



Healthcare Industry Update

Wednesday, March 6th, 2019



THE ORIGIN RX

It's A Home Run

After a little hiatus the Origin Rx is back, with streamlined categories and added valuation metrics. We hope you'll find it new-and-improved, and we always welcome your suggestions/feedback.

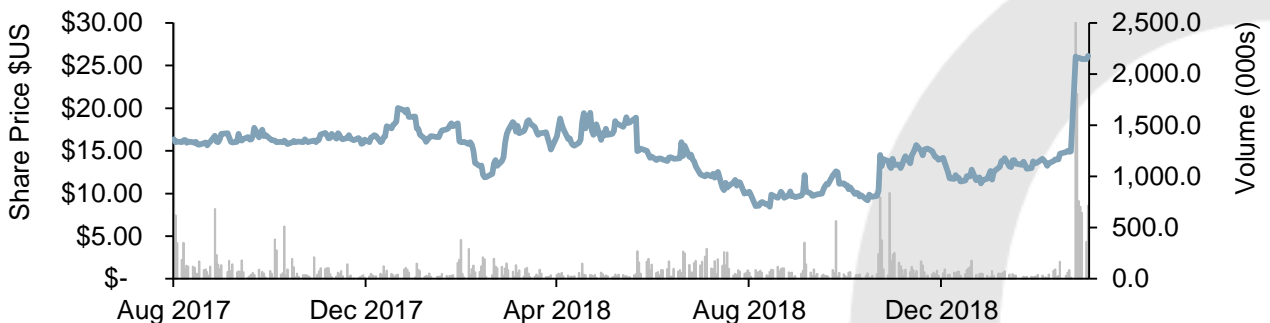
Today we're looking at Clementia Pharmaceuticals, a clinical-stage company with innovative treatments for people with ultra-rare bone disorders and other diseases with high medical need, and who recently announced that they were being acquired by the French specialty pharmaceutical company Ipsen.

Ipsen will pay US\$25.00 per share in cash upfront on completion of the transaction, for an initial aggregate consideration of US\$1.04 billion, plus a contingent value right of US\$6.00 per share upon FDA acceptance of the NDA filing for palovarotene for the treatment of multiple osteochondromas, for an additional potential payment of US\$263 million. The initial cash consideration represents a premium of 77% to Clementia's 30-day volume-weighted average stock price.

Lead product palovarotene, in development for the treatment of rare bone disorders, is currently in a Phase 3 trial and a Phase 2/3 trial for two different indications. Trials started in 2017 and data read-outs are anticipated in 2019 and 2020. The therapeutic is an oral small molecule (ie. relatively easy and cheap to manufacture) that previously demonstrated potent activity in preventing abnormal new bone formation and fibrosis in a variety of tissues in animal models.

Clementia did pretty much everything right. In the early days they were backed by Canadian healthcare stalwarts including Lumira and BDC, and in 2015 they attracted US healthcare investors like New Enterprise Associates, Janus and Orbimed in a US\$60M round. They went public in August 2017, raising US\$138M at US\$15.00 per share and in October 2018 they completed a US\$70M follow-on at US\$13.25 per share. Half a dozen healthcare analysts provide research coverage, five of them in the US.

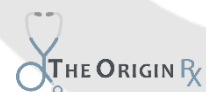
The chart below shows Clementia's stock price since its IPO:



The stepwise appreciation of CLTA shares on the M&A news is representative of development-stage healthcare companies. It's interesting to note that Clementia's IPO investors spent lots of time under water, with the share price in the doldrums as recently as October 2018, while the fundamentals remained as positive as ever.

A key takeaway from this success story is the importance of leadership. Seems that things tend to turn out better when you back people and not just products, and this case is no exception. As well, the company pursued disciplined strategies in clinical development and capital markets, ensuring access to adequate capital in a timely manner to fund its clinical trials - dilution alone didn't (and shouldn't) drive financing decisions. And finally, it takes a good deal of patience to wait out valuation catalysts like clinical trial results or strategic transactions - but it's great when it works out. Congratulations to Clementia and their shareholders.

