

**Estimated price:** €18.70

Share price (€) 7.32  
(as of January 4<sup>th</sup>, 2017)

High/Low (€) 7.41/7.1  
(since Jan. 1<sup>st</sup>, 2017)

Market Cap. (€M) 104.60  
(as of Jan 4<sup>th</sup>, 2017)\*

Estimated Net Cash (€M) 25.3

Estimated Market Cap. (€M) 264.7

Number of shares (M) 14.2

Estimated price (€) 18.70.

3-month average daily volume 15,000

Free Float 48.0%

*Euronext since Jan. 1<sup>st</sup>, 2017*

**OSE Immuno.** +1.4%

**Alys France\*** +4.8%

**Next Biotech** +1,0%

**CAC Healthcare.** +1.3%

**CAC 40** +0.8%

**CAC Small** +1.4%

\* 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>



## Servier license option confirms OSE Immunotherapeutics' product portfolio potential

OSE Immunotherapeutics announced a license option with Servier for the development of Effi-7, an early stage program developed through the EFFIMab consortium, led by OSE. The aim of the consortium is to develop a new generation of an immuno-modulatory antibody targeting the interleukin-7 receptor for the treatment of ulcerative colitis. Under the terms of the license option agreement, OSE Immunotherapeutics could receive up to €272M, including a €10.25M upfront payment, €30M upon the exercise of the option, development, regulatory and commercial milestone payments, and royalties on sales. Following this announcement, we reajusted our target price for OSE Immunotherapeutics to €18.70/share, taking into account the €10.25M upfront.

### Effi-7: an antibody developed to block T cell “fuel”

Effi-7 is a monoclonal antibody that is directed against the IL-7 cytokine receptor (IL-7R or CD127). Because of its key role in T cells homeostasis, IL-7 is considered as the master “fuel” of pathogenic T-cell responses downstream of autoimmune and chronic inflammation diseases. The strategy of Effi-7 is based on the particularity of the regulatory T cells (Treg) to be the unique lymphocytes which do not express the IL-7R, whereas other T cells express the IL-7 receptor. In light of this physiological particularity, OSE chose to target the IL-7R because of the opportunity to selectively target effectors T cells (Teff) without affecting Treg. Preclinical studies with Effi-7 showed interesting data demonstrating the efficacy of the drug candidate to restore the immune balance, especially in inflammatory bowel diseases, type 1 diabetes, multiple sclerosis, rheumatoid arthritis, and to promote immune tolerance in allo-transplantation.

The Effi-7 pre-clinical and clinical proofs of concept are the main goal of the EFFIMab project, partially financed by the French public investment

bank (Bpifrance) under the Industrial-Strategic-Innovation (ISI) program. The €10.25M received from Servier will be added to the €9.1M allocated by Bpifrance to complete the total amount of €20M needed to bring Effi-7 until the end of phase II. Then, depending on the clinical results, Servier could exercise its option to obtain exclusive worldwide rights for the development and commercialization of the Effi-7 antibody. As a reminder, Effi-7 is a proprietary product of OSE Immunotherapeutics, and its development is fully funded by Bpifrance and OSE. Therefore, payments received from Servier are totally dedicated to OSE Immunotherapeutics and its portfolio. The EFFIMab consortium will help the company accelerate the development of the antibody, thanks to the complementarity of skills. Under the terms of the agreement, OSE Immunotherapeutics is eligible to receive up to €272M including the €10.25 M upfront payment, and an additional payment of €30M upon the exercise of the license option. With these milestone payments, the company will not only be able to move Effi-7 clinical studies forward, but also be able to pursue the development of other programs in the short term. Further payments will be triggered with the achievement of clinical development steps, registration in several indications, and sales milestones, with double-digit royalties on sales.

### **A previous deal of €155 million with Janssen Biotech for FR104**

In July 2016, Janssen Biotech (Johnson & Johnson group) announced that they will pursue their collaboration with OSE Immunotherapeutics for the development, registration and worldwide commercialization of FR104. This product has been developed by Effimune (before its merger with OSE Pharma to create OSE Immunotherapeutics) through a collaboration concluded with Janssen Biotech in September 2013, in several indications such as autoimmune diseases and transplantation. Under the terms of the agreement OSE Immunotherapeutics could receive up to €155M, including a €10M upfront, in addition to royalties on sales.

FR104 is a phase II-ready drug candidate developed to treat autoimmune diseases especially rheumatoid arthritis, transplantation and Graft-versus-Host Diseases. FR104 is an antibody directed against CD28, thus blocking its interaction with its natural ligands. This leads to the selective activation of Treg cells only, and then to the modulation of the immune system activity as required in indications like autoimmune diseases or transplantation.

