# SECURITIES AND EXCHANGE COMMISSION

Washington, DC 20549

# **SCHEDULE 13D**

Under the Securities Exchange Act of 1934 (Amendment No. 1) Corrected 1



(Name of Issuer)

Common Stock, \$0.01 par value (Title of Class of Securities)

> 68373L109 (CUSIP Number)

William Taranto, President Merck Global Health Innovation Fund, LLC One Merck Drive Whitehouse Station, NJ 08889 908-423-6551 (Name, Address and Telephone Number of Person Authorized to Receive Notices and Communications)

> May 19, 2016 (Date of Event which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of §§240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box.

\* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

Explanatory Note: This Corrected Amendment No. 1 to Schedule 13D is being filed solely to correct a typographical error in the date of event set forth on the cover page of Amendment No. 1 to Schedule 13D filed on May 27, 2016 which incorrectly indicated the date of event which required the filing of the Amendment No. 1 as "May 19, 2015" instead of "May 19, 2016". Except for the foregoing correction, this Corrected Amendment No. 1 to Schedule 13D is identical to Amendment No. 1 to Schedule 13D previously filed on May 27, 2016. The remaining information (including all previously reported beneficial ownership information) set forth in Amendment No. 1 to Schedule 13D previously filed May 27, 2016 and included in this filing remains unchanged.

CUSIP No. 68373L109

	NT	( D	· • •			
1.	Names of Reporting Persons.					
	March Chabal Hashida Langerting French LLC					
2	Merck Global Health Innovation Fund, LLC					
2.			propriate Box if a Member of a Group (See Instructions)			
	(a) □ (b) □					
3.	SEC Use	Onle				
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4.	Source o	f Fun	ds (See Instructions)			
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5.		Disc	osure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e)			
5.	Check II	Disci				
6.	Citizensl	nip or	Place of Organization			
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	Deldwa		Cole Victing Decision			
		7.	Sole Voting Power			
Nu	umber of		8,364,270*			
shares		8.	Shared Voting Power			
beneficially owned by						
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	each		Sole Dispositive Power			
reporting		9.				
	person with		8,364,270*			
	with	10.	Shared Dispositive Power			
			0			
11.	Aggrega	te am	ount beneficially owned by each reporting person			
	8,364,270*					
12.			ggregate Amount in Row (11) Excludes Certain Shares (See Instructions) 🗆			
	Sheen II					
13.	Percent of	of Cla	ss Represented by Amount in Row (11)			
	37.5***	%				
14.			ting Person (See Instructions)			
	00					

\* Includes (i) 1,479,022 shares owned previously owned (including 68,532 shares held back in escrow pending indemnification claims); (ii) 1,200,000 shares of common stock and warrants to acquire 900,000 shares of common stock acquired at the First Closing pursuant to that certain Amended and Restated Securities Purchase Agreement dated May 18, 2016 (the "A&R Purchase Agreement"); and (iii) 2,734,427 shares of common stock and warrants to acquire 2,050,821 shares of common stock to be acquired at a Second Closing under the A&R Purchase Agreement to occur with 60 days of the First Closing.

\*\* Based upon an aggregate of 22,276,739 Issuer shares of common stock outstanding, consisting of (i) 19,325,918 Issuer shares outstanding as reported by Issuer; and (ii) 2,950,821 shares of common stock able to be acquired upon exercise warrants.

## CUSIP No. 68373L109

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1.	Names of Reporting Persons.				
	Merck Sharp & Dohme Corp.				
2.	Check th (a) $\Box$	e App (b)	propriate Box if a Member of a Group (See Instructions)		
	(a) 🗆	(0)			
3.	SEC Use	Only	7		
4.	Source o	f Fun	ds (See Instructions)		
	WC				
5.	Check if	Discl	osure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) $\Box$		
6.	Citizensl	ip or	Place of Organization		
	New Je	rsey			
		7.	Sole Voting Power		
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	shares beneficially owned by		Shared Voting Power		
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	each porting	9.	Sole Dispositive Power		
]	person with		8,364,270*		
		10.	Shared Dispositive Power		
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11.	Aggrega	e am	ount beneficially owned by each reporting person		
	8,364,2	70*			
12.			ggregate Amount in Row (11) Excludes Certain Shares (See Instructions) $\Box$		
13.	Percent o	f Cla	ss Represented by Amount in Row (11)		
	37.5**				
14.	Type of I	Repor	ting Person (See Instructions)		
	CO				

