



## Healthcare Industry Update

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Friday, November 2<sup>nd</sup>, 2018



## THE ORIGIN RX

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### US Payer Driving Change

What is FDA-approved for prevention of migraines, available in monthly and quarterly doses, and yet has been excluded from coverage by the largest US prescription benefits manager (“PBM”)? If you guessed Teva’s drug fremanezumab (Ajovy), then you deserve a prize! Express Scripts, a PBM with drug plans covering more than 100 million people, said recently that they would add Amgen’s and Lilly’s approved migraine prevention drugs to its formulary but not Teva’s.

Migraine is a disabling neurological disease that is estimated to affect more than 36 million Americans, causing missed work of 36 million days of bed rest, plus 21.5 million days of restricted activity, and costing as much as \$17 billion in lost productivity.

Teva’s Ajovy belongs to a new class of migraine drugs that interferes with the function of calcitonin gene-related peptide (CGRP), involved in the processes that kick off a migraine, as is Amgen’s Aimovig and Eli Lilly’s Emgality. Clinical studies for these drugs show that they lessen the frequency of migraine attacks enough to allow patients to experience more functional days. That means more days without being restricted by migraine pain and to be productive. These drugs could benefit an estimated 4 million Americans.

Amgen’s drug was first to market earlier this year and set the list price at \$575 a month, or \$6,900 a year, matched by Teva and Lilly. The three drugs are injectable, but Teva’s comes in a pre-filled syringe while the other two are available in an auto-injector format. Only Teva offers a second version that’s given every three months. All three are offering their new migraine meds for free where medically necessary. Teva’s free drug will continue through 2019, potentially giving them the runway they need to get on the Express Scripts formulary.

Express Scripts acknowledged that the three new migraine prevention drugs are “fairly interchangeable”, but their decision came down to value, including rebates from the drug companies who don’t disclose rebate amounts. Earlier this year Express Scripts called the existing drug pricing model of a high US list price subsidized by generous rebates as “broken”. The White House is demanding that PBM’s pass on more of their rebates to consumers, who are saddled with rising premiums and co-pays.

Amgen and Lilly have offered to refund a percentage of the list price of their drugs to Express Scripts clients if they don’t work or cause side effects. This would be the first time a new drug contract takes efficacy and side effects into account; guarantees have been more common with older drugs that have competing products in the market. Could this be the start of a new trend?

We’ll see what Express Scripts does with new migraine treatments still to come. Alder BioPharmaceuticals is also developing an anti-CGRP treatment, eptinezumab, anticipated to be administered quarterly in clinics instead of at home. Allergan, the company behind Botox for chronic migraine, plans to file an NDA next year for their oral CGRP blocker ubrogepant, for acute use.

Pricing pressures continue to drive restructuring efforts among payers, providers and insurers. Cigna shareholders voted in favour of the \$52 billion acquisition of Express Scripts and the merger of CVS Health with Aetna continues to move forward as well. Together with the White House, they are talking about reshaping and recalibrating the US drug spend.

Happy Halloween!

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CATHY STEINER, PRINCIPAL





## BIGGEST MOVERS

### Recent News<sup>1</sup>

Markets have been relatively volatile in the last two weeks with the TSX decreasing 7.1% and the NASDAQ decreasing by 1.9%. It's been a mixed bag in healthcare subsectors, which follow in this report. A selection of the largest share price movers in the healthcare space during the recent period is included below:

