

April 21, 2015

By Electronic Filing

United States Securities and Exchange Commission
100 F Street N.E.
Washington D.C. 20549
Attn: John Reynolds

Re: OpGen, Inc.
Amendment No. 2 to Registration Statement on Form S-1
Filed April 6, 2015
File No. 333-202478

Ladies and Gentlemen:

We are providing this response letter on behalf of OpGen, Inc. (the "Company") with respect to the Staff's comment letter dated April 17, 2015, regarding the above referenced Amendment No. 2 to Registration Statement on Form S-1 (File No. 333-202478), filed on April 6, 2015 (the "Form S-1/A2"). In this response letter we provide our response and include the relevant changes that will be made to Amendment No. 5 to the Registration Statement ("Amendment No. 5"). For your convenience, the Staff's comment has been reproduced below, followed by the Company's response.

Dilution, page 46

1. It appears to us that your net tangible book value (deficit) as of December 31, 2014 includes the deferred IPO issuance costs of \$296,041. Please revise to exclude these assets from your calculation of net tangible book value (deficit) and update your disclosure accordingly.

RESPONSE: The net tangible book value (deficit) as of December 31, 2014 did include deferred IPO issuance costs of \$296,041. The Company has revised this calculation to exclude such costs, and has revised the affected disclosures as appropriate. The revision had the effect of reducing the net tangible book value (deficit) at December 31, 2014 to eliminate deferred costs as of December 31, 2014, but did not reduce or otherwise change pro forma as adjusted net tangible book value after the offering. The changes, highlighted in Exhibit A attached to this response letter, will be included in the following sections of Amendment No. 5: Summary Financial Data, Capitalization, Dilution and Selected Financial Data.

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San Diego | Washington, DC | Wilmington | www.ballardspahr.com

C. Eric Winzer, the CFO of the Company (240-813-1273), or Mary Mullany at Ballard Spahr LLP (215-864-8631) are available to answer questions you may have about our responses.

Very truly yours,

/s/ Mary J. Mullany

Mary J. Mullany

MJM/seh

cc: Evan Jones
C. Eric Winzer
Hillary Daniels
John Archfield
James Lopez
Brian McAllister

The following summary financial data should be read together with our financial statements and related notes, “Selected Financial Data” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” appearing elsewhere in this prospectus. The summary statements of operations data for the years ended December 31, 2014 and 2013, and the balance sheet data as of December 31, 2014, have been derived from our audited financial statements included elsewhere in this prospectus.

	Year Ended December 31,	
	2014	2013
(In thousands, except share and per share data)		
Statements of Operations Data:		
Revenue	\$ 4,126	\$ 2,411
Operating expenses:		
Cost of sales	952	1,823
Research and development(1)	4,368	4,152
General and administrative(1)	2,313	2,762
Sales and marketing(1)	2,058	3,053
Argus Whole Genome obsolescence	—	951
Total operating expenses(1)	9,691	12,741
Loss from operations	(5,565)	(10,330)
Interest income	—	1
Interest expense	(111)	(32)
Change in fair value of warrant liability	—	135
Other income (expense), net	5	91
Net loss	\$ (5,671)	\$ (10,135)
Net loss available to common stockholders (2)	\$ (6,299)	\$ (15,508)
Net loss per common share, basic and diluted	\$ (16.25)	\$ (896.09)
Shares used in computing net loss per common share, basic and diluted	387,590	17,306
Pro forma net loss per common share, basic and diluted (unaudited) (3)	\$ (1.20)	
Pro forma shares used in computing pro forma net loss per common share, basic and diluted (unaudited) (3)	4,687,713	

(1) Includes stock-based compensation as follows:

	Year Ended December 31,	
	2014	2013
(In thousands)		
Research and development	\$ 5	\$ 8
General and administrative	56	143
Sales and marketing	3	2
Total stock-based compensation	\$ 64	\$ 153

(2) Net loss reduced by preferred stock dividends.

(3) Pro forma net loss per common share, basic and diluted, is calculated assuming the conversion of all shares of Series A Preferred Stock and our 2014 convertible notes into common stock outstanding at the beginning of the period or at the original date of issuance, if later, up to December 31, 2014, but does not include 1,875,000 shares of common stock that may be issued upon the conversion of the 2015 convertible notes that were not outstanding at December 31, 2014.

