

**Galapagos NV (GLPG)**  
**Rating: Buy**

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**Staying the Course for Now and Raising Target to \$302**

Stock Data	02/21/2020
Price	\$274.03
Exchange	NASDAQ
Price Target	\$302.00
52-Week High	\$274.03
52-Week Low	\$94.75
Enterprise Value (M)	\$11,420
Market Cap (M)	\$17,721
Shares Outstanding (M)	62.0
3 Month Avg Volume	143,738
Short Interest (M)	1.24

Balance Sheet Metrics	
Cash (M)	\$6,301.1
Total Debt (M)	\$0.0
Total Cash/Share	\$101.71

General: Currency used is roughly 1 Euro to \$1.09 US. Stock price is US\$ as on NASDAQ

EPS (€) Diluted			
Full Year - Dec	2018A	2019A	2020E
1Q	€(0.73)	€(0.89)	€(1.30)
2Q	€(0.42)	€(0.86)	€(1.54)
3Q	€0.27	€5.83	€(1.80)
4Q	€0.27	€(1.86)	€1.23
FY	€(0.56)	€2.49	€(3.40)

Revenue (€)			
Full Year - Dec	2018A	2019A	2020E
1Q	€44.8	€40.9	€103.1
2Q	€57.0	€67.6	€103.1
3Q	€103.2	€644.0	€103.1
4Q	€112.8	€143.4	€286.6
FY	€317.8	€895.9	€595.9



**The first could be luck, the second a coincidence, but for the third and beyond, we see serious expertise.** The ex-filgotinib pipeline is expected to generate mature and POC data over the next 12 months with readouts from: (1) the 850+ patient ROCELLA Phase 2 program during 2H20; (2) NOVESA study evaluating GLPG1690 in subjects with systemic sclerosis during 2H20; (3) POC data from inflammatory indications from two Toledo generated compounds GLPG3312 and '3970 during 2H20; and (4) POC data from the 69 patient PINTA program with GLPG1205 in subjects with IPF during 2H20. Note, about 66% of IPF patients are on nintedanib or pirfenidone and the remaining 33% on a local standard-of-care; and (5) futility analysis from the ISABELA Phase 3 programs evaluating GLPG1690 in IPF during 1Q21. In excess of 600 patients have been recruited in the Phase 3 programs to date, with full enrollment expected by YE20. For the filgotinib-centric pipeline Galapagos expects: (1) RA-related approvals in the U.S., and EU during 2H20; (2) a robust launch for filgotinib based on its differentiated safety profile at the expense of biologics. Note, JAKi's are gaining market share both in the U.S., at the expense of Embrel and Remicade and Germany in lieu of Embrel, Humira and its respective biosimilars, a trend which we see accelerating with the likely detailing of RINVOQ; (3) Phase 3 readout from UC during 2Q20. We expect the UC program to readout positively based on: (a) the prior history of JAKi's; and (b) compelling filgotinib data from CD, refer to the FITZROY study; and (c) ongoing recruitment in the Phase 3 segments of CD, PsA, and AS, which should be reading out during 2021 and beyond. Given the plethora of clinical and commercial milestones and despite the 32% and 180% YTD and 12-month moves respectively, handily outperforming the XBI, 2.26% and 15% over the same time frames, we are sticking to our Buy rating, and increasing our target to \$302, which is primarily being driven by a realignment of our filgotinib pricing assumptions, now calibrated to anticipated GtN for RINVOQ and other JAKi's.

**Links to our prior deep dives into GLPG1972 and GLPG1690 can be found here.**

- [1. ROCELLA Is Off to a Running Start; GLPG1972 Recap](#)
- [2. IPF in Vogue With Multiple Phase 3's: Overview and Perspectives](#)

**FY19 by the numbers.** For FY19, Galapagos reported a net profit of €149.8M, with GAAP EPS of €2.49. Balance sheet reflects about \$6.3B in cash and equivalents. The €3.1B in deferred revenues is expected to amortize at the rate of €400M annually over the next four to five years declining to approximately €200M/year thereafter until complete drawdown. With: (1) filgotinib commercialization in RA expected during 2H20; (2) potential for multiple additional indications thereafter, supports our \$3.9B peak revenue estimate; and (3) financial implications of Gilead's (GILD; not rated) opt-in decisions for maturing pipeline assets, implies Galapagos is unlikely to require additional capital for the foreseeable future, by our estimates. For FY20, we estimate a net loss of (€212.8M), and GAAP EPS of (€3.40)/share.

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**Valuation and risks to our investment thesis.** We reiterate our Buy rating with a new 12-month price target on shares of Galapagos of \$302 vs. our prior \$205, driven entirely by a change to our anticipated gross to net price assumption, which goes to approximately \$40K annually in the U.S., from our prior \$20K, which brings it into line with current commercial JAKi's. Our target is derived from a 12-year DCF-based, sum-of-the-parts analysis. Our DCF is driven by: beta of 1.26, terminal growth rate of -3.0%, risk premium of 4.93%, calculated WACC of 8.0%, and tax rate of 20% beginning in FY 2025. Filgotinib (82%), GLPG1690 and GLPG1972 (2% each) together make up about 86% of our value, with the remainder derived from the probability-adjusted, filgotinib-associated milestone payments. For filgotinib, we assume POS in the range of: 80% for RA based on the FINCH 1 and 3 clinical updates released post close on March 28, 2019, 65% for UC, and 60% for CD, PsA and AS each, whereas for '1690 and '1972, we assign a 35% and 10% POS, respectively. Key risks include: emergence of safety concerns, clinical risks, regulatory risks, and financial risks. Furthermore, regulatory and commercial strategy for filgotinib is under the control of partner, Gilead, not an established player in autoimmune indications. Hence, Gilead may not be able to drive rapid adoption of filgotinib, especially if the overall profile is relatively undifferentiated from AbbVie's (ABBV; not rated) upadacitinib, in our view. Hence, our estimates could be negatively impacted if AbbVie successfully leverages its market positioning with Humira during the launch of RINVOQ.