- **Endocyte Inc.** (NasdaqGS:ECYT **+50%**): Endocyte is a biopharmaceutical company focused on developing therapies for the treatment of cancer and inflammatory diseases in the US. Recent share price appreciation is attributed to the announcement that **Novartis** will acquire Endocyte for US\$2.1 billion, a 54% premium to its recent \$24 per share price
- **Clementia Pharmaceuticals Inc.** (NasdaqGS:CMTA **+45%**): Clementia Pharmaceuticals is a clinical stage biopharma company that develops treatments for patients suffering bone disorders and other diseases. Recent share price appreciation was attributed to the announcement that it intends to file a New Drug Application to the US FDA seeking approval for palovarotene in the second half of 2019
- **NeoGenomics Inc.** (NasdaqCM:NEO **+28%**): NeoGenomics operates a network of cancer-focused genetic testing laboratories in the US. Recent share price appreciation is attributed to the announcement that it has agreed to acquire oncology laboratory Genoptix for US\$125 million in cash and 1 million NEO common shares. The acquisition is expected to generate US\$85 million in revenue in first year and US\$25 million in cost synergies by year 3
- **Clovis Oncology Inc.** (NasdaqGS:CLVS **-45%**): Clovis Oncology is a biopharmaceutical company focused on acquiring, developing and commercializing anti-cancer agents internationally. Recent share price decline is attributed to the release of non-compelling initial data from its ongoing Phase 2 TRITON2 clinical trial
- **Selecta Biosciences Inc.** (NasdaqGM:SELB **-64%**): Selecta Bioscience is a clinical-stage biopharmaceutical company focused on the development of nanoparticle immunomodulatory drugs. Recent share price decline is attributed to a disclosed patient death in an early-stage study of SEL-403 from pneumonitis. Selecta also announced disappointing results from its Phase 2 clinical trial evaluating SEL-212 in patients with chronic severe gout
- **Synergy Pharmaceuticals Inc.** (NasdaqGS:SGYP **-74%**): Synergy Pharmaceuticals is a biopharmaceutical company focused on the development and commercialization of novel therapies to treat gastrointestinal diseases and disorders. Recent share price decline was attributed to the announcement that it is under negotiation on its term loan deal with CRG Servicing due to inadequate liquidity and inability to hit sales targets with its Trulance product

