

Sensorion S.A. (ALSEN.PA)

Sensorion Announces Collaboration with Cochlear Implants for SENS-401

On December 18th, Sensorion (Euronext Paris: ALSEN.PA) announced a collaboration with Cochlear Implants (ASX: COH), a leader in the field of implantable hearing devices, to evaluate SENS-401 in combination with cochlear implants. SENS-401 is a serotonin 5-HT₃ receptor antagonist with anti-inflammatory properties that may reduce damage to the inner ear and improve outcomes for patients undergoing implantation procedures. The companies plan to launch preclinical studies on the combination in 2018 with the potential for mid-stage clinical trials to begin by 2019. Sensorion is also developing SENS-401 for sudden sensorineural hearing loss (SSNHL) and chemotherapy-induced hearing loss (CIHL), and plans to launch Phase II studies for these indications in 2018 as well.

- Collaboration Will Test Effect of SENS-401 on Outcomes in Cochlear Implant Procedures.** The companies plan to launch preclinical studies in 2018 to test the therapeutic benefit of SENS-401 given in combination with cochlear implant surgery. SENS-401 has been shown to preserve function in models of noise-induced and chemotherapy-induced hearing loss (NIHL/CIHL), and may improve outcomes in individuals undergoing cochlear surgery. Cochlear will make a €1.6 million (\$1.9 million) equity investment into Sensorion and will have right of first negotiation for global rights to use SENS-401 in combination with certain implantable devices.
- SENS-401 Also in Development for SSNHL and CIHL.** Sensorion is also testing the clinical value of SENS-401 as a potential therapy for SSNHL and platinum-induced ototoxicity. Severe hearing loss occurs in roughly 50-60% of cancer patients treated with platinum-based chemotherapies. There are no approved agents to prevent or treat this condition, making this an important unmet need and a sizeable market opportunity. The Company plans to launch a Phase II study in SSNHL in H1 2018 with a trial in CIHL expected to begin later in 2018.
- SENS-401 Could Have Important Anti-Inflammatory Effects.** SENS-401 is an antagonist of the serotonin 5-HT₃ receptor. This receptor is broadly expressed in the central nervous system (CNS), as well as in peripheral locations including the gastrointestinal (GI) tract and immune system. 5-HT₃ receptors are found on mast cells, platelets, and T cells. *In vitro* and *in vivo* studies have shown that 5-HT₃ antagonists have anti-inflammatory properties. In liposaccharide-stimulated human monocytes, 5-HT₃ antagonist administration led to a dose-dependent decrease in tumor necrosis factor alpha (TNF- α), interleukin-1 β (IL-1 β), and interleukin-2 (IL-2).^[ref] Given its potential anti-inflammatory properties, a 5-HT₃ antagonist like SENS-401 may offer therapeutic benefit to patients suffering from a variety of inflammatory conditions. Treatment with SENS-401 may reduce degeneration, loss of connectivity, and long-term deficit following an insult to the inner ear. The goal of treatment is the preservation of cochlear or vestibular hair cells, as well as their synapses stressed by a lesional insult.

Expected Upcoming Milestones

- H1 2018 – Initiation of Phase II study for SENS-401 in SSNHL.
- 2018 – Launch of Phase II study for SENS-401 in platinum-induced ototoxicity.
- H2 2018 – Topline results from Phase II trial for SENS-111 expected.