## Valuation: Galapagos (GLPG) Discounted Cash Flow (DCF) Analysis

		Discounted Cash Flow Analysis													TV
		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031		
Ticker	Galapagos														
Period	2025E														
Beta est	1.26	EBIT (000s €)	€ (172,767)	€ 25,216	€ 461,573	€ 1,012,241	€ 1,680,322	€ 1,919,331	€ 2,394,812	€ 2,347,888	€ 2,487,721	€ 2,551,624	€ 2,577,254	€ 2,595,175	
Risk-free rate (R <sub>f</sub> )(10 yr yield)	1.75%	Tax rate	0.0%	0.0%	0.0%	0.0%	0.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	
Risk premium (R <sub>p</sub> )	4.93%	EBIT*(1-t)	(172,767)	25,216	461,573	1,012,241	1,680,322	1,535,465	1,915,850	1,878,311	1,990,177	2,041,299	2,061,803	2,076,140	
Cost of equity (K <sub>E</sub> )	8.0%	Capital expenditures	(24,000)	(26,400)	(29,040)	(31,944)	(35,138)	(38,652)	(42,517)	(46,769)	(51,446)	(56,591)	(62,250)	(68,475)	
Cost of debt (K <sub>D</sub> )	0.0%	% growth	7.2%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	
Terminal growth rate	-3.0%	Depreciation	14,000	16,800	17,640	18,522	19,448	20,421	21,442	22,514	23,639	24,821	26,062	27,365	
Terminal value (% of total value)	43.2%	% growth	15.8%	20.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
Shareholder equity	7,560,543	Change in non-cash working capital	17,500	13,825	16,266	18,882	21,683	20,011	9,194	15,306	16,510	20,885	26,928	33,594	
Debt outstanding	0	% growth	37.8%	-21.0%	17.7%	16.1%	14.8%	-7.7%	-54.1%	66.5%	7.9%	26.5%	28.9%	24.8%	
Total capital	7,560,543	<b>Free cash flow to the firm</b>	<b>(152,267)</b>	<b>54,591</b>	<b>491,987</b>	<b>1,043,825</b>	<b>1,713,226</b>	<b>1,574,526</b>	<b>1,970,615</b>	<b>1,932,288</b>	<b>2,048,752</b>	<b>2,101,826</b>	<b>2,123,187</b>	<b>2,138,386</b>	<b>18,922,390</b>
Equity/cap	100.0%	Discount factor	1.00	0.93	0.86	0.79	0.74	0.68	0.63	0.58	0.54	0.50	0.46	0.43	
Debt/cap	0.0%	<b>Present value of cash flows</b>	<b>(152,267)</b>	<b>50,565</b>	<b>422,098</b>	<b>829,502</b>	<b>1,261,055</b>	<b>1,073,493</b>	<b>1,244,461</b>	<b>1,130,267</b>	<b>1,110,014</b>	<b>1,054,789</b>	<b>986,931</b>	<b>920,693</b>	<b>7,546,309</b>
WACC (calculated)	8.0%	Value of firm	17,477,911												
WACC (applied)	8.0%	Debt	0												
Shares outstanding	63,141	Value of equity	17,477,911												
		Value per share (\$)	\$ 302.00												

Source: H.C. Wainwright &amp; Co. estimates.