This CD-28 immuno-modulator was developed under a European program

whose main objective was to demonstrate the ability of the molecule to restore an immune balance in autoimmune diseases involving T cells.

These two significant deals with major companies in the pharmaceutical field demonstrated OSE Immunotherapeutics' ability to secure licensing deals, highlighting the strong potential of its product portfolio. Furthermore, the company has recently communicated about their partnership with Selexis SA to help OSE Immunotherapeutics advance two of its preclinical products, Effi-7 and Effi-DEM, through Selexis's SUREtechnology Platform. These two programs are predicted to enter clinical trials within 2 years.

### **Two products under development in the immuno-oncology field**

Effi-7 and FR104, licensed to Servier and Janssen, respectively, are two molecules developed to treat auto-immune diseases, but the company also has two products in the immuno-oncology field: Tedopi, a Phase III drug-candidate in NSCLC, and Effi-DEM a new-generation ICI (immune checkpoint inhibitor) currently in preclinical studies.

OSE Immunotherapeutics clearly announced its desire to develop Tedopi, a cancer vaccine, until the end of the Phase III in NSCLC, and will then determine the best marketing strategy for this product, should the results be positive. Additionally, the company also announced the probable launch of a Phase II trial, with the aim to evaluate Tedopi in combination with an approved ICI in NSCLC (see our previous [Note of November 22th, 2016](#)).

Regarding Effi-DEM, the first data obtained highlighted its potential to block cancer progression, and further studies should open the way to other indications, specifically, cancers associated with chronic inflammation. Its unique mechanism of action suggests interesting strategies to evaluate Effi-DEM's potential, especially in combination therapy, with treatments like Tedopi, in order to greatly increase their therapeutic effects.

### **Valuation of OSE Immunotherapeutics**

We decided to maintain our valuation of OSE Immunotherapeutics but including the €10.25M upfront, our target is now €18.70 per share. This target price includes the value associated with the Tedopi and FR104 drug candidates, in NSCLC treatment and Rheumatoid Arthritis, respectively. In our model, we included the licensing deal with Janssen Biotech with

the financial terms provided by the company: a €155M deal, including an upfront payment of €10M, a 10% royalty rate on sales.

Because Effi-7 is still in early stage development, we decided not to include this asset in our valuation model, but we included the €10.25M upfront payment received from Servier in our cash projections.

### Stock Performance

OSE Immunotherapeutics' stocks did not benefit from the last macroeconomic events, and more specifically, the US elections that led to a Biotech market rally. This could be partly explained by low trading volumes. However, the company recorded a strong performance at the end of 2016, thanks to a global rebound in the stock market, but also to the announcement of the deal option with Servier. The one-year cumulative performance of OSE Immunotherapeutics is -10.4%, closing at €7.32 per share on January 4th, 2017.

