

GALAPAGOS NV

Leaning forward on Toledo; Raising PT to \$240

• **Bottom Line:** Discussions with investors since GLPG's R&D event in November have shown us a persistent sense of confusion within the investor community. While transformative for GLPG, in our view, the summer deal with GILD created a lot of moving parts that can be difficult to track. Given all of the economic wrinkles from the agreement and movement around the stock, we took the time and effort to consolidate all of the information in one place. We are raising our PT to \$240 per ADR, up from \$194, based on our high conviction in management, filgotinib, and now TOLEDO.

• **GILD deal leaves value ceiling open for GLPG.** In exchange for ~\$5.4B (~€4.5B) in cash, GILD gained opt-in rights to late stage clinical assets that arise from GLPG's pipeline. With each opt-in decision, GLPG will receive an upfront milestone payment, will split future R&D expenses for that asset 50/50, and receive 20%-24% tiered royalties on commercial sales outside of Europe (filgotinib, GLPG1690, and GLPG1972 have unique milestone and commercial arrangements in place). Meanwhile GLPG will retain European rights and can lean on the commercial foundation being established with filgotinib to support future product launches. GLPG1690 in idiopathic pulmonary fibrosis (IPF) will be the first potential drug approved (projected 2023 launch) where GLPG will have full European economics. This agreement leaves GLPG, in our view, well positioned to grow up into a European biotech powerhouse.

• **Now convinced and adding TOLEDO to valuation.** Due to our high opinion rooted in overwhelming conviction in management and their emphasis on the strength of science for the TOLEDO program, we are adding TOLEDO to our valuation for GLPG. Similar to filgotinib's profile as a pipeline-in-a-drug, TOLEDO's capabilities position multiple drugs emerging from the program to be developed across a range of inflammatory diseases. We currently value the TOLEDO program at \$40 per ADR using our valuation for filgotinib as a comp which we then value adjust to account for differences in projected launch year (2027 for TOLEDO in a first indication) and a 50% PTRS (probability of technical and regulatory success). We anticipate a full reveal of TOLEDO's identity in 2H20 coinciding with initial proof-of-concept (PoC) readouts.

• **Filgotinib NDA now filed.** After the close today, GLPG and partner GILD announced they have submitted the NDA to the FDA under priority review for filgotinib to treat rheumatoid arthritis (RA). Filing with the priority review voucher puts filgotinib on track for a regulatory decision in 3Q20 with a U.S. launch expect soon after if approved. The filing also triggered a \$20M milestone payment to GLPG. The FDA now joins the EMA in Europe and the PMDA in Japan as the third regulatory agency to take filgotinib under review.

Key Stats:

(NASDAQ: GLPG)

Sector: Biopharma / Immunology & Metabolism

S&P 500 Health Care Index: 1,181.27

Price: \$205.65

Price Target: \$240.00 from \$194.00

Methodology: SOTP with WACC-calculated 11.9% discount rate and a 2% terminal growth rate to the discounted cash flow value of each asset. DCF values were adjusted by asset specific probability of regulatory success.

52 Week High: \$217.29

52 Week Low: \$85.00

Shares Outstanding (mil): 64.6

Market Capitalization (mil): \$13,285.0

Cash Per Share: \$97.97

Dividend (ann): \$0.00

Dividend Yield: 0.0%

Completion: December 20, 2019, 6:28AM EDT.

Distribution: December 20, 2019, 6:28AM EDT.



Dec Yr	1Q	2Q	3Q	4Q	FY Rev	1Q	2Q	3Q	4Q	FY EPS	
2018A	€44.8	€57.0	€103.2	€112.8	€317.8	(€0.73)	(€0.42)	€0.29	€0.28	(€0.56)	NM
2019E - New	€40.9A	€67.6A	€644.0A	€135.1	€887.6	(€0.89)A	(€0.86)A	€6.03A	(€0.28)	€4.29	NM
2019E - Old	€40.9A	€67.6A	€644.0A	€135.1	€887.6	(€0.89)A	(€0.86)A	€6.03A	(€0.29)	€4.31	NM
2020E - New	€107.5	€107.5	€353.1	€200.3	€768.4	(€0.75)	(€0.80)	€2.96	€0.53	€1.95	NM
2020E - Old	€107.5	€107.5	€238.1	€199.3	€652.4	(€0.79)	(€0.84)	€1.20	€0.51	€0.12	NM

Source: Company Information and SVB Leerink LLC Research.
Revs in €MM; EPS diluted non-GAAP

- **Key assumptions drive PT raise.** Our PT increase to \$240 per ADR, up from \$194, is driven by two assumptions we make ahead of important catalysts in 2020. First, we are adding \$40 per ADR for TOLEDO based on a comparable analysis to our valuation for filgotinib. Second, we are raising our probability of approval for filgotinib in RA to 100%, adding \$12 per ADR, based on the efficacy and safety profile shown in the clinic. These increases are partially offset by \$6 of dilution across our valuation caused by GILD's warrant exercise in November. While we are encouraged by the timeliness of the NDA filing for filgotinib and the expected use of a priority review voucher, the addition of TOLEDO remains the most significant addition our valuation.

- **Additional value upside in catalyst rich 2020.** Beyond the TOLEDO reveal and PoC readouts, and filgotinib's anticipated approval in RA (both in 2H20), additional catalysts in 2020 give opportunity for further valuation growth. Positive Topline Phase 2 results for GLPG1972 in osteoarthritis in 1H20 could trigger up to \$450M (~\$7 per ADR) in milestones with an additional ~\$2 per ADR available for estimated changes in our PTRS. Positive topline results in mid-2020 from the Phase 3 ulcerative colitis (UC) trial for filgotinib would increase our PT by an additional \$5 per ADR before considering any developmental milestones that may be triggered. Management has not guided on how the ~\$750M in R&D milestones are distributed across the filgotinib program. Finally, GLPG1205 would demand greater attention within our valuation should they achieve positive topline Phase 2 results in idiopathic pulmonary fibrosis (IPF) in 2H20.

- **Continued inside...**

INVESTMENT THESIS

Filgotinib's superior safety profile versus other JAKi's makes it a potentially best-in-class JAKi that has an opportunity to compete with anti-TNF agents in rheumatoid arthritis (RA) and inflammatory bowel disease (IBD). We believe GLPG has a potential best-in-care drug in GLPG1690 that has the potential to become the standard of care in IPF treatment. With limited effective treatments in idiopathic pulmonary fibrosis (IPF), GLPG1690 carries blockbuster potential but with a projected 2023 market launch. TOLEDO rebalances inflammatory and anti-inflammatory cytokines by hitting an as yet unrevealed target. However, based on the information available we believe TOLEDO has the potential to disrupt the inflammatory medicine market. Finally, while we view gaining approval to treat osteoarthritis (OA) highly unlikely given the history of clinical efforts, we cannot ignore the massive opportunity should GLPG1972 gain regulatory approval.

The research and development collaboration with GILD provided significant upfront cash for the promise of future development. We expect GLPG's proprietary discovery platform to continue to produce uniquely profiled drugs that will keep the doors open and the partnership productive.

GILD deal leaves open sky to further valuation gain for GLPG in 2020

The summer announcement of the R&D collaboration with GILD changed the value trajectory for GLPG. The infusion of ~\$5.4B (~€4.5B) in cash gave GLPG the financial resources to expand R&D activity, with plans in the early stages to expand into oligonucleotide discovery, which will give them the ability to target the ~20,000 protein coding genome rather than the ~6,000 their current small molecule platform enables them to hit. GLPG will be very selective with their acquisitions as they seek to further expand their discovery capabilities by targeting companies that will be a synergistic fit with GLPG's culture and focus on high quality science.

Beyond the boon to R&D efforts, the collaboration agreement also updated the filgotinib agreement, specifically on GLPG's commercial role. The potential approval and launch for filgotinib will enable GLPG to systematically build out their commercial presence Europe. The collaboration agreement also gives GLPG the opportunity to realize earlier economics on clinical stage assets. In exchange for the cash, GILD received opt-in rights to any asset in GLPG's pipeline that reaches late stage clinical development. The opt-in milestones that GLPG receives varies on a per-asset basis and is triggered by what are considered "qualifying trials," Namely, these are Phase 2 trials with positive data that position a drug for a Phase 3 pivotal trial. In addition to the opt-in payment, GILD will assume 50% of R&D expenses for that asset moving forward and will owe 20-24% tiered royalties to GLPG on commercial sales outside of Europe. These terms exclude filgotinib, where GLPG and GILD already had an existing agreement in place, and GLPG1972 where GLPG is partnered with Servier for ex-U.S. regions. Outside of these two drugs, GLPG will retain full commercial rights in Europe on any asset where GILD opts in.