## Income Statement

Income statement	FY end Dec. 31	2018A	1Q19A	2Q19A	3Q19A	4Q19A	2019A	1Q20E	2Q20E	3Q20E	4Q20E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E
<b>Income statement</b>																							
<b>(€ in thousands, except per share data)</b>																							
Product revenues	€ 288,836	€ 33,047	€ 58,738	€ 633,934	€ 119,266	€ 844,985	€ 90,596	€ 90,596	€ 90,596	€ 274,083	€ 545,872	€ 859,883	€ 1,437,126	€ 2,139,542	€ 2,948,838	€ 3,250,754	€ 3,810,975	€ 3,816,980	€ 3,997,158	€ 4,082,820	€ 4,124,533	€ 4,157,790	
Milestones; other product sales	288,836	33,047	58,738	633,934	119,266	844,985	90,596	90,596	90,596	274,083	545,872	859,883	1,437,126	2,139,542	2,948,838	3,250,754	3,810,975	3,816,980	3,997,158	4,082,820	4,124,533	4,157,790	
<i>filigo RA (US)</i>	0	0	0	0	0	0	0	0	0	0	0	160,913	347,228	466,211	733,555	738,689	892,632	898,881	905,173	911,509	917,890	917,890	924,315
<i>filigo RA (EU)</i>	0	0	0	0	0	0	0	0	0	0	0	221,940	476,536	636,652	797,407	799,002	800,600	802,201	803,805	805,413	807,024	808,638	
<i>filigo UC (US)</i>	0	0	0	0	0	0	0	0	0	0	0	19,791	39,858	64,220	90,941	101,753	122,958	123,819	124,686	125,558	126,437	127,322	
<i>filigo UC (EU)</i>	0	0	0	0	0	0	0	0	0	0	0	27,351	54,811	87,673	110,281	122,958	140,561	140,722	140,944	141,166	141,388	141,610	
<i>filigo CD (US)</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>filigo CD (EU)</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>filigo PrA (US)</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>filigo PrA (EU)</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>filigo AS (US)</i>	0	0	0	0	0	0	0	0	0	0	0	0	21,888	55,103	77,684	107,284	121,539	135,988	136,940	137,899	138,858	139,817	140,776
<i>filigo AS (EU)</i>	0	0	0	0	0	0	0	0	0	0	0	0	29,950	60,019	84,195	108,371	122,546	122,721	122,896	123,071	123,246	123,421	123,596
1690 PF (US)	0	0	0	0	0	0	0	0	0	0	0	0	10,972	23,203	32,712	39,440	44,680	52,265	52,630	55,303	55,668	56,033	56,400
1690 PF (EU)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1972 OA (US)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21,084	42,483	62,745	72,211	85,524	98,692
1972 OA (EU)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,282	6,578	9,227	10,566	11,911	13,287
Grants + Other income	29,009	7,872	8,852	10,020	24,161	50,905	12,500	12,500	12,500	12,500	50,000	51,000	52,020	53,060	54,122	55,204	56,308	57,434	58,583	59,755	60,950	62,169	
<b>Total Revenues</b>	<b>317,845</b>	<b>40,919</b>	<b>67,590</b>	<b>643,954</b>	<b>143,427</b>	<b>895,890</b>	<b>103,096</b>	<b>103,096</b>	<b>103,096</b>	<b>286,583</b>	<b>595,872</b>	<b>910,983</b>	<b>1,489,146</b>	<b>2,192,603</b>	<b>3,002,960</b>	<b>3,305,958</b>	<b>3,867,283</b>	<b>3,874,415</b>	<b>4,055,741</b>	<b>4,142,575</b>	<b>4,185,483</b>	<b>4,219,958</b>	
Cost of goods sold	0	0	0	0	0	0	0	0	0	0	0	40,263	97,520	157,304	248,427	280,190	332,841	352,707	370,725	379,291	382,013	383,812	
<b>Gross profit</b>	<b>317,845</b>	<b>40,919</b>	<b>67,590</b>	<b>643,954</b>	<b>143,427</b>	<b>895,890</b>	<b>103,096</b>	<b>103,096</b>	<b>103,096</b>	<b>286,583</b>	<b>595,872</b>	<b>870,719</b>	<b>1,391,626</b>	<b>2,035,299</b>	<b>2,754,533</b>	<b>3,025,768</b>	<b>3,534,442</b>	<b>3,521,707</b>	<b>3,685,016</b>	<b>3,763,284</b>	<b>3,803,470</b>	<b>3,836,142</b>	
Research and development	322,876	83,195	94,372	120,680	129,073	427,320	135,000	145,500	163,350	168,251	615,101	678,611	744,272	818,699	859,634	885,423	911,985	939,345	958,132	967,713	977,390	987,164	
