Analyst Report

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Aurgalys is contracted by OSE Pharma to provide equity research

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OSE Pharma

EURONEXT PARIS: OSE [FR0012127173]

February 10th, 2016

Estimated price:	€15.25
Share price (€) (as of Feb. 10th, 2016)	6.62
High/Low (€) (since Jan. 1st, 2016)	8.59/5.70
Market Cap. (€M) (as of Feb. 10th, 2016)*	66.52
Estimated Net Cash (€M)	16.6
Estimated Market Cap. (€M)	153.2
Number of shares (M)	10.05
Estimated price (€)	15.25
3-month average daily volume	8,500
Free Float	29.7%

Euronext since Jan. 1st, 2016	
OSE Pharma	*-21.8%*
*Alys France**	*-27.2%*
Next Biotech	*-30.5%*
CAC Pharma.&Bio.	*-13.8%*
CAC 40	*-12.4%*
CAC Small	*-13.1%*

** Index of French smallcaps (less than €1B market capitalization at time of inclusion) in the healthcare and life sciences sector, listed on Euronext Paris.*

See http://www.aurgalys.com/aurgalys-indices

OSE Pharma extends pivotal NSCLC Phase III trial to the US

OSE Pharma obtained the authorization to conduct its pivotal NSCLC Phase III trial in an American center, allowing the company to extend the Atalante 1 study to the US territory. Seven European countries have already been included in this trial, and OSE Pharma expects to include a first patient in the coming weeks. This trial aims at confirming the results obtained in Phase II, whereby Tedopi can improve the survival of late stage lung cancer patients. Tedopi is a mix of cancer antigens which specifically stimulates the immune system to fight cancer. This particular strategy allows OSE Pharma to consider the development of their product in combination with other drugs such as checkpoint inhibitors. Indeed, important deals have recently been signed in this area, demonstrating the huge interest for immuno-oncology. The Atalante 1 results are expected in 2018.

First center opened in the US

With the authorization of the first American clinical center, OSE Pharma reached an important milestone for its pivotal Atalante 1 Phase III trial. The company already opened centers in 7 European countries. Five hundred patients will be included for this randomized, placebo-controlled trial. Twenty percent of them will be recruited in the US, allowing OSE Pharma to file for marketing approval in both the US and Europe, with data based on this single Phase III study. The €10 M trial is already financed, thanks to OSE Pharma's 2015 initial public offering. With an estimated annual cash burn of €5-6M, OSE Pharma has a financial visibility until the end of the Atalante 1 Phase III trial, in 2018.

Significant progress in immuno-oncology

In the past few years, we have witnessed the evolution of therapeutic strategies, with a growing awareness for the potential of personalized therapies. Immunotherapy has emerged as one of the therapeutic solutions for cancer treatment (immune-oncology). Its main goal is to activate the natural immune system against cancer antigens. The benefits of this therapeutic approach include a high specificity, and consequently, a decrease in side effects compared to non-specific therapies. OSE Pharma's Tedopi uses this mechanism of action, and target 5 of the most common antigens

found in solid tumors. Several strategies based on immunity are currently being developed, and already exist to fight cancer. The recent approvals of checkpoint inhibitors – a promising immuno-oncology strategy – to treat metastatic melanoma or NSCLC have boosted the interest of large pharmaceutical groups in this therapeutic field. This is further demonstrated by the numerous licensing deals recently signed in combination therapy of a drug candidate with a checkpoint inhibitor (PD-1, PD-L1, or CTLA-4 checkpoints, see selected deals in Table 1). Combination therapy has always been used against cancer to improve the efficacy of those treatments, and reduce cancer relapse.

Companies	Product	Status	Deal	Date
Innate Pharma/ Sanofi	Innovative bispecific antibody formats engaging natural killers (NK) cells to kill tumor cells through the activating receptor NKp46	Preclinical	€436 M	Jan 2016
Five Prime Therapeutics/ BMS	Colony stimulating factor 1 receptor antibody programme, inc FP A008 (p1) in immunology/ oncology combined with Opdivo + other therapies	Phase I	$ 1.7 B	Oct 2015
Regeneron/ Sanofi	Immuno-oncology collaboration including PD-1 inhibitor (p1)	Phase I	$ 2.2 B	Jul 2015
Innate Pharma/ AstraZeneca	IPH2201, antiNKG2A antibody, in combinatin with MEDI4736, an anti-PD-L1 immune checkpoint inhibitor	Phase II	$ 1.2 B	Apr 2015
AstraZeneca/ Celgene	Exclusive collaboration MEDI4736 immune checkpoint inhibitor against programmed cell death ligand 1 (PD-L1)	Phase III	$ 450 M	Apr 2015