- **Filgotinib:** The original filgotinib agreement was updated with the R&D collaboration. R&D costs have been updated to be a 50/50 split, rather than a 30/70 split, and commercial responsibilities in Europe have also been more specifically defined. In RA, GLPG will lead commercial efforts in France, Italy and Spain, with GILD leading commercial efforts in Germany and the U.K. In IBD, responsibilities will be reversed, with GLPG leading efforts in Germany and the U.K., and GILD leading in France, Italy, and Spain. GLPG will lead commercial efforts in both disease groups in Belgium, the Netherlands, and Luxembourg (BeNeLux). All economics will be split 50/50 in these 8 countries regardless of indication or who has commercial lead. GILD will lead commercial efforts in the remainder of Europe, the U.S. and the rest of the world, with GLPG receiving 20-30% tiered royalties. Of the original ~\$1.3B in milestones, \$750M were allocated to regulatory/R&D and \$600M to commercial. Thus far, GLPG has only received ~\$100M from the R&D portion. Neither GLPG nor GILD have disclosed triggers or sizes of the remaining milestones for these programs, although we assume a significant portion of the development milestones coming upon filgotinib approval in RA, and on achieving positive results from the Phase 3 trial in UC, both of which are expected in 2020.
- **GLPG1690:** GILD has already opted in on this program, with the opt-in fee recognized by GLPG in 3Q19. GLPG will receive a \$325M milestone should GLPG1690 be approved in IPF in the U.S. GLPG will then be eligible to receive 20-24% tiered royalties on ex-European sales. Importantly, the opt-in agreement does not give GILD rights for GLPG1690 in Europe, with GLPG instead retaining full commercial rights with no economics owed to GILD.
- **GLPG1972:** The ongoing Phase 2 ROCCELLA trial in osteoarthritis will serve as the qualifying trial for GLPG1972, with GILD eligible to license U.S. commercial rights only. GLPG is eligible to receive a \$250M milestone payment from GILD upon achieving the primary endpoint in ROCCELLA, with an additional \$200M triggered should the trial met certain secondary endpoints (likely WOMAC [Western Ontario and McMaster Universities Osteoarthritis Index] scores). GLPG is also eligible to receive up to \$550M in commercial milestones and 20-24% tiered royalties on U.S. sales. GLPG's prior agreement with Servier remains in place with GLPG eligible to receive €290M in milestones and high single digit royalties on commercial sales outside the U.S. This is the only program outside of filgotinib where GLPG will not retain full European rights due to the partnership agreement with Servier.
- **TOLEDO and everything else:** GILD will have opt-in options to all other molecules developed by GLPG over the next 10 years. For each asset where GILD opts-in, GLPG will receive \$150M and will be eligible to receive 20-24% tiered royalties on all future ex-European sales, with GLPG retaining full commercial rights in Europe. Each TOLEDO molecule will be considered a separate asset, with each having its own \$150M opt-in fee.

- **Warrants:** The agreement raised GILD's ownership in GLPG to 22% and gave them two blocks of warrants. The first block was exercised in November by GILD at the original agreement price of \$159.43 per ADR (€140 per share) and increased GILD's ownership to 25.1%. The second block is exercisable at any time over the next 10 years at a price equal to the trailing 30-day stock price, and will raise GILD's ownership to 29.9%.

Commercial paths in Europe

GLPG will either lead or share commercial activities in 8 major European markets (France, Germany, Italy, Spain, U.K., Belgium, Luxembourg and the Netherlands). This will give GLPG the opportunity to systematically build out their commercial infrastructure in these key countries ahead of European launches for other drugs. Commercial strategies will differ by drug and by indication.

For filgotinib, separate sales forces will be required to market in RA versus IBD. This makes sense considering the lack of location and specialty overlap between rheumatologists and gastroenterologists. While GLPG has not given guidance on the number of filgotinib sales reps they expect to hire in these 8 countries, they have verbally committed to matching the number of sales reps with AbbVie's (OP) sales group for Rinvoq (upadacitinib). Pre-commercial efforts are well underway with GLPG filling key strategy positions with experienced hands from big pharma. GLPG expects the Netherlands and Germany to be the first European countries to approve filgotinib in RA.

The commercial strategy will be different for GLPG1690 in IPF. IPF is a less prevalent disease (~100K IPF patients in Europe vs ~15M RA and ~2M IBD patients), with specialists and treatment options tending to be more centralized to major hospitals. Some European countries have IPF specialists in only 1 or 2 major hospitals. GLPG expects to hire 60-80 sales reps across all of Europe for GLPG1690 and will rely on infrastructure established to support filgotinib in the big 5 plus BeNeLux. Infrastructure in other European countries will be established separately with the timing dependent on projected approval dates in each country.

Regulatory path in Europe a multistep process

Drug approval in Europe operates through a two-tiered system. Drugs are first required to gain regulatory approval from the EMA. Companies must then seek approval and negotiate pricing on a country by country basis, with each country having their own approval and reimbursement systems. This can cause availability to vary throughout Europe. Because of this, we expect GLPG to target larger higher reimbursement markets first, as they step into their commercial footprint across Europe. We also expect approval times for GLPG1690 to be accelerated relative to approval times for filgotinib given the dire nature of IPF.

FDA and EMA only partially agree on pivotal nature of ISABELA 1&2

The Phase 3 ISABELA1 and 2 trials are identical 750-patient, double-blind, placebo controlled trials investigating two doses of GLPG1690 (600mg or 200mg QD) on top of standard of care (nintedanib, pirfenidone, or no therapeutic intervention). These trials will measure differences in the rate of decline in forced vital capacity (FVC) at 52 weeks versus placebo with the study >80% powered to show a significant difference in the primary endpoint. Excluding safety reasons, patients will not be able to change their assigned GLPG1690 treatment regimen once randomized, but can change their background medication. GLPG expects patients to be evenly distributed across background therapy arms with a sufficient number of patients enrolled to be able to measure efficacy in each subgroup despite expectations that some patients will switch background medications.

Management has indicated partial overlap in agreement between the FDA and the European Medicines Agency (EMA) over what constitutes a sufficiently robust trial for full regulatory approval of GLPG1690 for IPF. Both agencies are in agreement that the twin ISABELA trials will be sufficient for regulatory approval of GLPG1690 as part of a combination regimen with either nintedanib or pirfenidone (pending positive data). Additionally, the FDA believes the monotherapy arms of these trials will be sufficiently robust to allow for approval of GLPG as a monotherapy. However, the EMA is less positive on the robustness for the monotherapy arms and may require a follow-up placebo controlled or comparator trial if they are not overwhelmed by the monotherapy efficacy data from ISABELA 1&2.

GLPG announced an update to the timing and scope of a planned futility analysis for the ISABELA trials during their R&D day. The futility analysis will now be conducted once 28% of patients (originally 25%) have completed 52 weeks of treatment. This pushed the projected timing of the futility analysis back from 3Q20 to 1Q21. However, analysis of a larger sample of patients will provide increased confidence in the trial should the futility analysis recommend trial continuation. We expect the trial to be fully or nearly fully enrolled by the time of the futility analysis, setting GLPG1690 on pace for a projected topline readout in 1H22 with a U.S. market launch projected in 2023 should the drug gain regulatory approval.

Now giving credit for TOLEDO

We ascribe \$40 per ADR for TOLEDO using filgotinib as a comp. We assume TOLEDO revenues and cash flows will mirror our projected revenues and cash flows for filgotinib, excluding milestones, and including a ~10% premium for SG&A since TOLEDO will have sales synergy with filgotinib in the main 8 countries, but will also be marketed in parts of Europe where GLPG lacks a filgotinib sales force. The present value of unadjusted revenues and cash flows for filgotinib were adjusted by 50% PTRS for TOLEDO and then placed in 2027, our projected launch year for TOLEDO. These adjusted cash flows were then discounted to present value using the same 11.85% discount rate that we apply to our sum of the parts valuation. We also include \$150M opt-in fees for three different TOLEDO molecules

that we project occurring in 2021, 2022, and 2023 that were also adjusted to \$75M each using a 50% PTRS.

We are adding TOLEDO to our valuation for GLPG based on our conviction in their scientific team and bolstered by the level of resources the company is committing to the program. GLPG is currently committing over 110 R&D personnel to the TOLEDO project, including over 70 discovery scientists and over 40 chemists. The intent is to move as rapidly as possible to establish the preclinical science and to build out legal protection prior to revealing the identity of the TOLEDO target (expected 2H20).

At their R&D day in November, GLPG revealed TOLEDO is comprised of 3 members (TOL1, 2 and 3) What makes the TOLEDO targets unique is that inhibiting them not only reduces production of inflammatory cytokines, but also increases production of anti-inflammatory cytokines. This combinatorial mechanism acts to re-establish balance within the immune system, thereby suppressing inflammatory episodes. TOL-3 is the only exception, where selective inhibition did not increase production of anti-inflammatory IL-10.

GLPG will be advancing 3 TOLEDO molecules in the clinic in 2020. The goal of developing multiple TOLEDO molecules is to leverage targeting of different combinations of TOL1, 2, and 3. Targeting different combinations will produce different safety/efficacy profiles that may provide distinct advantages in particular indications.

1st generation TOLEDO molecule GLPG3312 is a pan-TOL inhibitor entering a small Phase 2 proof of concept (PoC) trial in IBD expected to readout in 2H20. In follow-up discussions, management stated that GLPG3312 demonstrated the best results they had ever seen across all preclinical IBD models. GLPG3970 is a 2nd generation TOLEDO molecule that selectively inhibits TOL2 and TOL3 while sparing TOL1. Multiple Phase 2 Proof of Concept (PoC) trials are planned for GLPG3970 in 2020 that are expected to begin reading out in 2H20. GLPG4399 is a selective TOL3 inhibitor that will begin Phase 1 PK/safety studies in 2020. This is the only TOLEDO molecule thus far that has not demonstrated efficacy in IBD, presumably due to its lack of influence on IL-10 expression. Instead, GLPG will initially develop this molecule in RA. GLPG intends to reveal 4th and 5th generation TOLEDO molecules in 2020.

GLPG envisions development of the TOLEDO molecules taking place in three waves. The first wave will include initial Phase 1 dosing studies followed by small PoC trials. Wave 2 will include dose-finding and larger PoC studies that we expect will trigger opt-in decisions from GILD. Wave 3 will investigate TOLEDO in indications outside of inflammation. GLPG is currently working to better understand the science surrounding these molecules and their implications outside of inflammation.

Valuation

Our \$240 PT was determined using a probability weighted scenario analysis. Individual scenario values were determined by sum of the parts valuation that applied a WACC

calculated 11.9% discount rate and 2% terminal growth rate to revenues and cash flows projected into 2028. Revenues for each asset were adjusted independently twice: by probability of regulatory approval and by asset specific commercial profile.

A commercial probability distribution was determined based on a revenue weighted distribution of independent commercial scenarios projected for each drug candidate. GLPG1690, filgotinib, TOLEDO and cash reserves comprise a majority of the valuation. Galapagos held €5.6B in cash and cash equivalents as of the end of 3Q19.