General and administrative	35,630	9,221	13,711	28,565	22,204	73,701	23,500	24,675	25,909	27,204	101,288	111,417	122,558	134,814	141,555	145,802	150,176	154,681	157,775	160,930	164,149	167,432	
Sales and marketing expenses	4,148	1,745	3,874	4,078	14,880	24,577	15,500	16,000	16,500	4,250	52,250	57,475	63,223	69,545	73,022	75,213	77,469	79,793	81,389	83,017	84,677	86,371	
<b>Total operating expenses</b>	<b>382,654</b>	<b>94,161</b>	<b>111,957</b>	<b>153,323</b>	<b>166,157</b>	<b>525,598</b>	<b>174,000</b>	<b>188,175</b>	<b>205,759</b>	<b>199,705</b>	<b>768,638</b>	<b>845,502</b>	<b>930,053</b>	<b>1,023,058</b>	<b>1,074,211</b>	<b>1,106,437</b>	<b>1,139,630</b>	<b>1,173,819</b>	<b>1,197,295</b>	<b>1,211,660</b>	<b>1,226,216</b>	<b>1,240,966</b>	
<b>Operating gains (losses)</b>	<b>(44,809)</b>	<b>(53,242)</b>	<b>(44,367)</b>	<b>490,631</b>	<b>(22,730)</b>	<b>370,292</b>	<b>(70,904)</b>	<b>(86,079)</b>	<b>(102,662)</b>	<b>86,878</b>	<b>(172,767)</b>	<b>25,216</b>	<b>461,573</b>	<b>1,012,241</b>	<b>1,680,322</b>	<b>1,919,331</b>	<b>2,394,812</b>	<b>2,347,888</b>	<b>2,487,721</b>	<b>2,551,624</b>	<b>2,577,254</b>	<b>2,595,175</b>	
Financial income	18,335	6,999	(1,349)	34,755	(18,923)	21,482	5,000	5,000	5,000	5,000	20,000	20,200	21,210	22,271	23,384	24,553	25,781	27,070	28,423	29,845	31,337	32,904	
Fair value re-measurement of share subscription	0	0	0	(142,349)	(39,295)	(181,644)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Financial expenses	(2,736)	(2,345)	(1,472)	(38,631)	(17,623)	(60,071)	(15,000)	(15,000)	(15,000)	(15,000)	(60,000)	(63,000)	(66,150)	(69,450)	(72,930)	(76,577)	(80,406)	(84,426)	(88,647)	(93,080)	(97,734)	(102,620)	
<b>Total other income (expense)</b>	<b>(9,210)</b>	<b>4,654</b>	<b>(2,821)</b>	<b>(146,225)</b>	<b>(75,841)</b>	<b>(220,233)</b>	<b>(10,000)</b>	<b>(10,000)</b>	<b>(10,000)</b>	<b>(10,000)</b>	<b>(40,000)</b>	<b>(42,800)</b>	<b>(44,940)</b>	<b>(47,187)</b>	<b>(49,546)</b>	<b>(52,224)</b>	<b>(54,625)</b>	<b>(57,350)</b>	<b>(60,224)</b>	<b>(63,235)</b>	<b>(66,397)</b>	<b>(69,717)</b>	
<b>Gain (loss) before income taxes</b>	<b>(29,210)</b>	<b>(48,588)</b>	<b>(47,188)</b>	<b>344,406</b>	<b>(98,571)</b>	<b>150,059</b>	<b>(80,904)</b>	<b>(96,079)</b>	<b>(112,662)</b>	<b>76,878</b>	<b>(212,767)</b>	<b>(17,584)</b>	<b>416,633</b>	<b>965,054</b>	<b>1,630,776</b>	<b>1,867,307</b>	<b>2,340,188</b>	<b>2,290,532</b>	<b>2,427,497</b>	<b>2,488,389</b>	<b>2,510,857</b>	<b>2,525,459</b>	
Income tax benefit (expense)	(49)	(88)	(61)	16,828	(16,913)	(214)	0	0	0	0	0	0	0	0	0	(373,461)	(468,038)	(458,100)	(485,499)	(497,678)	(502,171)	(505,092)	
<b>Net income (loss)</b>	<b>(29,259)</b>	<b>(48,656)</b>	<b>(47,249)</b>	<b>361,234</b>	<b>(115,484)</b>	<b>149,845</b>	<b>(80,904)</b>	<b>(96,079)</b>	<b>(112,662)</b>	<b>76,878</b>	<b>(212,767)</b>	<b>(17,584)</b>	<b>416,633</b>	<b>965,054</b>	<b>1,630,776</b>	<b>1,493,846</b>	<b>1,872,150</b>	<b>1,832,426</b>	<b>1,941,998</b>	<b>1,990,711</b>	<b>2,008,685</b>	<b>2,020,367</b>	
<b>Earnings (loss) per share - diluted</b>	<b>€ (0.56)</b>	<b>€ (0.89)</b>	<b>€ (0.86)</b>	<b>€ 5.83</b>	<b>€ (1.86)</b>	<b>€ 2.49</b>	<b>€ (1.30)</b>	<b>€ (1.54)</b>	<b>€ (1.80)</b>	<b>€ 1.23</b>	<b>€ (3.40)</b>	<b>€ (0.28)</b>	<b>€ 6.64</b>	<b>€ 15.35</b>	<b>€ 25.88</b>	<b>€ 23.66</b>	<b>€ 29.59</b>	<b>€ 28.91</b>	<b>€ 30.57</b>	<b>€ 31.28</b>	<b>€ 31.50</b>	<b>€ 31.62</b>	
Shares outstanding - diluted	52,227	54,615	54,823	61,954	62,078	60,118	62,202	62,326	62,451	62,576	62,514	62,639	62,764	62,889	63,015	63,141	63,267	63,394	63,521	63,648	63,775	63,903	