Note 1: For the period October 16<sup>th</sup> to October 31<sup>st</sup>, 2018

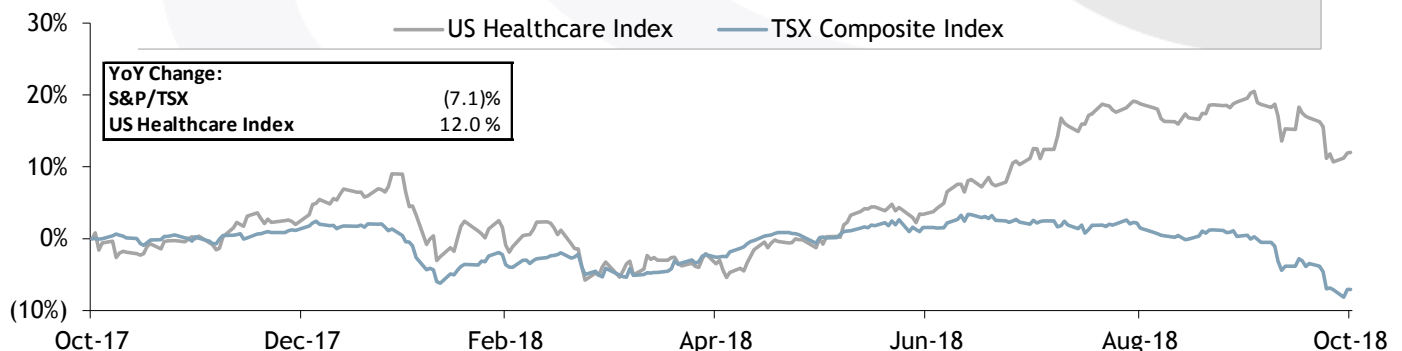


## US HEALTHCARE WATCHLIST

### News Scan<sup>1</sup>

- The US Healthcare Watchlist Index gained approximately 12.0% over the last twelve months, while the TSX Composite Index decreased 7.1% over the same period. Some events making news this month:
- On October 31<sup>st</sup>, **GlaxoSmithKline** reported its third quarter earnings with topline revenue of £8.1 billion. Strong business growth was shown in all three business segments with commercial execution for key products and new launches
- On October 30<sup>th</sup>, **Halozyme** announced that it has licensed its Enhanze drug delivery technology to **Roche** for the exclusive development of a new undisclosed drug target. Halozyme will receive US\$25 million upfront and between US\$160-165 million in milestones per target in addition to royalties on net sales
- On October 29<sup>th</sup>, **Pfizer Inc.** announced that it has entered into a non-exclusive clinical development agreement with Novartis to investigate one or more combination therapies for the treatment of non-alcoholic steatohepatitis (NASH), a progressive form of non-alcoholic fatty liver disease that is oftentimes underdiagnosed due to the lack of symptoms
- On October 26<sup>th</sup>, **Abbott Laboratories** and **AbbVie Inc.** announced that they will pay US\$25 million to resolve allegations Abbott paid kickbacks to doctors to incent the prescription of TriCor, a cholesterol drug
  - On October 17<sup>th</sup>, **Abbott** announced its third quarter financial results with US\$7.7 billion in sales, representing a 12.1% increase from the same period last year. Abbott has recently received FDA approval for its FreeStyle Libre 14 day sensor, a wearable glucose sensor and subsequent versions of this device. Abbott's strong quarter growth is attributable to a solid stream of new products in its pipelines
- On October 25<sup>th</sup>, **Merck** announced its third quarter financial results with sales of \$10.8 billion worldwide and GAAP EPS of \$0.73 up from (\$0.02) in the same period last year. Sales increase in the third quarter is attributed to a \$240 million purchase by the CDC to increase its Pediatric Vaccine Stockpile
- On October 24<sup>th</sup>, **Boston Scientific** announced its third quarter results with US\$2.4 billion in sales which represents 7.7% growth compared to the same period last year. Strong growth is attributed to innovation through internal research and tuck-in acquisitions which has extended the company's product line as it reaches more patients
- On October 19<sup>th</sup>, **Genentech**, a subsidiary of **Roche Group**, announced that it has received FDA approval on label update to Rituxan to include information for adult patients with Granulomatosis with Polyangiitis (GPA) and Microscopic Polyangiitis (MPA). Rituxan is the only FDA-approved therapy for these rare, potentially life threatening blood vessel disorders
- On October 15<sup>th</sup>, **Aclaris Therapeutics Inc.** announced that it has entered into an agreement to acquire **Rhofade** from **Allergan Sales, LLC** for US\$65 million in cash as well as additional development milestone payments and tiered royalties on net sales. Rhofade is a topical treatment for erythema (redness) associated with rosacea in adults. The acquisition is expected to be EBITDA accretive by Q4 2019

### Relative Performance Index



Note 1: For the period October 16<sup>th</sup> to October 31<sup>st</sup>, 2018

**US Healthcare Watchlist Constituents:** Johnson & Johnson, Pfizer Inc., Roche Holding AG, Novartis AG, Merck & Co., Inc., AbbVie Inc., Amgen Inc., Medtronic plc, Gilead Sciences, Inc., Bayer AG, Abbott Laboratories, Bristol-Myers Squibb, GlaxoSmithKline plc, Eli Lilly and Company, AstraZeneca PLC, Celgene Corporation, Allergan plc, Boston Scientific Corporation, Mylan N.V., Teva Pharmaceutical Industries, Mallinckrodt Public Limited Company, Endo International plc