\* Includes (i) 1,479,022 shares owned previously owned (including 68,532 shares held back in escrow pending indemnification claims); (ii) 1,200,000 shares of common stock and warrants to acquire 900,000 shares of common stock acquired at the First Closing pursuant to that certain Amended and Restated Securities Purchase Agreement dated May 18, 2016 (the "A&R Purchase Agreement"); and (iii) 2,734,427 shares of common stock and warrants to acquire 2,050,821 shares of common stock to be acquired at a Second Closing under the A&R Purchase Agreement to occur with 60 days of the First Closing.

\*\* Based upon an aggregate of 22,276,739 Issuer shares of common stock outstanding, consisting of (i) 19,325,918 Issuer shares outstanding as reported by Issuer; and (ii) 2,950,821 shares of common stock able to be acquired upon exercise warrants.

## CUSIP No. 68373L109

1.	. Names of Reporting Persons.				
	Merck & Co., Inc.				
2.	Check th	e Apj	propriate Box if a Member of a Group (See Instructions)		
	(a) 🗆	(b)			
3.	SEC Use	Only	1		
4.	Source o	f Fun	ds (See Instructions)		
	00				
5.	Check if	Discl	losure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e)		
6.	Citizensł	ip or	Place of Organization		
	New Je	rsey			
		7.	Sole Voting Power		
Nu	umber of		8,364,270*		
shares		8.	Shared Voting Power		
beneficially					
owned by			0		
each		9.	Sole Dispositive Power		
	eporting person				
	with		8,364,270*		
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11.	Aggrega	te am	ount beneficially owned by each reporting person		
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	8,364,2	70*			
12.			ggregate Amount in Row (11) Excludes Certain Shares (See Instructions) 🗆		
1					
13.	3. Percent of Class Represented by Amount in Row (11)				
	37.5*%	)			
14.	Type of I	Repor	ting Person (See Instructions)		
1					
	CO				

\* Includes (i) 1,479,022 shares owned previously owned (including 68,532 shares held back in escrow pending indemnification claims); (ii) 1,200,000 shares of common stock and warrants to acquire 900,000 shares of common stock acquired at the First Closing pursuant to that certain Amended and Restated Securities Purchase Agreement dated May 18, 2016 (the "A&R Purchase Agreement"); and (iii) 2,734,427 shares of common stock and warrants to acquire 2,050,821 shares of common stock to be acquired at a Second Closing under the A&R Purchase Agreement to occur with 60 days of the First Closing.

\*\* Based upon an aggregate of 22,276,739 Issuer shares of common stock outstanding, consisting of (i) 19,325,918 Issuer shares outstanding as reported by Issuer; and (ii) 2,950,821 shares of common stock able to be acquired upon exercise warrants.

#### Introduction

This Amendment No. 1 (this "Amendment") amends the statement on Schedule 13D filed on July 23, 2015 (the "Original Schedule 13D" and as so amended, the "Schedule 13D"), with respect to shares of common stock, par value \$0.01 per share (the "Common Stock") of OpGen, Inc., a Delaware corporation (the "Issuer" or the "Company"). Capitalized terms used and not otherwise defined in this Amendment shall have the meanings set forth in the Original Schedule 13D. This Amendment amends the Original Schedule 13D as specifically set forth herein.

This Amendment is being filed to report the additional shares of Common Stock, of the Issuer acquired by the Purchaser (as defined below) and Common Stock which the Purchaser has the right to acquire as follows: (i) 1,200,000 shares of Common Stock and warrants to acquire 900,000 shares of Common Stock acquired on May 19, 2016 pursuant to that certain Amended and Restated Securities Purchase Agreement dated May 18, 2016 (the "A&R Purchase Agreement"); and (ii) units comprised of 2,734,427 shares of Common Stock and warrants to acquire 2,050,821 shares of Common Stock to be acquired at a second closing under the A&R Purchase Agreement to occur within 60 days of May 19, 2016.

