

*January 5, 2017***Capnia, Inc.**
(Nasdaq/CAPN/\$0.85/Not rated)*Sherry Grisewood, CFA*
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**Merger with Private Rare Disease Company Announced,
Business Focus Changes to Rare Disease Therapeutics**

Last week, Capnia announced the Company had entered into a plan of merger with private company, Essentialis, Inc. Essentialis, like Capnia, is a portfolio company of Palo Alto-based Vivo Capital. Essentialis is a Phase II/III-ready rare disease therapeutics company that has completed five proof-of-concept clinical trials in hypertriglyceridemia and Prader-Willi Syndrome, a genetic neurobiological and metabolic disease. In consideration of the merger, Capnia will issue Essentialis stockholders 17,354,453 shares upon the transaction closing, expected during Q1 2017. An additional 981,392 shares will be held back as partial recourse to satisfy certain indemnification claims made by Capnia and will be issued to Essentialis shareholders upon the one year anniversary of the merger. The pricing mechanism for the to-be-issued Essentialis merger shares was not disclosed in the related SEC filings but if one uses either Capnia's closing price of \$0.81 on day prior to the announcement or the prior five day average close, the upfront payment to Essentialis shareholders would be approximately \$14.05 million, a very slight premium to Capnia's market value. Other terms of the merger disclosed in Capnia filings include:

- * 4,566,961 additional shares issuable upon achievement of certain development milestones;
- * Upon the achievement of certain commercial sales milestones, Capnia will be obligated to make cash earn-out payments of up to \$30 million;
- * The Capnia board will be expanded to 9 members to accommodate the addition of venture capitalist representatives from Vivo Ventures, Forward Ventures and Technology Partners currently sitting on the Essentialis board;
- * Capnia shareholders will have to approve the transaction;
- * The merger agreement contains termination rights including a provision that Capnia must pay Essentialis a termination fee of \$750,000 and/or reimburse Essentialis up to \$500,000 upon certain specific circumstances;
- * In conjunction with the merger closing, current and new investors have committed to invest \$8 million at \$0.96 per share to fund a planned PII/III clinical trial expected to get underway in the second half of 2017.

Essentailis Disease Focus

Essentailis is focused on rare metabolic genetic diseases where there is increased cardiovascular, endocrine and mortality risks. The Company is specifically pursuing clinical trials in Prader-Willi syndrome, a rare complex genetic abnormality neuro-endocrine and behavioral disease, with an extended release formulation of diazoxide choline (DCCR) as a once-daily oral treatment for hyperphagia (hyper-appetite). PWS induced hyperphagia

leads to extreme obesity which may become evident as early as two years of age. Prader-Willi Syndrome (PWS) affects between 12,000 and 21,000 individuals in the US and approximately 350,000 people on a worldwide basis. PWS disease hallmark features include an unrelenting appetite due to genetic mutations that impart a “starving” biological syndrome as well as developmental, mental, behavioral and endocrine anomalies that lead to premature death. A related indication Essentialis is addressing is hypothalamic obesity which occurs when the hypothalamus is damaged by the presence of a tumor or from surgery or radiation.

DCCR is a novel crystalline salt formulation of diazoxide, a glucose-elevating agent that interacts with the ATP-sensitive potassium channel, a metabolically-regulated membrane protein. Diazoxide is one of the most potent openers of the K⁺ ATP channels present on the insulin producing beta cells of the pancreas. Opening these channels leads to hyperpolarization of cell membrane, a decrease in calcium influx, and a subsequently reduced release of insulin, thus mediating insulin and glucose levels. Diazoxide has been administered as daily multi-dose suspension or capsule (Proglycem) for PWS, hypoglycemia other orphan indications in neonates, children and adults for over 40 years and has a substantial pre-clinical and clinical dossier. Essentialis presented data from its P1b/IIa clinical study of its DCCR compound, PCO25, at the September 2015 Annual Meeting of the Foundation for Prader-Willi Research. DCCR was granted Orphan Drug designation for treatment of PWS in May 2014.

Comment

While we have been enthusiastic about the need to bring new technologies into the neonate hospital unit, the challenges facing achieving economically-viable market penetration of the Company’s **CoSense®** CO monitoring device, even with the acquisition of other neonate products to bring into the “sales kitbag”, have been clearly articulated by company management. It is not a surprise, therefore, in light of the capital needs to drive a long “on-ramp” sales curve that management has looked to other ways to create shareholder value. Certainly changing the Company’s focus to rare diseases by bringing in a mid-stage clinical program is an attempt to do so. We will be meeting 1x1 with Capnia management next week at Biotech Showcase to further discuss this transaction and the Company’s go-forward strategic plan. *SG*



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Ratings Distribution	Company Coverage		Investment Banking	
	# of Companies	% of Total	# of Companies	% of Totals
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Market Perform (Neutral)	0	0%	0	0%
Market Underperform (Sell)	0	0%	0	0%
Rating Suspensions*	4	67%	4	100%
Total	6	100%	5	83%

*Suspensions are ratings under review for possible change due to unusual market-moving news, and/or analyst departure/change

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