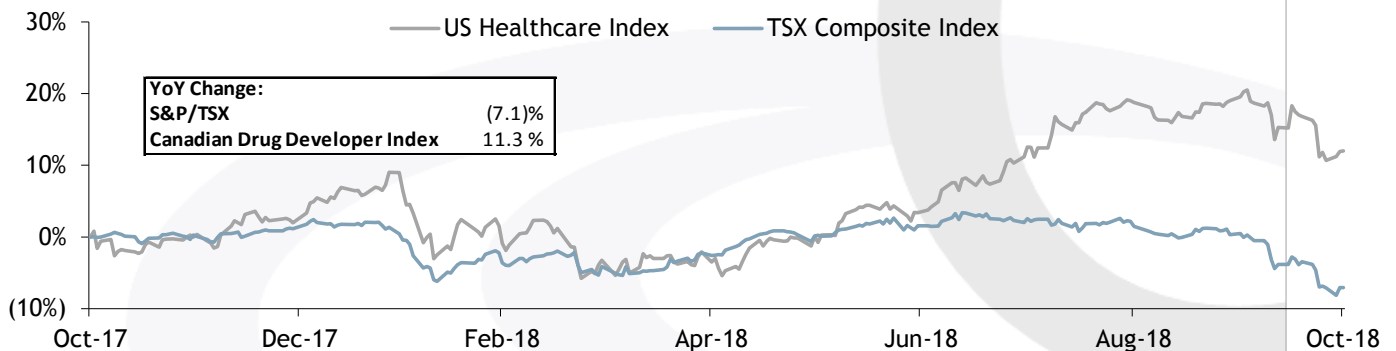


## CANADIAN DRUG DEVELOPERS

### News Scan<sup>1</sup>

- Last twelve-month performance of the Canadian Drug Developers Index was an impressive 11.3%, significantly outperforming the TSX Composite Index which decreased 7.1% over the same period. In the news this month:
- On October 16<sup>th</sup>, **Prometric Life Sciences** announced that it has completed a Type C meeting in which the FDA agreed with the Company's proposed action plan for implementing additional in-process controls related to the manufacturing of its plasminogen, Ryplazim. As a result of the meeting and positive feedback, Prometric is finalizing the process performance qualification protocol for manufacturing of additional conformance lots
- On October 23<sup>rd</sup>, **Clementia Pharmaceuticals Inc.**, a clinical-stage biopharmaceutical company, announced that it plans to submit a New Drug Application for palovarotene to the FDA in the second half of 2019. Palovarotene is being developed as a treatment for patients with rare and debilitating bone diseases. The drug was initially in-licensed from **Roche Pharmaceuticals** where it was evaluated in more than 800 patients
  - On October 30<sup>th</sup>, **Clementia** announced the pricing of a public offering of 5.3 million common shares at C\$13.25 per share. The gross proceeds are expected to be C\$70.2 million
- On October 23<sup>rd</sup>, **Zymeworks Inc.** announced that it has entered into a licensing and research collaboration agreement with **LEO Pharma** for its proprietary Azymetric and EFFECT platforms. As part of the agreement, Zymeworks will receive US\$5 million upfront and is eligible to receive payments up to US\$231 million for the first therapeutic candidate and US\$244 million for the second. The company is also eligible to receive up to 20% royalties in the US
- On October 24<sup>th</sup>, **Acerus Pharmaceuticals** announced the first dosing of subjects in a Phase 1 clinical trial testing a tetrahydrocannabinol-rich oil in healthy volunteers. The trial is one of the major milestones in the company's strategy to develop a portfolio of THC and cannabidiol-based products that utilize nasal delivery

### Relative Performance Index



Note 1: For the period October 16<sup>th</sup> to October 31<sup>st</sup>, 2018

**Canadian Drug Developers Constituents:** ProMetric Life Sciences Inc., Clementia Pharmaceuticals Inc., Aurinia Pharmaceuticals Inc., Arbutus Biopharma Corporation, Resverlogix Corp., Aquinox Pharmaceuticals Inc., Zymeworks Inc., ImmunoVaccine Inc., InMed Pharmaceuticals Inc., Sierra Oncology, Inc., Tetra Bio-Pharma Inc., Oncolytics Biotech Inc., Cardiome Pharma Corp., Acerus Pharmaceuticals Corporation, ProMIS Neurosciences Inc., Aeterna Zentaris Inc., Trillium Therapeutics Inc.