Risks to Valuation include the following:

Product Risk – One or more of the clinical trials for filgotinib or GLPG1690 may fail to meet its primary endpoint necessitating a deeper decision into continued development in that particular indication. Additionally, any safety issues that occur within one trial for filgotinib may read negatively across the entire filgotinib franchise.

Collaboration Risk – GLPG's pipeline and lead asset filgotinib are subject to risk related to GLPG's R&D collaboration agreement with Gilead. This collaboration agreement gives GLPG limited ability to address situational issues surrounding the success of these drugs.

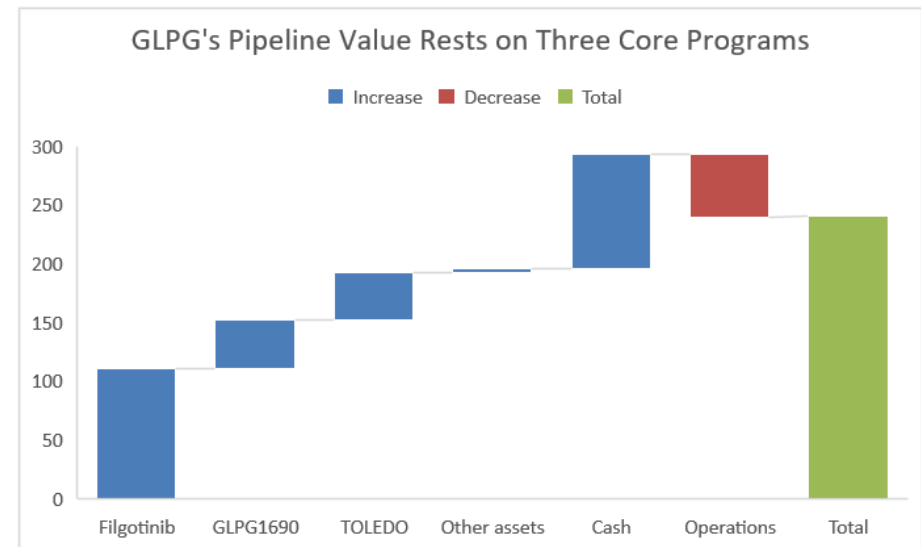
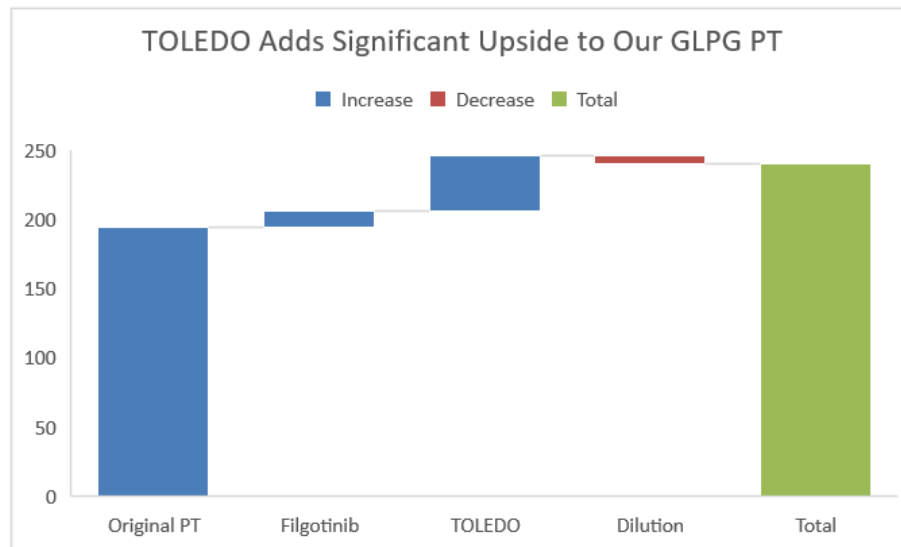
Regulatory Risk – The FDA has previously indicated a belief in drug combinations as the likely future for IPF treatment. With this in mind, GLPG has pursued pivotal trial investigating GLPG1690 in combination with standard of care. While we believe this creates a safer path to approval, it nonetheless opens the door to potential competitors pursuing a path to approval as a monotherapy to significantly disrupt expectations for market competition.

Financing Risk – GLPG currently has no revenue producing products on the market. Though well capitalized over the near term, negative outcomes for any of its asset franchises may significantly impact its ability raise funds in the future.

Economics and Commercial Responsibility Differ by Drug and by Region

	United States	Europe	Rest of World	Comments	
	Full commercial rights	50/50 split of economics	20%-30% tiered royalties	20%-24% tiered royalties	High single digit royalties
Filgotinib Rheumatoid arthritis (RA)		 	 • Rest of Europe		<ul style="list-style-type: none"> GLPG receives 20%-30% tiered royalties outside of BeNeLux and the Big 5 in Europe for all indications ~\$1.25B in remaining milestones; ~\$650M R&D, \$600M commercial
Filgotinib Inflammatory Bowel Disease (IBD)		 	 • Rest of Europe		
GLPG1690 Idiopathic pulmonary fibrosis (IPF)				<ul style="list-style-type: none"> GILD has already opted in and will owe \$325M upon U.S. approval 	
GLPG1972 Osteoarthritis				<ul style="list-style-type: none"> GILD may pay a \$250M opt-in fee plus an additional \$200M if specific secondary endpoints are met in the Phase 2 trial. \$550M in commercial milestones 	
All other assets (Including TOLEDO)				<ul style="list-style-type: none"> GILD may pay \$150M opt-in fee on a per asset basis. Each Toledo molecule is considered a distinct asset 	

Higher Conviction in Filgotinib and Now in Toledo Raises our PT



- We are increasing our 12-month PT for GLPG to \$240 per share, up from \$194 per share, based on the addition \$40 per share added for TOLEDO, \$12 per share added for filgotinib under the assumption it gets approved in RA in 2020, and partially offset by \$6 per share in dilution following warrant exercises by GILD in November.
- Our valuation for TOLEDO used our valuation for filgotinib as a comparable program. Unadjusted cash flows for filgotinib were re-adjusted to 50% (our PTRS for TOLEDO), placed in 2027, and then discounted to present value, yielding a valuation of \$40 per share
- GLPG's pipeline value is primarily derived from 3 assets: Filgotinib (\$110 per share), GLPG1690 (\$42 per share) and TOLEDO (\$40 per share)
- Other pipeline assets (\$3 per share), cash (\$98 per share) and operations (-\$54 per share) reconcile to our \$240 PT

SVB Leerink Catalyst Tracker

Stock (Ticker Symbol)	Lateral Impact (Other companies/stocks)	Drug (Brand or chemical name)	Indication	Type of Event	Event or Trial Details	Expected Timing	Specific Event Date if known or specified	Impact: H(igh) > 9% M(edium) 3 - 9% L(ow) < 2%	Estimated Stock Up/Down % on Best/Worst Outcomes	SVB Leerink View of Expected Outcome
GLPG	GILD	GLPG1205	Idiopathic pulmonary fibrosis	Other Event	Complete Phase 2 enrollment	2H19		L		Neutral
GLPG	GILD	GLPG3312	Inflammatory bowel disease	Phase II Trial Initiation	Proof of concept trial, 1st generation Toledo molecule	1H20		M	5%	Positive
GLPG	GILD	GLPG3970	Inflammatory diseases	Phase II Trial Initiation	Initiate multiple PoC studies in 2020	1H20		L		Positive
GLPG	GILD	GLPG1972	Osteoarthritis	Phase II Data Announcement	Proof of concept topline results	1H20		M	5%	Neutral
GLPG	GILD	Filgotinib	Ulcerative colitis	Phase III Results Announcement	Topline results	1H20		H	10%	Positive
GLPG	GILD	GLPG3312	Inflammatory bowel disease	Phase II Data Announcement	Topline results from proof of concept trial	2H20		M	5%	Positive
GLPG	GILD	TOLEDO	Inflammatory diseases	Other Event	Announce Toledo target	2H20		H	15%	Positive
GLPG	GILD	Filgotinib	Rheumatoid arthritis	EMA Approval	Launch 2H20 in E.U.	2H20		H	10%	Positive
GLPG	GILD	Filgotinib	Rheumatoid arthritis	FDA Approval	Launch 2H20 in U.S.	2H20		H	10%	Positive
GLPG	GILD	GLPG1205	Idiopathic pulmonary fibrosis	Phase II Data Announcement	26-week topline results	2H20		M	5%	Neutral
GLPG	GILD	GLPG1690	Idiopathic pulmonary fibrosis	Other Event	Futility analysis for Phase 3 ISABELA trials	1H21		H	10%	Positive