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	As of December 31, 2014		
	Actual	Pro Forma (1)	Pro Forma As Adjusted (2)
Balance Sheet Data:			
Cash and cash equivalents	\$ 750	\$ 750	\$ 31,290
Working capital (deficiency)	(4,308)	(2,808)	27,719
Total assets	2,655	2,655	32,899
Series A Preferred Stock	4,565	—	—
Accumulated deficit	(96,772)	(96,772)	(96,772)
Total stockholders’ equity (deficit)	(8,066)	(2,001)	28,526

The preceding table presents a summary of our audited balance sheet data as of December 31, 2014:

- on an actual basis;
- on a pro forma basis to give effect to the automatic conversion of all outstanding shares of our Series A Preferred Stock and convertible notes outstanding at December 31, 2014 into an aggregate of 5,499,864 shares of our common stock upon the closing of this offering; and

on a pro forma as adjusted basis to give further effect to the receipt of the estimated net proceeds from the sale of 3,750,000 shares of common stock in this offering at the initial public offering price of \$9.00 per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus, and after deducting the underwriting discount and commissions and estimated expenses payable by us.

- (1) The pro forma presentation does not include 1,875,000 shares of common stock that may be issued upon the conversion of the 2015 convertible notes (assuming that the holders of the 2015 convertible notes convert all such notes into shares of Series A Preferred Stock at a rate of 1.25 shares per \$1.00 of outstanding principal amount, and such shares of Series A Preferred Stock are converted into common stock upon completion of this offering).
- (2) Each \$1.00 increase or decrease in the assumed initial public offering price of \$9.00 per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus, would increase or decrease, as applicable, the amount of our cash and cash equivalents, working capital, total assets and total stockholders' equity by \$3.5 million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, after deducting estimated underwriting discounts and commissions payable by us. An increase or decrease of 500,000 shares in the number of shares offered by us would increase or decrease, as applicable, the amount of our cash and cash equivalents, working capital, total assets and total stockholders' equity by \$4.2 million, assuming an initial public offering price of \$9.00 per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions payable by us.

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CAPITALIZATION

The following table sets forth our cash and cash equivalents and capitalization as of December 31, 2014, as follows:

on an actual basis;

on a pro forma basis to give effect to the automatic conversion of all outstanding shares of our convertible preferred stock and 2014 convertible notes into an aggregate of 5,499,864 shares of common stock upon the closing of this offering; and

on a pro forma as adjusted basis to give further effect to the receipt of the estimated net proceeds from the sale of 3,750,000 shares of common stock in this offering at the initial public offering price of \$9.00 per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus, and after deducting the underwriting discount and commissions and estimated expenses payable by us.

You should read this table in conjunction with "Selected Financial Data" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our financial statements and related notes included elsewhere in this prospectus.

	As of December 31, 2014		
	Actual	Pro Forma	Pro Forma as Adjusted (1)
	(In thousands, except share data) (Unaudited)		
Cash and cash equivalents	\$ 750	\$ 750	\$ 31,290
Convertible notes	\$ 1,500	\$ —	\$ —
Promissory notes (secured demand notes)	1,500	1,500	1,500
Long-term debt	235	235	235
Redeemable convertible preferred stock, par value \$0.01 per share:			
6,000,000 shares authorized, 3,999,864 issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted.	4,565	—	—
Stockholder's (deficit) equity:			
Common stock, par value \$0.01 per share: 7,500,000 shares authorized, 493,178 shares issued and outstanding, actual; 7,500,000 shares authorized, 5,993,042 shares issued and outstanding, pro forma; and 200,000,000 shares authorized, 9,743,042 shares issued and outstanding, pro forma, as adjusted	5	60	98
Preferred stock, par value \$0.01 per share: no shares authorized, issued or outstanding, actual and pro forma; 5,000,000 shares authorized, no shares issued or outstanding, pro forma as adjusted	—	—	—
Additional paid-in capital	88,701	94,711	125,200
Accumulated deficit	(96,772)	(96,772)	(96,772)
Total stockholders' equity (deficit)	(8,066)	(2,001)	28,526
Total capitalization	\$ (266)	\$ (266)	\$ 30,261

If the underwriters' over-allotment option is exercised in full, pro forma as adjusted cash and cash equivalents, common stock, additional paid-in capital, total stockholders' equity and common stock issued and outstanding as of December 31, 2014 would be \$36.0 million, \$0.1 million, \$129.9 million, \$33.2 million and 10.3 million, respectively.

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The number of shares of common stock in the table above excludes:

- 1,230,772 shares of common stock issuable upon the exercise of options outstanding at December 31, 2014 at a weighted average exercise price of \$0.78 per share;
- 217,019 shares of common stock reserved for future issuance under our 2008 Plan;
- up to 1,875,000 shares of common stock reserved for future issuance upon the conversion of our 2015 convertible notes into a like number of shares of Series A Preferred Stock, assuming the holders of such notes convert such notes prior to the consummation of this offering;
- 258,605 shares of common stock issuable upon the exercise of warrants to purchase our common stock; and
- warrants to purchase 150,000 shares (or 172,500 shares in the event that the underwriters' overallotment option is exercised in full) of common stock to be issued to the underwriters in connection with this offering.