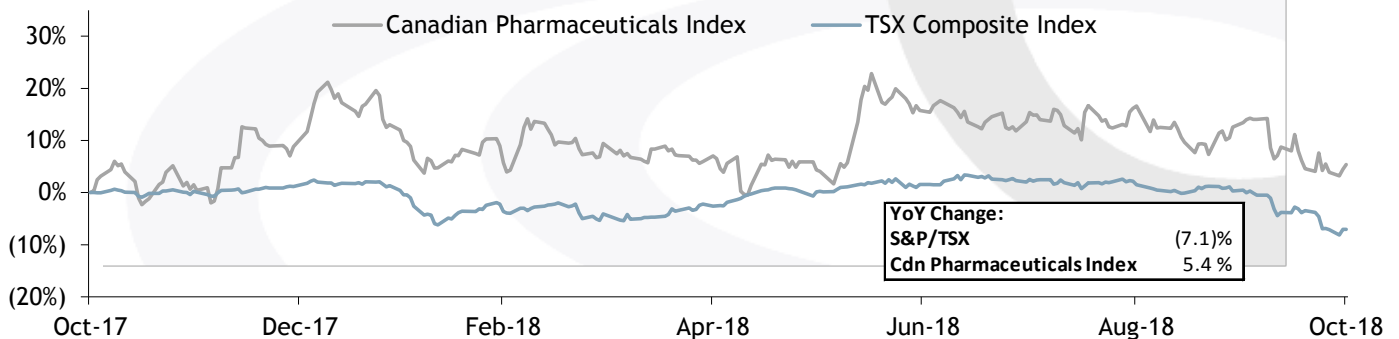


## CANADIAN PHARMACEUTICALS

### News Scan<sup>1</sup>

- The Canadian Pharmaceuticals Index experienced a gain of 5.4% over the last twelve months, while the TSX Composite Index decreased 7.1% over the same period. Recent news highlights include:
- On October 24<sup>th</sup>, **Bausch + Lomb**, a global eye health company owned by **Bausch Health Companies**, and **IBM** announced the new eyeTELLIGENCE applications that will run on the IBM cloud which help surgeons work more efficiently. The systems were built to deliver best-in class features to increase efficiency, reduce programming time and increase consistency of surgeries
  - On October 30<sup>th</sup>, **Ortho Dermatologics**, a dermatology company owned by **Bausch**, announced the US launch of ALTRENO tretinoin lotion for topical treatment of acne in patients over 9 years of age. ALTRENO is the first and only tretinoin available in a lotion for acne. It has been shown to be effective and well-tolerated by users
  - On October 29<sup>th</sup>, **Salix Pharmaceuticals**, a specialty pharmaceutical company owned by **Bausch**, announced that it has entered into an amendment to its existing license agreement with **Alfasigma** to initiate a late-stage clinical program of rifaximin in patients with Crohn's disease. The amended agreement allows both companies to start work toward a clinical research program that can provide new treatment options for patients with Crohn's disease
- On October 29<sup>th</sup>, **Knight Therapeutics** announced the commercial availability of PROBUPHINE for management of opioid dependence in patients clinically stabilized and in combination with counseling. Knight has the exclusive right to distribute PROBUPHINE in Canada under a license agreement with **Titan Pharmaceuticals**
- On October 29<sup>th</sup>, **Correvio**, a specialty pharmaceutical company, announced that it has received independent regulatory and legal opinions that its drug, Brinavess, may qualify for up to a 5-year patent extension in the US. The company plans to submit a New Drug Application to the FDA by Q2 of 2019. The patent extension has the potential to lengthen Brinavess' exclusive commercial rights into 2031
- On October 30<sup>th</sup>, **Theratechnologies Inc** announced that data from the Phase 3 clinical trial of Trogarzo injection show that patients who did not achieve the primary end point within 7 days after receiving a loading dose, eventually did experience the clinical benefits of Trogarzo during the study. Of the 40 patients enrolled in the trial, only 7 did not achieve the primary endpoint. The results demonstrate the impact Trogarzo can have on the treatment of HIV

### Relative Performance Index



Note 1: For the period October 16<sup>th</sup> to October 31<sup>st</sup>, 2018

**Canadian Pharmaceuticals Constituents:** Bausch Health Companies Inc., Knight Therapeutics Inc., Concordia International Corp., Aralez Pharmaceuticals Inc., Theratechnologies Inc., Zomedica Pharmaceuticals Corp., HLS Therapeutics Inc., Correvio Pharma Corp.