Source: SVB Leerink LLC Equity Research and Company Filings

(€ thousands, except per share)	1Q18A	2Q18A	3Q18A	4Q18A	2018A	1Q19A	2Q19A	3Q19A	4Q19E	2019E	1Q20E	2Q20E	3Q20E	4Q20E	2020E
Revenue:															
Revenue	37,907	49,676	94,874	106,379	288,836	33,047	58,738	633,934	127,107	852,826	99,489	99,489	345,011	192,182	736,171
Other revenue (Grant Income)	6,931	7,358	8,334	6,386	29,009	7,872	8,852	10,020	7,978	34,722	8,014	8,050	8,086	8,122	32,272
	44,838	57,034	103,208	112,765	317,845	40,919	67,590	643,954	135,085	887,548	107,502	107,539	353,097	200,305	768,443
Cost of goods sold	-	-	-	-	-	-	-	-	-	-	-	-	-	(1,359)	(1,359)
Research and development expenses	(69,765)	(81,680)	(80,314)	(91,117)	(322,876)	(83,195)	(94,372)	(120,680)	(130,334)	(428,581)	(132,941)	(135,600)	(138,312)	(141,078)	(547,931)
General and administrative expenses	(6,697)	(8,503)	(9,725)	(10,706)	(35,631)	(9,221)	(13,711)	(28,565)	(28,708)	(80,205)	(28,851)	(28,996)	(29,141)	(29,286)	(116,274)
Sales and marketing expenses	(413)	(602)	(898)	(2,234)	(4,147)	(1,746)	(3,875)	(4,078)	(4,282)	(13,981)	(4,325)	(4,368)	(4,412)	(4,456)	(17,560)
Total operating expenses	(76,875)	(90,785)	(90,937)	(104,057)	(362,654)	(94,162)	(111,958)	(153,323)	(163,324)	(522,767)	(166,117)	(168,963)	(171,864)	(176,179)	(683,124)
Profit (Loss) from operations	(32,037)	(33,751)	12,271	8,708	(44,809)	(53,243)	(44,368)	490,631	(28,239)	364,781	(58,615)	(61,425)	181,233	24,125	85,319
Other income (expense):															
Fair value re-measurement of share subscription agreement	-	-	-	-	-	-	-	(142,349)	-	(142,349)	-	-	-	-	-
Financial income	1,610	6,499	2,558	7,668	18,335	6,999	(1,349)	34,755	10,670	51,075	10,161	9,971	10,013	10,156	40,302
Financial expenses	(6,794)	5,553	(467)	(1,028)	(2,736)	(2,345)	(1,472)	(38,631)	-	(42,448)	-	-	-	-	-
Total other income (expense)	(5,184)	12,052	2,091	6,640	15,599	4,654	(2,821)	(146,225)	10,670	(33,722)	10,161	9,971	10,013	10,156	40,302
Loss from operations before taxes	(37,221)	(21,699)	14,362	15,348	(29,210)	(48,589)	(47,189)	344,405	(17,569)	231,059	(48,453)	(51,454)	191,246	34,282	125,621
Income tax benefit (expense)	(62)	(75)	480	(392)	(49)	(68)	(61)	16,828	-	16,699	-	-	-	-	-
Net profit (loss)	(37,283)	(21,774)	14,842	14,956	(29,259)	(48,657)	(47,250)	361,233	(17,569)	247,758	(48,453)	(51,454)	191,246	34,282	125,621
Basic common shares outstanding	50,973	51,235	51,179	54,385	51,943	54,615	54,823	57,705	63,263	57,728	64,572	64,572	64,572	64,572	64,572
Diluted common shares outstanding	50,973	51,235	53,007	54,385	51,943	54,615	54,823	59,906	63,263	57,728	64,572	64,572	64,572	64,572	64,572
Basic net loss per share	(0.73)	(0.42)	0.29	0.28	(0.56)	(0.89)	(0.86)	6.26	(0.28)	4.29	(0.75)	(0.80)	2.96	0.53	1.95
Diluted net loss per share	(0.73)	(0.42)	0.28	0.28	(0.56)	(0.89)	(0.86)	6.03	(0.28)	4.29	(0.75)	(0.80)	2.96	0.53	1.95

Source: Company reports; SVB Leerink Research

(€ thousands, except per share)	2017A	2018A	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E
Revenue:												
Revenue	127,087	288,836	852,826	736,171	606,535	978,782	1,037,033	1,357,718	1,308,261	1,562,710	1,863,077	2,130,075
Other revenue (Grant Income)	28,830	29,009	34,722	32,272	32,852	28,326	13,480	13,723	13,970	14,221	14,477	14,738
	155,917	317,845	887,548	768,443	639,387	1,007,108	1,050,513	1,371,440	1,322,231	1,576,931	1,877,554	2,144,813
Cost of goods sold	-	-	-	(1,359)	(9,940)	(37,993)	(84,653)	(121,872)	(153,452)	(173,605)	(212,065)	(244,030)
Research and development expenses	(218,502)	(322,876)	(428,581)	(547,931)	(558,890)	(530,945)	(504,398)	(479,178)	(464,803)	(469,451)	(474,145)	(478,887)
General and administrative expenses	(24,415)	(35,631)	(80,205)	(116,274)	(117,437)	(118,611)	(119,797)	(120,995)	(122,205)	(123,427)	(124,661)	(125,908)
Sales and marketing expenses	(2,803)	(4,147)	(13,981)	(17,560)	(22,828)	(29,677)	(37,096)	(44,515)	(51,192)	(56,311)	(59,127)	(62,083)
Total operating expenses	(245,720)	(362,654)	(522,767)	(683,124)	(709,094)	(717,226)	(745,944)	(766,560)	(791,652)	(822,794)	(869,999)	(910,908)
Profit (Loss) from operations	(89,803)	(44,809)	364,781	85,319	(69,707)	289,882	304,569	604,880	530,579	754,137	1,007,555	1,233,905
Other income (expense):												
Fair value re-measurement of share subscription agreement	-	-	(142,349)	-	-	-	-	-	-	-	-	-
Financial income	4,877	18,335	51,075	40,302	39,867	39,412	40,173	41,378	43,245	45,976	50,080	55,644
Financial expenses	(30,582)	(2,736)	(42,448)	-	-	-	-	-	-	-	-	-
Total other income (expense)	(25,705)	15,599	(133,722)	40,302	39,867	39,412	40,173	41,378	43,245	45,976	50,080	55,644
Loss from operations before taxes	(115,508)	(29,210)	231,059	125,621	(29,840)	329,294	344,742	646,258	573,824	800,113	1,057,635	1,289,549
Income tax benefit (expense)	(198)	(49)	16,699	-	-	(59,447)	(82,234)	(163,318)	(143,256)	(203,617)	(272,040)	(333,154)
Net profit (loss)	(115,706)	(29,259)	247,758	125,621	(29,840)	269,847	262,509	482,940	430,568	596,496	785,595	956,394
Basic common shares outstanding	49,479	51,943	57,728	64,572	64,572	64,572	64,572	64,572	64,572	64,572	64,572	64,572
Diluted common shares outstanding	49,479	51,943	57,728	64,572	64,572	64,572	64,572	64,572	64,572	64,572	64,572	64,572
Basic net loss per share	(2.34)	(0.56)	4.29	1.95	(0.46)	4.18	4.07	7.48	6.67	9.24	12.17	14.81
Diluted net loss per share	(2.34)	(0.56)	4.29	1.95	(0.46)	4.18	4.07	7.48	6.67	9.24	12.17	14.81
Growth and profitability ratios	2017A	2018A	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E
Revenue growth rate				-13%	-17%	58%	4%	31%	-4%	19%	19%	14%
Gross profit margin				100%	98%	96%	92%	91%	88%	89%	89%	89%
Operating profit margin				11%	-11%	29%	29%	44%	40%	48%	54%	58%
Effective tax rate				0%	0%	-18%	-24%	25%	25%	25%	26%	26%
Net profit margin				16%	-5%	27%	25%	35%	33%	38%	42%	45%