#### Item 3. Source and Amount of Funds or Other Consideration.

Item 3 is amended and restated in its entirety as follows:

The source of the purchase price for the purchase under the Common Stock and Note Purchase Agreement and A&R Purchase Agreement was capital contributions from MSD. No borrowed funds were used in the purchase.

## Item 4. Purpose of Transaction.

Item 4 is amended and restated in its entirety as follows:

The information set forth under Items 3 and 6 is hereby incorporated by reference.

All of the securities of the Issuer acquired under the Common Stock and Note Purchase Agreement and the A&R Purchase Agreement described in Item 6 were acquired for investment purposes. The Reporting Persons intend to review on a continuing basis the investment in the Issuer. Based on such review, the Reporting Persons may acquire, or cause to be disposed, such securities at any time or formulate other purposes, plans or proposals regarding the Issuer or any of its securities, to the extent deemed advisable in light of general investment and trading policies of the Reporting Persons, the Issuer's business, financial condition and operating results, general market and industry conditions or other factors.

Dr. David Rubin, an employee of Merck, continues to serve on the board of directors of the Issuer. Except as otherwise described in this Schedule 13D, or pursuant to the transactions contemplated by the Purchase Agreement, none of the Reporting Persons nor, to the best knowledge of the Reporting Persons, any of the persons listed on Schedule A to this Schedule 13D, currently has any plans or proposals that would result in:

- (a) The acquisition by any person of additional securities of the Issuer, or the disposition of securities of the Issuer;
- (b) An extraordinary corporate transaction, such as a merger, reorganization or liquidation, involving the Issuer or any of its subsidiaries;
- (c) A sale or transfer of a material amount of assets of the Issuer or any of its subsidiaries;
- (d) Any change in the present board of directors or management of the Issuer, including any plans or proposals to change the number or term of directors or to fill any existing vacancies on the Board;
- (e) Any material change in the present capitalization or dividend policy of the Issuer;

- (f) Any other material change in the Issuer's business or corporate structure including but not limited to, if the Issuer is a registered closed-end investment company, any plans or proposals to make any changes in its investment policy for which a vote is required by section 13 of the Investment Company Act of 1940;
- (g) Changes in the Issuer's charter, bylaws or instruments corresponding thereto or other actions which may impede the acquisition of control of the Issuer by any person;
- (h) Causing a class of securities of the Issuer to be delisted from a national securities exchange or to cease to be authorized to be quoted in an interdealer quotation system of a registered national securities association;
- (i) A class of equity securities of the Issuer becoming eligible for termination of registration pursuant to Section 12(g)(4) of the Securities Exchange Act of 1934; or
- (j) Any action similar to any of those enumerated above.

However, as part of the ongoing evaluation of this investment and investment alternatives, the Reporting Persons may consider such matters and, subject to applicable law, may formulate a plan with respect to such matters, and, from time to time, may hold discussions with or make formal proposals to management or the Board of the Issuer, other stockholders of the Issuer or other third parties regarding such matters.

#### Item 5. Interest in Securities of the Issuer.

Item 5 is amended and restated in its entirety as follows:

(a) The Reporting Persons may be deemed to beneficially own 8,364,270 shares of Common Stock of which 5,685,248 of the 8,364,270 shares of Common Stock represent shares that the Purchaser has the right to acquire from the Issuer pursuant to the A&R Purchase Agreement and Warrants. The Common Stock voting rights represent 37.5% of the total number of shares of common stock treated as outstanding for purposes of such vote. The ownership percentages set forth in this Schedule 13D, according to information provided by the Issuer. As a result of their direct and indirect ownership of the Purchaser, each of MSD and Merck may be deemed to share the Common Stock voting rights held in the name of the Purchaser.

(b) Each of the Reporting Persons has the power to vote or direct the vote of the 2,679,022 votes that may be cast in actions taken by common stockholders as a result of the shares of Common Stock held in the name of the Purchaser. None of the Reporting Persons has sole or shared power to direct the disposition of any shares of Common Stock.