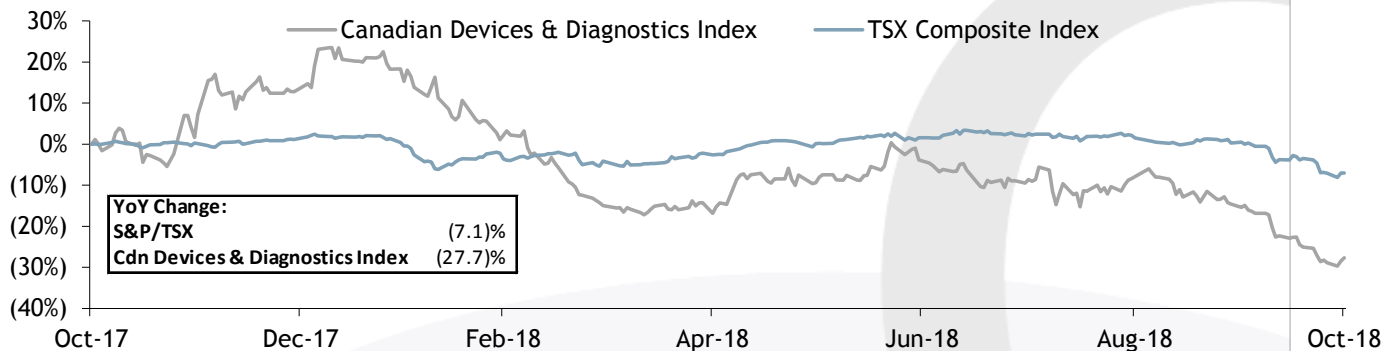


## CANADIAN DEVICES & DIAGNOSTICS

### News Scan<sup>1</sup>

- The Canadian Devices & Diagnostics Index lost approximately 27.7% over the last twelve months, lagging the TSX Composite Index which fell by 7.1% over the same period. Newsmakers for October 2018:
- On October 30<sup>th</sup>, **Covalon Technologies** announced that it has completed the integration of **AquaGuard** with its operations. Using AquaGuard's salesforce, Covalon can now effectively target an established client base of over 1,500 hospitals and clinics in the US
  - On October 30<sup>th</sup>, **Covalon** announced that it has won a series of competitive contracts for Covalon products in the Middle East with an estimated sales value of C\$100 million over 3 years
  - On October 30<sup>th</sup>, **Covalon** announced that it has received a US\$3.5 million payment under a new license agreement with a large global medical company for rights to use Covalon's patented antimicrobial medical coating technology. The agreement also includes an additional US\$5 million in licensing fees as technology development milestones are reached and ongoing royalties on worldwide product sales once regulatory clearance is achieved

### Relative Performance Index



Note 1: For the period October 16<sup>th</sup> to October 31<sup>st</sup>, 2018

**Canadian Devices and Diagnostics Constituents:** CRH Medical Corporation, TSO3 Inc., Titan Medical Inc., Opsens Inc., Neovasc Inc., Relay Medical Corp., Profound Medical Corp., Covalon Technologies Ltd., Spectral Medical Inc., Hamilton Thorne Ltd.

