EDISON

Quantum Genomics

NEW-HOPE trial recruiting rapidly

Financial results

Pharma & biotech

Quantum Genomics recently announced its 2017 results and updated the status of its NEW-HOPE study in 250 hypertensive overweight patients across 25 major hospitals in the US. According to the company, the study's recruitment has been very rapid and exceeded initial projections. Final data are expected in H119. In the near term, the company is expected to announce a three-year strategic plan on 19 April.

Year end	Revenue (€m)	PBT* (€m)	EPS* (€)	DPS (€)	P/E (x)	Yield (%)
12/16	0.0	(6.2)	(0.60)	0.0	N/A	N/A
12/17	0.0	(10.3)	(0.93)	0.0	N/A	N/A
12/18e	0.0	(11.4)	(0.73)	0.0	N/A	N/A
12/19e	0.0	(16.2)	(1.00)	0.0	N/A	N/A

Note: *PBT and EPS are normalised, excluding amortisation of acquired intangibles, exceptional items and share-based payments.

NEW-HOPE progress

In November, Quantum Genomics announced it had recruited the first patients into the NEW-HOPE trial in hypertensive overweight patients across 25 major US hospitals with a primary end point of change from baseline in office systolic blood pressure (SBP) at week eight. As of the end of March, recruitment is going very well, topping internal projections. Final data are expected in H119.

Trial enriched with patients most likely to respond

One of the core premises of QGC001 is that it targets the brain renin-angiotensin system, which is specifically implicated in certain forms of resistant primary hypertension. One such class is the so-called low renin subtype, which is present in 25% of American hypertensive patients and 52% of hypertensive African Americans. NEW-HOPE is enriched with those patients who are expected to respond and have the highest unmet medical need.

QGC001 has potential in heart failure

Hypertension is significantly comorbid with heart failure, and virtually every drug used to treat the former is also approved for the latter. Quantum Genomics has an ongoing study in 75 patients, although recruitment has been slow. The trial protocol was amended in January 2018 to expand the patient profile, including raising the age and body mass index (BMI) limits, to accelerate recruitment. We had previously expected data in H118 but now expect them in the second half of the year.

Valuation: €201m or €18.31 per share

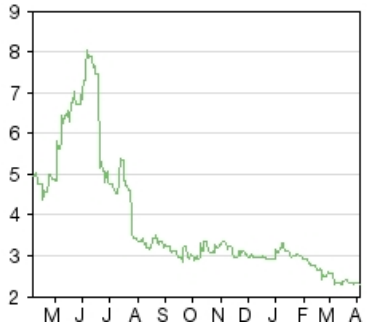
We have adjusted our valuation of Quantum Genomics to €201m or €18.31 per share, from €195m or €17.79 per share. The valuation increase is due to advancing our NPVs, which was partially offset by a lower cash balance. In March, the company announced an equity line of credit with Kepler Cheuvreux, which could raise €24m over three years in four tranches. The initial tranche of €6m does not require shareholder approval, but the final three will be subject to a vote at the next meeting of shareholders later this year.

6 April 2018

Price	**€2.31**
Market cap	**€25m**

Net cash (€m) at 31 December 2017	11.1
Shares in issue	11.0m
Free float	84.3%
Code	ALQGC
Primary exchange	Euronext Paris
Secondary exchange	OTCQX

Share price performance



%	1m	3m	12m
Abs	(10.3)	(25.6)	(55.2)
Rel (local)	(10.7)	(23.1)	(56.2)
52-week high/low		€8.1	€2.3

Business description

Quantum Genomics is a biopharmaceutical company developing QGC001, a brain aminopeptidase A inhibitor for the treatment of hypertension and heart failure. Its mechanism is implicated in the 25% of patients resistant to treatment.