Table 1: Recent selected deals in immuno-oncology (Sources: Companies' documents and Medius Associates)

An ambitious licensing strategy

The growing activity in this area, and the number of multiple deals concluded in these recent months, strengthen OSE Pharma's position for a significant partnership. Indeed, OSE Pharma strategy is to develop their lead product Tedopi until the Phase III in NSCLC and to license it. Moreover, OSE Pharma clearly announced its desire to evaluate Tedopi in combination therapy with a checkpoint inhibitor (PD-1) such as Opdivo or Keytruda. These two anti PD-1 have recently been approved for NSCLC. Since Tedopi is already in Phase III with proof of concept in human patients, it represents a strong candidate for a potential deal with a large pharmaceutical company. OSE Pharma also plans to develop Tedopi as a monotherapy in indications other than NSCLC. The company preferentially targets colon cancer, ovarian cancer, and triple negative breast cancer, indications with a strong medical need, in HLA-A2 patients. OSE Pharma intends to find a partnership to develop these indications in Phase II clinical trials.

Valuation of OSE Pharma

Following this announcement, we decided to maintain our valuation of OSE Pharma at €15.25 per share, as it had already been integrated in our valuation model.

Stock Performance

As with other French Biotech smallcaps (Alys France Index, -27.2% YTD), OSE Pharma was impacted by negative macroeconomic

events, and more specifically, the oil crisis, the Chinese economy, etc. OSE Pharma's stock lost 23.02% in January 2016, and displays a 21.8% YTD performance closing at €6.62 per share on February 10th, 2016. OSE Pharma's stock gained 9.11% on February 5th, 2016 after obtaining the authorization to initiate the NSCLC phase III study in the US.

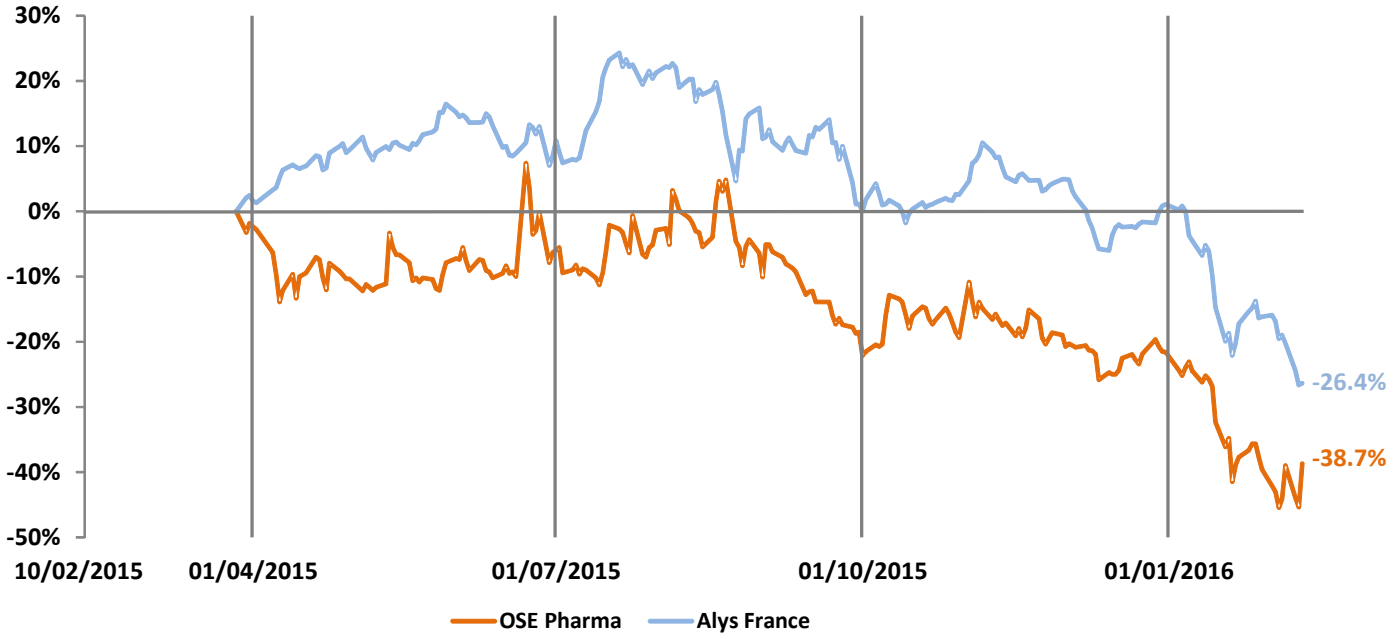

Figure 1: One-year chart dated February 10th, 2015, comparing the performance of OSE Pharma's stock with French smallcaps of the life sciences and healthcare sector (Alys France index).

