

ISABELA p3s (readout in 2020, unclear if we will see data beforehand) (iii) INMARK trial will read out at ATS in May-19, which will help to focus the biomarker approach for the p3 (iv) The PoC in SSc-CTA will read out before end of 2018, highlighting GLPGs opportunity beyond IPF.

Other bits:

- + There was a pure translational medicine-focussed session on mesenchymal stem cells (MSC) in IPF, although we felt that we left the talk none the wiser. Stem cells are thought to participate in the rebuilding of missing / damaged tissue and in IPF, they are abundant in lung tissue (not healthy tissue). IPF is thought to start with lung injury after all, but they clearly don't seem to be doing their job. Whilst studies have shown stem cells to be relatively well tolerated, the jury is still out on whether they could be effective in IPF. The push-back to stem cells seems to be (i) Pulmonary engraftment of MSC in lungs is low. (ii) MSC may differentiate into myofibroblasts and actually be pro-fibrotic. (iii) Malignancy risk. We are not aware of any stem cell approaches in IPF that have yielded success, but given there was a session on it, perhaps this is an area to keep an eye on.
- + The last session highlighted various assay development approaches being taken by GLPG to isolate mechanisms in IPF that did not involve TGF-Beta's role in fibroblast to myofibroblast transition (FMT), one of many functions of the protein. In short, these included (i) MKL1, a "master" regulator of fibrosis (co-transcription factor) and one that only worked in stiff matrix environments (i.e. fibrotic tissue, not healthy lungs). GLPG aim to develop new targets and compounds modulating the MKL1 pathway. (ii) Genomic screens of SSc patients serum (excessively produced) that lead to the identification of SNAI1 and SM22 biomarkers and potentially ACVRL1 as a target. All very early, and so we do not delve further.

In short, not a whole lot new to report, but more that attention is being drawn to the disease area. IPF remains an exciting area and the GLPG p2 data was certainly encouraging, despite being in a small patient cohort. If it works, based on our prior physician discussions, GLPG1690 will be approved – the need is there and it is not hard to improve upon the current standard of care. With Galapagos owning full rights for the IPF portfolio, our peak sales estimates of €1.3B in 2030 (very realistic for an efficacious product, 2 existing products already approaching \$1B) can be a big contributor to GLPG value. We would not call IPF a graveyard for drug development (we have better examples e.g. SLE) but given some patients may go periods of months with no worsening of disease, it will always be challenging to say with certainty that GLPG1690 will demonstrate superiority (hence our 30% probability of success). The initial data suggests the product should do well and given the complementarity to existing treatment, we would expect to see an additive benefit for patients. The way we see it, get an approval (late 2021 launch) and the drug will sell.

Model update. We update our Company model for the AbbVie deal (see our thoughts - [link](#)) and post 3Q18 results. In short, AbbVie will obtain exclusive worldwide rights to the CF portfolio which includes all potentiator and corrector candidates. In return, GLPG will get (i) an upfront payment of \$45M, (ii) up to \$200M in additional development, regulatory, and commercial milestone payments in CF, (iii) royalties ranging from single digit to low teens in CF, (iv) tiered single digit royalties of sales in indications outside of CF. Importantly, the deal structure ensures that regardless of where the CF assets come from, GLPG will receive royalties on sales (i.e. if ABBV buy Vertex, GLPG will still get their royalty). We include upfront milestone of \$45M, developmental, regulatory and commercial milestones (previously included as \$200M sales milestones), adjust royalties from 5-12% (previously 15-20%), update for FX and 3Q18 results. The net result being a change in value for CF from €9/sh to €7/sh.