CATHY STEINER, PRINCIPAL





DRUG DEVELOPERS

News Scan

- On February 27th, **Aurinia Pharmaceuticals**, a clinical late-stage biopharmaceutical company, announced that it has completed the sale of 4.6 million common shares at a weighted average price of US\$6.55 per share, raising gross proceeds of US\$30 million. The proceeds will be used to fund the clinical development and commercial production of volcosporin and other commercialization preparation activities
- On February 25th, **Ipsen**, a France-based specialty biopharmaceutical group, announced that it has entered an agreement to acquire **Clementia Pharmaceuticals**, for US\$1.31 billion. The transaction provides Ipsen with a near-term launch opportunity of a largely de-risked asset with little competition, enhancing the company's sustainable growth profile
- On February 25th, **Prometic Life Sciences Inc.** announced that it has raised an additional US\$10 million from an affiliate of **Thomvest Asset Management Inc.** The drawdown represents the final tranche of the existing US\$80 million loan agreement which was entered into in November 2017. The proceeds provide the company with additional means to fund itself with limited dilution
- On February 22nd, **Trillium Therapeutics**, a clinical stage immuno-oncology company announced that it has priced a its underwritten public offering of 6.55 million Common Share Units ("CSU") and 12.2 million Series II Non-Voting Convertible Preferred Share Units, and expects to receive gross proceeds of US\$15 million. The proceeds will be used to fund the ongoing research program and for general working capital purposes
- On February 4th, **Crescita Therapeutics** and **Tetra Natural Health**, a subsidiary of **Tetra Bio-Pharma** have announced a collaboration to develop an enhanced version of Tetra's dermatology portfolio using Crescita's patented transdermal delivery technologies: Multiplexed Molecular Penetration Enhancer and DuraPeel
- On January 31st, **Resverlogix**, a developer of epigenetic mechanisms that regulate disease-causing genes, announced that it has closed a C\$6.6 million private placement with **Shenzhen Hepalink Pharmaceutical Group**, a China-based producer of heparin sodium API. The funds will be used to fund research and development activities related to the company's phase 3 BETonMACE trial
- On January 23rd, **ProMIS Neurosciences** announced that it has completed a private placement of 9.56 million units at a price of C\$0.23 per unit, for gross proceeds of C\$2.2 million. The additional funds allow the company to continue generating data showing the competitive advantages of ProMIS's novel antibody programs and help capitalize on interest received from large pharmaceutical companies
- On January 14th, **Zomedica Pharmaceuticals** announced it completed its previous private placement offering which issued 2.8 million common shares at US\$1.52 per share amounting to gross proceeds of US\$4.28 million

Key Indicators¹

Prices as of Mar 05, 2019

in USD millions, unless otherwise indicated

| | Market | | | |
|--------------------------|--------|------|------|-----|
| | Cap | Cash | Debt | TEV |
| Clementia Pharmaceutical | 918 | 107 | - | 811 |
| Aurinia Pharmaceuticals | 613 | 169 | - | 444 |
| Zymeworks Inc. | 488 | 155 | - | 333 |
| Resverlogix Corp. | 467 | 16 | 13 | 464 |
| Arbutus Biopharma Corpor | 237 | 142 | - | 70 |

1. Top 5 companies by Market Capitalization



COMMERCIAL PRODUCTS

News Scan

- On February 26th, **Bausch Health Companies** announced that it was selected as the successful bidder to acquire certain assets of **Synergy Pharmaceuticals** for a purchase price of US\$195 million and the assumption of certain liabilities. The acquisition is part of the evolution of Bausch's portfolio that augments it with research investments. The assets of Synergy are expected to enhance Bausch's **Salix Pharmaceuticals** business and supplement the organic growth in gastroenterology
- On February 26th, **Neovasc Inc.**, a specialty medical device company announced that it has priced its public offering of 11.1 million common shares and expects to receive gross proceeds of US\$5 million. The proceeds will be used for the development and commercialization of the Neovasc Reducer and development of the Tiara, products that are used in heart treatments
- On February 25th, **Theratechnologies Inc.** announced the acquisition of **Katana Biopharma Inc.**, a developer of a targeted oncology platform, for US\$5.3 million. The acquisition provides Theratechnology with an attractive platform that the company can develop and market, along with an attractive research and development pipeline
- On February 18th, **Knight Therapeutics Inc.** announced the closing of a strategic financing agreement for up to US\$125 million with **Moksha8 Inc.**, specialty pharmaceutical company focused on Latin America. Under the agreement, Knight will initially lend Moksha8 up to US\$25 million in working capital and up to US\$100 million for M&A and the acquisition of new licenses. The partnership allows Knight to support Moksha8's growth
- On January 22nd, **Spectral Medical Inc.**, a Phase 3 company developing treatment for patients with endotoxemic septic shock, announced the completion of a distribution agreement for its proprietary continuous renal replacement therapy (CRRT) machine with a private US-based company. The agreement allows the US-based company to provide CRRT machines for their use in a specific therapeutic process where an open platform CRRT machine is preferred. Spectral's unique open platform design provides increased flexibility for doctors, allowing them to support patient's specific needs
- On January 14th, **Zomedica Pharmaceuticals**, a veterinary diagnostic and pharmaceutical company, announced that it has closed a private placement offering, pursuant to which it has issued an aggregate of 2.8 millions shares at a price of US\$1.52 per share, for total proceeds of US\$4.3 million. The funds will be used to fund its cash expenditure obligations under its exclusive development and supply agreement with **Qorvo Biotechnologies**

