

UNITED STATES SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, DC 20549

FORM 10-K/A

Amendment No. 1

(Mark One)

- ANNUAL REPORT PURSUANT TO SECTION 13 OR 15 (d) OF THE SECURITIES EXCHANGE ACT OF 1934  
For the fiscal year ended December 31, 2018
- TRANSITION REPORT PURSUANT TO SECTION 13 OR 15 (d) OF THE SECURITIES EXCHANGE ACT OF 1934  
For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission File Number: 000-17082

**Novelion Therapeutics Inc.**

(Exact Name of Registrant as Specified in Its Charter)

British Columbia, Canada  
(State or Other Jurisdiction of  
Incorporation or Organization)

98-0455702  
(IRS Employer  
Identification Number)

c/o Norton Rose Fulbright  
1800 - 510 West Georgia Street, Vancouver, BC V6B 0M3 Canada

(Address of Principal Executive Offices, including Zip Code)

(877) 764-3131

(Registrant's telephone number, including area code)

SECURITIES REGISTERED PURSUANT TO SECTION 12(b) OF THE ACT:

<u>Title of each class</u>	<u>Name of each exchange on which registered</u>
Common shares, without par value	The NASDAQ Global Select Market

SECURITIES REGISTERED PURSUANT TO SECTION 12(g) OF THE ACT:

None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. Yes  No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes  No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer,"

“smaller reporting company,” and “emerging growth company” in Rule 12b-2 of the Exchange Act.

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
Emerging growth company	<input type="checkbox"/>		

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes  No

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. Yes  No

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant as of June 30, 2018 was approximately \$47,871,556, based upon the closing price on the NASDAQ Select Global Market reported for such date.

The number of shares outstanding of the registrant’s Common Stock as of April 22, 2019 was 19,043,618.

AMENDMENT NO.1 TO ANNUAL REPORT ON FORM 10-K

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EXPLANATORY NOTE

Novelion Therapeutics Inc. (the “Company”) is filing this Amendment No. 1 to its Annual Report on Form 10-K (“Amendment”), originally filed with the Securities and Exchange Commission (the “SEC”) on March 15, 2019 (the “Initial Filing”), solely for the purpose of amending and supplementing Part III of the Annual Report on Form 10-K. This Amendment changes our Initial Filing by including information required by Part III (Items 10, 11, 12, 13 and 14).

In addition, in connection with the filing of this Amendment, we are including new certifications of our principal executive officer and principal financial officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. Accordingly, Item 15 of Part IV of the Initial Filing has also been amended to reflect the filing of the new certifications.

This Amendment contains “forward-looking statements,” “forward-looking information” and “financial outlooks” as such terms are defined in the Initial Filing under the section titled “Forward-Looking Statements.” Reference should be made to this section of the Initial Filing and the entirety of this section is hereby incorporated by reference into this Amendment.

Except as contained herein, this Amendment does not modify or update disclosures contained in the Initial Filing. This Amendment should be read in conjunction with the Company’s other filings made with the SEC subsequent to the date of the Initial Filing.

## PART III

### Item 10. Directors, Executive Officers and Corporate Governance

#### Background of Directors and Executive Officers

Set forth below are the name and age of each of our current directors and the positions held by each director with us, each director's principal occupation and business experience during the last five years, and the year of the commencement of each director's term as a director. Additionally, for each director, included below is information regarding the specific experience, qualifications, attributes and skills that contributed to the decision of the Board of Directors of the Company (the "Board") to nominate such director for election as a director and the names of other publicly held companies of which such director serves or has served as a director in the previous five years. There is no family relationship between any of our directors, director nominees or executive officers. Except as otherwise disclosed below, no director was selected as a director or nominee pursuant to any arrangement or understanding.

#### *Directors*

**Suzanne Bruhn, Ph.D.**, age 55, has served as a director of Novelson since October 2017. Dr. Bruhn served as the President and Chief Executive Officer of Proclara Biosciences, Inc., a clinical-stage biotechnology company, or Proclara, from April 2017 to September 2018. Prior to joining Proclara, from May 2012 to November 2015, Dr. Bruhn served as President and Chief Executive Officer of Promedior, Inc., a clinical-stage biotechnology company. She also served as a member of the board of directors of Raptor Pharmaceuticals Corp., a publicly traded biopharmaceutical company, from 2011 until it was acquired by Horizon Pharma in 2016. Previously, Dr. Bruhn served in a number of roles of increasing responsibility at Shire, a biopharmaceutical company, from 1998 until 2012, most recently as Senior Vice President, Strategic Planning and Program Management. Dr. Bruhn currently also serves on the board of directors of Aeglea BioTherapeutics, Inc., a publicly traded biotechnology company focused on the treatment of rare genetic diseases and cancer, and Pliant Therapeutics, a private biotechnology company. Dr. Bruhn received her B.S. degree in Chemistry from Iowa State University and her Ph.D. in Chemistry from Massachusetts Institute of Technology.

The Board has concluded that Dr. Bruhn is well-qualified to serve on the Board and has the requisite qualifications, skills and perspectives derived from her extensive experience in the biopharmaceutical industry, including her expertise in the development and commercialization of treatments for rare diseases.

**Mark Corrigan, M.D.**, age 61, has served as a director of Novelson since March 2017 and as Chairman of the Board since March 2019. From July 2018 to March 2019, Dr. Corrigan served as Executive Chair of the Board. Since March 2019, Dr. Corrigan has been serving as the Chief Executive Officer of Correvio Pharma Corp. (formerly Cardiome Pharma Corp), a publicly-traded specialty pharmaceutical company, where he has been serving on the board of directors since 2015. He has also been serving on the supervisory board of Nabriva Therapeutics AG, a publicly-traded biopharmaceutical company since 2016. From 2015 to March 2017, Dr. Corrigan served as a director of CoLucid Pharmaceuticals, Inc., a publicly-traded biopharmaceutical company, until its acquisition by Eli Lilly and Company. From 2014 to 2016, Dr. Corrigan served as Chair of the board of directors of EPIRUS Biopharmaceuticals, Inc. ("EPIRUS"), which filed for bankruptcy in July 2016. Prior to that, Dr. Corrigan served as President and Chief Executive Officer of Zalicus Inc. ("Zalicus"), from January 2010 until the completion of Zalicus's merger with EPIRUS in July 2014. From 2013 to 2015, Dr. Corrigan served on the board of directors of Avanir Pharmaceuticals, Inc., a publicly-traded company, chairing the Scientific Committee, and serving on the Nominating and Corporate Governance Committee, until its acquisition by Otsuka Pharmaceuticals Co., Ltd. From 2008 to 2015, Dr. Corrigan served on the board of directors of Cubist Pharmaceuticals, Inc., a publicly-traded biopharmaceutical company, serving on the Audit Committee and the Nominating and Governance Committee and chairing the Scientific Affairs Committee, until its acquisition by Merck & Co., Inc. From 2003 to 2009, Dr. Corrigan was Executive Vice President, Research & Development of Sepracor, Inc., which is now Sunovion Pharmaceuticals Inc., a biopharmaceutical company ("Sunovion"). Prior to joining Sunovion, Dr. Corrigan spent 10 years with Pharmacia & Upjohn, Inc., which was a global pharmaceutical company prior to its acquisition by Pfizer Inc., most recently as Group Vice President of Global Clinical Research and Experimental Medicine. Dr. Corrigan spent five years in academic research at the University of North Carolina Medical School, focusing on psychoneuroendocrinology, before joining the pharmaceutical industry. Dr. Corrigan holds a B.A. and an M.D. from the University of Virginia and received specialty training in psychiatry at Maine Medical Center and Cornell University.

The Board has concluded that Dr. Corrigan is well-qualified to serve on the Board and has the requisite qualifications, skills and perspectives derived from his extensive experience in the biopharmaceutical industry, including as a director and executive officer of publicly-traded biotechnology companies, as well as his scientific background.

**John Orloff, M.D.**, age 61, has served as a director of Novilion since July 2017. Dr. Orloff is Executive Vice President, Head of Research and Development at Alexion Pharmaceuticals, Inc., a publicly-traded global biopharmaceutical company. Prior to this, Dr. Orloff was Executive Vice President, Research and Development at Novilion from November 2016 to July 2017, following Novilion's acquisition of Aegerion Pharmaceuticals, Inc. ("Aegerion"), where Dr. Orloff had been Executive Vice President, Research and Development since November 2016. Prior to joining Aegerion, Dr. Orloff served as Executive Vice President, Global Head of Research and Development and Chief Scientific Officer of Baxalta, Inc., a biopharmaceutical company, from July 2015 to June 2016. Prior to Baxter International's spinout of its Baxter BioScience global biopharmaceutical business into Baxalta, Inc., Dr. Orloff served as Global Head of Research and Development for Baxter BioScience from July 2014 to June 2015. Prior to Baxter BioScience, he served as Senior Vice President, Global Head of Clinical Development at Merck Serono Pharmaceuticals from January 2014 to May 2014. Between 2003 and 2013, Dr. Orloff held a series of positions at Novartis Pharma AG, a global healthcare company, including Senior Vice President and Chief Medical Officer. Dr. Orloff completed his internal medicine residency at University of Pittsburgh Medical Center and his endocrinology and metabolism fellowship at Yale University School of Medicine, where he also spent seven years on the faculty. He holds an M.D. from University of Vermont College of Medicine and a B.A. from Dartmouth College.

The Board has concluded that Dr. Orloff is well-qualified to serve on the Board and has the requisite qualifications, skills and perspective based on his extensive experience in the biopharmaceutical industry and institutional knowledge gained while a member of Novilion's senior management.

**Stephen Sabba, M.D.**, age 60, has served as a director of Novilion since 2012. Currently, Dr. Sabba is also a Partner and Health Care Portfolio Manager at Knott Partners, LP, an investment fund, and a director of Ligand Pharmaceuticals Inc., a public biotechnology company, positions he has held since 2006 and 2008, respectively. Previously, from 2001 to 2006, he was a Partner and Director of Research with Kilkenny Capital Management, a Chicago-based hedge fund. Dr. Sabba received his medical degree from the New York University School of Medicine, and completed a residency in internal medicine and a fellowship in gastroenterology at the Veterans Administration Medical Center in New York City. He earned a B.S. degree with honors at Cornell University.