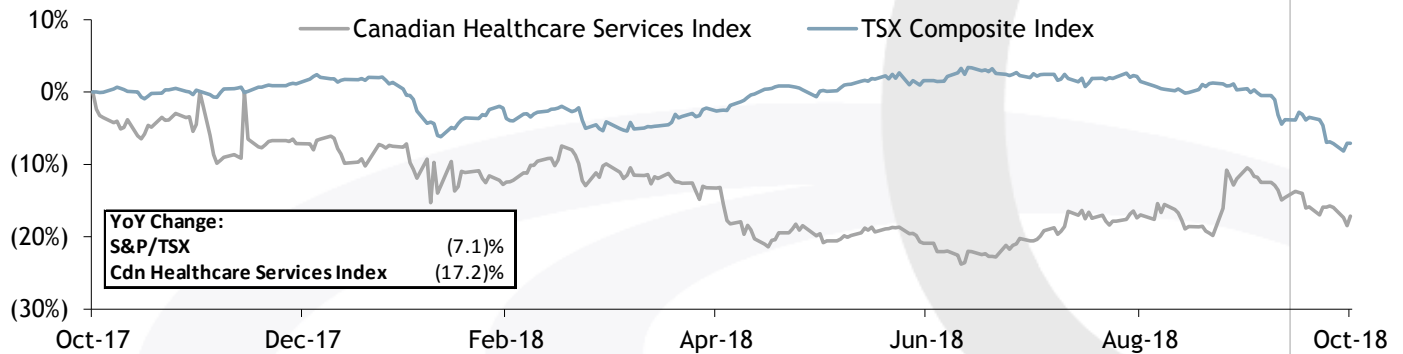


## CANADIAN HEALTHCARE SERVICES

### News Scan<sup>1</sup>

- Last twelve-month performance of the Canadian Healthcare Services Index decreased 17.2%, while the TSX Composite Index fell by 7.1% over the same period. In August, the following occurred in the Canadian healthcare services space:
- On October 29<sup>th</sup>, **Revera Inc.** announced the opening of the state-of-the-art Westney Gardens Retirement Residence in Ajax, Ontario. The Company invested \$50 million into the facility that will include a 132-suite retirement residence and create more than 40 local full-and-part-time jobs
- On October 23<sup>rd</sup>, **Centric Health Corporation** announced a number of changes to its executive team:
  - Leslie Cho, the Company's CFO, will be leaving the Company effective November 16, 2018
  - Nina Freier has joined the Company as Chief Human Resources Officer effective October 22, 2018. Most recently, Ms. Freier was Vice President, Human Resources at Sienna Senior Living
  - Mitchell Sinclair will join the company on November 5<sup>th</sup> as Vice President of Business Development for the Specialty Pharmacy Division. Mr. Sinclair is a seasoned healthcare leader, having spent more than 25 years in sales leadership roles in various segments of the industry.
  - Ryan Stempfle has been promoted to the position of Vice President and General Manager, Western Canada for the specialty Pharmacy Division
  - Tim Matthews, currently Chief Operating Officer for the Specialty Pharmacy Division, will be leaving the Company later this year after the completion of the Company's business re-engineering plan

### Relative Performance Index



Note 1: For the period October 16<sup>th</sup> to October 31<sup>st</sup>, 2018

**Canadian Healthcare Services Constituents:** Sienna Senior Living Inc., Extendicare Inc., Medical Facilities Corporation, Akumin Inc, Centric Health Corporation