Source: Company reports; SVB Leerink Research

(€ thousands, except per share)	1Q18A	2Q18A	3Q18A	2018A	1Q19A	2Q19A	3Q19A	2019E	1Q20E	2Q20E	3Q20E	2020E
ASSETS												
Cash and cash equivalents	1,108,186	1,066,766	1,343,668	1,290,796	1,222,901	1,147,923	5,599,787	5,189,150	5,085,054	4,997,028	5,127,493	5,141,577
Current restricted cash	-	-	2,014	-	-	-	-	-	-	-	-	-
Inventories	293	267	280	-	-	-	-	-	-	-	-	(830)
Trade and other receivables	8,501	19,108	25,314	18,609	15,347	42,067	32,642	14,123	33,163	33,163	57,502	42,707
Current R&D incentives receivables	11,585	14,654	11,692	11,203	11,645	11,644	9,746	9,746	9,746	9,746	9,746	9,746
Other current assets	7,171	7,086	7,432	8,244	9,351	6,970	8,837	8,990	8,958	9,008	9,059	9,110
Total current assets	1,135,736	1,107,881	1,390,400	1,328,852	1,259,244	1,208,604	5,651,013	5,222,010	5,136,920	5,048,945	5,203,800	5,202,310
Intangible assets	2,555	1,403	2,058	3,632	6,497	7,191	23,492	21,728	20,097	18,589	17,193	15,902
Property, plant and equipment	16,971	17,854	18,113	23,137	49,542	51,180	61,883	61,529	61,176	60,826	60,478	60,132
Deferred tax assets	1,979	1,980	2,525	2,514	2,511	2,516	19,406	19,406	19,406	19,406	19,406	19,406
Non-current R&D incentives receivables	69,285	71,567	68,755	73,443	76,029	82,644	89,965	84,937	79,909	74,881	69,853	64,825
Non-current restricted cash	1,158	1,158	1,226	-	-	-	-	-	-	-	-	-
Other non-current assets	2,182	2,506	2,474	7,919	6,377	5,712	5,993	5,993	5,993	5,993	5,993	5,993
Total non-current assets	94,129	96,466	95,151	110,645	140,956	149,243	200,739	193,593	186,582	179,695	172,923	166,258
Total assets	1,229,864	1,204,347	1,485,551	1,439,496	1,400,200	1,357,848	5,851,752	5,415,603	5,323,502	5,228,640	5,376,723	5,368,568
LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)												
Finance lease liabilities	-	-	-	-	4,580	5,141	5,251	5,251	5,251	5,251	5,251	5,251
Trade and other payables	55,657	69,141	80,721	68,928	69,880	86,216	156,254	118,073	120,092	122,150	124,247	126,766
Current tax payable	862	862	855	1,175	1,168	1,031	1,032	1,032	1,032	1,032	1,032	1,032
Accrued charges	943	861	867	-	-	-	-	-	-	-	-	-
Current deferred income	166,168	175,722	186,659	149,801	123,822	96,325	468,764	349,650	349,650	349,650	349,650	349,650
Total current liabilities	223,630	246,586	269,102	219,905	199,450	188,713	631,300	474,006	476,026	478,083	480,180	482,699
Pension liabilities	3,660	3,739	3,818	3,764	3,851	3,939	4,026	4,026	4,026	4,026	4,026	4,026
Provisions	65	58	57	-	-	-	-	-	-	-	-	-
Other non-current liabilities	677	878	1,269	1,578	736	1,373	2,471	2,471	2,471	2,471	2,471	2,471
Non-current deferred income	102,486	67,427	23,083	-	-	-	2,659,013	2,017,660	1,960,248	1,902,835	1,845,423	1,788,010
Total non-current liabilities	106,888	72,102	28,227	5,342	24,996	25,769	2,685,171	2,043,818	1,986,406	1,928,993	1,871,581	1,814,168
Total liabilities	330,519	318,688	297,329	225,247	224,445	214,482	3,316,471	2,517,824	2,462,431	2,407,076	2,351,761	2,296,867
Stockholders' equity (deficit):												
Share capital	235,027	235,583	235,672	236,540	237,348	238,475	272,605	273,089	273,089	273,089	273,089	273,089
Share premium account	995,336	996,117	1,276,284	1,277,780	1,280,452	1,283,650	2,268,585	2,648,168	2,659,914	2,671,861	2,684,013	2,696,470
Other reserves	(641)	(641)	(641)	(735)	(735)	(735)	(735)	(735)	(735)	(735)	(735)	(735)
Translation differences	(1,757)	(1,604)	(1,598)	(1,557)	(1,290)	(1,505)	(1,267)	(1,267)	(1,267)	(1,267)	(1,267)	(1,267)
Accumulated losses	(328,620)	(343,796)	(321,495)	(297,779)	(340,020)	(376,518)	(3,907)	(21,476)	(69,929)	(121,383)	69,864	104,145
Total stockholders' equity (deficit)	899,345	885,659	1,188,222	1,214,249	1,175,755	1,143,367	2,535,281	2,897,780	2,861,072	2,821,565	3,024,963	3,071,702
Total liabilities and stockholders' equity (deficit)	1,229,864	1,204,347	1,485,551	1,439,496	1,400,200	1,357,848	5,851,752	5,415,604	5,323,503	5,228,641	5,376,724	5,368,569
Outstanding shares at end of period (thousands)	51,235	51,338	54,299	54,470	54,615	54,823	61,954	64,572	64,572	64,572	64,572	64,572
SELECTED METRICS (€ thousands, except per share)												
Current ratio	5	4	5	6	6	6	9	11	11	11	11	11
Working capital (in thousands)	912,106	861,295	1,121,298	1,108,947	1,059,794	1,019,891	5,019,713	4,748,004	4,660,895	4,570,862	4,723,620	4,719,611
Book value per common share	18	17	22	22	22	21	41	45	44	44	47	48
Cash, cash equivalents and marketable securities per common share	1,108,186	1,066,766	1,343,668	1,290,796	1,222,901	1,147,923	5,599,787	5,189,150	5,085,054	4,997,028	5,127,493	5,141,577
	22	21	25	24	22	21	90	80	79	77	79	80

Source: Company reports; SVB Leerink Research

(€ thousands, except per share)	2017A	2018A	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E
ASSETS												
Cash and cash equivalents	1,151,211	1,290,796	5,189,150	5,141,577	4,935,803	5,026,725	5,128,088	5,331,192	5,600,177	6,021,373	6,637,633	7,427,800
Current restricted cash	-	-	-	-	-	-	-	-	-	-	-	-
Inventories	279	-	-	(830)	(1,498)	(5,725)	(12,756)	(18,364)	(23,123)	(26,160)	(31,955)	(36,772)
Trade and other receivables	27,966	18,609	14,123	42,707	33,235	53,632	56,824	74,395	71,686	85,628	102,086	116,716
Current R&D incentives receivables	11,782	11,203	9,746	9,746	4,718	39,376	-	-	-	-	-	-
Other current assets	6,409	8,244	8,990	9,110	37,871	40,038	42,361	44,688	46,817	48,529	49,623	50,758
Total current assets	1,197,647	1,328,852	5,222,010	5,202,310	5,010,129	5,154,045	5,214,517	5,431,911	5,695,557	6,129,371	6,757,387	7,558,502
Intangible assets	2,495	3,632	21,728	15,902	14,709	13,604	12,583	11,638	10,765	9,059	7,623	6,415
Property, plant and equipment	16,692	23,137	61,529	60,132	58,754	57,409	56,094	54,809	53,554	52,328	51,129	49,958
Deferred tax assets	1,978	2,514	19,406	19,406	19,406	19,406	19,406	19,406	19,406	19,406	19,406	19,406
Non-current R&D incentives receivables	64,001	73,443	84,937	64,825	49,741	-	-	-	-	-	-	-
Non-current restricted cash	1,158	-	-	-	-	-	-	-	-	-	-	-
Other non-current assets	2,303	7,919	5,993	5,993	5,993	5,993	5,993	5,993	5,993	5,993	5,993	5,993
Total non-current assets	88,627	110,645	193,593	166,258	148,603	96,412	94,076	91,847	89,718	86,785	84,151	81,772
Total assets	1,286,274	1,439,496	5,415,603	5,368,568	5,158,733	5,250,457	5,308,593	5,523,758	5,785,275	6,216,156	6,841,538	7,640,274
LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)												
Finance lease liabilities	9	-	5,251	5,251	5,251	5,251	5,251	5,251	5,251	5,251	5,251	5,251
Trade and other payables	47,122	68,928	118,073	126,766	126,283	127,098	131,717	135,646	140,270	146,129	154,051	161,518
Current tax payable	865	1,175	1,032	1,032	1,032	1,032	1,032	1,032	1,032	1,032	1,032	1,032
Accrued charges	1,159	-	-	-	-	-	-	-	-	-	-	-
Current deferred income	122,544	149,801	349,650	349,650	349,650	349,650	317,565	221,310	221,310	221,310	221,310	172,238
Total current liabilities	171,699	219,905	474,006	482,699	482,216	483,031	455,566	363,239	367,864	373,722	381,645	340,039
Pension liabilities	3,582	3,764	4,026	4,026	4,026	4,026	4,026	4,026	4,026	4,026	4,026	4,026
Provisions	65	-	-	-	-	-	-	-	-	-	-	-
Other non-current liabilities	1,597	1,578	2,471	2,471	2,471	2,471	2,471	2,471	2,471	2,471	2,471	2,471
Non-current deferred income	97,348	-	2,017,660	1,788,010	1,558,360	1,328,710	1,099,060	869,410	639,760	410,110	180,460	-
Total non-current liabilities	102,592	5,342	2,043,818	1,814,168	1,584,518	1,354,868	1,125,218	895,568	665,918	436,268	206,618	26,158
Total liabilities	274,291	225,247	2,517,824	2,296,867	2,066,734	1,837,899	1,580,784	1,258,807	1,033,782	809,990	588,263	366,197
Stockholders' equity (deficit):												
Share capital	233,414	236,540	273,089	273,089	273,089	273,089	273,089	273,089	273,089	273,089	273,089	273,089
Share premium account	993,025	1,277,780	2,648,168	2,696,470	2,746,607	2,797,320	2,850,063	2,904,264	2,960,239	3,018,416	3,079,931	3,144,338
Other reserves	(1,260)	(735)	(735)	(735)	(735)	(735)	(735)	(735)	(735)	(735)	(735)	(735)
Translation differences	(1,754)	(1,557)	(1,267)	(1,267)	(1,267)	(1,267)	(1,267)	(1,267)	(1,267)	(1,267)	(1,267)	(1,267)
Accumulated losses	(211,441)	(297,779)	(21,476)	104,145	74,305	344,152	606,661	1,089,601	1,520,169	2,116,664	2,902,259	3,858,653
Total stockholders' equity (deficit)	1,011,983	1,214,249	2,897,780	3,071,702	3,091,999	3,412,559	3,727,811	4,264,952	4,751,495	5,406,167	6,253,277	7,274,078
Total liabilities and stockholders' equity (deficit)	1,286,274	1,439,496	5,415,604	5,368,569	5,158,734	5,250,458	5,308,594	5,523,759	5,785,276	6,216,157	6,841,539	7,640,275
Outstanding shares at end of period (thousands)	50,937	54,470	64,572	64,572	64,572	64,572	64,572	64,572	64,572	64,572	64,572	64,572
SELECTED METRICS (€ thousands, except per share)												
Current ratio	7	6	11	11	10	11	11	15	15	16	18	22
Working capital (in thousands)	1,025,948	1,108,947	4,748,004	4,719,611	4,527,913	4,671,014	4,758,952	5,068,672	5,327,694	5,755,649	6,375,743	7,218,463
Book value per common share	19.87	22.29	44.88	47.57	47.88	52.85	57.73	66.05	73.58	83.72	96.84	112.65
Cash, cash equivalents and marketable securities per common share	1,151,211	1,290,796	5,189,150	5,141,577	4,935,803	5,026,725	5,128,088	5,331,192	5,600,177	6,021,373	6,637,633	7,427,800
	22.60	23.70	80.36	79.63	76.44	77.85	79.42	82.56	86.73	93.25	102.79	115.03