Next events

Three-year strategic plan announcement	19 April 2018
Heart failure Phase IIa data	H218
NEW-HOPE data	H119

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NEW-HOPE doing well

Quantum Genomics has announced that the NEW-HOPE trial is enrolling very rapidly and has exceeded its projections. As a reminder, the NEW-HOPE trial is on 250 hypertensive overweight (BMI 25-45kg/m^2) patients, with a primary end point of change from baseline in office SBP at week eight. SBP at screening will have to be 145-170mmHg if previously untreated, or 130-150mmHg if treated. Following a two-week run-in period in which there would be no treatment, SBP would need to be 145-170mmHg. Patients will start off on 250mg twice a day (BID) for two weeks and then either continue at that dose or increase to 500mg BID for another two weeks. Following that, patients would either be on 250mg BID, 500mg BID or 500mg BID with 25mg of hydrochlorothiazide (HCT), an often-used diuretic, added in.

The company expects that at least 50% of patients will be self-identified as African American or Hispanic. African Americans have a higher prevalence of hypertension compared to other groups, but also, along with Hispanics, are less likely to have their hypertension under control compared to their white counterparts.

These patients are also more likely to have low renin primary hypertension (52% in African Americans compared to 25% in the broader population), which is characterised by resistance to ACE inhibitors, ARBs and beta-blockers, commonly used classes of hypertension medications.[1] The targeting of the renin-angiotensin by QGC001 could be especially helpful in these patients.

QGC001 in heart failure

Quantum Genomics is also investigating QGC001 for the treatment of heart failure. Hypertension has an exceptionally high comorbidity with heart failure and virtually every drug approved for the former is also approved for the latter. However, the heart failure (HF) development pathway has significant advantages over hypertension. First, HF drugs command significantly higher prices at approximately $4,000-5,000 per year, compared to approximately $1,000 for the highly genericised hypertension market. Additionally, clinical trials for HF require significantly fewer patients.

The company initiated its heart failure programme in 2016 with a 75-person Phase II clinical trial in Europe. The trial is enrolling patients with diagnosed worsening heart failure and the primary end points for the study are a decrease in N-terminal pro b-type natriuretic peptide, a key marker of heart dysfunction, as well as lower blood pressure. Enrolment in the trial has been slow and the company made a number of inclusion/exclusion criteria changes in January (including raising the age and BMI requirements) to accelerate enrolment. We had previously expected data in H118 but now expect them in the second half of the year.

Valuation

We have adjusted our valuation of Quantum Genomics to €201m or €18.31 per share, from €195m or €17.79 per share. The valuation increase is due to advancing our NPVs, which was partially offset by a lower cash balance relative to our previous valuation. We expect to update our valuation with the release of data from the Phase IIa heart failure trial in H218.

[1] Bühler FR, et al. (1984) Renin profiling to select antihypertensive baseline drugs. Renin inhibitors for high-renin and calcium entry blockers for low-renin patients. *Am. J. Med.* 77, 36.

Exhibit 1: Quantum Genomics valuation table

Product	Main indication	Local	Status	Probability of success	Launch year	Peak sales ($m)	Patent protection	rNPV (€m)
QGC001	Hypertension	US	Phase II	15%	2023	$1,110	2031	€118.27
QGC001	Hypertension	Europe	Phase II	15%	2023	$959	2031	€100.33
QGC001	Development costs							(€124.76)
QGC101	Heart failure	US	Phase IIa	15%	2023	$574	2031	€75.27
QGC101	Heart failure	Europe	Phase IIa	15%	2023	$687	2031	€89.31
QGC101	Development costs							(€68.31)
Total								€190.10
Cash and cash equivalents (31 December 2017) (€m)								€11.09
Total firm value (€m)								€201.19
Total shares (m)								10.99
Value per basic share (€)								€18.31

Source: Edison Investment Research

Financials

Quantum Genomics reported an operational loss of €10.3m in 2017 compared to €6.2m in 2016, with the increase primarily driven by the advancement of the clinical programmes in both hypertension and heart failure. We are maintaining our 2018 estimates for the most part and have introduced 2019 numbers. The company ended 2017 with €11.1m in cash and investments. In March, the company announced an equity line of credit with Kepler Cheuvreux, which could raise €24m over three years in four tranches. The initial tranche of €6m does not require shareholder approval but the final three will be subject to a vote at the next meeting of shareholders later this year (in 2017, the shareholder meeting occurred in June). The company has stated it believes that if the equity line is approved by shareholders that it would be funded through the end of 2020. This will be somewhat dependent on whether additional trials are conducted by the company or a partner. As late-stage cardiovascular trials are extremely expensive to conduct, we expect further development to be financed via a partnership.