(c) To the best knowledge of the Reporting Persons, none of the Reporting Persons nor the individuals named in Schedule A to this Schedule 13D has effected a transaction in shares of the Issuer during the past 60 days (other than the transactions contemplated by the A&R Purchase Agreement described below).

(d) Other than the Reporting Persons, no other person is known to have the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of the Reporting Persons' securities.

(e) Not applicable.

## Item 6. Contracts, Arrangements, Understandings or Relationships With Respect to Securities of the Issuer.

Item 6 is hereby amended by inserting the following paragraphs at the end thereof:

#### Amended and Restated Securities Purchase Agreement

On May 18, 2016, the Issuer entered into an amended and restated securities purchase agreement (the "A&R Purchase Agreement") with certain investors named therein, including the Purchaser which amended and restated the securities purchase agreement dated as of May 12, 2016 (the "Original Purchase Agreement").

The A&R Purchase Agreement amended the Original Purchase Agreement to provide for the purchase, at the election of each Investor, of units ("Units") consisting of (i) either (A) one share of the Issuer's common stock, par value \$0.01 per share (the "Common Stock"), or (B) one share of non-voting, convertible preferred stock par value \$0.01 per share (the "Series A Convertible Preferred Stock") and (ii) warrants to acquire 0.75 of one share of Common Stock (the "Warrants").

Under the A&R Purchase Agreement, the Purchaser (i) acquired from the Issuer 1,200,000 shares of common stock and warrants to acquire 900,000 shares of common stock on May 19, 2016 and (ii) will acquire from the Issuer 2,734,427 shares of common stock and warrants to acquire 2,050,821 shares of common stock at a second closing under the A&R Purchase Agreement to occur within 60 days of May 19, 2016.

Pursuant to the A&R Purchase Agreement, the Issuer has agreed to provide certain mandatory registration rights and piggyback registration rights to the Investors in respect of the Shares and the Warrant Shares customary for this type of private placement. Specifically, the Company has agreed to file a registration statement on Form S-3 (or other registration statement, if the Issuer is not then eligible to use Form S-3) (the "Registration Statement") within 60 days of execution of the A&R Purchase Agreement. The Issuer has agreed to keep the Registration Statement effective until all Shares have been sold by Investors or may be sold without restriction under Rule 144, promulgated under the Securities Act of 1933, as amended. In addition, to the extent that the Registration Statement is not available, the Investors will have piggyback registration rights with respect to a registration statement that the Issuer proposes to file (subject to certain exceptions). The Issuer will pay all fees and expenses incident to the registration rights provided to Investors.

In addition the A&R Purchase Agreement provides that, for a period of two years, Investors also have the right to participate on a pro rata basis in subsequent offerings of the Issuer (subject to certain exceptions). The A&R Purchase Agreement also provides that, for a period of 90 days from the date of the Securities Purchase Agreement, the Issuer is prohibited from issuing any Common Stock or securities convertible into common stock (subject to certain exceptions). In addition, the Issuer's officers, directors and holders in excess of 5% of the Issuer's outstanding Common Stock have agreed to enter into a lock-up agreement in connection with the Offering, which generally prohibits them from selling securities of the Issuer for a period of 90 days from the date of the A&R Purchase Agreement.

#### Common Stock Warrants

The Warrants will be exercisable at an exercise price of \$1.3125 per share of common stock, will become exercisable 90 days after the date of issuance, and may be exercised for five years. The exercise price and the number of Warrant Shares will be adjusted to account for the subdivision or combination by the Issuer of outstanding shares of Common Stock. The exercise price may at anytime also be voluntarily reduced at the discretion of the Board of Directors of the Issuer. The Warrants may be exercised pursuant to a cashless exercise, but only if a registration statement covering the resale of the Warrant Shares that are the subject of an exercise notice is not available for the resale of such Warrant Shares.

The foregoing is subject to and qualified by the terms and conditions contained in the Amended and Restated Securities Purchase Agreement and the Warrant to Purchase Common Stock, copies of which are incorporated by reference to this Schedule 13D as Exhibit 8 and Exhibit 9, respectively.