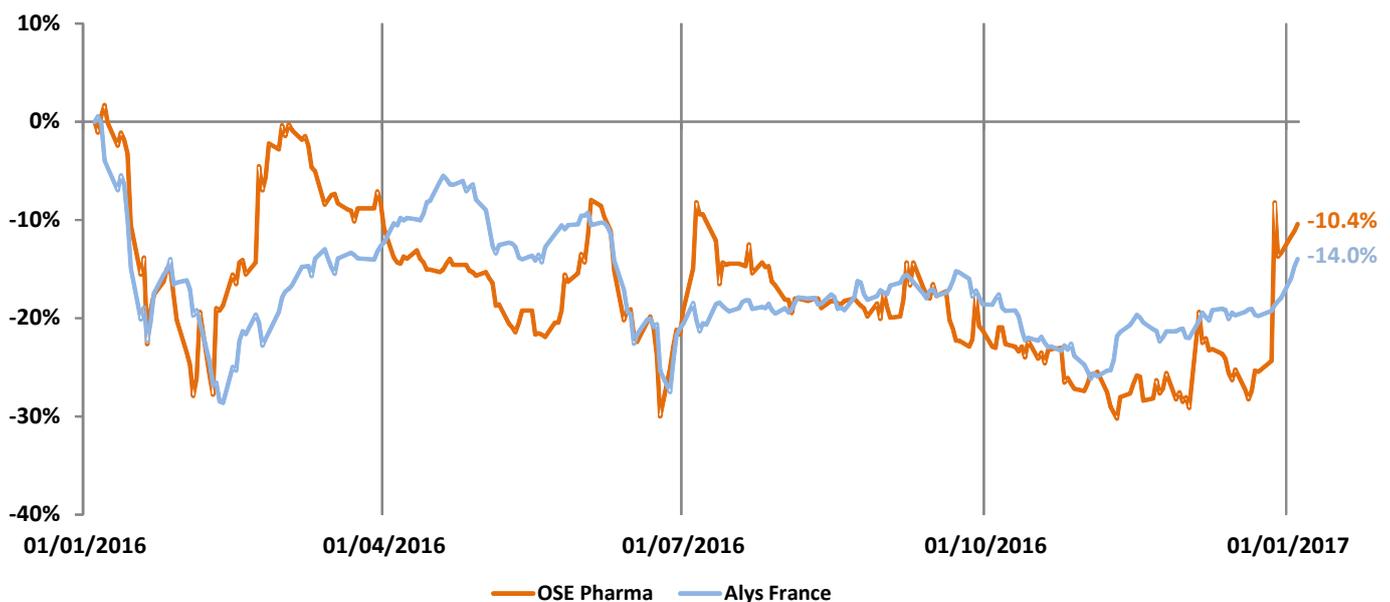


Figure 1. One-year chart dated January 4<sup>th</sup>, 2017, comparing the performance of OSE Immunotherapeutics's stock with French smallcaps of the life sciences and healthcare sector (Alys France index).

## Financial Data

Statements for the years 2013, 2014, and 2015 are OSE Pharma's financial statements. Estimated figures are for OSE Immunotherapeutics.

<b>Earnings Per Share (€)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016e</b>	<b>2017e</b>	<b>2018e</b>
<b>EPS</b>	<b>-0.03</b>	<b>-0.36</b>	<b>-0.59</b>	<b>0.06</b>	<b>-0.14</b>	<b>0.29</b>

<b>Income Statement (€M)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016e</b>	<b>2017e</b>	<b>2018e</b>
Revenues	0.0	0.0	0.0	10.3	6.9	13.1
EBIT	-0.3	-2.8	-5.6	0.5	-2.5	5.5
<b>Net Income</b>	<b>-0.3</b>	<b>-2.8</b>	<b>-5.6</b>	<b>0.8</b>	<b>-2.0</b>	<b>4.2</b>

<b>Balance Sheet (€M)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016e</b>	<b>2017e</b>	<b>2018e</b>
Non-Current Assets	0.0	0.1	0.1	59.8	58.3	56.8
Current Assets	0.3	1.9	16.9	32.8	24.3	28.2
<i>Including Cash and Cash Equivalents</i>	<i>0.3</i>	<i>1.1</i>	<i>9.3</i>	<i>25.3</i>	<i>16.9</i>	<i>24.5</i>
<b>Total Assets</b>	<b>0.3</b>	<b>2.0</b>	<b>17.0</b>	<b>92.6</b>	<b>82.6</b>	<b>85.0</b>
<b>Total Equity</b>	<b>-0.9</b>	<b>-0.8</b>	<b>14.5</b>	<b>64.2</b>	<b>62.3</b>	<b>66.5</b>
Non-Current Liabilities	1.1	0.9	0.2	16.0	15.1	14.1
Current Liabilities	0.1	1.9	2.3	12.3	5.2	4.5
<b>Total Equity and Liabilities</b>	<b>0.3</b>	<b>2.0</b>	<b>17.0</b>	<b>92.6</b>	<b>82.6</b>	<b>85.0</b>

<b>Cash Flow Statement (€M)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016e</b>	<b>2017e</b>	<b>2018e</b>
Cash from operating activities	-0.2	-1.9	-4.6	12.0	-7.9	4.8
Cash from investing activities	0.0	0.0	-6.2	-0.1	-0.1	-0.1
Cash from financing activities	0.3	2.8	19.1	-1.0	-0.5	2.8
<b>Change in Cash</b>	<b>0.1</b>	<b>0.8</b>	<b>8.2</b>	<b>11.0</b>	<b>-8.5</b>	<b>7.6</b>

**Notes**



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You may call +33(0)1 75 66 20 52 or write to [m.dubourd@aurgalys.com](mailto:m.dubourd@aurgalys.com) to request a copy of this independent research

## Aurgalys

1, rue Pierre Fontaine  
91058 Evry Cedex  
France  
[www.aurgalys.com](http://www.aurgalys.com)

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## Acknowledgements

Special thanks to Chris Wilkinson (B.Sc. Pharmacy, US trader) for her detailed and constructive comments

## 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 Therapeutics), diagnostic tests (Alys Diagnostics), medical devices (Alys Medtech) and Greentech (Alys Greentech). You can find our reports on our website at <http://www.aurgalys.com/aurgalys-indices>



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