Key Indicators¹

Prices as of Mar 05, 2019

in USD millions, unless otherwise indicated

| | Market | | TEV / Revenue | | TEV / EBITDA | | Price / Earnings | |
|--------------------------|--------|--------|---------------|-------------|--------------|--------------|------------------|--------------|
| | Cap | TEV | 2019E | 2020E | 2019E | 2020E | 2019E | 2020E |
| Bausch Health Companies | 8,381 | 32,403 | 3.8x | 3.7x | 9.4x | 9.2x | 6.1x | 5.6x |
| ADVANZ PHARMA Corp. | 889 | 2,080 | 4.1x | 4.0x | 9.1x | 8.7x | nmf | nmf |
| Knight Therapeutics Inc. | 820 | 222 | 21.9x | 16.0x | nmf | 12.8x | nmf | 41.8x |
| Theratechnologies Inc. | 454 | 476 | 4.3x | 2.5x | 21.5x | 9.9x | 21.4x | 7.8x |
| HLS Therapeutics Inc. | 324 | 460 | 7.6x | 6.6x | 11.7x | 10.2x | nmf | nmf |
| Mean | | | 8.4x | 6.5x | 12.9x | 10.1x | 13.7x | 18.4x |

1. Top 5 companies by Market Capitalization



HEALTHCARE SERVICES

News Scan

- On February 27th, **Nova Leap Health** announced that it has executed a non-binding letter of intent to acquire a homecare services company located in Eastern Canada. Nova Leap will acquire the asset for total consideration of US\$564k, of which US\$188k is payable at close with the rest to be paid by way of a promissory note over the next five years. The target reported revenues of US\$1.82 million and EBITDA of US\$127k, implying a purchase multiple of 4.4x LTM EBITDA. The transaction is expected to be immediately accretive and is aimed to close by the end of April 2019
 - On January 15th, **Nova Leap Health** provided an update on its 2019 expansion plans. The company will continue to explore and evaluate opportunities for home care and home health care businesses in both the U.S. and Canada. Management anticipates that Nova Leap will acquire up to four home health care companies in 2019 and expects annualized recurring home care service hours to increase between 50 to 100% over 2018 results
- On February 14th, **Centric Health** announced that it has closed the planned divestiture of its retail pharmacy location in Medicine Hat, Alberta. The total sale price was C\$2.33 million. The company intends to use the proceeds for working capital purposes. Due to an unforeseen delay, the company will not be completing the previously announced the sale of a second retail pharmacy located in Grand Prairie, Alberta
- On February 7th, **Revera Inc.** announced that it has formed an agreement with **SmartCentres REIT** and **Penguin Group of Companies** to own and develop new retirement living residences across Canada. Under the terms of the overall agreement, there are several sites which are currently owned by SmartCentres, Penguin, and Revera that have been earmarked for future development. Additionally, SmartCentres and Revera have executed specific site agreements to proceed with the first of three projects in the GTA. The projects will include 536 units consisting of seniors' apartments and retirement residences in Vaughan and Oakville. The total investment is expected to be -C\$300 million