Source: H.C. Wainwright &amp; Co. estimates.

## Cash Flow Statement

Cash flows statement (€ in thousands, except per share data)	2018A	1Q19A	2Q19A	3Q19A	4Q19A	2019A	1Q20E	2Q20E	3Q20E	4Q20E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	
<b>Cash flows from Operating activities:</b>																							
Net gain (loss)	€ (29,259)	€ (48,656)	€ (47,249)	€ 361,234	€ (115,484)	€ 149,845	€ (80,904)	€ (96,079)	€ (112,662)	€ 76,878	€ (212,767)	€ (17,584)	€ 416,633	€ 965,054	€ 1,630,776	€ 1,493,846	€ 1,872,150	€ 1,832,426	€ 1,941,998	€ 1,990,711	€ 2,008,685	€ 2,020,367	
Adjustments for non-cash transactions, and items to disclose under op cash flow	€ 17,364	€ 4,007	€ 16,407	€ 107,523	€ 112,359	€ 240,296	€ 16,550	€ 17,050	€ 17,550	€ 18,050	€ 69,200	€ 77,410	€ 84,196	€ 91,612	€ 99,720	€ 108,585	€ 118,282	€ 128,891	€ 140,500	€ 153,205	€ 167,114	€ 182,343	
Adjustment for items to disclose under investing and financing cash flows	(668)	(3)	0	0	(5,059)	(5,061)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Change in working capital other than deferred income	19,922	(2,294)	(13,624)	57,044	(28,428)	12,698	4,000	5,000	3,500	5,000	17,500	13,825	16,266	18,882	21,683	20,011	9,194	15,396	16,510	20,885	26,928	33,594	
Decrease in deferred income	(153,312)	(25,979)	(27,499)	2,943,764	(86,084)	2,804,202	(100,000)	(100,000)	(100,000)	(100,000)	(400,000)	(400,000)	(400,000)	(400,000)	(175,000)	(175,000)	(150,000)	(150,000)	(150,000)	(100,000)	(75,000)	(50,000)	
Interest paid, and received, net	3,495	1,238	2,000	990	2,466	6,694	650	650	650	650	2,600	2,860	3,146	3,461	3,807	4,187	4,606	5,067	5,573	6,131	6,744	7,418	
Income taxes paid	(8)	(11)	(77)	(67)	88	(57)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Net cash provided (used) by Operating activities</b>	<b>(142,466)</b>	<b>(71,698)</b>	<b>(70,042)</b>	<b>3,470,498</b>	<b>(120,141)</b>	<b>3,208,617</b>	<b>(159,704)</b>	<b>(173,379)</b>	<b>(190,962)</b>	<b>578</b>	<b>(523,467)</b>	<b>(323,489)</b>	<b>120,241</b>	<b>679,008</b>	<b>1,580,985</b>	<b>1,451,629</b>	<b>1,854,232</b>	<b>1,831,689</b>	<b>1,954,581</b>	<b>2,070,932</b>	<b>2,134,472</b>	<b>2,193,723</b>	
<b>Cash flows from Investing activities:</b>																							
Purchases of property and equipment	(10,392)	(2,103)	(2,930)	(12,289)	(5,063)	(22,385)	(6,000)	(6,000)	(6,000)	(6,000)	(24,000)	(26,400)	(29,040)	(31,844)	(35,138)	(38,652)	(42,517)	(46,769)	(51,446)	(56,591)	(62,250)	(68,475)	
Purchase of and expenditure in intangible fixed assets	(3,325)	(1,201)	(2,334)	(1,930)	(17,635)	(23,300)	(1,000)	(1,000)	(1,000)	(1,000)	(4,000)	(4,200)	(4,410)	(4,631)	(4,862)	(5,105)	(5,360)	(5,626)	(5,910)	(6,205)	(6,516)	(6,841)	
Proceeds from disposal of p.p. and e	1	1	1	(1)	(1)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Increase in/ Interest received/ Decrease in financial investments; and decrease in rest	0	0	0	0	(3,718,880)	(3,718,880)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Acquisition of available-for-sale financial assets	(4,559)	(177)	0	0	0	(177)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Proceeds from sale of available-for-sale financial assets	2,361	82	0	0	0	82	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Net cash provided (used) by Investing activities</b>	<b>(15,914)</b>	<b>(3,398)</b>	<b>(5,263)</b>	<b>(14,220)</b>	<b>(3,741,779)</b>	<b>(3,764,660)</b>	<b>(7,000)</b>	<b>(7,000)</b>	<b>(7,000)</b>	<b>(7,000)</b>	<b>(28,000)</b>	<b>(30,600)</b>	<b>(33,450)</b>	<b>(36,575)</b>	<b>(40,000)</b>	<b>(43,757)</b>	<b>(47,878)</b>	<b>(52,398)</b>	<b>(57,356)</b>	<b>(62,796)</b>	<b>(68,765)</b>	<b>(75,316)</b>	
<b>Cash flows from Financing activities:</b>																							
Repayment of obligations under finance leases and other debts	(5)	(1,248)	(896)	(1,690)	(1,257)	(5,091)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Proceeds from capital and share premium increases, gross amount	296,188	0	0	960,087	0	960,087	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Issue costs paid related to capital and share premium increases	(15,964)	0	0	0	(4,447)	(4,447)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Proceeds from capital and share premium increases from exercise of warrants	7,657	3,481	4,324	6,675	370,722	385,202	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Net cash provided (used) by Financing activities</b>	<b>287,876</b>	<b>2,233</b>	<b>3,428</b>	<b>965,072</b>	<b>365,018</b>	<b>1,335,751</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
Effect of exchange rate differences on cash, cash equivalents; and transfer to curr fina	10,089	4,968	(3,101)	30,514	(241,269)	(208,888)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Net increase (decrease) in Cash/Cash Equivalents</b>	<b>139,585</b>	<b>(67,895)</b>	<b>(74,978)</b>	<b>4,451,864</b>	<b>(3,738,171)</b>	<b>570,820</b>	<b>(166,704)</b>	<b>(180,379)</b>	<b>(197,962)</b>	<b>(6,422)</b>	<b>(551,467)</b>	<b>(354,089)</b>	<b>96,791</b>	<b>642,434</b>	<b>1,540,984</b>	<b>1,407,872</b>	<b>1,806,354</b>	<b>1,779,292</b>	<b>1,897,225</b>	<b>2,008,136</b>	<b>2,065,707</b>	<b>2,118,407</b>	
<b>Cash &amp; Cash Equivalents at Beginning of Period</b>	<b>1,151,211</b>	<b>1,290,796</b>	<b>1,222,901</b>	<b>1,147,923</b>	<b>5,599,787</b>	<b>1,290,796</b>	<b>1,861,616</b>	<b>1,894,912</b>	<b>1,514,534</b>	<b>1,316,571</b>	<b>1,861,616</b>	<b>1,310,149</b>	<b>956,060</b>	<b>1,042,851</b>	<b>1,685,285</b>	<b>3,226,269</b>	<b>4,634,141</b>	<b>6,440,496</b>	<b>8,219,787</b>	<b>10,117,013</b>	<b>12,125,148</b>	<b>14,190,852</b>	
<b>Cash &amp; Cash Equivalents at End of Period</b>	<b>€ 1,290,796</b>	<b>€ 1,222,901</b>	<b>€ 1,147,923</b>	<b>€ 5,599,787</b>	<b>€ 1,861,616</b>	<b>€ 1,861,616</b>	<b>€ 1,694,912</b>	<b>€ 1,514,534</b>	<b>€ 1,316,571</b>	<b>€ 1,310,149</b>	<b>€ 1,310,149</b>	<b>€ 956,060</b>	<b>€ 1,042,851</b>	<b>€ 1,685,285</b>	<b>€ 3,226,269</b>	<b>€ 4,634,141</b>	<b>€ 6,440,496</b>	<b>€ 8,219,787</b>	<b>€ 10,117,013</b>	<b>€ 12,125,148</b>	<b>€ 14,190,852</b>	<b>€ 16,309,261</b>	

Source: H.C. Wainwright &amp; Co. estimates.