The Board has concluded that Dr. Sabba is well-qualified to serve on the Board and has the requisite qualifications, skills and perspectives based on his capital markets and financial expertise gained from his experience working in the hedge fund and investment fund industries.

**Donald Stern**, age 73, has served as a director of Novilion since November 2016 and, prior to joining our Board, was a member of Aegerion's board of directors since September 2015. Mr. Stern is Managing Director of Corporate Monitoring & Consulting Services at Affiliated Monitors Inc., a consulting firm providing independent integrity monitoring services and compliance services across a wide range of regulated industries and professions. He is also Of Counsel to Yurko, Salvesen, & Remz, PC, a boutique litigation law firm in Boston. Mr. Stern was United States Attorney for the District of Massachusetts from 1993 to 2001. He was also the chair of the U.S. Attorney General's Advisory Committee from 1996 to 1998. Mr. Stern served as the chief legal counsel to Governor Michael S. Dukakis from 1987 to 1990. He also spent seven years as an assistant attorney general in the Massachusetts Attorney General's office, where he held several positions, including Chief of the Government Bureau. Previously, Mr. Stern was a partner at three major law firms, Cooley LLP, Bingham McCutchen LLP, and Hale and Dorr LLP (now WilmerHale), where his law practice focused on internal investigations, white collar defense and business litigation. He has extensive experience representing companies and individuals in complex civil, criminal and regulatory matters, with clients across a spectrum of industries, including health care, pharmaceutical, and financial services. Mr. Stern was an Advisor to President Barack Obama's Justice Department Transition Team. He currently co-chairs the American Bar Association/DOJ White Collar Liaison Committee, and is a former President of the National Association of Former U.S. Attorneys. He was a liaison to the American Bar Association Task Force on Corporate Monitors. Mr. Stern has been on the faculty of Boston College Law School and Harvard Law School. He received his LL.M. from the University of Pennsylvania, his J.D. from Georgetown University Law Center, and his B.A. from Hobart College. He also received an honorary LL.D. from the New England School of Law. Mr. Stern is a member of the Board of Directors of Blue Cross and Blue Shield of Massachusetts.

The Board has concluded that Mr. Stern is well-qualified to serve on the Board and has the requisite qualifications, skills and perspectives based on his extensive experience as an adviser in corporate and government regulatory compliance.

**John C. Thomas, Jr.**, age 65, has served as a director of Novilion since 2012. Mr. Thomas has almost 40 years of experience in a variety of financial and accounting positions, with the last three decades spent in the medical, pharmaceutical and device fields. Currently, Mr. Thomas serves as Chief Financial Officer and Secretary of SmartPharm Therapeutics, Inc., a privately held genetics company, and as Chief Financial Officer, Secretary and Director of Motion Reality, Inc., a motion capture and simulation company, since 2018 and 1991, respectively, and rejoined DemeRx, Inc., a private medical company, as Chief Financial Officer in 2018, where he had previously been acting Chief Financial Officer from 2010 to 2011. Since 2014, Mr. Thomas has

served on the Board of Directors of NantKwest, Inc. a publicly-traded biotechnology company. From 2001 to 2018, Mr. Thomas served as Chief Financial Officer and Secretary of CorMatrix Cardiovascular, Inc., a privately-held medical device company, where, from 2001 to 2016, he also served as a director. From September 2013 until 2018, Mr. Thomas has served on the Board of Medovex, Inc., a publicly-traded medical device company. Additionally, during the past ten years, Mr. Thomas served as Chief Financial Officer for MRI Interventions, Inc. (1998 to 2010), MiMedx Group, Inc. (2007 to 2008) and DARA BioSciences (2003 to 2009); and as a director of MRI Interventions, Inc. (2004 to 2011) and DARA BioSciences (2012). Previously, from 1999 to 2012, Mr. Thomas also served as a trustee and subsequently the chairman of the Finance Committee of The Walker School, a private Pre-K through 12 grade school. Mr. Thomas is a Certified Public Accountant and graduated from the University of Virginia, McIntire School of Commerce with a B.S. in Commerce degree in 1975.

The Board has concluded that Mr. Thomas is well-qualified to serve on the Board and has the requisite qualifications, skills and perspectives based on his financial expertise and experience serving as Chief Financial Officer of a number of life science companies, his development stage company background, and his service on the Boards of pharmaceutical and medical device companies.

#### *Executive Officers*

The following table sets forth the name, age and positions of each of our current executive officers as of April 26, 2019:

<b>Name</b>	<b>Age</b>	<b>Position(s) with the Company</b>
BEN HARSHBARGER	50	Interim Chief Executive Officer (“CEO”) and General Counsel
MICHAEL D. PRICE	61	Executive Vice President (“EVP”) and Chief Financial Officer
LINDA BUONO	53	Senior Vice President, Human Resources
ROGER LOUIS	64	Global Chief Compliance Officer and Interim Head of Research and Development (“R&D”)

**Ben Harshbarger** has served as our Interim CEO since November 2018 and as our General Counsel since November 2016. Mr. Harshbarger was Acting General Counsel at Aegerion from September 2015 to August 2016 and General Counsel from August 2016 to November 2016. Prior to that, he served as Aegerion’s VP, EMEA Legal Counsel from January 2014 to September 2015 and as Aegerion’s VP, Deputy General Counsel from April 2012 to January 2014. Before joining Aegerion, Mr. Harshbarger served as Senior Director, Corporate Counsel at Cubist Pharmaceuticals, Inc. from March 2008 to March 2012, and Senior Director, Deputy General Counsel at ViaCell, Inc. from March 2006 to March 2008. Mr. Harshbarger served in several legal positions of increasing responsibility at Biogen Idec Corporation from November 2001 to March 2006 and served as an associate at the law firm of Mintz Levin from 1996 to 2001. Mr. Harshbarger has a J.D. from Boston College Law School and a B.A. from the University of Richmond.

**Michael D. Price** has served as our EVP and Chief Financial Officer since July 16, 2018 and, prior to that, as our Senior Vice President and Chief Financial Officer since December 4, 2017. Prior to joining Novilion in November 2017 as Senior Vice President, Finance, Mr. Price served as Vice President and Chief Financial Officer for Noven Pharmaceuticals from November 2007 to March 2016. Noven was publicly traded until its acquisition by Hisamitsu Pharmaceutical Company in August 2009. Prior to joining Noven in 2007, Mr. Price was Vice President, Chief Financial Officer, Treasurer, and Secretary for Bentley Pharmaceuticals, a publicly-traded pharmaceutical company, from March 1992 until September 2006. Mr. Price began his career with Price Waterhouse (now PricewaterhouseCoopers), where his client base was concentrated in the life sciences/healthcare sector. Mr. Price is a certified public accountant. He holds a B.S. degree in Business Administration (Accounting) from Auburn University and a M.B.A. degree from Florida State University.

**Linda Buono** has served as our Senior Vice President, Human Resources since November 2016. Prior to this, Ms. Buono was Senior Vice President, Human Resources at Aegerion from August 2016 to November 2016. From March 2016 to August 2016, she served as Aegerion’s Vice President, Human Resources. Prior to that, Ms. Buono, held a series of positions with ImmunoGen, most recently as Executive Director, Human Resources since July 2013 and Senior Director, Human Resources from July 2008 through June 2013.

**Roger Louis** has served as our Interim Head of R&D since October 2018 and as our Senior Vice President, Global Chief Compliance Officer since November 2016. Prior to this, Mr. Louis was Senior Vice President, Global Chief Compliance Officer at Aegerion from November 2015 to November 2016. Mr. Louis has extensive experience in compliance and risk management having served most recently as Senior Vice President, Compliance & Risk Management, Chief Compliance Officer at Cubist Pharmaceuticals from August 2013 until its acquisition by Merck in January 2015. Mr. Louis joined Cubist Pharmaceuticals from Biogen Idec Corporation where he was Senior Vice President, Chief Compliance Officer. From 1997 to 2012, he held positions

of increasing responsibility at Genzyme Corporation, including Senior Vice President, Chief Compliance Officer. Mr. Louis began his legal career as an Associate at Hale & Dorr LLP (now WilmerHale) in Boston where he practiced corporate and securities law. Mr. Louis received his J.D. from University of Chicago School of Law and his B.A. from Tufts University.

#### **Code of Conduct**

Novelion has adopted a Global Code of Conduct (the “Code of Conduct”) which is applicable to all directors, officers and employees of Novelion and its affiliates. As further described in the charter of the Audit Committee of the Board (the “Audit Committee”), the Audit Committee is responsible for reviewing, at least on an annual basis and with management and its principal financial and accounting officer, compliance with the Code of Conduct, the adequacy of and any requests for waivers under the Code of Conduct and to make recommendations to the Board with regard to any waiver sought with respect to any executive officer or director. As further described in the charter of the Compliance Committee of the Board (the “Compliance Committee”), the Compliance Committee is responsible for reviewing and assessing the adequacy of the Code of Conduct periodically, but at least annually, and to recommend any proposed changes to the Board for approval.

The Code of Conduct and the charters of the Board’s standing committees, including the Audit Committee and the Compliance Committee, are available on Novelion’s website at [www.novelion.com](http://www.novelion.com). We intend to disclose on our website any amendment or waiver of a provision of the Code of Conduct that is required to be disclosed by applicable SEC rules and regulations.