#### Item 7. Material to be Filed as Exhibits.

Item 7 is hereby amended and supplemented by inserting the following at the end thereof:

- 8. Amended and Restated Securities Purchase Agreement dated May 18, 2016 by and among OpGen, Inc. and the purchasers a party thereto (incorporated by reference to Exhibit 10.1 to Current Report on Form 8-K filed by OpGen, Inc. with the Securities and Exchange Commission on May 20, 2016).
- 9. Form of Warrant to Purchase Common Stock (incorporated by reference to Exhibit 4.1 to Current Report on Form 8-K filed by OpGen, Inc. with the Securities and Exchange Commission on May 17, 2016).

#### Signatures

After reasonable inquiry and to the best of its knowledge and belief, the undersigned certify that the information set forth in this statement is true, complete and correct.

Dated this 31st day of May, 2016.

## MERCK GLOBAL HEALTH INNOVATION FUND, LLC

By:/s/ William J. Taranto\*Name:William J. TarantoTitle:President

## MERCK SHARP & DOHME CORP.

 By:
 /s/ Katie E. Fedosz

 Name:
 Katie E. Fedosz

 Title:
 Assistant Secretary

#### MERCK & CO., INC.

By:	/s/ Katie E. Fedosz
Name:	Katie E. Fedosz
Title:	Senior Assistant Secretary
*By:	/s/ Katie E. Fedosz
	As Attorney-in-Fact

\* Ms. Katie E. Fedosz is signing as Attorney-in-Fact pursuant to powers of attorney dated July 23, 2015 granted by each Reporting Person, copies of which are filed as exhibits to the Original Schedule 13D filed on July 23, 2015 and incorporated herein by reference.

## EXHIBIT INDEX

## Item 7. Material to be Filed as Exhibits.

- 8. Amended and Restated Securities Purchase Agreement dated May 18, 2016 by and among OpGen, Inc. and the purchasers a party thereto (incorporated by reference to Exhibit 10.1 to Current Report on Form 8-K filed by OpGen, Inc. with the Securities and Exchange Commission on May 20, 2016).
- 9. Form of Warrant to Purchase Common Stock (incorporated by reference to Exhibit 4.1 to Current Report on Form 8-K filed by OpGen, Inc. with the Securities and Exchange Commission on May 17, 2016).

The name, present principal occupation or employment, and the name, principal business and address of any corporation or other organization in which such employment is conducted, of each of the executive officers and directors of each of the Reporting Persons is set forth below.

# MERCK GLOBAL HEALTH INNOVATION FUND, LLC

# EXECUTIVE OFFICERS AND DIRECTORS

Name	Principal Occupation	Business Address	Citizenship
Arthur Ceconi, Jr.	Vice President, Tax	2000 Galloping Hill Road	USA
		Kenilworth, NJ 07033	
Donna Daidone-Yahara	Assistant Vice President, Finance	2000 Galloping Hill Road	USA
		Kenilworth, NJ 07033	
Robert Davis	Manager / Vice President	2000 Galloping Hill Road	USA
		Kenilworth, NJ 07033	
Katie Fedosz	Assistant Secretary	2000 Galloping Hill Road	USA
		Kenilworth NJ, 07033	
Jon Filderman	Secretary	2000 Galloping Hill Road	USA
		Kenilworth NJ, 07033	
Jay Galeota	Manager / Vice President	2000 Galloping Hill Road	USA
		Kenilworth, NJ 07033	
Clark Golestani	Manager	3070 Route 22 West	USA
		Branchburg, NJ 08876-3598	
Michael J. Holston	Manager	2000 Galloping Hill Road	USA
		Kenilworth, NJ 07033	
Juanita Lee	Assistant Treasurer	2000 Galloping Hill Road	USA
		Kenilworth, NJ 07033	
Mark E. McDonough	Vice President and Treasurer	2000 Galloping Hill Road	USA
		Kenilworth, NJ 07033	
Kathleen McGrath Nicastro	Assistant Secretary	2000 Galloping Hill Road	USA
		Kenilworth, NJ 07033	
Joseph Miletich	Manager	126 E. Lincoln Avenue	USA
		Rahway, NJ 07065	
Joseph Promo	Assistant Treasurer	2000 Galloping Hill Road	USA
		Kenilworth, NJ 07033	
Michael Rosenblatt	Manager	2000 Galloping Hill Road	USA
		Kenilworth, NJ 07033	
Mark Simon	Assistant Treasurer	2000 Galloping Hill Road	USA
		Kenilworth, NJ 07033	
William J. Taranto	Manager / President	One Merck Drive,	USA
		Whitehouse Station, NJ 08889	