Financial Data

Earnings Per Shares (€)	2013	2014	2015e	2016e	2017e
EPS	-0,03	-0,36	-0,45	-0,49	-0,64

Income Statement (€M)	2013	2014	2015e	2016e	2017e
Revenues	0,0	0,0	0,0	0,0	0,0
EBIT	-0,3	-2,8	-4,2	-4,9	-6,4
Net Income	**-0,3**	**-2,8**	**-4,3**	**-4,9**	**-6,5**

Balance Sheet (€M)	2013	2014	2015e	2016e	2017e
Non-Current Assets	0,0	0,1	0,2	0,3	0,3
Current Assets	0,0	0,8	1,3	1,8	2,3
Cash and Cash equivalents	0,3	1,1	17,5	11,8	4,9
Total Current Assets	0,3	1,9	18,7	13,6	7,2
Total Assets	**0,3**	**2,0**	**18,9**	**13,9**	**7,5**
Total Equity	**-0,9**	**-0,8**	**16,1**	**11,1**	**4,7**
Non-Current Liabilities	1,1	0,9	0,4	0,3	0,2
Current Liabilities	0,1	1,9	2,9	2,9	3,0
Total Equity and Liabilities	**0,3**	**2,0**	**19,3**	**14,3**	**7,9**

Cash Flow Statement (€M)	2013	2014	2015e	2016e	2017e
Cash from operating activities	-0,2	-1,9	-2,6	-4,9	-6,7
Cash from investing activities	0,0	0,0	-0,2	-0,1	0,0
Cash from financing activities	0,3	2,8	19,1	-0,7	-0,1
Change in Cash	**0,1**	**0,8**	**16,4**	**-5,7**	**-6,8**

Résumé en français

OSE Pharma a annoncé avoir obtenu l'approbation d'un premier centre investigateur aux USA pour mener son essai pivot de Phase III dans le cancer non à petites cellules (NSCLC). Cette nouvelle vient s'ajouter aux autorisations préalablement obtenues dans 7 pays européens en janvier 2016, donnant à cet essai Atalante 1 une envergure internationale. Une extension d'essai aux USA permettra à OSE Pharma d'obtenir des AMMs (Autorisations de Mise sur la Marché) sur les territoires Etats-Unis/Europe, sur la base d'une seule Phase III. Ainsi, OSE Pharma qui s'inscrit comme un acteur innovant dans le domaine de l'immuno-oncologie, pourra concentrer ses efforts au déploiement de son essai Atalante 1 et à la recherche de partenaires pour la commercialisation de leur produit phare Tedopi dans cette indication particulière. Atalante 1 prévoit le recrutement de 500 patients atteints de NSCLC, pathologie qui représente 85% des cancers du poumon, afin de démontrer l'efficacité du Tedopi sur plusieurs critères dont le principal est la prolongation de la survie des malades. Les résultats de cette étude sont attendus pour 2018, et la société envisage en seconde option une étude du produit en combinaison avec un inhibiteur de checkpoint (anti-PD-1) tel que le Keytruda ou l'Opdivo, dans la même indication. OSE Pharma qui s'est introduite en bourse en Avril 2015, dispose des ressources nécessaires pour mener à terme cet essai clinique. Compte-tenu de son actualité, notre valorisation d'OSE Pharma reste identique à celle que nous avions estimée, notre analyse intégrant déjà l'entrée en phase III.

Disclaimer

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About Aurgalys indices

Aurgalys launched on October 2013, the Alys France index measuring the performance of the 40 French smallcap companies (less than €1B of market capitalization) listed on Euronext/Alternext Paris. Three other indices also measure the performance of companies dedicated to the development of therapeutic molecules (Alys Thérapeutics), diagnostic tests (Alys Diagnostics), medical devices (Alys Medtech) and Greentech (Alys Greenetch). You can find our reports on our website at http://www.aurgalys.com/aurgalys-indices

About Aurgalys

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