Novelion complies with the provisions of the *Business Corporations Act* (British Columbia) (the “BCBCA”) that deal with conflict of interest situations. Novelion, through directors’ and officers’ questionnaires and other systems, also gathers and monitors relevant information in relation to potential conflicts of interest that a director or officer may have. As part of these systems, Novelion adopted a Related Party Transaction Policy under which the Audit Committee will review and pre-approve or otherwise ratify all Novelion “interested transactions,” including, with certain exceptions, any transaction, arrangement or relationship in excess of \$50,000 in value in any calendar year and of which a “related person” has or will have a direct or indirect interest. A “related person” includes Novelion’s executive officers, directors and nominees for director, greater than 5% beneficial owners, and their respective associates, affiliates and immediate family members.

#### **Audit Committee**

The Company has a separately-designated standing Audit Committee which has been established in accordance with Section 3(a)(58)(A) of the Securities Exchange Act of 1934 (the “Exchange Act”). The Audit Committee currently consists of Mr. Thomas (Chairman), Dr. Sabba and Dr. Corrigan. The Board has adopted a written charter for the Audit Committee. A copy of the charter is available on Novelion’s website at [www.novelion.com](http://www.novelion.com).

The Board has determined that each member of the Audit Committee is “independent” as that term is defined under Rule 10A-3 of the Exchange Act, applicable Canadian securities rules, and applicable The NASDAQ Global Select Market (“NASDAQ”) rules. Each member of the Audit Committee meets the requirements for financial literacy under the applicable rules and regulations of the SEC, Canadian securities rules, and NASDAQ.

#### **Section 16(a) Beneficial Ownership Reporting Compliance**

Section 16(a) of the Exchange Act requires our directors, our executive officers and beneficial owners of more than ten percent of Novelion’s common shares to file with the SEC reports of their initial ownership and changes in their ownership of Novelion’s common shares and other equity securities. We are required to disclose herein any late filings of such reports. Based solely on a review of copies of reports filed by the reporting persons furnished to us, or written representations from reporting persons, we believe that all reporting persons timely complied with all applicable filing requirements, except that Forms 4 were not timely filed by Mr. Harshbarger in respect of shares that were withheld to satisfy tax obligations upon vesting of certain of his restricted stock units. The withholdings occurred during May and September of 2018, but the Form 4 was not filed until November 5, 2018.

#### **Item 11. Executive Compensation**

##### **2018 Summary Compensation Table**

The following table summarizes total compensation, for services rendered in all capacities, paid or earned by our named executive officers (“NEOs”) during the fiscal years ended December 31, 2018 and 2017.

Name and Principal Position	Year	Salary (\$)	Bonus (\$)	Stock Awards (\$) (1)	Option Awards (\$) (2)	Non-Equity Incentive Plan Compensation (\$) (3)	All Other Compensation (\$)	Total (\$)
Ben Harshbarger, Interim CEO and General Counsel	2018	\$ 444,000 <sup>(4)</sup>	\$ —	\$ —	\$ 85,901	\$ —	\$ 8,970 <sup>(5)</sup>	\$ 538,871
	2017	374,673	—	—	215,355	141,750	8,100	739,878
Michael D. Price, EVP and Chief Financial Officer	2018	416,923 <sup>(6)</sup>	—	—	—	—	175,630 <sup>(7)</sup>	592,553
	2017	39,904	—	79,400	165,580	—	2,463	287,347
Roger Louis, Global Chief Compliance Officer and Interim Head of R&D	2018	360,500	—	—	47,723	—	9,243 <sup>(5)</sup>	417,466
	2017	352,313	—	—	—	105,000	8,100	465,413
Jeffrey Hackman, former Interim CEO <sup>(8)</sup>	2018	456,683 <sup>(9)</sup>	—	—	—	—	8,850 <sup>(5)</sup>	465,533
	2017	79,385	—	671,175	262,292	—	554	1,013,406
Murray Stewart, former EVP, R&D <sup>(10)</sup>	2018	448,000	—	—	85,901	—	23,455 <sup>(7)</sup>	557,356
	2017	53,846	—	198,500	331,160	—	7,293	590,799

(1) This column represents the aggregate grant date fair value of the restricted stock units, calculated in accordance with ASC Topic 718, *Compensation - Stock Compensation* (“ASC Topic 718”). Such aggregate grant date fair values do not take into account any estimated forfeitures related to service-based vesting conditions. The valuation assumptions used in determining such amounts are described in Note 12 to the audited consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2018. The amounts reflect the accounting cost for the restricted stock units and do not correspond to the actual economic value that may be received by the NEOs upon vesting or settlement of the restricted stock units.

(2) This column represents the aggregate grant date fair value of the stock options, calculated in accordance with ASC Topic 718. Such aggregate grant date fair date values do not take into account any estimated forfeitures related to service-based vesting conditions. The valuation assumptions used in determining such amounts are described in Note 12 to the audited consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2018. The amounts reflect the accounting cost for the stock options and do not correspond to the actual economic value that may be received by the NEOs upon exercise of the stock options or the sale of any underlying common shares.

(3) For 2017, this column represents the cash bonuses earned by the NEOs for the year under our annual cash award plan, based on our achievement of corporate performance goals. For 2018, given the resignations of Mr. Hackman and Dr. Stewart during the fourth quarter of the year, the only NEOs who would have been eligible for annual cash awards attributable to 2018 performance were Mr. Harshbarger, Mr. Price and Mr. Louis. None of these eligible NEOs received 2018 performance-based cash awards as a result of the replacement of the 2018 annual performance-based cash award plan by the Key Executive Incentive Plan in November 2018, discussed below.

(4) Mr. Harshbarger’s base salary was increased to \$480,000 from \$441,000, effective December 1, 2018.

(5) For Mr. Harshbarger and Mr. Hackman, the “All Other Compensation” column for 2018 represents 401(k) plan contributions from the Company and parking allowance. For Mr. Louis, the “All Other Compensation” column for 2018 represents 401(k) plan contributions from the Company, parking allowance and reimbursement for gym membership.

(6) Mr. Price’s base salary was increased to \$440,000 from \$415,000, effective December 1, 2018.

(7) For Mr. Price and Dr. Stewart, the “All Other Compensation” column for 2018 represents the following:

Name	Year	Reimbursement for Housing and Commuting Allowance (a)	401(k) Plan Contributions	Tax Gross-Ups for Benefits Provided to NEOs	Other	Total
Michael D. Price, EVP and Chief Financial Officer	2018	\$ 95,207	\$ 8,250	\$ 72,173	\$ —	\$ 175,630
Murray Stewart, former EVP, R&D	2018	5,911	8,250	8,734	560	23,455

(a) Represents the following: for Mr. Price, amounts paid to or on behalf of him in connection with temporary housing and commuting in his role as EVP and Chief Financial Officer of the Company; for Dr. Stewart, amounts paid to or on behalf of him in connection with temporary housing and commuting in his former role as EVP, R&D of the Company.

(8) Mr. Hackman was appointed as our Chief Operating Officer on November 1, 2017 and was appointed as our Interim Chief Executive Officer on July 2, 2018. He served in that capacity until November 19, 2018, but remained as an employee of the Company until November 30, 2018. Mr. Hackman did not receive any severance in connection with his resignation.

(9) The amount represents Mr. Hackman’s base salary and the cash payment for his unused vacation upon his resignation.

(10) Dr. Stewart was appointed as our EVP, R&D on November 27, 2017. He served in that capacity until October 17, 2018 and did not receive any severance

in connection with his resignation.

## Narrative Disclosure to Summary Compensation

### Overview of Our Key 2018 Compensation Elements

The compensation that our NEOs were initially eligible for in 2018 primarily consisted of annual base salary, annual performance-based cash awards and equity incentives, in the form of stock options. As noted below, for certain of our executive officers, the 2018 annual performance-based cash award plan was replaced by the Key Executive Incentive Plan in November 2018, and therefore no annual performance-based cash awards were made to our current executive officers for 2018 performance. Below is a description of our key NEO compensation elements for 2018.

**Base Salary.** During the first quarter of 2018, as part of our annual performance review cycle, the Compensation Committee approved increases in the base salaries of Mr. Harshbarger, from \$420,000 to \$441,000, effective January 1, 2018 and Mr. Louis, from \$350,000 to \$360,500, effective January 1, 2018. The Compensation Committee did not increase the salaries of our other NEOs during this performance cycle given that each of them started employment with us in the fourth quarter of 2017. In addition, in November 2018, the Board and the Compensation Committee approved an increase to Mr. Harshbarger's base salary from \$441,000 to \$480,000, effective December 1, 2018, in connection with Mr. Harshbarger's promotion to Interim CEO, and an increase to Mr. Price's salary from \$415,000 to \$440,000, effective December 1, 2018.

**Annual performance-based cash awards.** The Compensation Committee has the authority to award annual performance-based cash awards to our executive officers, including our NEOs (other than our CEO), and to recommend such awards for the CEO to the Board for approval. These awards, if made, would be based upon the level of achievement against pre-established corporate goals. Given the resignations of Mr. Hackman and Dr. Stewart during the fourth quarter of 2018, the only NEOs who would have been eligible for annual cash awards, attributable to 2018 performance, were Mr. Harshbarger, Mr. Price and Mr. Louis. None of these eligible NEOs received 2018 performance-based cash awards as a result of the replacement of the 2018 annual performance-based cash award plan by the Key Executive Incentive Plan in November 2018.

**Key Executive Incentive Plan.** In November 2018, the Board and the Compensation Committee approved a retention plan which was subsequently amended and restated on March 22, 2019 (the "Key Executive Incentive Plan") for certain executive officers, including Mr. Harshbarger, Mr. Price and Mr. Louis. Under the terms of the Key Executive Incentive Plan, participants will be entitled to a bonus opportunity, payable in four tranches, based on the levels of achievement by the Company of a cumulative net operating cash flow target (the "NOCF") over the course of three performance periods (which, together, represent 60% of the aggregate payout (the "NOCF Portion")) and the completion of a transaction (the "Transaction Event" and the date on which the Transaction Event occurs, the "Transaction Date") in connection with the Company's review of strategic alternatives (representing 40% of the aggregate payout (the "Transaction Event Portion")) and, together with the NOCF Portion, the ("Total Target Award"), as follows:

Tranche	Metric	Payout	Measurement Period
One	NOCF	25% of the NOCF Portion	November 4, 2018 through February 28, 2019
Two	NOCF	25% of the NOCF Portion*	November 4, 2018 through June 30, 2019
Three	NOCF	50% of the NOCF Portion***	November 4, 2018 through the Transaction Date**
Four	Transaction Event	100% of the Transaction Event Portion	Transaction Date

\* New payout opportunity included as part of the March 2019 amendments.