Source: Company reports; SVB Leerink Research

(€ thousands)	1Q18A	2Q18A	3Q18A	4Q18A	2018A	1Q19A	2Q19A	3Q19A	4Q19E	2019E	1Q20E	2Q20E	3Q20E	4Q20E	2020E
Cash Flows from Operating Activities:															
Net Profit (loss)	(37,283)	(21,773)	14,842	14,956	(29,259)	(48,656)	(47,248)	361,236	(17,566)	247,758	(48,453)	(51,454)	191,246	34,282	125,621
Reconciliation of net loss to net cash:															
Adjustment for non-cash transactions	5,140	9,084	8,593	(1,064)	21,753	5,524	17,754	128,088	8,143	159,509	8,551	8,664	8,567	8,488	34,270
Adjustment for items to disclose separately under operating cash flow	5,246	(11,977)	(2,570)	4,912	(4,389)	(1,517)	(1,347)	(20,568)	-	(23,432)	-	-	-	-	-
Adjustment for items to disclose under investing and financing cash flows	141	4	(266)	(547)	(668)	(3)	-	-	-	(3)	-	-	-	-	-
(Increase) decrease in operating assets and liabilities:															
Changes in working capital other than deferred income	20,482	(2,317)	8,888	(7,131)	19,922	(2,294)	(13,624)	57,045	(14,789)	26,338	(11,960)	7,035	(17,265)	23,121	931
Decrease in deferred income	(34,458)	(25,509)	(33,403)	(59,942)	(153,312)	(25,979)	(27,499)	2,943,764	(760,467)	2,129,819	(57,413)	(57,413)	(57,413)	(57,413)	(229,650)
Operating activity and working capital cash flow	(40,732)	(52,488)	(3,916)	(48,816)	(145,953)	(72,925)	(71,964)	3,469,565	(784,677)	2,539,991	(109,275)	(93,168)	125,136	8,479	(68,828)
Interest paid	(500)	(348)	(178)	(37)	(1,063)	(327)	(301)	(273)	-	(901)	-	-	-	-	-
Interest received	1,428	1,361	463	1,306	4,558	1,565	2,301	1,263	10,670	15,799	10,161	9,971	10,013	10,156	40,302
Income taxes paid	-	-	(7)	(1)	(8)	(11)	(77)	(57)	-	(145)	-	-	-	-	-
Net interest and tax- operating cash flow	928	1,013	278	1,268	3,487	1,227	1,923	933	10,670	14,753	10,161	9,971	10,013	10,156	40,302
Net cash used in operating activities	(39,804)	(51,475)	(3,638)	(47,548)	(142,466)	(71,698)	(70,041)	3,470,498	(774,007)	2,554,744	(99,113)	(83,196)	135,150	18,635	(28,525)
Cash Flows from Investing Activities:															
Purchase of property, plant and equipment	(1,192)	(1,811)	(1,256)	(6,133)	(10,392)	(2,103)	(2,930)	(12,289)	(3,189)	(20,511)	(3,171)	(3,152)	(3,134)	(3,116)	(12,574)
Purchase of and expenditure in intangible fixed assets	(340)	(382)	(811)	(1,792)	(3,325)	(1,201)	(2,334)	(1,930)	(1,960)	(7,425)	(1,813)	(1,677)	(1,551)	(1,434)	(6,474)
Proceeds from disposal of property, plant and equipment	1	-	-	-	1	1	1	(1)	-	1	-	-	-	-	-
Decrease in restricted cash	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Proceeds from sale of financial asset held at fair value through profit or loss	-	-	134	2,227	2,361	82	-	-	-	82	-	-	-	-	-
Acquisition of available-for-sale financial assets	-	-	-	(4,559)	(4,559)	(177)	-	-	-	(177)	-	-	-	-	-
Net cash provided by (used in) investing activities	(1,531)	(2,193)	(1,933)	(10,257)	(15,914)	(3,398)	(5,263)	(14,220)	(5,149)	(28,030)	(4,983)	(4,829)	(4,685)	(4,551)	(19,048)
Cash Flows from Financing Activities:															
Repayment of obligations under finance leases and other debts	(19)	12	1	1	(5)	(1,248)	(896)	(1,690)	-	(3,834)	-	-	-	-	-
Proceeds from capital and share premium increases, gross amount	-	-	296,188	-	296,188	-	-	960,087	-	960,087	-	-	-	-	-
Issue costs paid related to capital and share premium increases	-	-	(15,008)	(956)	(15,964)	-	-	-	-	-	-	-	-	-	-
Proceeds from capital and share premium increases from exercise of warrants	3,924	1,337	-	2,396	7,657	3,481	4,324	6,675	368,519	382,999	-	-	-	-	-
Net cash provided by financing activities	3,905	1,349	281,181	1,441	287,876	2,233	3,428	965,072	368,519	1,339,252	-	-	-	-	-
Effect of exchange rate differences on cash and cash equivalents	(5,595)	10,899	1,292	3,493	10,089	4,968	(3,102)	30,514	-	32,380	-	-	-	-	-
Net increase (decrease) in cash and cash equivalents	(43,025)	(41,420)	276,902	(52,871)	139,585	(67,895)	(74,978)	4,451,864	(410,637)	3,898,346	(104,097)	(88,025)	130,464	14,084	(47,573)
Cash & cash equiv. at beginning of period	1,151,211	1,108,186	1,066,766	1,343,668	1,151,211	1,290,796	1,222,901	1,147,923	5,599,787	1,290,796	5,189,150	5,085,054	4,997,028	5,127,493	5,189,150
Cash & cash equivalents at end of period	1,108,186	1,066,766	1,343,668	1,290,797	1,290,796	1,222,901	1,147,923	5,599,787	5,189,150	5,189,142	5,085,054	4,997,028	5,127,493	5,141,577	5,141,577
Cash Burn															
Cash burn: Sum of cash used in OpEx and P&E	(40,996)	(53,286)	(4,894)	(53,681)	(152,858)	(73,801)	(72,971)	(76,791)	(777,196)	2,534,233	(102,284)	(86,349)	132,015	15,518	(41,099)
Annual cash burn (Q x 4 or annual)	(163,984)	(213,144)	(19,576)	(214,724)	(152,858)	(295,204)	(291,884)	(307,164)	(3,108,783)	2,534,233	(409,136)	(345,395)	528,061	62,074	(41,099)
Years of cash remaining	7	5	69	6	8	4	4	18	2	Cash+	12	14	Cash+	Cash+	125
Months of cash remaining	81	60	824	72	101	50	47	219	20	Cash+	149	174	Cash+	Cash+	1,501

Source: Company reports; SVB Leerink Research

(€ thousands)	2017A	2018A	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E
Cash Flows from Operating Activities:												
Net Profit (loss)	(115,704)	(29,259)	247,758	125,621	(29,840)	269,847	262,509	482,940	430,568	596,496	785,595	956,394
Reconciliation of net loss to net cash:												
Adjustment for non-cash transactions	20,821	21,753	159,509	34,270	26,563	27,088	27,874	27,664	27,127	26,173	24,855	21,681
Adjustment for items to disclose separately under operating cash flow	25,903	(4,389)	(23,432)	-	-	-	-	-	-	-	-	-
Adjustment for items to disclose under investing and financing cash flows	(334)	(668)	(3)	-	-	-	-	-	-	-	-	-
(Increase) decrease in operating assets and liabilities:												
Changes in working capital other than deferred income	(12,862)	19,922	26,338	931	1,007	(2,437)	45,511	(10,361)	9,963	(6,760)	(3,834)	(3,481)
Decrease in deferred income	(65,722)	(153,312)	2,129,819	(229,650)	(229,650)	(229,650)	(261,735)	(325,905)	(229,650)	(229,650)	(229,650)	(229,533)
Operating activity and working capital cash flow	(147,898)	(145,953)	2,539,991	(68,828)	(231,920)	64,847	74,158	174,338	238,008	386,259	576,966	745,061
Interest paid	(273)	(1,063)	(901)	-	-	-	-	-	-	-	-	-
Interest received	1,341	4,558	15,799	40,302	39,867	39,412	40,173	41,378	43,245	45,976	50,080	55,644
Income taxes paid	(199)	(8)	(145)	-	-	-	-	-	-	-	-	-
Net interest and tax- operating cash flow	869	3,487	14,753	40,302	39,867	39,412	40,173	41,378	43,245	45,976	50,080	55,644
Net cash used in operating activities	(147,029)	(142,466)	2,554,744	(28,525)	(192,053)	104,260	114,331	215,716	281,253	432,234	627,046	800,705
Cash Flows from Investing Activities:												
Purchase of property, plant and equipment	(5,312)	(10,392)	(20,511)	(12,574)	(12,394)	(12,110)	(11,833)	(11,562)	(11,297)	(11,038)	(10,786)	(10,539)
Purchase of and expenditure in intangible fixed assets	(2,125)	(3,325)	(7,425)	(6,474)	(1,327)	(1,227)	(1,135)	(1,050)	(971)	-	-	-
Proceeds from disposal of property, plant and equipment	7	1	1	-	-	-	-	-	-	-	-	-
Decrease in restricted cash	6,510	-	-	-	-	-	-	-	-	-	-	-
Proceeds from sale of financial asset held at fair value through profit or loss	372	2,361	82	-	-	-	-	-	-	-	-	-
Acquisition of available-for-sale financial assets	-	(4,559)	(177)	-	-	-	-	-	-	-	-	-
Net cash provided by (used in) investing activities	(548)	(15,914)	(28,030)	(19,048)	(13,721)	(13,337)	(12,968)	(12,612)	(12,268)	(11,038)	(10,786)	(10,539)
Cash Flows from Financing Activities:												
Repayment of obligations under finance leases and other debts	(65)	(5)	(3,834)	-	-	-	-	-	-	-	-	-
Proceeds from capital and share premium increases, gross amount	363,924	296,188	960,087	-	-	-	-	-	-	-	-	-
Issue costs paid related to capital and share premium increases	(15,790)	(15,964)	-	-	-	-	-	-	-	-	-	-
Proceeds from capital and share premium increases from exercise of warrants	5,288	7,657	382,999	-	-	-	-	-	-	-	-	-
Net cash provided by financing activities	353,357	287,876	1,339,252	-	-	-	-	-	-	-	-	-
Effect of exchange rate differences on cash and cash equivalents	(27,808)	10,089	32,380	-	-	-	-	-	-	-	-	-
Net increase (decrease) in cash and cash equivalents	177,972	139,585	3,898,346	(47,573)	(205,774)	90,922	101,363	203,104	268,985	421,196	616,260	790,166
Cash & cash equiv. at beginning of period	973,241	1,151,211	1,290,796	5,189,150	5,141,577	4,935,803	5,026,725	5,128,088	5,331,192	5,600,177	6,021,373	6,637,633
Cash & cash equivalents at end of period	1,151,213	1,290,796	5,189,142	5,141,577	4,935,803	5,026,725	5,128,088	5,331,192	5,600,177	6,021,373	6,637,633	7,427,800
Cash Burn												
Cash burn: Sum of cash used in OpEx and P&E	(152,341)	(4,894)	2,534,233	(41,099)	(204,448)	92,149	102,498	204,154	269,956	421,196	616,260	790,166
Annual cash burn (Q x 4 or annual)	(152,341)	(19,576)	2,534,233	(41,099)	(204,448)	92,149	102,498	204,154	269,956	421,196	616,260	790,166
Years of cash remaining	8	69	Cash+	125	24	Cash+	Cash+	Cash+	Cash+	Cash+	Cash+	Cash+
Months of cash remaining	91	824	Cash+	1,501	290	Cash+	Cash+	Cash+	Cash+	Cash+	Cash+	Cash+