- (1) Each \$1.00 increase or decrease in the assumed initial public offering price of our common stock of \$9.00 per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus, would increase or decrease, as applicable, the amount of our pro forma as adjusted cash and cash equivalents, additional paid-in capital and total stockholders' equity by approximately \$3.5 million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions payable by us. An increase or decrease of 500,000 shares in the number of shares offered by us would increase or decrease, as applicable, the amount of our pro forma as adjusted cash and cash equivalents, additional paid-in capital and total stockholders' equity by approximately \$4.2 million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions payable by us.

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DILUTION

If you invest in our common stock in this offering, your ownership interest will be diluted to the extent of the difference between the initial public offering price per share of our common stock and the pro forma as adjusted net tangible book value per share of our common stock immediately after this offering.

Our historical net tangible book value per share is determined by dividing our total tangible assets less our total liabilities by the total number of shares of common stock outstanding as of December 31, 2014. Our historical net tangible book value (deficit) as of December 31, 2014, was (\$3.8) million, or (\$7.70) per share of common stock. Our pro forma net tangible book value (deficit) as of December 31, 2014 was (\$2.3) million, or (\$0.38) per share of common stock. Our pro forma net tangible book value is determined by our total tangible assets less our total liabilities divided by the total number of shares of common stock outstanding as of December 31, 2014, assuming conversion of all shares of Series A Preferred Stock and all convertible notes outstanding at December 31, 2014.

The pro forma presentation does not include up to 1,875,000 shares of common stock that may be issued upon the elective conversion of the 2015 convertible notes that were not outstanding at December 31, 2014.

After giving effect to the sale of shares of common stock in this offering at the initial public offering price of \$9.00 per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus, after deducting the underwriting discount and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of December 31, 2014 would have been \$28.5 million, or \$2.93 per share. This represents an immediate increase in pro forma net tangible book value of \$3.31 per share to existing stockholders and an immediate dilution in pro forma net tangible book value of \$6.07 per share to purchasers of common stock in this offering, as illustrated in the following table:

Initial public offering price per share		\$	9.00
Pro forma net tangible book value per share as of December 31, 2014	\$	(0.38)	
Increase in pro forma net tangible book value per share attributable to new investors		3.31	
Pro forma as adjusted net tangible book value per share after this offering			2.93
Dilution per share to investors participating in this offering		\$	6.07

If the underwriters' over-allotment option to purchase additional shares is exercised in full, the pro forma as adjusted net tangible book value per share after this offering would be \$3.60 per share, the increase in pro forma as adjusted net tangible book value per share to existing stockholders would be \$3.55 per share and the dilution to new investors purchasing common stock in this offering would be \$5.78 per share.

The following table presents, on a pro forma as adjusted basis as of December 31, 2014, the differences between existing stockholders and purchasers of common stock in this offering with respect to the number of shares purchased from us, the total consideration paid and the average price paid per share, which, with respect to the purchasers of common stock in this offering, is based on the initial public offering price of \$9.00 per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus, and before deducting the underwriting discount and commissions and estimated expenses payable by us:

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	Total Shares		Total Consideration		Average Price per Share
	Number	Percent	Amount	Percent	
Existing stockholders before this offering	5,993,042	61.5%	\$ 76,267,396	69.3%	\$ 12.73
Purchasers of common stock in this offering	3,750,000	38.5%	\$ 33,750,000	30.7%	\$ 9.00
Total	9,743,042	100.0%	\$ 110,017,396	100.0%	\$ 11.29

Each \$1.00 increase or decrease in the assumed initial public offering price of \$9.00 per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus, would increase or decrease, as applicable, our pro forma as adjusted net tangible book value per share to new investors by \$0.36, and would increase or decrease, as applicable, dilution per share to new investors in this offering by \$0.64, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each increase or decrease of 500,000 shares in the number of shares offered by us would increase or decrease, as applicable, our pro forma as adjusted net tangible book value by approximately \$0.26 and (\$0.30) per share and increase or decrease, as applicable, the dilution to new investors by \$0.26 and (\$0.30) per share, assuming the assumed initial public offering price remains the same, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

If the underwriters' over-allotment option to purchase additional shares is exercised in full, existing stockholders would own 58% and new investors would own 42% of the total number of shares of our common stock outstanding immediately after this offering.

The calculations above are based on 5,993,042 shares outstanding as of December 31, 2014, after giving effect to the automatic conversion of all then-outstanding shares of Series A Preferred Stock and 2014 convertible notes into common stock upon the closing of this offering and exclude:

- 1,230,772 shares of common stock issuable upon the exercise of options outstanding at December 31, 2014, at a weighted average exercise price of \$0.78 per share;
- 217,019 shares of common stock reserved for future issuance under our 2008 Plan;
- up to 1,875,000 shares of common stock reserved for future issuance upon the conversion of our 2015 convertible notes into a like number of shares of Series A Preferred Stock, assuming the holders of such notes convert such notes prior to the consummation of this offering;
- 258,605 shares of common stock issuable upon the exercise of warrants to purchase our common stock; and
- warrants to purchase 150,000 shares (or 172,500 shares in the event that the underwriters' over-allotment option is exercised in full) of common stock to be issued to the underwriters in connection with this offering.