\*\* If the Transaction Date occurs prior to September 30, 2019, then achievement of the NOCF metric shall be determined as of the end of the last completed calendar month preceding the Transaction Date. If the Transaction Date takes place after September 30, 2019, this NOCF period will be extended to the date upon which the Transaction Date occurs and the achievement of the NOCF metric shall be determined as of the end of the last completed calendar month preceding the Transaction Date.

\*\*\* March 2019 amendments reduced this tranche to 50% from 75% in light of the new Tranche Two above.

The NOCF Portion is subject to a minimum level of achievement, at which level the participant would be eligible to receive 50% of the target NOCF Portion, and is capped at a payout of 120% of the target NOCF Portion if the NOCF performance meets or exceeds the maximum performance level (if the minimum level of achievement is not attained, no amount is payable)

under the NOCF Portion). If performance is between the minimum and target performance levels or the target and maximum performance levels, then the amount of the NOCF Portion shall be determined by linear interpolation.

The Transaction Event Portion is subject to increase based on an award modifier depending on the type of Transaction Event (if any), and based on the consummation date of such Transaction Event, which modifier could increase the target Transaction Event Portion by a maximum of 25%.

A participant's right to the Total Target Award will be forfeited upon an employee's voluntary termination prior to the date on which such award is paid. However, in the event of death or disability, termination by the Company without cause or a resignation by the participant with good reason, in each case prior to the applicable payment date, the amounts payable under the Total Target Award will be prorated for the number of completed months the participant was actively employed during the applicable performance period, and measured based upon actual performance at the end of each Measurement Period. Further, if a participant resigns other than for good reason or is terminated for cause, in each case within 90 days following receipt of any portion of the Total Target Award (the "Clawback Period"), the value of all payouts paid to such participant within the Clawback Period (on an after-tax basis) shall be repaid to the Company. For purposes of calculating the prorated payment amount for the second and third NOCF tranches, the number of completed calendar months shall be based on commencement dates of March 1, 2019 and July 1, 2019, respectively.

Pursuant to the Key Executive Incentive Plan, Mr. Harshbarger is eligible for a Total Target Award of \$840,000, Mr. Price is eligible for a Total Target Award of \$440,000, and Mr. Louis is eligible for a Total Target Award of \$288,400. As part of the March 2019 amendments to the Key Executive Incentive Plan, each of Mr. Harshbarger, Mr. Price and Mr. Louis received his respective first NOCF payment at the target level of payout despite having exceeded the maximum level of achievement as consideration for the additional, incremental payout opportunity at the new June 2019 measurement period. The March 2019 amendments did not increase any award opportunities (at threshold, target or maximum amounts) or reduce any performance metrics for any participants. Rather, the March 2019 amendments re-allocated the potential payments and adjusted the performance measurement periods in light of the expected timing to complete our review of strategic alternatives.

*Long-Term Incentive Awards.* We currently maintain one equity compensation plan, the 2017 Equity Incentive Plan (the "Equity Incentive Plan"), under which we may grant time-based stock options, time-based restricted stock units and/or performance-based restricted stock units, as applicable, to directors, officers, including our NEOs, employees and key consultants of the Company and its affiliates.

In February 2018, as part of annual performance review cycle, we made the following equity awards to our NEOs. Neither Mr. Price nor Mr. Hackman received an equity award as part of the 2018 annual performance cycle given the timing, size and type of equity awards that they received when they joined the Company in November 2017.

NEOs	Shares Subject to Time-Based Stock Option
Ben Harshbarger	45,000
Roger Louis	25,000
Murray Stewart	45,000 (1)

(1) The option granted to Dr. Stewart was cancelled in its entirety in connection with his resignation from the Company in October 2018.

#### *Other Compensation*

*Broad-based benefit programs.* We currently maintain broad-based employee benefits that are provided to our NEOs, including health insurance, life and disability insurance, and dental and vision insurance.

*401(k) Plan.* Our U.S.-based employees, including our NEOs, are eligible to participate in our tax-qualified 401(k) plan, which provides participants with an opportunity to save for retirement on a tax-advantaged basis. Our 401(k) plan permits employees to make contributions up to the statutory limit. We have the discretion to match up to 50% of the first 6% of gross wages that an employee contributes, resulting in a maximum match by us that totals up to 3% of an employee's gross wages (as further limited by statutorily defined annual compensation limits). We matched 50% of the first 6% of employee contributions in 2018 (subject to statutory limits).

*Perquisites; Other Benefits.* We provide certain perquisites and personal benefits to our NEOs. See below, in the section entitled "Employment Arrangements with our current NEOs," for a more detailed description of the perquisites and/or personal

benefits that we provided in 2018 to our NEOs. In general, we provide each of our NEOs with the Canadian tax support, in order to ensure that they are in a comparable tax position, both in terms of taxes paid and payments for tax services, as they would have been had they not been required to work and pay taxes in Canada. We also provide certain housing and commuting benefits and certain moving expenses to certain of our NEOs who reside outside of the Cambridge, Massachusetts area. In addition, we pay tax-gross ups for certain of these benefits.

#### ***Employment Agreements with our current NEOs***

##### *Compensation Arrangements for Ben Harshbarger, Interim CEO, General Counsel*

We entered into an employment agreement with Mr. Harshbarger, dated November 28, 2016, as amended on August 28, 2017. The employment agreement, as amended, provides for Mr. Harshbarger's initial annual base salary (subject to increase by the Board), initial annual target bonus and eligibility to participate in our health insurance and other benefits, generally. Mr. Harshbarger's current annual base salary is \$480,000 and his current annual target bonus is 45% of base salary. We also agreed to reimburse Mr. Harshbarger for incurrence of reasonable expenses for independent tax consultation regarding Canadian tax obligations in connection with service in Canada up to \$5,000 on an annual basis, as well as tax equalization payments for Mr. Harshbarger's services in Canada and fees associated with the calculation of such payments. Mr. Harshbarger's employment agreement also includes severance and other benefits that would be paid to Mr. Harshbarger in the event of certain types of termination of employment, as described below. Mr. Harshbarger is subject to the restrictive covenants in the Company's standard Confidentiality, Assignment of Intellectual Property and Non-Competition agreement.

##### *Compensation Arrangements of Michael D. Price, EVP, Chief Financial Officer*

We entered into an employment agreement with Mr. Price on December 4, 2017, which was subsequently amended in April 2018 and July 2018. The employment agreement, as amended, provides for Mr. Price's annual base salary (subject to increase by the Board), annual target cash bonus based on achievement of certain performance goals with a target of 50% of his base salary, and eligibility to participate in our health insurance and other benefits, generally. Mr. Price's current base salary is \$440,000 and his current annual target bonus is 50% of base salary. Under his original employment agreement, Mr. Price also received (a) a time-based option to purchase 100,000 of our common shares and (b) time-based restricted stock units representing 20,000 of our common shares. Additionally, during the term of his employment, until April 20, 2018, we were obligated to (a) provide Mr. Price with a temporary housing allowance of up to \$5,500 per month; and (b) weekly commuting costs not to exceed \$1,000, as well as a tax gross-up payment in the amount necessary to offset the tax liability associated with such allowances. Effective April 20, 2018, we are obligated to provide Mr. Price with an aggregate temporary housing and commuting allowance of up to \$9,500 per month, as well as a tax gross-up payment in the amount necessary to offset the tax liability associated with such allowances. We also agreed to reimburse Mr. Price for incurrence of reasonable expenses for independent tax consultation regarding Canadian tax obligations in connection with service in Canada up to \$5,000 on an annual basis, as well as tax equalization payments for Mr. Price's services in Canada and fees associated with the calculation of such payments. Mr. Price's employment agreement also includes severance and other benefits that would be paid to Mr. Price in the event of certain types of termination of employment, as described below. Mr. Price is subject to the restrictive covenants in the Company's standard Confidentiality, Assignment of Intellectual Property and Non-Competition agreement.

##### *Compensation Arrangements for Roger Louis, Global Chief Compliance Officer and Interim Head of R&D*

We entered into an employment agreement with Mr. Louis, dated November 28, 2016, as amended August 28, 2017. The employment agreement, as amended, provides for Mr. Louis' initial annual base salary (subject to increase by the Board), initial annual target bonus and eligibility to participate in our health insurance and other benefits, generally. Mr. Louis' current annual base salary is \$360,500, and his current annual target bonus is 40% of base salary. We also agreed to reimburse Mr. Louis for incurrence of reasonable expenses for independent tax consultation regarding Canadian tax obligations in connection with service in Canada up to \$5,000 on an annual basis, as well as tax equalization payments for Mr. Louis's services in Canada and fees associated with the calculation of such payments. Mr. Louis's employment agreement also includes severance and other benefits that would be paid to Mr. Louis in the event of certain types of termination of employment, as described below. Mr. Louis is subject to the restrictive covenants in the Company's standard Confidentiality, Assignment of Intellectual Property and Non-Competition agreement.

##### *Termination Arrangements with Messrs. Harshbarger and Louis*

###### *Involuntary Termination of Employment Not in Connection with a Change in Control*

Pursuant to their respective employment agreements, as amended, if the executive is terminated by us for any reason other than “Cause” (as defined in the applicable agreement) death or disability, or the executive resigns for “Good Reason” (as defined in the applicable agreement) then he will be entitled to the following, subject to his execution of a general release of claims in our favor and continued compliance with applicable restrictive covenants: (i) continued base salary for 12 months; and (ii) if he was participating in our group health plan immediately prior to the date of termination and elects COBRA health continuation, we will pay him an amount equal to our share of the premium for the executive’s group health coverage, for up to 12 months.