## Balance Sheet

Balance sheet	2018A	1Q19A	2Q19A	3Q19A	4Q19A	2019A	1Q20E	2Q20E	3Q20E	4Q20E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	
(€ in thousands, except per share data)																							
<b>Assets</b>																							
<b>Current assets:</b>																							
Cash and cash equivalents	€ 1,290,796	€ 1,222,901	€ 1,147,923	€ 5,599,787	€ 1,861,616	€ 1,861,616	€ 1,694,912	€ 1,514,534	€ 1,316,571	€ 1,310,149	€ 1,310,149	€ 956,060	€ 1,042,851	€ 1,685,285	€ 3,226,269	€ 4,634,141	€ 6,440,496	€ 8,219,787	€ 10,117,013	€ 12,125,148	€ 14,190,855	€ 16,309,261	
Trade and other receivables	18,509	15,347	42,067	32,642	54,009	54,009	62,759	71,509	81,509	91,509	91,509	132,759	175,247	219,009	264,084	312,945	370,010	427,264	487,222	546,464	610,332	672,899	
Current R&D incentives receivables	11,203	11,645	11,644	9,746	21,949	21,949	30,699	39,449	49,449	59,449	59,449	100,699	143,187	186,949	232,024	280,785	337,350	395,204	455,162	516,404	578,272	640,639	
Current restricted cash	0	0	0	0	3,919,216	3,919,216	3,919,216	3,919,216	3,919,216	3,919,216	3,919,216	3,919,216	3,919,216	3,919,216	3,919,216	3,919,216	3,919,216	3,919,216	3,919,216	3,919,216	3,919,216	3,919,216	3,919,216
Other current assets	8,243	9,351	6,970	8,837	9,138	9,138	10,138	11,138	12,138	13,138	13,138	18,138	23,288	28,593	34,056	39,684	45,480	51,450	57,600	63,934	70,457	77,177	
<b>Total current assets</b>	<b>1,328,851</b>	<b>1,259,244</b>	<b>1,208,604</b>	<b>5,651,012</b>	<b>5,865,928</b>	<b>5,865,928</b>	<b>5,717,724</b>	<b>5,555,846</b>	<b>5,376,883</b>	<b>5,393,461</b>	<b>5,393,461</b>	<b>5,126,872</b>	<b>5,303,788</b>	<b>6,039,051</b>	<b>7,675,649</b>	<b>9,186,671</b>	<b>11,113,151</b>	<b>13,012,922</b>	<b>15,036,211</b>	<b>17,173,166</b>	<b>19,369,132</b>	<b>21,616,992</b>	
Intangible assets	3,632	6,497	7,191	23,492	24,927	24,927	25,377	25,827	26,277	26,727	26,727	28,617	30,602	32,685	34,873	37,170	39,583	42,115	44,775	47,567	50,499	53,578	
Property, plant and equipment, net	23,137	49,542	51,180	61,883	66,052	66,052	68,552	71,052	73,552	76,052	76,052	85,652	97,052	110,474	126,164	144,396	165,472	189,728	217,534	249,304	285,491	326,601	
Deferred tax assets	2,514	2,511	2,516	19,406	4,205	4,205	4,205	4,205	4,205	4,205	4,205	4,205	4,205	4,205	4,205	4,205	4,205	4,205	4,205	4,205	4,205	4,205	
Non-current R&D incentives receivables	73,443	76,029	82,644	89,965	93,407	93,407	93,407	93,407	93,407	93,407	93,407	93,407	93,407	93,407	93,407	93,407	93,407	93,407	93,407	93,407	93,407	93,407	
Other non-current assets	7,919	6,377	5,713	5,994	14,090	14,090	14,090	14,090	14,090	14,090	14,090	14,090	14,090	14,090	14,090	14,090	14,090	14,090	14,090	14,090	14,090	14,090	
<b>Total assets</b>	<b>1,439,496</b>	<b>1,400,200</b>	<b>1,357,848</b>	<b>5,851,752</b>	<b>6,068,609</b>	<b>6,068,609</b>	<b>5,923,355</b>	<b>5,764,427</b>	<b>5,590,414</b>	<b>5,607,942</b>	<b>5,607,942</b>	<b>5,352,843</b>	<b>5,543,144</b>	<b>6,293,912</b>	<b>7,948,388</b>	<b>9,479,939</b>	<b>11,429,908</b>	<b>13,356,467</b>	<b>15,410,223</b>	<b>17,581,739</b>	<b>19,816,825</b>	<b>22,110,873</b>	
<b>Liabilities and stockholders' equity</b>																							
<b>Current liabilities:</b>																							
Finance lease liabilities	0	4,580	5,141	5,251	5,826	5,826	5,826	5,826	5,826	5,826	5,826	5,826	5,826	5,826	5,826	5,826	5,826	5,826	5,826	5,826	5,826	5,826	
Trade and other payables	68,928	69,880	86,216	156,254	143,434	143,434	165,934	189,434	213,934	239,934	239,934	341,259	447,650	559,361	676,657	799,819	929,138	1,064,923	1,207,497	1,357,201	1,514,389	1,679,437	
Current tax payable	1,175	1,168	1,031	1,032	2,037	2,037	2,037	2,037	2,037	2,037	2,037	2,037	2,037	2,037	2,037	2,037	2,037	2,037	2,037	2,037	2,037	2,037	