Exhibit 2: Financial summary

€000s	2015	2016	2017	2018e	2019e
Year end 31 December	PCG	PCG	PCG	PCG	PCG
PROFIT & LOSS					
Revenue	144	0	0	0	0
Cost of Sales	(0)	0	0	0	0
Gross Profit	144	0	0	0	0
EBITDA	(4,310)	(6,216)	(10,292)	(10,948)	(14,792)
Operating Profit (before amort. and except.)	(4,310)	(6,216)	(10,292)	(10,948)	(14,792)
Intangible Amortisation	0	0	0	0	0
Other	0	1	0	0	0
Exceptionals	0	0	0	0	0
Operating Profit	(4,310)	(6,216)	(10,292)	(10,948)	(14,792)
Net Interest	(222)	0	0	(481)	(1,440)
Other	54	18	(176)	0	0
Profit Before Tax (norm)	(4,503)	(6,216)	(10,292)	(11,429)	(16,232)
Profit Before Tax (FRS 3)	(4,479)	(6,198)	(10,468)	(11,429)	(16,232)
Tax	714	958	1,150	1,486	2,110
Deferred tax	0	0	0	0	0
Profit After Tax (norm)	(3,789)	(5,258)	(9,142)	(9,943)	(14,122)
Profit After Tax (FRS 3)	(3,765)	(5,240)	(9,318)	(9,943)	(14,122)
Average Number of Shares Outstanding (m)	6.9	8.7	9.9	13.6	14.1
EPS - normalised (€)	(0.55)	(0.60)	(0.93)	(0.73)	(1.00)
EPS - FRS 3 (€)	(0.54)	(0.60)	(0.95)	(0.73)	(1.00)
Dividend per share (c)	0.0	0.0	0.0	0.0	0.0
BALANCE SHEET					
Fixed Assets	520	701	439	434	431
Intangible Assets	108	142	91	91	91
Tangible Assets	54	60	52	48	44
Other	358	500	296	296	296
Current Assets	10,020	13,809	13,478	15,540	13,422
Stocks	14	1,011	189	189	189
Debtors	1,354	1,599	2,197	2,197	2,197
Cash	8,652	11,198	11,089	13,151	11,033
Other	0	1	3	3	3
Current Liabilities	(2,128)	(3,481)	(4,572)	(4,572)	(4,572)
Creditors	(2,128)	(3,480)	(4,571)	(4,571)	(4,571)
Short term borrowings	(1)	(1)	(1)	(1)	(1)
Long Term Liabilities	(390)	(506)	(474)	(6,474)	(18,474)
Long term borrowings	(78)	(18)	(19)	(6,019)*	(18,019)*
Other long term liabilities	(312)	(488)	(454)	(454)	(454)
Net Assets	8,022	10,524	8,871	4,929	(9,193)
CASH FLOW					
Operating Cash Flow	(3,142)	(5,531)	(7,977)	(9,931)	(14,110)
Net Interest	0	0	0	0	0
Tax	0	0	0	0	0
Capex	(72)	(66)	32	(8)	(8)
Acquisitions/disposals	0	0	0	0	0
Financing	12,150	7,744	7,733	6,000	0
Dividends	0	0	0	0	0
Other	(296)	399	104	0	0
Net Cash Flow	8,640	2,546	(108)	(3,939)	(14,118)
Opening net debt/(cash)	(5)	(8,573)	(11,179)	(11,069)	(7,131)
HP finance leases initiated	0	0	0	0	0
Exchange rate movements	0	0	0	0	0
Other	-72	60	-2	0	0
Closing net debt/(cash)	(8,573)	(11,179)	(11,069)	(7,130)	6,988

Source: Quantum Genomics accounts, Edison Investment Research. Note: *We assume €24m additional financing, the amount of the equity credit line, €18m of which is shown as debt for the purpose of our model.

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