*Involuntary Termination of Employment in Connection with a Change in Control*

In the event of a termination by us for any reason other than Cause, death or disability, or the executive’s resignation for Good Reason, in each case within 18 months following a “Sale Event” (as defined in the applicable agreement), he will be entitled to the payments and benefits described above, as well as full accelerated vesting of all outstanding equity awards held by him as of the date of such termination, the target bonus for the year of termination and a portion of his target bonus for the year of termination, pro-rated for his employment during such year, in each case subject to his execution of a general release of claims in our favor and continued compliance with applicable restrictive covenants.

The payments and benefits provided under the employment agreement in connection with a Sale Event may not be eligible for federal income tax deduction for the Company pursuant to Section 280G of the Internal Revenue Code (“Code”). These payments and benefits may also be subject to an excise tax under Section 4999 of the Code. If the payments or benefits payable to the executive in connection with a Sale Event would be subject to the excise tax imposed under Section 4999 of the Code, then those payments or benefits may be reduced, at the discretion of the executive, if such reduction would result in a higher net after-tax benefit to him.

For purposes of the employment agreements:

“Cause” generally means (i) his failure (except where due to a disability), neglect or refusal to perform in any material respect his duties and responsibilities; (ii) any act by him that has, or could reasonably be expected to have, the effect of injuring our business in any material respect; (iii) his conviction of, or plea of guilty or no contest to (A) a felony or (B) any other criminal charge that has, or could be reasonably expected to have, an adverse impact on the performance of his duties or otherwise result in material injury to our reputation or business; (iv) his commission of an act of fraud or embezzlement against us, or any other act that creates or reasonably could create negative or adverse publicity for us; (v) any violation by him of our policies, including but not limited to those relating to sexual harassment or business conduct, and those otherwise set forth in our manuals or statements of policy; (vi) his violation of federal or state securities laws; or (vii) his breach of his employment agreement or breach of his confidentiality agreement.

“Good Reason” generally means that he has complied with the proper notification process following the occurrence of any of the following events (i) a material diminution of his responsibilities, authority or duties; (ii) a material diminution in his base salary except for across-the-board salary reductions applicable to all similarly situated executives; (iii) the relocation of his principal place of employment more than 50 miles from its current location; or (iv) our material breach of his employment agreement.

“Sale Event” generally means (i) the sale of all or substantially all of our assets on a consolidated basis to an unrelated person or entity; (ii) a merger, reorganization or consolidation pursuant to which the holders of our outstanding voting power immediately prior to such transaction do not own a majority of the outstanding voting power of the resulting or successor entity; (iii) the sale of all of our common shares to an unrelated person or entity; (iv) the acquisition, directly or indirectly, by any person or group of persons acting jointly or in concert (other than us or a person that directly or indirectly controls, is controlled by, or is under common control with, us) of beneficial ownership of securities possessing more than 50% of the total combined voting power of our outstanding securities pursuant to a tender offer (which includes a takeover bid) made directly to our stockholders.

*Termination Arrangements with Mr. Price*

*Involuntary Termination of Employment Not in Connection with a Change in Control*

Pursuant to his employment agreement, if Mr. Price is terminated by us for any reason other than “Cause” (as defined in his agreement), death or disability or Mr. Price resigns for “Good Reason” (as defined in his agreement), then he will be entitled to the following, subject to execution of a general release of claims in our favor and continued compliance with applicable restrictive covenants: (i) continued base salary for 12 months; (ii) if the Board determines that he is eligible for a target bonus for the year during which his employment terminates, a portion of such target bonus, pro-rated for his employment during such year; and (iii) if Mr. Price was participating in our group health plan immediately prior to the date of termination and elects COBRA health continuation, we will pay him an amount equal to our share of the premium for his group health coverage, for up to 12 months.

### *Involuntary Termination of Employment in Connection with a Change in Control*

In the event of a termination by us for any reason other than Cause, death or disability or Mr. Price's resignation for Good Reason, in each case within 18 months following a "Change in Control" (as defined in his agreement), Mr. Price will be entitled to the following (instead of the payments and benefits described above), subject to his execution of a general release of claims in our favor and continued compliance with applicable restrictive covenants: (A) continued base salary (at his then-current rate or base salary in effect immediately prior to the Change in Control, if higher) for 12 months; (B) a portion of his target bonus for the year of termination, pro-rated for his employment during such year; (C) full accelerated vesting of all outstanding equity awards held by him as of the date of such termination; and (D) if he was participating in our group health plan immediately prior to the date of termination and elects COBRA health continuation, we will pay him an amount equal to its share of the premium for his group health coverage, for up to 12 months.

The payments and benefits provided under the employment agreement in connection with a Change in Control may not be eligible for federal income tax deduction for the Company pursuant to Section 280G of the Code. These payments and benefits may also be subject to an excise tax under Section 4999 of the Code. If the payments or benefits payable to Mr. Price in connection with a Change in Control would be subject to the excise tax imposed under Section 4999 of the Code, then those payments or benefits may be reduced, at the discretion of Mr. Price if such reduction would result in a higher net after-tax benefit to him.

For purposes of Mr. Price's employment agreement:

"Cause" generally means (i) his conduct constituting a material act of misconduct in connection with the performance of his duties; (ii) a material and willful misrepresentation by him to our CEO or our Board regarding a matter of material importance to us; (iii) his commission of any felony or misdemeanor involving moral turpitude, deceit, dishonesty or fraud, or any conduct by him that would reasonably be expected to result in material injury or reputational harm to us or any of our subsidiaries and affiliates if he were retained in his position; (iv) his continued non-performance of his duties hereunder with a cure period and standard carve-outs; (v) his breach of any of the provisions contained in section 7 of his employment agreement; (vi) his material violation of our written employment policies; (vii) his failure to cooperate with a bona fide internal investigation or an investigation by regulatory or law enforcement authorities, after being instructed by us to cooperate, or the willful destruction or failure to preserve documents or other materials known to be relevant to such investigation or the inducement of others to fail to cooperate or to produce documents or other materials in connection with such investigation.

"Change in Control" generally means any of the following (i) any person becomes the beneficial owner, directly or indirectly, of our securities representation 50 percent or more of the combined voting power of our then-outstanding securities having the right to vote in an election of the Board, as such terms are used in the Exchange Act, as amended; (ii) the date a majority of the members of the board is replaced during any 12-month period by directors whose appointment or election is not endorsed by a majority of the members of the board before the date of the appointment or elects; or (iii) the consummation of (A) any consolidation or merger of us where our shareholders, immediately prior to the consolidation or merger, would not, immediately after the consolidation or merger, beneficially own, directly or indirectly, shares representing in the aggregate more than 50 percent of the voting shares of the company issuing cash or securities in the consolidation or merger, or (B) any sale or other transfer of all or substantially all of our assets.

"Good Reason" generally means that he has complied with the proper notification process following the occurrence of any of the following events (i) a material diminution of his responsibilities, authority or duties; (ii) a material diminution in his base salary except for across-the-board salary reductions based on our financial performance similarly affecting all or substantially all our senior management employees; (iii) a material change in the geographic location at which he provides services to us; or (iv) our material breach of his employment agreement.

### **Outstanding Equity Awards at 2018 Fiscal Year-End**

The following table provides information regarding equity awards held by our NEOs as of December 31, 2018. Dr. Stewart is not included in the following table because he did not hold any equity awards as of December 31, 2018, due to his resignation in 2018.

Name	Options Awards (1)				Stock Awards (1)	
	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price (\$)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock That Have Not Vested (\$) (2)
Ben Harshbarger	64,933 (3)	32,467 (3)	\$ 8.65	12/22/2026	348 (4)	\$ 292
	25,000 (5)	50,000 (5)	7.03	10/6/2027	374 (6)	314
	—	45,000 (7)	4.44	2/12/2028	—	—
Michael D. Price	33,333 (8)	66,667 (8)	3.97	11/27/2027	13,333 (9)	11,200
Roger Louis	27,827 (3)	13,913 (3)	8.65	12/22/2026	546 (4)	459
	—	25,000 (7)	4.44	2/12/2028	—	—
Jeffrey Hackman	45,000 (10)	—	4.71	2/28/2019 (10)	— (11)	—

- (1) Pursuant to the NEOs' employment agreements, such equity awards are subject to certain acceleration of vesting provisions in the event of certain qualifying terminations in connection with a change in control, as discussed further in "Employment Agreements with our current NEOs" above.
- (2) Based on the closing price of our common shares on December 31, 2018 (\$0.84), the last trading date of 2018.
- (3) Represents time-based stock options granted on December 22, 2016 under the Equity Incentive Plan, which vest ratably on an annual basis over three years from the grant date, subject to continued employment through each applicable vesting date.
- (4) Represents time-based restricted stock units granted on May 9, 2016 under the Aegerion Pharmaceuticals, Inc. 2010 Stock Option and Incentive Plan ("Aegerion 2010 Plan"), which vest ratably on an annual basis over three years from the grant date, subject to continued employment through each applicable vesting date.
- (5) Represents time-based stock options granted on October 6, 2017 under the Equity Incentive Plan, which vest ratably on an annual basis over three years from the grant date, subject to continued employment through each applicable vesting date.
- (6) Represents time-based restricted stock units granted on May 9, 2016 under the Aegerion 2010 Plan, 25% of which vest on the first anniversary of the grant date, 50% of which vest on the second anniversary grant date, and 25% of which vest on the third anniversary grant date, subject to continued employment through each applicable vesting date.
- (7) Represents time-based stock options granted on February 12, 2018 under the Equity Incentive Plan, which vest ratably on an annual basis over three years from the grant date, subject to continued employment through each applicable vesting date.
- (8) Represents time-based stock options granted on November 27, 2017 under the Equity Incentive Plan, which vest ratably on an annual basis over three years from the grant date, subject to continued employment through each applicable vesting date.
- (9) Represents time-based restricted stock units granted on November 27, 2017 under the Equity Incentive Plan, which vest ratably on an annual basis over three years from the grant date, subject to continued employment through each applicable vesting date.
- (10) Represents time-based stock options granted on November 1, 2017 under the Equity Incentive Plan, which vest ratably on an annual basis over three years from the grant date. The remaining unvested time-based stock options were cancelled upon Mr. Hackman's resignation from the Company. All the vested stock options expired on February 28, 2019, 90 days after Mr. Hackman's termination date.
- (11) In connection with Mr. Hackman's appointment as the former Chief Operating Officer of the Company, on November 1, 2017, he was granted (1) 50,000 shares of time-based restricted stock units under the Equity Incentive Plan, of which, 16,667 shares were vested on November 1, 2018; and (2) 92,500 shares of time-based restricted stock units under the Equity Incentive Plan, of which 100% was vested on November 1, 2018. The remaining unvested time-based restricted stock units were cancelled upon Mr. Hackman's resignation from the Company.