Source: Company reports; SVB Leerink Research

Per share value (\$)	Undifferentiated	Incremental	Meaningful	Breakthrough
Filgotinib	43.69	82.42	119.28	175.43
GLPG1690	13.02	27.26	48.09	72.15
TOLEDO	40.60	40.60	40.60	40.60
GLPG1972	0.44	2.05	2.27	2.59
GLPG1205	0.63	0.96	1.46	2.66
Cash	97.97	97.97	97.97	97.97
Operations	(28.85)	(39.78)	(60.12)	(77.79)
Total	167.49	211.49	249.55	313.61
Commercial probability distribution	9.8%	25.7%	51.7%	12.8%
Commercial adjusted total	16.34	54.42	129.11	40.05
Sum of the parts total (\$)	240.00			

Source: SVB Leerink Research

Disclosures Appendix

Analyst Certification

I, Pasha Sarraf, M.D., Ph.D., certify that the views expressed in this report accurately reflect my views and that no part of my compensation was, is, or will be directly related to the specific recommendation or views contained in this report.

Rating and Price Target History for: Galapagos NV (GLPG) as of 12-19-2019



OP = Outperform MP = Market Perform UP = Underperform D = Drop Coverage I = Initiate SC = Suspended Coverage

Created by: BlueMatrix

Valuation

Our \$240 PT was determined using a probability weighted scenario analysis. Individual scenario values were determined by sum of the parts valuation that applied a WACC calculated 11.9% discount rate and 2% terminal growth rate to revenues and cash flows projected into 2028. Revenues for each asset were adjusted independently twice: by probability of regulatory approval and by asset specific commercial profile.

A commercial probability distribution was determined based on a revenue weighted distribution of independent commercial scenarios projected for each drug candidate. GLPG1690, filgotinib, TOLEDO and cash reserves comprise a majority of the valuation. Galapagos held €5.6B in cash and cash equivalents as of the end of 3Q19.

Risks to Valuation

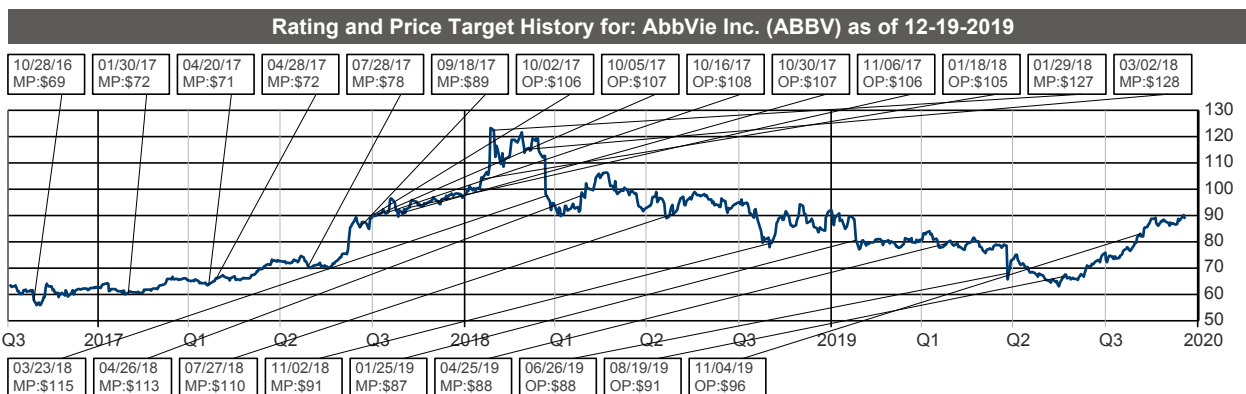
Risks to Valuation include the following:

Product Risk – One or more of the clinical trials for filgotinib or GLPG1690 may fail to meet its primary endpoint necessitating a deeper decision into continued development in that particular indication. Additionally, any safety issues that occur within one trial for filgotinib may read negatively across the entire filgotinib franchise.

Collaboration Risk – GLPG's pipeline and lead asset filgotinib are subject to risk related to GLPG's R&D collaboration agreement with Gilead. This collaboration agreement gives GLPG limited ability to address situational issues surrounding the success of these drugs.

Regulatory Risk – The FDA has previously indicated a belief in drug combinations as the likely future for IPF treatment. With this in mind, GLPG has pursued pivotal trial investigating GLPG1690 in combination with standard of care. While we believe this creates a safer path to approval, it nonetheless opens the door to potential competitors pursuing a path to approval as a monotherapy to significantly disrupt expectations for market competition.

Financing Risk – GLPG currently has no revenue producing products on the market. Though well capitalized over the near term, negative outcomes for any of its asset franchises may significantly impact its ability raise funds in the future.



Leerink initiated coverage of ABBV with an Outperform rating on October 18, 2016.

OP = Outperform MP = Market Perform UP = Underperform D = Drop Coverage I = Initiate SC = Suspended Coverage

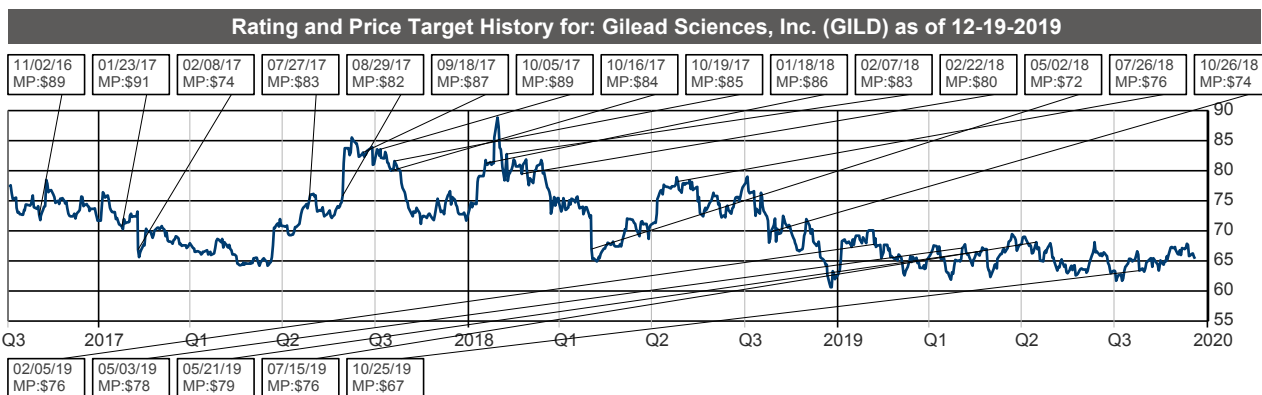
Created by: BlueMatrix

Valuation

Our price target for AbbVie (ABBV) is based on a simple average of three approaches that we believe are a reasonable basis for valuing the stock today. These approaches are simple price to earnings multiples for comparable large biopharmaceutical companies; price to sales multiples for large cap peer companies' stocks; and discounted cash flow (DCF). We apply peer EPS and revenue multiples using an average for large cap, large molecule therapeutic companies with midterm growth and tail risk (GILD, BIIB, AMGN, AGN, BMY). Their average 2019 consensus EPS multiple of ~10x applied to our current 2020 EPS estimate for ABBV, gives a value of \$97 in 2020. Using a revenue multiple for similar companies of 3.5x 2020E consensus sales, and applied to our 2021 revenue estimate for ABBV, gives a 2020 value of \$93. Lastly, our DCF valuation given a 6.9% WACC and a terminal cash flow growth rate of -3% beginning 2029E (after Humira biosimilar entry) gives a present value of \$97. The average of these three methods is our current price target of \$96.

Risks to Valuation

The risks to our view, outlook, and valuation for AbbVie include any major change in the price outlook, reimbursement coverage, labeling, or competitive position for Humira, the company's main product. Other risks include commercial or development disappointments for the company's follow-on programs in inflammatory diseases, for Imbruvica and Venclexta in expanded hematological malignancies, as well as the competitive positioning of the company's next-generation HCV therapy. Also, the company remains highly levered and committed to a growing dividend, and any reduction to forecasted EBITDA due to negative business trends would place the company's capital allocation strategy and dividend growth at risk. Opportunities for upside from our expectations include stronger-than-expected pricing, volume and share for Humira and emergence of more tangible demand for underappreciated elements of the company's early-to-mid stage pipeline assets, and potential label expansion opportunities to late stage opportunities.



Leerink placed a Market Perform rating on GILD on September 27, 2016.

