is a biopharmaceutical company focused on addressing the unmet need of severely obese patients and related orphan indications. The company's lead development candidate is beloranib, a first-in-class MetAP2 inhibitor. Initial development of beloranib is targeting obesity and hyperphagia, or insatiable life-threatening hunger and hunger-related behaviors, in patients with Prader-Willi Syndrome (PWS) and craniopharyngioma-associated obesity. Additional indications for beloranib, and second generation MetAP2 inhibitors, include severe obesity in the general population, NASH, and Type 2 diabetes. The company is lead by an experienced management team with proven success in the cardiovascular and metabolic disease arenas.

Zafgen completed its IPO in June 2014 and raised net proceeds of ~$103MM. We believe the IPO proceeds provide sufficient cash to fund operations into 2017, which include full clinical development of beloranib in Prader-Willi Syndrome.

Investment Risks

Clinical risk. We note that positive results from early trials cannot always be replicated and that the drug may fail in later trials. We note that the Phase 2a proof-of-concept trial was conducted in a small number of patients (n=14), although we believe the likelihood of replicating these positive results in a Phase 3 trial is high. Zafgen may not be successful in the full development and launch of its product candidate, beloranib. There may be dosing, efficacy, or safety issues related to product candidates undergoing clinical trials that could preclude continued development. In addition, there may be manufacturing issues including challenges with the scale-up to commercial quantities. Any of these issues could pose a risk to success.

Regulatory risk. The company’s potential regulatory filing for its NDA may not receive approval from the FDA or ex-U.S. agencies. The FDA may request further studies, in which case the approval pathway will likely take longer and cost significantly more. Zafgen relies on third parties to conduct future clinical trials of beloranib and there is risk that they may not carry out their contractual duties or meet deadlines, either of which would result in delays and adverse consequences to the business.

Market risk. Market estimates of PWS patients, or patients eligible for beloranib treatment, may be overestimated. This would impact the ability to reach revenue and profitability projections. The company must retain its intellectual property rights. Other companies may file patent applications or may receive patents that claim the same methods or formulations. This competition would affect operations and potential business prospects.

Financial risk. Zafgen has funded operations to date through proceeds from sales of redeemable convertible preferred stock and convertible debt. Due to no incoming revenue as of yet, the company has incurred losses each year since inception due to research and development expenses. These expenses are expected to continue to incur in the near future. We anticipate that Zafgen will likely need to raise additional funds in the next 12 months to continue future operations. If there are any issues commercializing its product candidates and achieving sales revenue, the company may not reach profitability, which may jeopardize the business. Additionally, Zafgen shares are subject to market volatility risk.

JMP FACTS AND DISCLOSURES

Analyst Certification:

The research analyst(s) who prepared this report does/do hereby certify that the views presented in this report are in accordance with my/our personal views on the securities and issuers discussed in this report. As mandated by SEC Regulation AC no part of my/our compensation was, is or will be directly or indirectly related to the specific views or recommendations expressed herein. This certification is made under the obligations set forth in SEC Regulation AC. Any other person or entity may not use it for any other purpose. This certification is made based on my/our analysis on the date of this report's publication. I/We assume no obligation to update this certification to reflect any facts,circumstances or events that may subsequently come to my/our attention. Signed Jason N. Butler

JMP Securities Disclosures:

JMP Securities currently makes a market in the security of Zafgen, Inc.

JMP Securities was manager or co-manager of a public offering of securities for Zafgen, Inc. (ZFGN) in the past 12 months, and received compensation for doing so.