Key Indicators¹

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| | Market | | TEV / Revenue | | TEV / EBITDA | | Price / Earnings | |
|--------------------------------|--------|-------|---------------|-------------|--------------|-------------|------------------|--------------|
| | Cap | TEV | 2019E | 2020E | 2019E | 2020E | 2019E | 2020E |
| Sienna Senior Living Inc. | 899 | 1,644 | 3.3x | 3.1x | 15.3x | 14.4x | nmf | nmf |
| Extencare Inc. | 490 | 837 | 1.0x | 1.0x | 11.6x | 10.8x | 21.8x | 16.8x |
| Medical Facilities Corporation | 384 | 565 | 1.3x | 1.2x | 5.5x | 5.1x | 17.9x | 19.7x |
| CRH Medical Corporation | 223 | 290 | 2.3x | 2.1x | 4.8x | 4.6x | 26.2x | 18.9x |
| Akumin Inc. | 221 | 330 | 1.5x | 1.3x | 6.3x | 5.2x | 13.5x | 8.8x |
| Mean | | | 1.9x | 1.8x | 8.7x | 8.0x | 19.8x | 16.0x |

1. Top 5 companies by Market Capitalization



CANNABIS

News Scan

- On February 26th, **Aurora Cannabis** announced that it has agreed to terms to acquire a 51% ownership stake of **Gaia Pharm Lda.**, a Portuguese-based licensed producer. Aurora plans on constructing a new production facility that is expected to produce 4,000 kg per year by 2020
 - On January 24th, **Aurora Cannabis** announced that it has closed an offering of 5.5% convertible senior notes due 2024 for gross proceeds of US\$345 million. Aurora intends to use the proceeds to support its Canadian and international expansion initiatives and working capital requirements
 - On January 14th, **Aurora Cannabis** announced that it has entered into a letter of intent to acquire **Whistler Medical Marijuana Corp.** for C\$175 million. The transaction is expected to provide Aurora with a premium organic certified product suite and will allow the company to reinforce its presence in the west coast cannabis market
- On February 25th, **CannTrust Holdings** announced that it has satisfied all regulatory requirements and has begun trading on the NYSE under the ticker "CTST"
- On February 7th, **Canopy Growth Corporation** announced that it intends to invest C\$30 million in Canopy Rivers Inc. by way of a private placement. After the closing of the transaction, Canopy Growth will own approximately 27.3% of Canopy rivers, an increase from 26.5% pre-transaction
- On February 6th, **Aphria Inc.** announced that its Board of Directors has rejected a hostile bid by **Green Growth Brands** to acquire the company in exchange for 1.5714 shares of GGB per one share of Aphria. Based on the 20-day volume-weighted average price of GGB shares before the announcement, the bid reflects a 23% discount to Aphria's share price over the same time period
 - On January 9th, **Aphria Inc** announced that it has completed its acquisition of **CC Pharma GmbH**, a leading distributor of pharmaceutical products to more than 13,000 pharmacies in Germany and throughout Europe. Aphria paid €18.9 million in cash with an earn-out worth up to another €23.5 million for total consideration of €42.4 which implies an EBITDA transaction multiple of 1.8x based on CC Pharma's 2018 EBITDA of €10.5
- On January 21st, **Tilray Inc.** announced that it has entered into a definitive agreement to acquire **Natura Naturals Holdings**, a licensed cultivator of cannabis. Under the terms of the agreement, Tilray will deliver C\$35 million at closing consisting of C\$15 million in cash and C\$20 million in common stock with the option for another C\$35 million upon reaching certain quarterly production milestones

Key Indicators¹

Prices as of Mar 05, 2019

in USD millions, unless otherwise indicated

| | Market | TEV / Revenue | | TEV / EBITDA | | Price / Earnings | | |
|---------------------------|--------|---------------|--------------|--------------|--------------|------------------|------------|--------------|
| | | Cap | TEV | 2020E | 2021E | 2020E | 2021E | 2020E |
| Canopy Growth Corporation | 16,662 | 15,626 | 25.0x | 15.4x | nmf | 61.3x | nmf | nmf |
| Aurora Cannabis Inc. | 8,188 | 8,467 | 13.1x | 8.1x | 54.6x | 28.4x | nmf | 46.0x |
| Cronos Group Inc. | 7,735 | 7,495 | 39.6x | 28.0x | nmf | 86.2x | nmf | nmf |
| Tilray, Inc. | 7,178 | 7,661 | 24.8x | 15.6x | nmf | 49.2x | nmf | nmf |
| Aphria Inc. | 2,596 | 2,557 | 4.7x | 3.4x | 20.2x | 12.6x | nmf | nmf |
| Mean | | | 21.4x | 14.1x | 37.4x | 47.5x | nmf | 46.0x |