# MERCK SHARP & DOHME CORP.

# EXECUTIVE OFFICERS AND DIRECTORS

Name	<b>Principal Occupation</b>	Business Address	Citizenship
Arthur Ceconi, Jr.	Assistant Secretary, Tax	2000 Galloping Hill Road	USA
		Kenilworth, NJ 07033	
Katie Fedosz	Assistant Secretary	2000 Galloping Hill Road	USA
		Kenilworth, NJ 07033	
Jon Filderman	Director / Secretary	2000 Galloping Hill Road	USA
		Kenilworth, NJ 07033	
Rita Karachun	Director / President	2000 Galloping Hill Road	USA
		Kenilworth, NJ 07033	
Juanita Lee	Assistant Treasurer	2000 Galloping Hill Road	USA
		Kenilworth, NJ 07033	
Mark E. McDonough	Director /	2000 Galloping Hill Road	USA
	Vice President and Treasurer	Kenilworth, NJ 07033	
Robert McGovern	Vice President, Tax	2000 Galloping Hill Road	USA
		Kenilworth, NJ 07033	
Kathleen McGrath Nicastro	Assistant Secretary	2000 Galloping Hill Road	USA
		Kenilworth, NJ 07033	
Joseph Promo	Assistant Treasurer	2000 Galloping Hill Road	USA
		Kenilworth, NJ 07033	
Mark Simon	Assistant Treasurer	2000 Galloping Hill Road	USA
		Kenilworth, NJ 07033	

# MERCK & CO., INC.

# OFFICERS

Name	Principal Occupation	Business Address	Citizenship
Kenneth C. Frazier	Chairman, President and Chief	2000 Galloping Hill Road	USA
	Executive Officer / Director, Merck	Kenilworth, NJ 07033	
	& Co., Inc.		
Adele D. Ambrose	Senior Vice President and Chief	2000 Galloping Hill Road	USA
	Communications Officer, Merck &	Kenilworth, NJ 07033	
	Co., Inc.		110.4
Sanat Chattopadhyay	Executive Vice President and	One Merck Drive,	USA
	President, Merck Manufacturing Division ("MMD"), Merck & Co.,	Whitehouse Station, NJ 08889-0100	
	Inc.		
Robert Davis	Executive Vice President, Chief	2000 Galloping Hill Road	USA
Robert Davis	Financial Officer and Global	Kenilworth, NJ 07033	USA
	Services, Merck & Co., Inc.		
Richard R. DeLuca, Jr.	Executive Vice President and	Giralda Farms 2	USA
	President, Merck Animal Health	Madison, NJ 07940	
Katie Fedosz	Senior Assistant Secretary, Merck &	2000 Galloping Hill Road	USA
	Co., Inc.	Kenilworth, NJ 07033	
Julie Gerberding	Executive Vice President for	770 Sumneytown Pike,	USA
	Strategic Communications, Global	West Point, PA 19486	
	Public Policy and Population Health,		
	Merck & Co., Inc.		
Clark Golestani	Executive Vice President and Chief	3070 Route 22 West	USA
	Information Officer, Merck & Co.,	Branchburg, NJ 08876-3598	
Mirian M. Graddick-Weir	Inc.	2000 Colloping Hill Dood	USA
MIIIAII MI. GIAUUICK-WEII	Executive Vice President, Human Resources, Merck & Co., Inc.	2000 Galloping Hill Road Kenilworth, NJ 07033	USA
Michael J. Holston	Executive Vice President and General	-	USA
Witchact 5. Horston	Counsel, Merck & Co., Inc.	Kenilworth, NJ 07033	0.5/1
Rita Karachun	Senior Vice President Finance –	2000 Galloping Hill Road	USA
	Global Controller, Merck & Co., Inc.	Kenilworth, NJ 07033	0011
Juanita Lee	Assistant Treasurer, Merck & Co.,	2000 Galloping Hill Road	USA
	Inc.	Kenilworth, NJ 07033	
Mark McDonough	Senior Vice President and Treasurer,	2000 Galloping Hill Road	USA
-	Merck & Co., Inc.	Kenilworth, NJ 07033	
Roger Perlmutter	Executive Vice President and	2000 Galloping Hill Road	USA
	President, Merck Research	Kenilworth, NJ 07033	
	Laboratories		
Joseph Promo	Assistant Treasurer, Merck & Co.,	2000 Galloping Hill Road	USA
	Inc.	Kenilworth, NJ 07033	
Geralyn Ritter	Senior Vice President, Corporate	2000 Galloping Hill Road	
	Secretary and Assistant General	Kenilworth, NJ 07033	
	Counsel, Merck & Co., Inc.		