Current financial instruments	0	0	0	0	6,198	6,198	6,198	6,198	6,198	6,198	6,198	6,198	6,198	6,198	6,198	6,198	6,198	6,198	6,198	6,198	6,198	6,198	
Current deferred income	149,801	123,822	96,325	468,764	414,298	414,298	414,298	414,298	414,298	414,298	414,298	414,298	414,298	414,298	414,298	414,298	414,298	414,298	414,298	414,298	414,298	414,298	
<b>Total current liabilities</b>	<b>219,904</b>	<b>199,450</b>	<b>188,713</b>	<b>631,301</b>	<b>571,793</b>	<b>571,793</b>	<b>594,293</b>	<b>617,793</b>	<b>642,293</b>	<b>668,293</b>	<b>668,293</b>	<b>769,618</b>	<b>876,009</b>	<b>987,720</b>	<b>1,105,016</b>	<b>1,228,178</b>	<b>1,357,497</b>	<b>1,493,282</b>	<b>1,635,856</b>	<b>1,785,560</b>	<b>1,942,748</b>	<b>2,107,796</b>	
Non-current liabilities	3,764	3,851	3,939	4,026	8,263	8,263	8,263	8,263	8,263	8,263	8,263	8,263	8,263	8,263	8,263	8,263	8,263	8,263	8,263	8,263	8,263	8,263	
Long-term leasing debts; and Other non-current liabilities	1,579	21,144	21,829	22,131	26,547	26,547	27,197	27,847	28,497	29,147	29,147	32,007	35,153	38,614	42,420	46,608	51,214	56,280	61,854	67,984	74,728	82,146	
Non-current deferred income	0	0	0	2,659,013	2,586,348	2,586,348	2,486,348	2,386,348	2,286,348	2,186,348	2,186,348	1,786,348	1,386,348	986,348	811,348	636,348	456,348	336,348	186,348	86,348	11,348	(38,652)	
<b>Total liabilities</b>	<b>225,247</b>	<b>224,445</b>	<b>214,481</b>	<b>3,316,471</b>	<b>3,192,951</b>	<b>3,192,951</b>	<b>3,116,101</b>	<b>3,040,251</b>	<b>2,965,401</b>	<b>2,892,051</b>	<b>2,892,051</b>	<b>2,596,236</b>	<b>2,305,773</b>	<b>2,020,945</b>	<b>1,967,048</b>	<b>1,919,396</b>	<b>1,903,321</b>	<b>1,894,173</b>	<b>1,892,321</b>	<b>1,948,155</b>	<b>2,037,087</b>	<b>2,159,553</b>	
<b>Shareholders' equity</b>																							
Share capital	236,540	237,348	238,475	272,605	287,282	287,282	287,282	287,282	287,282	287,282	287,282	287,282	287,282	287,282	287,282	287,282	287,282	287,282	287,282	287,282	287,282	287,282	
Share premium account	1,277,780	1,280,452	1,283,650	2,268,585	2,703,583	2,703,583	2,716,083	2,729,083	2,742,583	2,756,583	2,756,583	2,814,883	2,879,013	2,949,556	3,027,153	3,112,510	3,206,403	3,309,585	3,423,295	3,546,297	3,685,735	3,836,950	
Other reserves	(735)	(735)	(735)	(735)	(4,842)	(4,842)	(4,842)	(4,842)	(4,842)	(4,842)	(4,842)	(4,842)	(4,842)	(4,842)	(4,842)	(4,842)	(4,842)	(4,842)	(4,842)	(4,842)	(4,842)	(4,842)	
Translation differences	(1,567)	(1,290)	(1,505)	(1,267)	(1,142)	(1,142)	(1,142)	(1,142)	(1,142)	(1,142)	(1,142)	(1,142)	(1,142)	(1,142)	(1,142)	(1,142)	(1,142)	(1,142)	(1,142)	(1,142)	(1,142)	(1,142)	
Accumulated losses	(297,779)	(340,020)	(376,518)	(3,907)	(109,223)	(109,223)	(190,127)	(286,205)	(398,668)	(521,990)	(632,990)	(839,574)	(1,142,114)	(1,542,114)	(2,027,889)	(2,596,735)	(3,356,885)	(4,317,311)	(5,484,308)	(6,859,014)	(8,444,705)	(10,250,722)	
<b>Total stockholders' equity</b>	<b>1,214,249</b>	<b>1,175,755</b>	<b>1,143,367</b>	<b>2,535,281</b>	<b>2,875,658</b>	<b>2,875,658</b>	<b>2,807,254</b>	<b>2,724,176</b>	<b>2,625,013</b>	<b>2,715,991</b>	<b>2,715,991</b>	<b>2,756,607</b>	<b>3,237,371</b>	<b>4,272,968</b>	<b>5,981,340</b>	<b>7,560,543</b>	<b>9,526,586</b>	<b>11,462,294</b>	<b>13,517,902</b>	<b>15,633,584</b>	<b>17,779,738</b>	<b>19,951,320</b>	
<b>Total liabilities and stockholders' equity</b>	<b>€ 1,439,496</b>	<b>€ 1,400,200</b>	<b>€ 1,357,848</b>	<b>€ 5,851,752</b>	<b>€ 6,068,609</b>	<b>€ 6,068,609</b>	<b>€ 5,923,355</b>	<b>€ 5,764,427</b>	<b>€ 5,590,414</b>	<b>€ 5,607,942</b>	<b>€ 5,607,942</b>	<b>€ 5,352,843</b>	<b>€ 5,543,144</b>	<b>€ 6,293,912</b>	<b>€ 7,948,388</b>	<b>€ 9,479,939</b>	<b>€ 11,429,908</b>	<b>€ 13,356,467</b>	<b>€ 15,410,223</b>	<b>€ 17,581,739</b>	<b>€ 19,816,825</b>	<b>€ 22,110,873</b>	