## Director Compensation

Our non-employee directors receive cash and equity-based compensation for their services on the Board as described below.

### Cash Compensation

The cash compensation component of our non-employee director compensation program includes annual cash Board and committee member or Chair, Executive Committee or Executive Chair retainers. Non-employee directors are also eligible for reimbursement of their expenses incurred in connection with attendance at Board meetings, in accordance with our policies, and reimbursement for preparation of annual Canadian tax returns. Non-employee director retainers are paid to the Board quarterly in arrears.

Fees payable to our non-employee directors for our standing committees in 2018 were as follows:

Nature of Board Duty	Fee (US\$)
<b>Annual Board Retainer Fee:</b>	
- for all directors	\$ 40,000
- additional retainer for Chair of the Board	40,000
<b>Additional Annual Retainer Fee for Chair of the:</b>	
- Audit Committee	20,000
- Compensation Committee	15,000
- Corporate Governance and Nominating Committee	10,000
- Compliance Committee	20,000
- Scientific & Innovation Committee	10,000
<b>Additional Annual Retainer Fee for Non-Chair Member of the:</b>	
- Audit Committee	10,000
- Compensation Committee	7,500
- Corporate Governance and Nominating Committee	5,000
- Compliance Committee	10,000
- Scientific & Innovation Committee	5,000
<b>Additional fee to perform Board or committee business (other than attendance at a Board or committee meeting) at the specific request of the Board or relevant committee:</b>	
- if no out-of-town travel is required	1,500
- if out-of-town travel is required	3,000
<b>Fee to Novellion Board member for attending operating subsidiary Board meeting as a member of the Board of the operating subsidiary (whether in person or by telephone)</b>	<b>1,500</b>

In addition, non-employee directors are generally entitled to receive annual cash retainers and other fees for service on any ad hoc committees that the Board may establish from time to time commensurate with the level of efforts expected to be undertaken by such committee (which may also include an increased retainer fee for the chair of any such committee).

#### ***Equity-Based Compensation***

In addition to cash compensation, our non-employee directors also receive equity-based compensation to ensure that their interests are aligned with those of our shareholders.

Non-employee directors are eligible to receive grants of stock options and restricted stock units under our Equity Incentive Plan. We also maintain a nonqualified deferred compensation arrangement for our non-employee directors, in the form of deferred stock units (“DSUs”), which are converted to cash only when a director ceases to be a member of the Board; DSUs have not been granted since our merger with Aegerion in November 2016.

In August 2018, following our annual meeting of shareholders and upon the recommendation of the Compensation Committee, the Board approved a grant of an option to purchase 10,000 of our common shares to each non-employee director and a grant of an option to purchase 50,000 of our common shares to our Executive Chair. The stock options were granted with an exercise price per share equal to the closing price of our common shares on the grant date, and vest in 12 equal monthly installments commencing on the monthly anniversary of the grant date, subject to continued service on our Board through each applicable vesting date.

The following table provides information regarding the compensation earned by our non-employee directors in 2018:

Name (1)	Fees Earned or Paid in Cash (\$) USD (2)	Option Awards (\$) (3)	Total
Suzanne Bruhn	\$ 53,664	\$ 15,187 (4)	\$ 68,851
Mark Corrigan	241,010 (5)(6)	75,935 (4)	316,945
John Orloff	50,000	15,187 (4)	65,187
Stephen Sabba	65,000	15,187 (4)	80,187
Donald K. Stern	62,842	15,187 (4)	78,029
John C. Thomas, Jr.	67,500	15,187 (4)	82,687
Jason Aryeh	163,428 (5)(7)	10,565 (8)	173,993
Mark DiPaolo (9)	37,038	15,187 (4)	52,225
Kevin Kotler (10)	42,298	15,187 (4)	57,485
	<u>\$ 782,780</u>	<u>\$ 192,809</u>	<u>\$ 975,589</u>

- (1) Mr. Aryeh did not stand for re-election at the 2018 annual meeting of shareholders and his term as a director therefore ended on August 9, 2018. Mr. DiPaolo resigned from the Board on September 13, 2018, and Mr. Kotler resigned from the Board on September 24, 2018.
- (2) Represents the aggregate dollar amount of 2018 fees earned or paid in cash for services as a director, including annual retainer fees and committee fees.
- (3) Represents the aggregate grant date fair value of stock options, as applicable, calculated in accordance with ASC Topic 718. Such aggregate grant date fair values do not take into account any estimated forfeitures related to service-based vesting conditions. The valuation assumptions used in determining such amounts are described in the Note 12 to the audited consolidated financial statements in our Annual Report on Form 10-K filed on March 15, 2019. The amounts reflect the accounting cost for the stock options, as applicable, and do not correspond to the actual economic value that may be received by the non-employee directors upon exercise of the stock options or sale of any underlying common shares.
- (4) Represents time-based stock options granted on August 9, 2018 under the Equity Incentive Plan, which vest in twelve equal monthly installments, beginning one month after the grant date, subject to continued service through each applicable vesting date.
- (5) Includes a special one-time payment of \$70,000 to each of Dr. Corrigan and Mr. Aryeh for their service on the Executive Committee of the Board from November 2017 through May 2018.
- (6) Includes \$21,000 in fees paid to Dr. Corrigan on a monthly basis in connection with his tenure as Executive Chair, effective July 2, 2018.
- (7) Includes cash paid to Mr. Aryeh in connection with the settlement of his DSUs upon the termination as a non-employee director.
- (8) Represents the incremental fair value, calculated in accordance with ASC Topic 718, of the modification of the vesting of Mr. Aryeh's stock option awards, in connection with his termination as a non-employee director on August 9, 2018. The Board approved the full acceleration of vesting of Mr. Aryeh's unvested stock options and an extension of the post-termination exercise period of his stock options from 90 days to one year from the termination date of August 9, 2018.
- (9) Fees earned by Mr. DiPaolo were paid to Sarissa Capital Management LP.
- (10) Fees earned by Mr. Kotler were paid to Broadfin Healthcare Master Fund, Ltd.

#### Director Awards Outstanding as of December 31, 2018

Name	Total Outstanding Stock Options (1)	Total Outstanding DSUs (2)
Suzanne Bruhn	19,600	—
Mark Corrigan	59,600	—
John Orloff	19,600	—
Stephen Sabba	29,600	5,680
Donald K. Stern	19,600	—
John C. Thomas, Jr.	29,600	5,680
Jason Aryeh	29,600	—
	<u>207,200</u>	<u>11,360</u>

- (1) Messrs. DiPaolo and Kotler did not hold any stock options as of December 31, 2018. Due to their resignations as non-employee directors in 2018, all the unvested stock options were cancelled upon their respective resignation date; the vested stock options expired 90 days after each resignation date

on September 13, 2018 and September 24, 2018, respectively.

- (2) DSUs are settled in cash and can only be settled once a director ceases to be a member of the Board.

## Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Shareholder Matters

### Securities Authorized for Issuance under Equity Compensation Plans

We currently maintain the Equity Incentive Plan, pursuant to which directors, officers, employees and consultants of Novelion and its affiliates may be granted restricted stock units and stock options to acquire common shares, as well as a 2017 Employee Stock Purchase Plan (the "ESPP"), pursuant to which our eligible employees may use payroll deductions to purchase our common shares at a discount. Our ESPP program is currently suspended.

The following table sets out information as of December 31, 2018 with respect to our common shares that may be issued under our existing equity compensation plans.

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted-average exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
Equity compensation plans approved by security holders	2,239,485 (1)	\$ 5.63 (2)	2,250,137 (3)
Equity compensation plans not approved by security holders	—	—	—
<b>Total</b>	<b>2,239,485</b>	<b>\$ 5.63</b>	<b>2,250,137</b>

- (1) Reflects securities (both shares underlying stock options and restricted stock units) from the Aegerion 2010 Plan (16,832 shares) and the Equity Incentive Plan (2,222,653 shares).

- (2) Represents the weighted-average exercise price of outstanding stock options only, as there are no exercise prices associated with the restricted stock units.

- (3) Reflects available securities for future issuance from the Equity Incentive Plan. The Company no longer issues any equity awards under the Aegerion 2010 Plan.

### Security Ownership of Certain Beneficial Owners and Management

The following table sets forth information with respect to the beneficial ownership of our common shares as of April 20, 2019 (unless otherwise noted) with respect to:

- each person, or group of affiliated persons, known to us to be the beneficial owner of more than 5% of our common shares outstanding as of such date ("5% Shareholders"), based on currently available Schedules 13G and 13D filed with the SEC, as may be updated by a Statement of Change of Beneficial Ownership of Securities on Form 4 subsequently filed with the SEC;
- each of our NEOs and directors; and
- all of our current executive officers and directors as a group.