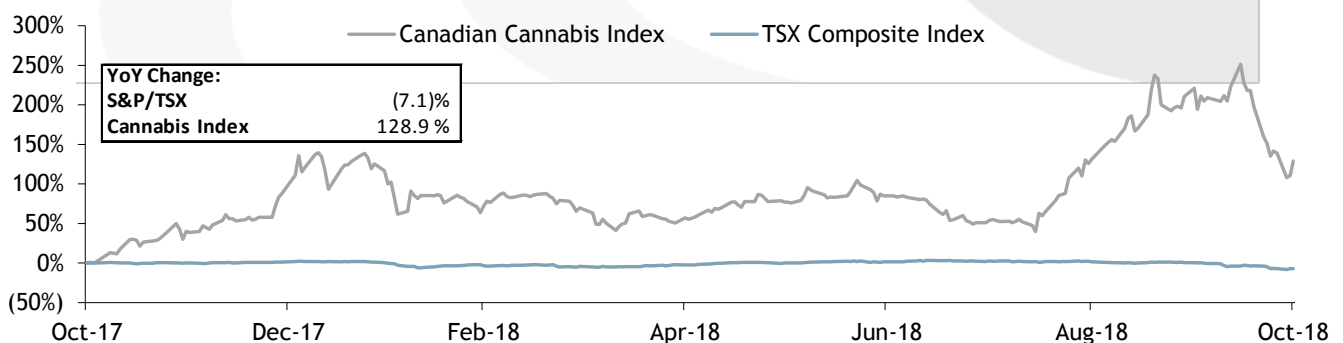


# CANNABIS

## News Scan<sup>1</sup>

- Two weeks since legalization, the ACMPR has issued 132 licenses. Last twelve-month performance of the Cannabis index saw an increase of 128.9%, compared to the 7.1% decline of the TSX Composite Index over the same period. Highlights:
- On October 30<sup>th</sup>, **Aphria Inc.** announced that its common shares have been approved for listing on the NYSE and will commence trading under the ticker “APHA” on November 2<sup>nd</sup>
- On October 29<sup>th</sup>, **National Access Cannabis Corp.** announced that it has closed the initial tranche of a financing plan from four leading licensed producers in Canada. **Aphria**, **CannTrust**, **VIVO Cannabis**, and **Zenabis** have purchased an aggregate of 21,978,020 common shares for gross proceeds of C\$20 million. The participants have agreed to participate in future tranches of the financing up to an additional C\$35 million in aggregate proceeds
- On October 29<sup>th</sup>, **Canopy Growth Corporation** announced that it has issued 60,488 common shares of the Company to acquire an additional 10% ownership stake in 10006215 Manitoba Ltd., bringing Canopy’s ownership to 89.9%
- On October 28<sup>th</sup>, **CannTrust Holdings** announced that it has entered into a strategic partnership with Australian licensed producer **Cannatrek Ltd.** Cannatrek is one of the first Australian vertically integrated enterprises to be awarded a cannabis cultivation, sales, and import license by federal and state governments, which will position Cannatrek to be one of the lowest cost producers in Australia. As part of the partnership, CannTrust is making an investment of C\$6 million for a 19.8% stake in Cannatrek, with an option to maintain its shareholding through any future share issuances
- On October 25<sup>th</sup>, **Aurora Cannabis** announced that the Polish Ministry of Health granted the Company approval for its first shipment of medical cannabis to Poland. This is an important milestone for medical patients in Poland as it is believed to be the first time a non-government run business has been granted approval to supply medical cannabis products in the country
  - On October 18<sup>th</sup>, **Aurora Cannabis** announced that its common shares have been approved for listing on the NYSE and commenced trading on October 23. Existing shares of Aurora, which previously traded on the OTCQX under the ticker symbol “ACBFF”, will now trade on the NYSE under the ticker “ACB”
- On October 22<sup>nd</sup>, **Auxly Cannabis Group** announced that the company has entered into an agreement with **Atlantic Cultivation Inc.** wherein the parties will collaborate on the development of a 110,000 sq. ft. indoor cultivation facility in St. John’s, Newfoundland. Pursuant to the agreement, Auxly will invest \$2.5 million into Atlantic for a 50% equity stake
- On October 19<sup>th</sup>, **The Supreme Cannabis Company** announced that the Company has completed its bought deal offering for gross proceeds of \$100 million, comprised of 6.0% senior unsecured convertible debentures. The Company plans on using the proceeds for the construction and development of its facilities in Canada. The debentures convert at \$2.45 per share
- On October 17<sup>th</sup>, **Organigram Holdings** announced that the company has completed the sale of **Trauma Healing Centers to Harvest Medicine** for \$1.2 million

## Relative Performance Index



Note 1: For the period October 16<sup>th</sup> to October 31<sup>st</sup>, 2018

**Cannabis Index Constituents:** Canopy Growth, Aurora Cannabis, Aphria, CannTrust Holding, Auxly Cannabis Group, OrganiGram Holdings, The Supreme Cannabis Company, The Hydrophocary, Tilray Inc.



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