1. Top 5 companies by Market Capitalization



US HIGHLIGHTS

News Scan

- On February 25th, **Roche** announced that it has agreed to acquire **Spark Therapeutics** at US\$114.50 in cash for a total transaction value of US\$4.8 billion on a fully diluted basis. Spark is a fully integrated, commercial gene therapy company and one of the only biotechnology company that has successfully commercialized a gene therapy for a genetic disease in the U.S.
- On February 21st, **Merck** announced that it has entered into a definitive agreement with **Immune Design** to acquire the company at US\$5.85 per share for an approximate value of US\$300 million. Immune Design will expand Merck's portfolio of cancer immunization products
- On February 13th, **Johnson & Johnson (J&J)** announced that it has agreed to buy **Auris Health Inc.**, a privately held surgical robotics company for US\$3.4 billion in cash. The agreement includes additional payments by J&J of \$US2.35 billion, contingent of undisclosed milestones. The acquisition aims to accelerate J&J's entry into robotics and potential expansion into other interventional applications
 - On January 22nd, **J&J** announced that it has settled its hip implant litigation filed against its DePuy unit with 45 states for approximately US\$120 million. In 2010, DePuy recalled approximately 93,000 of its ASR hip implant systems due to a 5-year failure rate of 12%, and paid at least US\$2.5 billion to settle thousands of lawsuits from patients who had the devices removed
- On February 5th, **Xencor**, a clinical-stage biopharmaceutical company announced it has entered into a research and license agreement with **Genentech**, a member of the **Roche Group**, to develop and commercialize Xencor's most advanced preclinical cytokine program. Under the terms of the partnership, Genentech will pay Xencor US\$120 million upfront, and up to US\$340 million in milestones
- On February 5th, **Teva Pharmaceutical** received tentative FDA approval for Farxiga, its generic version of AstraZeneca's type 2 diabetes medication. Tentative approval means that the application met the criteria for approval but patient issues are pending resolution
- On January 24th, **Medtronic** announced that it has entered into a definitive agreement to acquire **EPIX Therapeutics**, a privately-held medical device company that makes novel, catheter-based, temperature-controlled system for treating cardiac arrhythmias. The deal is expected to close before May this year, no financial terms were disclosed
- On January 2nd, **Bristol-Myers** announced that it has signed a definitive agreement to acquire **Celgene Corp.** for total consideration of US\$72.9 billion. Under the terms of the transaction, Celgene shareholders will receive one Bristol-Myers share and US\$50 in cash for each share of Celgene. The transaction is pending approval

Key Indicators¹

Prices as of Feb 28, 2019

in USD millions, unless otherwise indicated

| | Market | | TEV / Revenue | | TEV / EBITDA | | Price / Earnings | |
|-------------------|---------|---------|---------------|-------------|--------------|--------------|------------------|--------------|
| | Cap | TEV | 2019E | 2020E | 2019E | 2020E | 2019E | 2020E |
| Johnson & Johnson | 366,465 | 378,363 | 4.7x | 4.5x | 12.7x | 12.2x | 15.9x | 15.0x |
| Pfizer Inc. | 250,584 | 268,308 | 5.0x | 5.0x | 12.3x | 12.4x | 15.0x | 14.1x |
| Roche Holding AG | 237,376 | 245,907 | 4.1x | 4.1x | 10.5x | 10.2x | 15.0x | 14.5x |
| Merck & Co., Inc. | 211,385 | 219,830 | 5.0x | 4.7x | 12.6x | 11.6x | 17.3x | 15.4x |
| Novartis AG | 210,409 | 218,148 | 4.1x | 3.9x | 13.5x | 12.3x | 17.0x | 15.4x |
| Mean | | | 4.6x | 4.4x | 12.3x | 11.7x | 16.0x | 14.9x |

1. Top 5 companies by Market Capitalization



ORIGIN

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