IPF Program – GLPG1690/1250/3499

GLPG1690 Promising P2 Data in IPF on Top of SOC – $1.3bn Oppy.

Despite the approval of pirfenidone (Esbriet) and nintedanib (Ofev) in 2014, there remains significant unmet need in IPF, with SOC drugs only slowing the FVC decline.

Esbriet and Ofev brought in a combined ~$2bn in 2017 despite high discontinuations (~25%).

Based on promising P2a results (note), with '1690 showing +8mL in FVC vs. baseline at 12 weeks, GLPG is pursuing the fast-growing IPF drug market with ~1500 pt 2xP3 trials (ISABELA 1-US & ISABELA 2-EU) on top of SOC. IP goes to 2034.

Phase 3 ISABELA Program Readout Expectations

Final top-line data is scheduled for YE2021 (clinicaltrials.gov but we est. could be as early as YE2020 due to flexible enrollment criteria - on top of any SOC or none).

Though the trials are on top of SOC for 52 wks, we believe the study is adequately powered at n=1500 and is likely to show significant clinical benefit in FVC, based on P2 POC data showing FVC improvements at 12wks, LPA biomarker reduction confirming autotaxin inhibition, and stat sig SAV/SAR functional respiratory measures.

The patients will be segmented based on SOC (Ofev, Esbriet, or None) – setting up an upside opportunity for superiority > SOC.

Future Combination Approach to IPF

In FY19, we look for additional color on GLPG's combination strategy with other IPF assets (GLPG1205 and GLPG3499) with novel MOA. GLPG1690 and other IPF assets are wholly owned.

OA Program – GLPG1972 (Upside)

GLPG1972 OA Sleeper – Mega-blockbuster Potential – Upside Call Option.

We remain excited about GLPG1972's potential to be the only approved disease-modifying OA drug in an indication impacting more than 118 million patients in US, EU, and Japan. GLPG has US rights targeting roughly 30 million pts – Sevier has ex-US.

Following positive biomarker data from P1b study in OA patients (note), as well as histological data from preclinical mice model demonstrating significant chondroprotection in '1972-treated surgery induced OA mice, GLPG's global P2 study (ROCELLA) is recruiting and well under way (n=~850) across three doses.

P2 ROCELLA Readout Expectations

The trial is enrolling OA patients of the "knee" (easier for imaging), with primary endpoint testing for the change in cartilage thickness of cMTFC (as assessed by MRI) on target knee—as well as multiple secondary/exploratory endpoints measuring pain, function, joint space, and bone area.

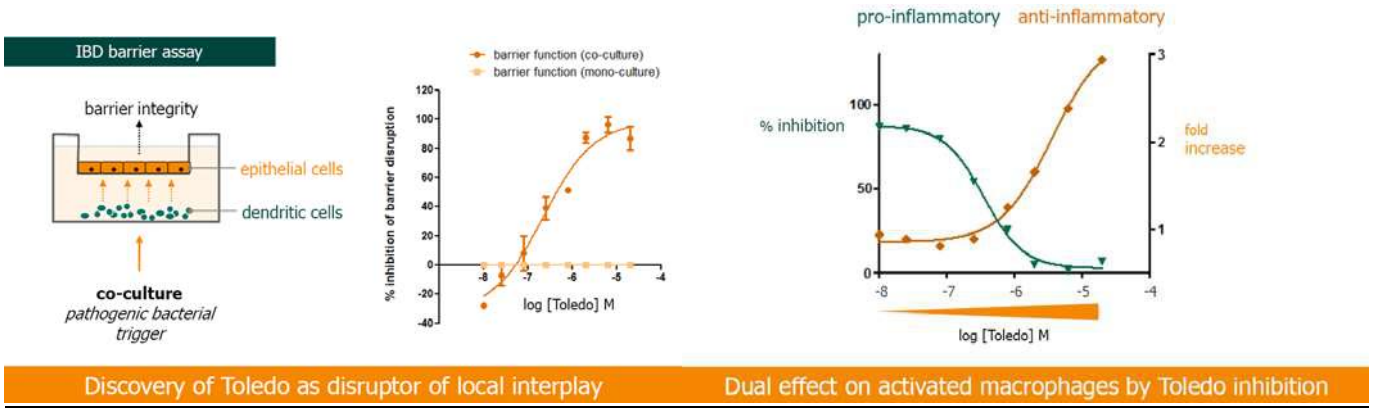
Primary completion date is set for YE2020, making the investment horizon ~a year off.

However, we anticipate a quicker-than-anticipated enrollment in ROCELLA P2 due to disease prevalence - we think there is a potential for top-line data by 1H20 based on a speedy enrollment, which may significantly de-risk '1972 and yield upside on a mega-blockbuster oppy.