JMP Securities Investment Opinion Definitions:

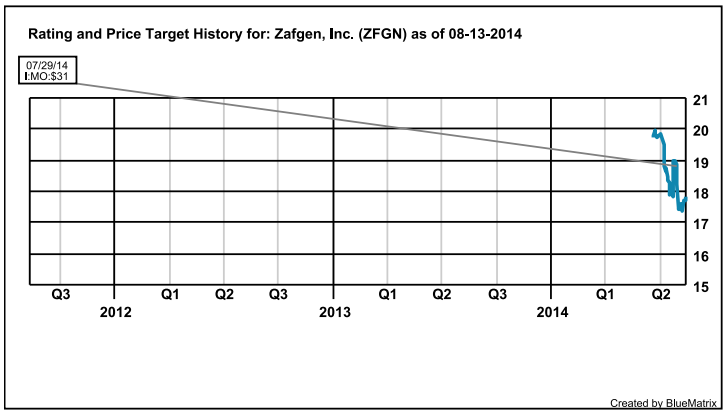
Market Outperform (MO): JMP Securities expects the stock price to outperform relevant market indices over the next 12 months.
Market Perform (MP): JMP Securities expects the stock price to perform in line with relevant market indices over the next 12 months.
Market Underperform (MU): JMP Securities expects the stock price to underperform relevant market indices over the next 12 months.

JMP Securities Research Ratings and Investment Banking Services: (as of August 14, 2014)

JMP Rating	Regulatory Equivalent	# Co's Under Coverage	*% of Total*	Regulatory Equivalent	# Co's Under Coverage	*% of Total*	# Co's Receiving IB Services in Past 12 Months	*% of Co's With This Rating*
MARKET OUTPERFORM	Buy	267	*60.00%*	Buy	267	*60.00%*	97	*36.33%*
MARKET PERFORM	Hold	138	*31.01%*	Hold	138	*31.01%*	18	*13.04%*
MARKET UNDERPERFORM	Sell	4	*0.90%*	Sell	4	*0.90%*	0	*0%*
COVERAGE IN TRANSITION		36	*8.09%*		36	*8.09%*	0	*0%*
TOTAL:		445	*100%*		445	*100%*	115	*25.84%*

Stock Price Chart of Rating and Target Price Changes:

Note: First annotation denotes initiation of coverage or 3 years, whichever is shorter. If no target price is listed, then the target price is N/A. In accordance with NASD Rule 2711, the chart(s) below reflect(s) price range and any changes to the rating or price target as of the end of the most recent calendar quarter. The action reflected in this note is not annotated in the stock price chart. Source: JMP Securities.



JMP Disclaimer:

JMP Securities LLC (the “Firm”) compensates research analysts, like other Firm employees, based on the Firm’s profitability, which includes revenues from the Firm’s institutional sales, trading, and investment banking departments as well as on the quality of the services and activities performed that are intended to benefit the Firm’s institutional clients. These data have been prepared by JMP Securities LLC for informational purposes only and are based on information available to the public from sources that we believe to be reliable, but we do not guarantee their accuracy or completeness. Any opinions and projections expressed herein reflect our judgment at this date and are subject to change without notice. These data are neither intended nor should be considered as an offer to sell or a solicitation or a basis for any contract for the purchase of any security or other financial product. JMP Securities LLC, its affiliates, JMP Group LLC, Harvest Capital Strategies LLC, and their respective partners, directors, officers, and associates may have a long or short position in, may act as a market maker for, or may purchase or sell a position in the securities mentioned herein. JMP Securities LLC or its affiliates may be performing, have performed, or seek to perform investment banking, advisory, or other services and may have acted as manager or co-manager for a public offering of securities for any company mentioned herein. The reader should assume that JMP Securities LLC will solicit business from the company covered in this report. Members of our Sales and Trading Department provide oral and/or written market opinions and trading strategies to our clients that reflect their personal opinions about stocks that are the subject of the firm's research reports. Our research analysts discuss trading strategies with clients that sometimes reflect short-term expectations for the price of the securities that are the subject of research reports. These trading strategies are distinct from the analysts' fundamental rating for the stock, which is based upon the analysts' view compared to other stocks under coverage for the relevant time period. JMP Securities LLC is a member of FINRA, NASDAQ, and SIPC.