OP = Outperform MP = Market Perform UP = Underperform D = Drop Coverage I = Initiate SC = Suspended Coverage

Created by: BlueMatrix

Valuation

Our \$67 price target for Gilead Sciences, Inc. (GILD) is based on an average of three approaches that we believe are a reasonable basis for valuing the stock today. These approaches are trough price to earnings multiples for large cap, slow-growth medical products businesses long term; revenue multiples for large cap medical products stocks with slow growth outlooks; and discounted cash flow (DCF). Using a trough consensus forward earnings (2019E) multiple for slow-growth medical products stocks (AGN, ABBV, CELG, BIIB, AMGN) of ~10x, applied to our 2020E EPS estimate for Gilead, gives a price of \$67. Alternatively we apply a slow-growing, large-cap biopharma products (ABBV, AMGN, BMY, PFE, CELG, RHHBY, NVS) revenue multiple (3.8x) to 2021E revenue estimates to derive a 2019 implied value of \$84bn, implying a one-year price target of \$66. Lastly, our DCF uses our forecast of free cash flow through 2029E and then applies a -5% growth rate to our terminal cash flow forecast and discounts the values back to the present at a 6.8% WACC to give a present value of \$68. The average of these three approaches is \$67, which is our price target.

Risks to Valuation

The risks to our view, outlook, and valuation for Gilead include any major change in the labeling, price, or reimbursement coverage for the company’s existing HIV or HCV products, emergence of further aggressive price discounting, rebating, or other value erosion in the HIV and HCV categories, over and above our current forecast, or any failure of the company’s principal pipeline assets, selonsertib (NASH) and filgotinib (RA, IBD) to advance through development to commercialization. Opportunities for better performance and value than our expectations include delays or limitations in the development, profile, and adoption of competitive HIV products, successful development of underappreciated elements of the company’s portfolio, such as GS-9674 (FXR agonist), GS-0976 (ACC Inhibitor), or follow-on CART indications and stronger-than-expected conversion of current HIV patients to Gilead’s next generation TAF-based HIV treatment regimens.

Rating	Distribution of Ratings/Investment Banking Services (IB) as of 09/30/19			
	Count	Percent	IB Serv./Past 12 Mos.	
			Count	Percent
BUY [OP]	148	74.4	54	36.5
HOLD [MP]	48	24.1	3	6.3
SELL [UP]	3	1.5	0	0.0

Explanation of Ratings

Outperform (Buy): We expect this stock to outperform its benchmark over the next 12 months.

Market Perform (Hold/Neutral): We expect this stock to perform in line with its benchmark over the next 12 months.

Underperform (Sell): We expect this stock to underperform its benchmark over the next 12 months.

The degree of outperformance or underperformance required to warrant an Outperform or an Underperform rating should be commensurate with the risk profile of the company.

For the purposes of these definitions the relevant benchmark will be the S&P 600[®] Health Care Index for issuers with a market capitalization of less than \$2 billion and the S&P 500[®] Health Care Index for issuers with a market capitalization over \$2 billion.

Important Disclosures

This information (including, but not limited to, prices, quotes and statistics) has been obtained from sources that we believe reliable, but we do not represent that it is accurate or complete and it should not be relied upon as such. All information is subject to change without notice. The information is intended for Institutional Use Only and is not an offer to sell or a solicitation to buy any product to which this information relates. SVB Leerink LLC (“Firm”), its officers, directors, employees, proprietary accounts and affiliates may have a position, long or short, in the securities referred to in this report, and/or other related securities, and from time to time may increase or decrease the position or express a view that is contrary to that contained in this report. The Firm’s research analysts, salespeople, traders and other professionals may provide oral or written market commentary or trading strategies that are contrary to opinions expressed in this report. The Firm’s asset management group and proprietary accounts may make investment decisions that are inconsistent with the opinions expressed in this document. The past performance of securities does not guarantee or predict future performance. Transaction strategies described herein may not be suitable for all investors. This document may not be reproduced or circulated without SVB Leerink’s written authority. Additional information is available upon request by contacting the Editorial Department, SVB Leerink LLC, One Federal Street, 37th Floor, Boston, MA 02110.

Like all Firm employees, research analysts receive compensation that is impacted by, among other factors, overall firm profitability, which includes revenues from, among other business units, Institutional Equities, Research, and Investment Banking. Research analysts, however, are not compensated for a specific investment banking services transaction. To the extent SVB Leerink research reports are referenced in this material, they are either attached hereto or information about these companies, including prices, rating, market making status, price charts, compensation disclosures, Analyst Certifications, etc. is available on <https://svbleerink.bluematrix.com/bluematrix/Disclosure2>.

MEDACorp is a network of healthcare professionals, attorneys, physicians, key opinion leaders, and other specialists accessed by SVB Leerink LLC and its clients.

SVB Leerink LLC makes a market in Galapagos NV, AbbVie Inc. and Gilead Sciences, Inc.

This document may not be reproduced or circulated without our written authority.

© 2019 SVB Leerink LLC. All Rights Reserved. Member FINRA/SIPC. SVB Leerink LLC is a member of SVB Financial Group.



RESEARCH MANAGEMENT

John L. Sullivan, CFA
Director of Equity Research
(617) 918-4875
john.sullivan@svbleerink.com

Jim Kelly
Associate Director of Research
(212) 277-6096
jim.kelly@svbleerink.com

Geoffrey C. Porges, MBBS
Director of Therapeutics Research
(212) 277-6092
geoffrey.porges@svbleerink.com

Christian Clark
Vice President
(212) 277-6117
christian.clark@svbleerink.com

DIVERSIFIED BIOTECHNOLOGY

Geoffrey C. Porges, MBBS
(212) 277-6092
geoffrey.porges@svbleerink.com

Bradley Canino, CPA
(212) 277-6158
bradley.canino@svbleerink.com

Neil Puri, M.D., MBA
(212) 277-6139
neil.puri@svbleerink.com

Ke (Andrew) Yuan, CFA, CPA
(212) 277-6147
ke.yuan@svbleerink.com

TARGETED ONCOLOGY

Andrew Berens, M.D.
(212) 277-6108
andrew.berens@svbleerink.com

Thomas J. Smith
(212) 277-6069
thomas.smith@svbleerink.com

Gang Li, Ph.D.
(212) 277-6185
gang.li@svbleerink.com

IMMUNO-ONCOLOGY

Daina M. Graybosch, Ph.D.
(212) 277-6128
daina.graybosch@svbleerink.com

Dilip Joseph
(212) 277-6148
dilip.joseph@svbleerink.com

David B. Iaea, Ph.D.
(212) 277-6155
david.iaea@svbleerink.com

EMERGING ONCOLOGY

Jonathan Chang, Ph.D., CFA
(617) 918-4015
jonathan.chang@svbleerink.com

John C. Barrett, Ph.D.
(617) 918-4039
john.barrett@svbleerink.com

David Ruch
(617) 918-4817
david.ruch@svbleerink.com

GENETIC MEDICINE

Mani Foroohar, M.D.
(212) 277-6089
mani.foroohar@svbleerink.com

Rick Bienkowski, Ph.D.
(212) 277-6109
rick.bienkowski@svbleerink.com

Aravinda Kuntimaddi, Ph.D.
(212) 277-6148
aravinda.kuntimaddi@svbleerink.com

IMMUNOLOGY & METABOLISM

Pasha Sarraf, M.D., Ph.D.
(212) 277-6013
pasha.sarraf@svbleerink.com

Mike Kratky, CFA
(212) 277-6192
mike.kratky@svbleerink.com

Dylan Dupuis, Ph.D.
(212) 277-6151
dylan.dupuis@svbleerink.com

NEUROSCIENCE

Marc Goodman
(212) 277-6137
marc.goodman@svbleerink.com

Roanna Ruiz, Ph.D.
(212) 277-6144
roanna.ruiz@svbleerink.com

Rudy Li, Ph.D.
(212) 277-6127
rudy.li@svbleerink.com

RARE DISEASE

Joseph P. Schwartz
(617) 918-4575
joseph.schwartz@svbleerink.com

Dae Gon Ha, Ph.D.
(617) 918-4093
daegon.ha@svbleerink.com

Joori Park, Ph.D.
(617) 918-4098
joori.park@svbleerink.com

GENERICS, INFECTIOUS DISEASE, PAIN, WOMEN'S HEALTH, OTHER THERAPEUTICS

Ami Fadia
(212) 277-6047
ami.fadia@svbleerink.com

Eason Lee
(212) 277-6070
eason.lee@svbleerink.com

Sheldon Fan, Ph.D.
(212) 277-6074
sheldon.fan@svbleerink.com

LIFE SCIENCE TOOLS & DIAGNOSTICS

Puneet Souda
(212) 277-6091
puneet.souda@svbleerink.com

Westley Dupray
(617) 918-4549
westley.dupray@svbleerink.com

Scott Mafale
(212) 277-6107
scott.mafale@svbleerink.com

MEDICAL DEVICES, CARDIOLOGY

Danielle Antaffy
(212) 277-6044
danielle.antaffy@svbleerink.com

Rebecca Wang, CFA
(212) 277-6087
rebecca.wang@svbleerink.com

MEDICAL DEVICES, ORTHOPEDICS

Richard Newitter
(212) 277-6088
richard.newitter@svbleerink.com

Jaime L. Morgan
(212) 277-6073
jaime.morgan@svbleerink.com

EMERGING HEALTHCARE TECHNOLOGIES

Daniel Grosslight
(212) 277-6140
daniel.grosslight@svbleerink.com

EDITORIAL

SR. EDITOR/SUPERVISORY ANALYST

Mary Ellen Eagan, CFA
(617) 918-4837
maryellen.eagan@svbleerink.com

SUPERVISORY ANALYSTS

Randy Brougher
randy.brougher@svbleerink.com

Robert Egan
bob.egan@svbleerink.com

Amy N. Sonne
amy.sonne@svbleerink.com

EDITORIAL ASSOCIATE

Emily Singletary
(212) 277-6115
emily.singletary@svbleerink.com