Source: H.C. Wainwright &amp; Co. estimates.

## Cash Outlook, Ratio Analysis, and Enterprise Value

CASH QUICK LOOK :	2018A	1Q19A	2Q19A	3Q19A	4Q19A	2019A	1Q20E	2Q20E	3Q20E	4Q20E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E
Cash burn in period (cash from operations)	€ 362,654	€ 94,161	€ 111,957	€ 153,323	€ 166,157	€ 525,598	€ 174,000	€ 189,175	€ 205,759	€ 199,705	€ 768,638	€ 845,502	€ 930,053	€ 1,023,058	€ 1,074,211	€ 1,106,437	€ 1,139,630	€ 1,173,819	€ 1,197,295	€ 1,211,660	€ 1,226,216	€ 1,240,966
Total cash and cash equivalents	€ 1,290,796	€ 1,222,901	€ 1,147,923	€ 5,599,787	€ 5,780,832	€ 5,780,832	€ 5,614,128	€ 5,433,750	€ 5,235,787	€ 5,229,365	€ 4,875,276	€ 4,962,067	€ 4,962,067	€ 5,604,501	€ 7,145,485	€ 8,553,357	€ 10,359,712	€ 12,139,003	€ 14,036,229	€ 16,044,364	€ 18,110,071	€ 20,228,477
Periods of cash remaining	3.5 yrs	13.0 qrs	10.5 qrs	36.5 qrs	35.0 qrs	11.0 yrs	32.5 qrs	28.5 qrs	25.5 qrs	26.0 qrs	7.0 yrs	6.0 yrs	6.5 yrs	5.5 yrs	6.5 yrs	7.5 yrs	9.0 yrs	10.5 yrs	11.5 yrs	13.0 yrs	15.0 yrs	16.5 yrs
Ratio analysis	2018A	1Q19A	2Q19A	3Q19A	4Q19A	2019A	1Q20E	2Q20E	3Q20E	4Q20E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E
EBIT	(44,809)	(53,242)	(44,367)	490,631	(22,730)	370,292	(70,904)	(86,079)	(102,662)	86,878	(172,767)	25,216	461,573	1,012,241	1,680,322	1,919,331	2,394,812	2,347,888	2,487,721	2,551,624	2,577,254	2,595,175
EBITDA	(40,618)	(50,484)	(41,472)	493,815	(19,480)	382,379	(67,404)	(82,579)	(99,162)	90,378	(158,767)	42,016	479,213	1,030,763	1,699,770	1,939,751	2,416,254	2,370,402	2,511,360	2,576,445	2,603,316	2,622,541
EBITDA % of Sales	-13%	-123%	-61%	77%	-14%	43%	-6%	-80%	-96%	32%	-27%	5%	32%	47%	57%	59%	62%	61%	62%	62%	62%	62%
EV/EBITDA multiple	(72x)	(88x)	(122x)	6x	(564x)	29x	(205x)	(170x)	(144x)	158x	(90x)	349x	31x	14x	7x	6x	4x	3x	2x	1x	1x	(0x)
Gross Profit Margin	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	96%	93%	93%	92%	92%	91%	91%	91%	91%	91%	91%
OpMargin	-14%	-130%	-66%	76%	-16%	41%	-6%	-83%	-100%	30%	-29%	3%	31%	46%	56%	58%	62%	61%	61%	62%	62%	61%
Net Operating Profit After Tax (NOPAT)	(44,858)	(53,310)	(44,428)	507,459	(39,643)	370,078	(70,904)	(86,079)	(102,662)	86,878	(172,767)	25,216	461,573	1,012,241	1,680,322	1,545,869	1,926,775	1,889,782	2,002,221	2,053,946	2,075,082	2,090,084
Free Cash Flow (FCF)	(152,858)	(73,801)	(72,972)	3,458,209	(125,204)	3,186,232	(165,704)	(179,379)	(196,962)	(5,422)	(547,467)	(349,889)	91,201	647,064	1,545,846	1,412,977	1,811,715	1,784,920	1,903,135	2,014,341	2,072,222	2,125,248
Book per share	€ 23.25	€ 21.53	€ 20.86	€ 40.92	€ 46.32	€ 47.83	€ 45.13	€ 43.71	€ 42.03	€ 43.40	€ 43.44	€ 44.01	€ 51.58	€ 67.94	€ 94.92	€ 119.74	€ 150.58	€ 180.81	€ 212.81	€ 245.63	€ 278.79	€ 312.21
Net cash per share	€ 24.72	€ 22.39	€ 20.94	€ 90.39	€ 29.99	€ 30.97	€ 27.25	€ 24.30	€ 21.08	€ 20.94	€ 20.96	€ 15.26	€ 16.62	€ 26.80	€ 51.20	€ 73.39	€ 101.80	€ 129.66	€ 159.27	€ 190.50	€ 222.51	€ 255.22
Return on assets (ROA)	-2%	-3%	-3%	6%	-2%	2%	-1%	-2%	-2%	1%	-4%	0%	9%	15%	21%	16%	16%	14%	13%	11%	11%	9%
Return on equity (ROE)	-2%	-4%	-4%	14%	-4%	5%	-3%	-4%	-4%	3%	-8%	-1%	13%	23%	27%	20%	20%	16%	14%	13%	11%	10%
Current ratio	6.04	6.31	6.40	8.95	10.26	10.26	9.62	8.99	8.37	8.07	8.07	6.66	6.05	6.11	6.95	7.48	8.19	8.71	9.19	9.62	9.97	10.26
Enterprise Value (MC + Total Debt - Cash)	2,916,600	4,451,576	5,071,758	2,920,723	10,977,923	10,977,923	13,824,460	14,035,878	14,264,941	14,302,526	14,286,976	14,672,259	14,616,724	14,005,610	12,496,007	11,119,580	9,344,733	7,597,012	5,731,420	3,754,981	1,721,035	(365,548)
Market Cap (MC)	4,207,396	5,674,477	6,219,681	8,520,510	12,839,539	12,839,539	15,519,373	15,550,411	15,581,512	15,612,675	15,597,125	15,628,319	15,659,576	15,690,895	15,722,277	15,753,721	15,785,229	15,816,799	15,848,433	15,880,130	15,911,890	15,943,714
Current Share price	€ 249.50																					

Source: H.C. Wainwright &amp; Co. estimates.

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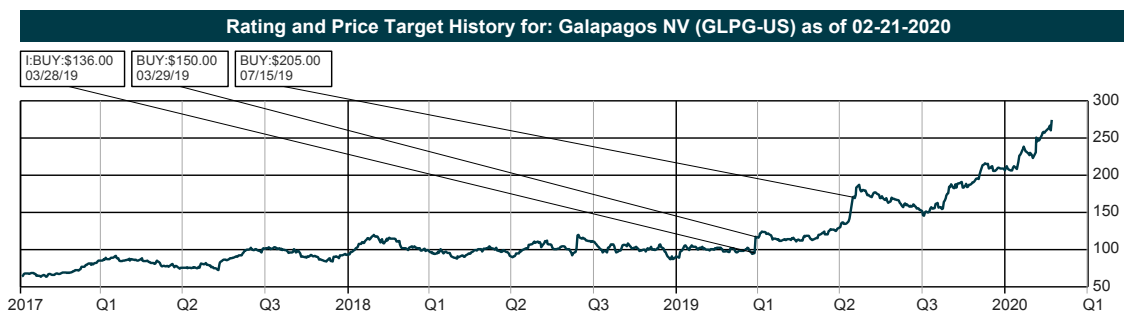
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Ratings	Count	Percent	IB Service/Past 12 Months	
			Count	Percent
Buy	380	91.57%	135	35.53%
Neutral	33	7.95%	6	18.18%
Sell	0	0.00%	0	0.00%
Under Review	2	0.48%	2	100.00%

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