Beneficial ownership is determined in accordance with the rules of the SEC and the applicable Canadian securities regulators. These rules generally attribute beneficial ownership of securities to persons who possess sole or shared voting power or investment power with respect to those securities and include common shares issuable upon the exercise of stock options or other securities that are immediately exercisable or exercisable within sixty days after April 20, 2019, although these shares are not deemed outstanding for the purpose of computing percentage ownership of any other person. Inclusion of shares of common share in the following table does not constitute an admission that the named shareholder is a direct or indirect beneficial owner for any other purpose. Except as otherwise indicated, all of the shares reflected in the table are our common shares, and all persons

listed below have sole voting and investment power with respect to the common shares beneficially owned by them, subject to applicable community property laws. The information is not necessarily indicative of beneficial ownership for any other purpose. Percentage of ownership is based on 19,043,618 common shares outstanding as of April 20, 2019.

Except as otherwise indicated in the table below, addresses of named beneficial owners are c/o Novelson Therapeutics Inc., c/o Norton Rose Fulbright, 1800 - 510 West Georgia Street, Vancouver, BC V6B 0M3 Canada.

Name of Beneficial Owner <sup>(1)</sup>	Amount and Nature of Beneficial Ownership		Total Beneficial Ownership	
	Shares Beneficially Owned	Shares for Which Beneficial Ownership May Be Acquired Within 60 Days <sup>(2)</sup>	Number of Shares <sup>(3)</sup>	Percent of Class
<b>Directors and Named Executive Officers</b>				
Suzanne Bruhn	—	13,666	13,666	*
Mark Corrigan	—	48,600	48,600	*
John Orloff	—	14,466	14,466	*
Stephen Sabba	7,400	26,066	33,466	*
Donald K. Stern	2,500	16,066	18,566	*
John C. Thomas, Jr.	7,400	26,066	33,466	*
Ben Harshbarger	3,173	105,655	108,828	*
Michael D. Price	4,704	33,333	38,037	*
Roger Louis	771	36,706	37,477	*
Jeffrey Hackman	77,018	—	77,018	*
Murray Stewart	—	—	—	*
All current directors and executive officers as a group (10 persons) <sup>(4)</sup>	26,322	394,163	420,485	2.2%
<b>5% Shareholders</b>				
Edgepoint Investment Group Inc. <sup>(5)</sup>	2,368,819	—	2,368,819	12.4%
Broadfin Capital, LLC <sup>(6)</sup>	1,229,301	909,296	2,138,597	10.7%
NB Public Equity K/S <sup>(7)</sup>	1,890,525	—	1,890,525	9.9%
Healthcare Value Capital, LLC <sup>(8)</sup>	1,800,000	—	1,800,000	9.5%
Whitefort Capital Master Fund, LP <sup>(9)</sup>	1,582,341	—	1,582,341	8.3%
Highbridge Capital Management, LLC <sup>(10)</sup>	946,842	—	946,842	5.0%

\* Represents less than 1%.

- (1) The information in the table regarding the beneficial ownership of 5% Shareholders is derived from the System for Electronic Disclosures by Insiders ("SEDI") and the Electronic Data Gathering, Analysis, and Retrieval system ("EDGAR"). Includes all current directors and executive officers of the Company.
- (2) Indicates common shares that may be acquired upon exercise of outstanding stock options that are presently exercisable or will be exercisable by the persons named in the table above and by all current directors and executive officers as a group within 60 days of April 20, 2019, as well as common shares that may be acquired on vesting of restricted stock units within 60 days of such date.
- (3) Excludes DSUs, which are issued to directors and are payable only in cash when a director ceases to be a member of the Board. As of April 20, 2019, Dr. Sabba and Mr. Thomas each holds 5,680 vested DSUs.
- (4) Includes, in addition to the holdings of our directors and those named executive officers who are current officers of the Company, 374 shares of common shares beneficially owned, 273 shares of common shares subject to vesting of restricted stock units within 60 days of April 20, 2019 and 73,266 shares of common shares that may be acquired upon exercise of outstanding stock options that are presently exercisable or will be exercisable within 60 days of such date, held by Linda Buono, our Senior Vice President, Human Resources.
- (5) The information in the table and this note is derived from a Schedule 13G/A filed with the SEC on February 13, 2019 by EdgePoint Investment Group Inc. and EdgePoint Canadian Portfolio (collectively, "EdgePoint"). Excludes 260,999 and 19,926 shares of common shares issuable upon conversion

of the Company's 2.00% Convertible Senior Notes due 2019 (the "Convertible Notes") directly owned by EdgePoint Investment Group Inc. and EdgePoint Canadian Portfolio, respectively. Of the 2,368,819 common shares beneficially owned, EdgePoint Investment Group Inc. reports shared voting power and shared dispositive power as to 2,368,819 shares and EdgePoint Canadian Portfolio reports shared voting power and shared dispositive power as to 1,350,323 shares. The address for EdgePoint is 150 Bloor Street West, Suite 500, Toronto, Ontario M5S 2X9, Canada. The percentage of beneficial ownership has been adjusted to reflect our actual shares of common shares outstanding as of the close of business on April 20, 2019.

- (6) The information in the table and this note is derived from a Form 13F filed with the SEC on February 14, 2019 by Broadfin Capital, LLC and from a Form 4 filed with the SEC on March 15, 2018 by Broadfin Healthcare Master Fund, Ltd. Of the 1,229,301 common shares beneficially owned, Broadfin Capital, LLC, Broadfin Healthcare Master Fund, Ltd. and Mr. Kevin Kotler each have shared voting power and shared dispositive power as to 1,229,301 shares. Includes 909,296 warrants issued to Broadfin Healthcare Master Fund Ltd., a private investment fund managed by Broadfin Capital, LLC, of which Mr. Kotler is the managing member (Mr. Kotler disclaims beneficial ownership of the warrants except to the extent of his pecuniary interest therein). The percentage of beneficial ownership has been adjusted to reflect our actual shares of common shares outstanding as of the close of business on April 20, 2019.
- (7) The information in the table and this note is derived from a Schedule 13G/A filed with the SEC on December 17, 2018 by NB Public Equity K/S, NB Public Equity Komplementar ApS, Cora Madsen and Florian Schonharting. Of the 1,890,525 common shares beneficially owned, NB Public Equity K/S, NB Public Equity Komplementar ApS, Cora Madsen and Florian Schonharting each report shared voting power and shared dispositive power as to 1,890,525 shares. The address for NB Public Equity K/S is Ostergade 24A, 1, 1100 Copenhagen K, Denmark. The percentage of beneficial ownership has been adjusted to reflect our actual shares of common shares outstanding as of the close of business on April 20, 2019.
- (8) The information in the table and this note is derived from a Schedule 13D/A filed with the SEC on December 3, 2018 by Healthcare Value Capital, LLC, Healthcare Value Capital General Partner, LLC, Healthcare Value Partners, L.P. and Joseph P. Riccardo. Of the 1,800,000 common shares beneficially owned, Healthcare Value Capital, LLC, Healthcare Value Capital General Partner, LLC, Healthcare Value Partners, L.P. and Joseph P. Riccardo each report shared voting power and shared dispositive power as to 1,800,000 shares. The address for Healthcare Value Capital, LLC is 50 Tice Blvd, Suite 140, Woodcliff Lake, New Jersey 07677. The percentage of beneficial ownership has been adjusted to reflect our actual shares of common shares outstanding as of the close of business on April 20, 2019.
- (9) The information in the table and this note is derived from a Schedule 13D/A filed with the SEC on April 2, 2019 by Whitefort Capital Master Fund, LP, Whitefort Capital Management, LP, David Salanic and Joseph Kaplan. Of the 1,582,341 common shares beneficially owned, Whitefort Capital Master Fund, LP, Whitefort Capital Management, LP, David Salanic and Joseph Kaplan each report shared voting power and shared dispositive power as to 1,582,341 shares. The address for Whitefort Capital Master Fund, LP is 780 Third Avenue, 26th Floor, New York, New York 10017. The percentage of beneficial ownership has been adjusted to reflect our actual shares of common shares outstanding as of the close of business on April 20, 2019.
- (10) The information in the table and this note is derived from a Schedule 13G filed with the SEC on November 29, 2018 by Highbridge Capital Management, LLC. Of the 946,842 common shares beneficially owned, Highbridge Capital Management, LLC reported shared voting power and shared dispositive power as to 946,842 shares. The address for Highbridge Capital Management, LLC is 40 West 57th Street, 32nd Floor, New York, New York 10019. The percentage of beneficial ownership has been adjusted to reflect our actual shares of common shares outstanding as of the close of business on April 20, 2019.

### **Item 13. Certain Relationships and Related Transactions, and Director Independence**

Unless otherwise disclosed in this Amendment, none of the directors, executive officers, persons who have been directors or executive officers at any time since the beginning of Novellion's last completed fiscal year, or any beneficial owner of more than 5% of the outstanding common shares of Novellion or any associate or affiliate of such person, had any material interest, direct or indirect, in any transaction or proceeding during the past two fiscal years or in any proposed transaction or pending proceeding which has materially affected or will materially affect Novellion or its subsidiaries or which would require disclosure under Item 404(a) of Regulation S-K for smaller reporting companies.

On March 15, 2018, Aegerion entered into a loan and security agreement with affiliates of Broadfin Capital, LLC ("Broadfin Capital") and Sarissa Capital Management LP ("Sarissa Capital") (the "Shareholder Term Loan Agreement"), pursuant to which the lenders made a single-draw term loan to Aegerion in an aggregate amount of \$20.0 million (the "Shareholder Term Loans"). In connection with the Shareholder Term Loan Agreement, the lenders of the Shareholder Term Loans were issued warrants ("Shareholder Term Loan Warrants") to purchase approximately 1.8 million Novellion common shares. The Shareholder Term Loan Warrants have an exercise price equal to \$4.40 per share, representing the volume weighted average price of Novellion common shares for the 20 trading days ended March 14, 2018. The terms of the Shareholder Term Loan Agreement, which were approved by our Audit Committee and by a special committee of disinterested directors and our full Board (with conflicted members recused), can be found in our Current Report on Form 8-K filed with the SEC on March 15, 2018.