Toledo Program (inflammatory program)

R&D Day highlighted the new Toledo (asset name, target not disclosed) program - focused initially on the underserved IBD market by targeting DCs, barrier disruption, and macrophages – MOA was not disclosed. The MOA seems distinct from the traditional immunosuppressive pathways used in recent clinical development (i.e. IL-17, TNFalpha, JAK, etc…).

Fig. 13: Toledo Presentation at R&D Day

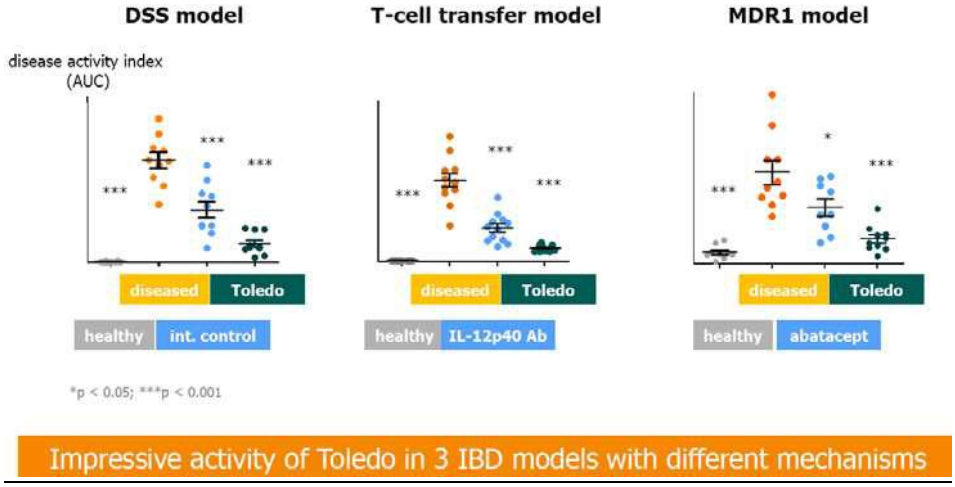


Source: Company presentations

Through the Toledo program, GLPG hopes to improve high response efficacy in RA (ACR70) and IBD (remission) to >80% - as seen in Psoriasis through the last few decades.

Though preclinical IBD models and CIA mouse model (RA-proxy) were encouraging (even at low doses) - it is still an ambitious task considering even strong bDMARDs such as Humira and their best-in-class filgo can't break 25% in ACR70 (RA).

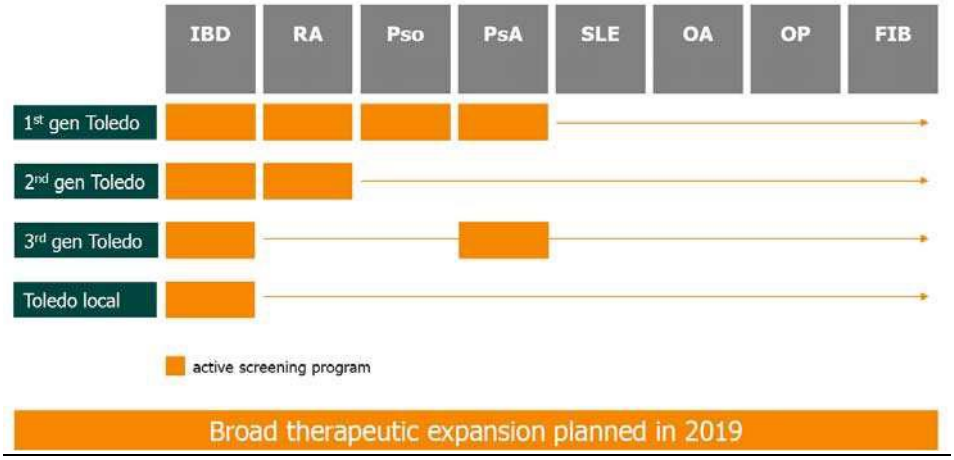
Fig. 14: Preclinical IBD models with Toledo



Source: Company presentations

Based on the overlap of the program's indications with filgotinib (Fig. 15) and the co's ambitious goals, we believe Toledo may be tested and marketed as a combination therapy with safe and highly efficacious bDMARDs such as filgotinib for additive benefits - esp. considering the distinct MOA showing impressive disease control (vs. active controls) in preclinical models.

Fig. 15: Toledo Program Overview



Source: Company presentations

Toledo could be an opportunity to extend GLPG's presence in autoimmune diseases with a separate, potentially synergistic MOA – and further the filgotinib lifecycle with combination approaches to slow disease progression and ultimately bring it into remission (reminiscent of PD-1 combos in oncology).

GLPG plans to initiate a P1 trial with GLPG3312 (1st gen Toledo) and GLPG3970 (2nd gen Toledo) in 2019. We eagerly await future updates on the program – potentially at JPM.