To the extent that any outstanding options or warrants are exercised or new shares, stock awards or stock options (which are then exercised) are issued under our incentive plans, there will be further dilution to investors participating in this offering.

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SELECTED FINANCIAL DATA

We derived the selected statements of operations data for the years ended December 31, 2014 and 2013, and the selected actual balance sheet data as of December 31, 2014 and 2013, from our audited financial statements included elsewhere in this prospectus. You should read the selected financial data together with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our financial statements, related notes and other financial information included elsewhere in this prospectus. The selected financial data is qualified in its entirety by the financial statements and related notes included elsewhere in this prospectus.

	Year Ended December 31,	
	2014	2013
(In thousands, except share and per share data)		
Statements of Operations Data:		
Revenue	\$ 4,126	\$ 2,411
Operating expenses:		
Cost of sales	952	1,823
Research and development(1)	4,368	4,152
General and administrative(1)	2,313	2,762
Sales and marketing(1)	2,058	3,053
Argus Whole Genome obsolescence	—	951
Total operating expenses(1)	<u>9,691</u>	<u>12,741</u>
Loss from operations	(5,565)	(10,330)
Interest income	—	1
Interest expense	(111)	(32)
Change in fair value of warrant liability	—	135
Other income (expense), net	5	91
Net loss	<u>\$ (5,671)</u>	<u>\$ (10,135)</u>
Net loss available to common stockholders (2)	<u>\$ (6,299)</u>	<u>\$ (15,508)</u>
Net loss per common share, basic and diluted	<u>\$ (16.25)</u>	<u>\$ (896.09)</u>
Shares used in computing net loss per common share, basic and diluted	<u>387,590</u>	<u>17,306</u>
Pro forma net loss per common share, basic and diluted (unaudited) (3)	<u>\$ (1.20)</u>	
Pro forma shares used in computing net loss per common share, basic and diluted (unaudited) (3)	<u>4,687,713</u>	

(1) Includes stock-based compensation as follows:

	Year Ended December 31,	
	2014	2013
(In Thousands)		

Research and development	\$	5	\$	8
General and administrative		56		143
Sales and marketing		3		2
Total stock-based compensation	\$	64	\$	153

(2) Net loss reduced by preferred stock dividends.

(3) Pro forma net loss per common share, basic and diluted, is calculated assuming the conversion of all shares of Series A Preferred Stock and our 2014 convertible notes into common stock outstanding at the beginning of the period or at the original date of issuance, if later, up to December 31, 2014, but does not include up to 1,875,000 shares of common stock that may be

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issued upon the elective conversion of the 2015 convertible notes by the holders thereof into 1,875,000 shares of Series A Preferred Stock that were not outstanding at December 31, 2014.

	<u>December 31, 2014</u>	<u>December 31, 2013</u>
Balance Sheet Data:		
Cash and cash equivalents	\$ 750	\$ 1,400
Working capital deficiency	(4,308)	(791)
Total assets	2,655	3,159
Series A Preferred Stock	4,565	2,000
Accumulated deficit	(96,772)	(91,101)
Total stockholders' deficit	(8,066)	(1,831)

	<u>As of December 31, 2014</u>		
	<u>Actual</u>	<u>Pro Forma (1)</u>	<u>Pro Forma As Adjusted (2)</u>
Balance Sheet Data:			
Cash and cash equivalents	\$ 750	\$ 750	\$ 31,290
Working capital (deficiency)	(4,308)	(2,808)	27,719
Total assets	2,655	2,655	32,899
Series A Preferred Stock	4,565	—	—
Accumulated deficit	(96,772)	(96,772)	(96,772)
Total stockholders' deficit	(8,066)	(2,001)	28,526

(1) The pro forma presentation above does not include up to 1,875,000 shares of common stock that may be issued upon the elective conversion of the 2015 convertible notes by the holders thereof, that were not outstanding at December 31, 2014, into 1,875,000 shares of Series A Preferred Stock.

(2) Each \$1.00 increase or decrease in the assumed initial public offering price of \$9.00 per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus, would increase or decrease, as applicable, the amount of our cash and cash equivalents, working capital, total assets and total stockholders' equity by \$3.5 million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, after deducting estimated underwriting discounts and commissions payable by us. An increase or decrease of 500,000 shares in the number of shares offered by us would increase or decrease, as applicable, the amount of our cash and cash equivalents, working capital, total assets and total stockholders' equity by \$4.2 million, assuming an initial public offering price of \$9.00 per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions payable by us.

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