Michael Rosenblatt, M.D.	Executive Vice President and Chief Medical Officer, Merck & Co., Inc.	2000 Galloping Hill Road Kenilworth, NJ 07033	USA
Adam H. Schechter	Executive Vice President and President, Global Human Health, Merck & Co., Inc.	600 Corporate Drive, Lebanon, NJ 08833	USA
Mark Simon	Assistant Treasurer, Merck & Co., Inc.	2000 Galloping Hill Road Kenilworth, NJ 07033	USA

# MERCK & CO., INC.

# DIRECTORS

Kenneth C. Frazier	Chairman, President and Chief Executive Officer, Merck & Co., Inc.	2000 Galloping Hill Road Kenilworth, NJ 07033	USA
Leslie A. Brun	Chairman and Chief Executive Officer, Sarr Group, LLC	435 Devon Park Drive, 700 Building, Wayne, PA 19087	USA
Thomas R. Cech	Investigator, Howard Hughes Medical Institute and Faculty, University of Colorado.	University of Colorado, University Chemistry Building 215, Boulder, CO 80309-0215	USA
Thomas H. Glocer	Retired Chief Executive Officer, Thomson Reuters Corporation	19 West 44th Street, 18th Floor, New York, NY 10036	USA
Pamela J. Craig	Former Chief Financial Officer, Accenture, plc	c/o Merck & Co., Inc. 2000 Galloping Hill Road Kenilworth, NJ 07033	USA
C. Robert Kidder	Former Chairman and Chief Executive Officer, 3Stone Advisors LLC	191 West Nationwide Boulevard, Suite 600, Columbus, OH 43215	USA
Rochelle B. Lazarus	Chairman Emeritus, Ogilvy & Mather	636 11th Avenue, New York, NY 10036-2010	USA
Carlos E. Represas	Retired Chairman, Grupo Nestle Mexico	Av. Ejercito Nacional No. 453, Colonia Granada, 11520 Mexico, D.F., Mexico	Mexico & Spain
Paul B. Rothman, M.D.	Dean of Medical Faculty and Vice President for Medicine, The Johns Hopkins University, and CEO John Hopkins Medicine	733 N. Broadway, Suite 100 Baltimore, MD 21205-2196	USA
Patricia F. Russo	Chairman, Hewlett Packard Enterprise Company	600 Mountain Avenue, Murray Hill, NJ 07974	USA
Craig B. Thompson	President and Chief Executive Officer of Memorial Sloan- Kettering Cancer Center	Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, Room M110 New York, NY 10065	USA
Wendell P. Weeks	President, Chairman and Chief Executive Officer, Corning Incorporated	1 Riverfront Plaza, Corning, NY 14831-0001	USA
Peter C. Wendell	Managing Director, Sierra Ventures	1400 Fashion Island Blvd. Suite 1010 San Mateo, CA 94404	USA