Model Updates

Fig. 16: FY18E Model Updates

(in 000s, except for per share; GAAP)	Our Estimate	Previous Estimate
Total Revenue	**€ 285,157**	**€ 236,171**
R&D	322,112	348,702
SG&A	*39,413*	*38,095*
Operating Expenses	**361,525**	**386,797**
Operating Income	**(76,368)**	**(150,626)**
Net Financial income (expense)	2,177	(6,933)
Earnings before taxes	**(74,191)**	**(157,559)**
Tax expense	*(343)*	*137*
Net Income	**(€ 73,848)**	**(€ 157,696)**
Diluted EPS	**(€ 1.42)**	**(€ 3.07)**

Source: Company reports, Instinet Estimates

- We lower 4Q18 expenditure for the removal of CF program (sale to ABBV).
- We add $45mn in upfront revenue (recognized in 4Q) for CF Program sale.
- We update our share count for the recent ~$300mn secondary.

Upcoming Potential Catalysts

Fig. 17: GLPG Potential Catalysts

Time	Event	Impact	Drug	Indication	Phase	Program	NCT (or EU) #
Filgotinib							
1Q19	**DATA:** Topline results, MTX-IR	+++	filgotinib	Rheumatoid arthritis	3	FINCH 1	NCT02889796
1Q19	**DATA:** Topline results, MTX-Naiive	+++	filgotinib	Rheumatoid arthritis	3	FINCH 3	NCT02886728
YE18	**INITIATION (competitor):** Incyte	+	baricitinib	Psoriatic arthritis	3		
1H19	**ENROLLMENT:** complete, testicular safety study	++	filgotinib	ulcerative colitis	2	MANTA	NCT03201445
1H19	**ENROLLMENT:** complete	++	filgotinib	ulcerative colitis	3	SELECTION 1	NCT02914522
2H19	**DATA:** Testicular safety Data	+++	filgotinib	ulcerative colitis	2	MANTA	
2H19	**ENROLLMENT:** complete	++	filgotinib	Crohn's disease	3	DIVERSITY 1	NCT02914561
2H19	**DATA (competitor):** Topline bDMARD int/IR, on stable csDMARD	+++	upadacitinib	Rheumatoid arthritis	3	SELECT-CHOICE	NCT03086343
2H19	**REGULATORY:** FDA Filing	+++	filgotinib	Rheumatoid arthritis	n/a		
2H19	**LAUNCH (competitor):** Upadacitinib	+++	upadacitinib	Rheumatoid arthritis	n/a		n/a
2019	**DATA (competitor)**: Celgene Phase 3 study results	++	ozanimod	Crohn's disease	3		NCT03440385
2019	**DATA:** Topline	++	filgotinib	Cutaneous lupus erythematosus	2	n/a	NCT03134222
2019	**DATA:** Topline	++	filgotinib	Sjogren syndrome	2	n/a	NCT03100942
4Q19/1Q20	**DATA:** Topline results	+++	filgotinib	ulcerative colitis	3	SELECTION 1	NCT02914522
YE20	**DATA:** Topline results	+++	filgotinib	Crohn's disease	3	DIVERSITY 1	NCT02914561
IPF							
4Q18	**INITIATION:** Begin Dosing	++	1690	Idiopathic pulmonary fibrosis	3	ISABELA	NCT03711162
2H18	**INITIATION**: Begin Dosing Ph 2	+	1205	Idiopathic pulmonary fibrosis	2	n/a	n/a
2H18	**INITIATION:** initiate Ph 1	+	3499	Idiopathic pulmonary fibrosis	1	n/a	n/a
YE19/1Q20	**ENROLLMENT:** Complete	++	1690	Idiopathic pulmonary fibrosis	3	ISABELA	NCT03711162
Atopic Dermatitis, OA							
~~2H18~~	~~**INITIATION:** Begin enrolling; Initiate Dosing~~	~~+~~	~~1972~~	~~Osteoarthritis~~	~~2~~	~~ROCELLA~~	~~NCT03595618~~
~~2H18~~	~~**INITIATION (competitor):** AbbVie's Ph 3 trial~~		~~upadacitinib~~	~~mod-sev atopic dermatitis~~	~~3~~	~~Measure Up~~	~~NCT03569293~~
1H19	**DATA**: topline readout	+++	MOR106	Atopic dermatitis	2	IGUANA	NCT02739009
2019	**DATA (competitor):** Pfizer Ph 3 topline results w/ JAK1i		PF-04965842	mod-sev atopic dermatitis	3	JADE Mono-1	NCT03422822
2020	**DATA:** Topline readout Ph2		1972	Osteoarthritis		ROCELLA	NCT03595618

Source: Company reports, Instinet estimates