At the time of the Shareholder Term Loans and based on publicly available information, Broadfin Capital beneficially owned, or had control or direction over, directly or indirectly, 1,948,554 common shares of Novellion (excluding the Shareholder Term Loan Warrants), or approximately 10.45% of the outstanding common shares of Novellion at the time. Further, at the time of the Shareholder Term Loans, Mr. Kevin Kotler was a non-employee director of Novellion, and is the founder and general partner of Broadfin Capital, the general partner of Broadfin Healthcare Master Fund, Ltd. Mr. Kotler, Broadfin Capital and Broadfin Healthcare Master Fund, Ltd. were each deemed to be beneficial owners of the 1,948,554 shares. Mr. Kotler was designated to the Board by Broadfin Capital.

At the time of the Shareholder Term Loans and based on publicly available information, Sarissa Capital beneficially owned, or had control or direction over, directly or indirectly, 1,025,000 common shares of Novelion (excluding the Shareholder Term Loan Warrants), or approximately 5.55% of the outstanding common shares of Novelion at the time. Further, at the time of the Shareholder Term Loans, Mr. Mark DiPaolo was a non-employee director of Novelion and is the general counsel of Sarissa Capital. Mr. DiPaolo was appointed to the Board by Sarissa Capital in accordance with the requirements of our agreement with Sarissa Capital, as set forth in the merger agreement by which we acquired Aegerion, which provided Sarissa Capital with the right to appoint an additional director by providing written notice to the Company within a defined period of time of the 2017 Annual Meeting.

The Shareholder Term Loans were subsequently repaid in connection with Aegerion's entry into a bridge credit agreement on November 8, 2018 with certain funds managed by Highbridge Capital Management, LLC and Athyrium Capital Management, LP, as lenders (the "Bridge Lenders"), under which Aegerion borrowed new secured first lien term loans in cash in an original aggregate principal amount of \$50.0 million ("New Money Loans") and \$22.5 million of new secured term loans that were funded, on behalf of Aegerion, to repurchase and retire an equal amount of Aegerion's outstanding Convertible Notes, at par, held by certain funds managed by the Bridge Lenders (the "Roll Up Loans"). On November 8, 2018, in addition to the repurchase and cancellation of certain Aegerion's outstanding Convertible Notes with the proceeds of the Roll Up Loans, Aegerion used proceeds of the New Money Loans to repay, at par, (a) the amounts outstanding under the Shareholder Term Loan Agreement, in an aggregate principal amount of approximately \$21.2 million, and (b) principal under Aegerion's secured term loan owed to Novelion in an amount of \$3.5 million. The Shareholder Term Loan Warrants remain outstanding as of December 31, 2018.

Novelion has entered into indemnity agreements with our directors and all other officers of Novelion which provide, among other things, that, subject to any requirements that may exist under the BCBCA or the Articles of Novelion, Novelion will indemnify such officer or director, under the circumstances and to the extent specified, for expenses, damages, judgments, fines and settlements he or she may be required to pay in actions or proceedings to which he or she is or may be made a party by reason of his or her position as a director or officer of Novelion.

#### **Independence of Directors**

To ensure that we maintain good and objective governance, the Board strives to maintain strong independence from management. In determining whether directors are independent, each year the Board considers and discusses the nature and materiality of all direct or indirect relationships between each director, or nominee, and Novelion, including any family or business relationships, for the purposes of determining whether a material relationship exists that might signal a potential conflict of interest or otherwise interfere with such director's ability to satisfy his or her responsibilities as an independent director. Under the applicable Canadian and U.S. securities laws, a relationship is considered material where that relationship could, in the view of the Board, reasonably interfere with the exercise of the director's independent judgment. A director who also serves as CEO, or, depending on duration of term, interim CEO, of a company would be considered a non-independent director of that company under applicable Canadian and U.S. securities laws.

As a result, and in connection with its annual review of the nature and materiality of all direct or indirect relationships between each director and Novelion and its subsidiaries, the Board has determined that none of its directors, other than Dr. Orloff, has any relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director and is "independent" within the meaning of our director independence standards and the independence standards of NASDAQ and the SEC rules and regulations.

In addition, the Board has determined that each director who served as a member on each of the Audit Committee, the Compensation Committee and the Corporate Governance and Nominating Committee during 2018 was "independent" within the meaning of our director independence standards and the independence standards of NASDAQ and the SEC, including Rule 10a-3(b)(1) under the Exchange Act, as amended, and National Instrument 52-110 - *Audit Committees*.

#### **Item 14. Principal Accounting Fees and Services**

Deloitte & Touche LLP, an independent registered public accounting firm, served as our independent registered public accounting firm for the fiscal years ended December 31, 2018 and 2017. Deloitte LLP, an independent registered public accounting firm, served as our independent registered public accounting firm from 1981 through fiscal year 2016. On April 11, 2017, in recognition of the fact that the financial operations and management team of Novelion had transitioned to be primarily located in the U.S. following the merger of Aegerion, Deloitte LLP resigned as our independent registered public accounting firm, and Deloitte & Touche LLP was appointed as the successor independent registered public accounting firm. The decision to change the certifying accountant was approved by the Audit Committee and ratified by our shareholders at the 2017 Annual Meeting.

## Fees Paid for Services

The following table sets forth the aggregate fees billed by Deloitte & Touche LLP (“Deloitte U.S.”), and Deloitte LLP, the other member firms of Deloitte Touche Tohmatsu, and their respective affiliates (collectively, “Deloitte Canada”) for the following services during 2018 and 2017. All fees incurred for fiscal year 2018 were billed by Deloitte U.S.

Description of Service	2018 (US\$)	2017 (US\$)		Total
		Deloitte U.S.	Deloitte Canada	
Audit Fees (1)	\$ 1,301,950	\$ 1,281,350	\$ 8,560	\$ 1,289,910
Audit-Related Fees	—	—	—	—
Tax Fees (Tax compliance, tax advice and planning)	198,000	74,996	—	74,996
All Other Fees	556,165 (2)	669,043 (2)	40,928 (3)	709,971
<b>Total Fees</b>	<b>\$ 2,056,115</b>	<b>\$ 2,025,389</b>	<b>\$ 49,488</b>	<b>\$ 2,074,877</b>

- (1) For 2018, “Audit Fees” consist of fees for the audit of Novelion’s annual financial statements and reviews of quarterly financial statements. For 2017, “Audit Fees” consist of fees for the integrated audit of Novelion’s annual financial statements, reviews of quarterly financial statements, audits of internal controls over financial reporting, and Deloitte Canada’s issuance of consent in connection with the 2017 audited consolidated financial statements.
- (2) For 2018 and 2017, “All Other Fees” billed by Deloitte U.S. consist of fees related to document production and related services in connection with the U.S. Department of Justice and SEC investigations of Aegerion. Although Deloitte U.S. was engaged by our outside legal counsel for the document production and related services, fees are paid directly by the Company to Deloitte U.S. The “All Other Fees” billed by Deloitte U.S. also include an annual subscription to Deloitte U.S.’ technical accounting research tool.
- (3) For 2017, “All Other Fees” billed by Deloitte Canada consist of fees related to services in connection with the filing with the SEC of certain Registration Statements on Form S-8.

## Pre-Approval Policies and Procedures

The charter of the Audit Committee provides that the Audit Committee is responsible for the pre-approval of all audit and permitted non-audit services to be performed for Novelion by the independent auditors. The fees paid to the independent registered public accounting firm that are shown in the chart above for 2018 and 2017 were approved by the Audit Committee in accordance with the procedures described below.

The Audit Committee reviews and approves audit and non-audit services proposed to be provided by the independent registered public accounting firm. The Audit Committee has delegated to its Chair, or an alternate member of the Audit Committee, the authority to grant pre-approvals if either deems it necessary or appropriate to consider a pre-approval request without approval and/or meeting of the full Audit Committee. Pre-approvals by the Chair of the Audit Committee or an alternate member are reviewed with the Audit Committee at its next regularly scheduled meeting.

In considering the pre-approval of proposed audit or non-audit services by the independent registered public accounting firm, management reviews with the Audit Committee or its delegate a description of and the budget for the proposed service and the reasons that the independent registered public accounting firm are being requested to provide the services, including any possible impact on the independence of the independent registered public accounting firm. Additional Audit Committee approval is required if the pre-approved services exceed the pre-approved budgeted amount for the services.

**PART IV**

**Item 15. Exhibits, Financial Statement Schedules**

**Exhibits**

The exhibits filed with this Amendment are set forth in the Exhibit Index.

**EXHIBIT INDEX**

<b>Exhibit</b>	<b>Description of Document</b>	<b>Location</b>
<a href="#">31.1</a>	Certification pursuant to Rule 13a-14(a)/15(d)-14(a) of the Exchange Act, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002: Principal Executive Officer.	Filed herewith.
<a href="#">31.2</a>	Certification pursuant to Rule 13a-14(a)/15(d)-14(a) of the Exchange Act, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002: Principal Financial Officer.	Filed herewith.

**SIGNATURES**

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

NOVELION THERAPEUTICS INC.

(Registrant)

/s/ Benjamin Harshbarger

Date: April 26, 2019

By:

\_\_\_\_\_  
Benjamin Harshbarger

Principal Executive Officer

Date: April 26, 2019

By:

/s/ Michael D. Price

\_\_\_\_\_  
Michael D. Price

Principal Financial Officer

**CERTIFICATIONS**

I, Benjamin Harshbarger, certify that:

1. I have reviewed this Amendment No. 1 to the annual report on Form 10-K of Novelion Therapeutics Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report.

Date: April 26, 2019

/s/ Benjamin Harshbarger

Name: Benjamin Harshbarger

Title: Principal Executive Officer

**CERTIFICATIONS**

I, Michael D. Price, certify that:

1. I have reviewed this Amendment No. 1 to the annual report on Form 10-K of Novelion Therapeutics Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report.

Date: April 26, 2019

/s/ Michael D. Price

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Name: Michael D. Price

Title: Principal Financial Officer