Jeffrey H. Spurr
Director of Research
(415) 835-3903

RESEARCH PROFESSIONALS

FINANCIAL SERVICES

Alternative Asset Managers
Devin Ryan (212) 906-3578
Brian McKenna (212) 906-3545

Commercial & Specialty Finance
Christopher York (415) 835-8965
Hannah Kim, CFA (415) 835-8962

Consumer Finance
David M. Scharf (415) 835-8942
Jeremy Frazer (312) 768-1796

Financial Processing & Outsourcing
David M. Scharf (415) 835-8942
Jeremy Frazer (312) 768-1796

Insurance
Matthew J. Carletti (312) 768-1784
Christine Worley (312) 768-1786

Investment Banks & Brokers
Devin Ryan (212) 906-3578
Brian McKenna (212) 906-3545

Mortgage Operating Companies
REITs: Agency, Hybrid, & Commercial Mortgage
Steven C. DeLaney (404) 848-7773
Trevor Cranston, CFA (415) 869-4431
Charter Robinson (757) 613-8955
Benjamin Zucker (212) 906-3529

HEALTHCARE

Biotechnology
Liisa A. Bayko (312) 768-1785
Andrew Prigodich, PhD (312) 768-1788
Bhumika Sharma, PhD (312) 768-1795
Jason N. Butler, PhD (212) 906-3505
Caroline Palomeque (212) 906-3509
Michael G. King, Jr. (212) 906-3520
Bryan Czyzewski, PhD (212) 906-3577
Eric Joseph, PhD (212) 906-3514

Healthcare Services & Facilities
Peter L. Martin, CFA (415) 835-8904
Aaron Hecht (415) 835-3963
Arthur Kwok (415) 835-8908

Life Science Tools & Diagnostics
J. T. Haresco, III, PhD (415) 869-4477
Marie T. Casey, PhD (415) 835-3955

Medical Devices
J. T. Haresco, III, PhD (415) 869-4477
Marie T. Casey, PhD (415) 835-3955

Medical Devices & Supplies
David Turkaly (212) 906-3563
John Gillings (212) 906-3564

Specialty Pharmaceuticals
Oren G. Livnat, CFA (212) 906-3566
Nazibur Rahman (212) 906-3519

REAL ESTATE

Housing & Land Development
Peter L. Martin, CFA (415) 835-8904
Aaron Hecht (415) 835-3963
Bharathwajan Iyengar (415) 835-3902

Lodging & Leisure
Robert A. LaFleur (212) 906-3510
Whitney Stevenson (212) 906-3538

Property Services
Mitch Germain (212) 906-3546
Peter Lunenburg (212) 906-3537

REITs: Healthcare, Residential, & Specialty
Peter L. Martin, CFA (415) 835-8904
Aaron Hecht (415) 835-3963
Arthur Kwok (415) 835-8908

REITs: Office, Industrial, & Diversified
Mitch Germain (212) 906-3546
Peter Lunenburg (212) 906-3537

Residential Services
Peter L. Martin, CFA (415) 835-8904
Aaron Hecht (415) 835-3963
Bharathwajan Iyengar (415) 835-3902

TECHNOLOGY

Communications Equipment & Internet Security
Erik Suppiger (415) 835-3918
John Lucia (415) 835-3920

Internet & Digital Media
Ronald V. Josey III (212) 906-3528
Andrew Boone, CFA (415) 835-3957
Michael Wu (415) 835-8996

Software
Patrick Walravens (415) 835-8943
Peter Lowry (415) 869-4418
Greg McDowell (415) 835-3934

Wireless & Cloud Computing Technologies
Alex Gauna (415) 835-8998

ADDITIONAL CONTACTS

Thomas R. Wright
Director of Equities
(212) 906-3599

Dan Wychulis
Director of Institutional Sales
(617) 235-8530

600 Montgomery Street, Suite 1100
San Francisco, CA 94111
www.jmpsecurities.com