Analysts

David Sherman, Ph.D. (AC)
(212) 915-2570
ds Sherman@lifescicapital.com

Market Data

Price	\$3.65
Market Cap (M)	\$30
EV (M)	\$22
Shares Outstanding (M)	8.2
Fully Diluted Shares (M)	10.2
Avg Daily Vol	66,568
52-week Range:	\$3.06 - \$9.13
Cash (M)	\$10.8
Net Cash/Share	\$0.96
Annualized Cash Burn (M)	\$10.0
Years of Cash Left	~1.0
Debt (M)	\$3.0

Financials

FY Dec	2015A	2016A	2017A
EPS H1	(0.74)A	(0.75)A	(0.71)A
H2	NA	NA	NA
FY	NA	(1.27)A	NA

- **Sensorion Has Shown Potential Therapeutic Benefit in a Preclinical Model of CIHL.** Sensorion has conducted a preclinical study to evaluate the potential of SENS-401 to prevent inner ear damage using a rat model of cisplatin-induced hearing loss. The Company generated a rat model of cisplatin-induced hearing loss by treating the rats with 8 mg/kg of cisplatin on day 1. Rats were then treated with SENS-401 for 14 days at doses of 6.6, 13.2, or 26.4 mg/kg/day. Treatment with SENS-401 was associated with a significant improvement in recovery at all doses tested, as measured by the shift in the acoustic brainstem response (ABR). Histological analysis also revealed significantly more surviving outer hair cells (OHC) following SENS-401 treatment relative to placebo. The results, which are consistent with prior results in a noise-induced injury model, suggest that SENS-401 may facilitate recovery following inner ear injury and support advancing this molecule into clinical development.

Risk to Investment

We consider an investment in Sensorion to be a high-risk investment. Sensorion has generated limited clinical data to date, and early signs of safety and efficacy may not necessarily translate into late-stage success. There are clinical and commercialization risks associated with their program as well. As with any company, Sensorion may be unable to obtain sufficient capital to fund planned development programs. There are regulatory risks associated with the development of any drug, and Sensorion may not receive FDA or EMA approval for its drug candidates despite significant time and financial investments. Regulatory approval to market and sell a drug does not guarantee that the drug will penetrate the market, and sales may not meet expectations.

Analyst Certification

The research analyst denoted by an “AC” on the cover of this report certifies (or, where multiple research analysts are primarily responsible for this report, the research analyst denoted by an “AC” on the cover or within the document individually certifies), with respect to each security or subject company that the research analyst covers in this research, that: (1) all of the views expressed in this report accurately reflect his or her personal views about any and all of the subject securities or subject companies, and (2) no part of any of the research analyst's compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed by the research analyst(s) in this report.

DISCLOSURES

This research contains the views, opinions and recommendations of LifeSci Capital, LLC (“LSC”) research analysts. LSC (or an affiliate) has received compensation from the subject company for producing this research report. Additionally, LSC expects to receive or intends to seek compensation for investment banking services from the subject company in the next three months. LSC (or an affiliate) has also provided non-investment banking securities-related services, non-securities services, and other products or services other than investment banking services to the subject company and received compensation for such services within the past 12 months. LSC does not make a market in the securities of the subject company.

Neither the research analyst(s), a member of the research analyst's household, nor any individual directly involved in the preparation of this report, has a financial interest in the securities of the subject company. Neither LSC nor any of its affiliates beneficially own 1% or more of any class of common equity securities of the subject company.

LSC is a member of FINRA and SIPC. Information has been obtained from sources believed to be reliable but LSC or its affiliates (LifeSci Advisors, LLC) do not warrant its completeness or accuracy except with respect to any disclosures relative to LSC and/or its affiliates and the analyst's involvement with the company that is the subject of the research. Any pricing is as of the close of market for the securities discussed, unless otherwise stated. Opinions and estimates constitute LSC's judgment as of the date of this report and are subject to change without notice. Past performance is not indicative of future results. This material is not intended as an offer or solicitation for the purchase or sale of any financial instrument. The opinions and recommendations herein do not take into account individual client circumstances, objectives, or needs and are not intended as recommendations of particular securities, companies, financial instruments or strategies to particular clients. The recipient of this report must make his/her/its own independent decisions regarding any securities or financial instruments mentioned herein. Periodic updates may be provided on companies/industries based on company specific developments or announcements, market conditions or any other publicly available information. Additional information is available upon request.

No part of this report may be reproduced in any form without the express written permission of LSC. Copyright 2017.