EDISON

Quantum Genomics

Development update

NEW-HOPE enrolled much faster than expected

Pharma & biotech

Quantum Genomics announced that it has enrolled the NEW-HOPE trial faster than expected, with data to come around mid-November (previously around the end of Q119). In our opinion, the faster enrolment rate is positive as this is an open-label trial and hence we suspect that results seen by physicians to date are encouraging. As a reminder, NEW-HOPE is a study of firibastat in 256 hypertensive overweight patients across 25 major US hospitals, with a primary endpoint of change from baseline in office systolic blood pressure (SBP) at week eight.

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.

Hypertension is a large, pharma-friendly market

A large number of people with hypertension are resistant to treatment with ARBs and ACE inhibitors. One class is so-called low-renin primary hypertension, which is present in 25% of the 70 million hypertension patients in the US, but is endemic among hypertensive African Americans (52%). The brain angiotensin pathway is a central mechanism in this disorder.

Patient demographics are favourable

Data from the company's 34-patient pilot study of firibastat in hypertension patients indicated that patients with the highest blood pressure when entering the study had the largest response. In that study, the baseline systolic blood pressure (mmHg) for patients was 148, whereas in NEW-HOPE the baseline is 154, indicating a less well-controlled patient population.

Phase IIb heart failure trial to start by end of year

The QUORUM study will enrol 300 subjects from 40 centres in the US and Europe within 24 hours of suffering acute myocardial infarction (AMI), also known as a heart attack. The primary endpoint will be the change from baseline in left ventricular ejection fraction (LVEF) after a three-month treatment.

Valuation: €281m or €23.46 per share

We have increased our valuation of Quantum Genomics from €207m or €18.45 per share to €281m or €23.46 per share, mainly due to an increase in the probability of success for firibastat for hypertension from 15% to 20% because of the much faster than expected pace of recruitment. This valuation increase was mitigated in part by a slightly larger number of shares outstanding. Otherwise, our financial forecasts are unchanged.

10 September 2018

Price	**€1.76**
Market cap	**€21m**
Net cash (€m) at 31 December 2017	11.1
Shares in issue	12.0m
Free float	80.1%
Code	ALQGC
Primary exchange	Euronext Paris
Secondary exchange	OTCQX

Share price performance

%	1m	3m	12m
Abs	(1.7)	(16.6)	(42.9)
Rel (local)	2.7	(13.9)	(44.6)
52-week high/low		€3.4	€1.7

Business description

Quantum Genomics is a biopharmaceutical company developing firibastat, 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. The Phase IIb in hypertension is expected to read out in mid-November and the Phase IIb in heart failure should start by the end of 2018.

Next events

NEW-HOPE results	Mid-November 2018
Initiation of Phase IIb heart failure study	Q418

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Edison profile page

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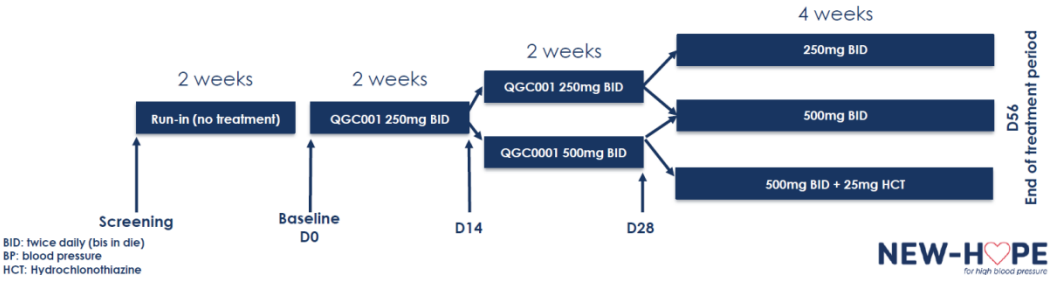
NEW-HOPE enrolment completion

The company has announced that the NEW-HOPE trial has completed enrolment faster than expected, enrolling 256 patients in just 10 months, with data coming around mid-November. As a reminder, NEW-HOPE focused enrolment on hypertensive overweight (BMI 25-45kg/m^2) patients, with a primary endpoint of change from baseline in office SBP at week eight. Following a two-week, run-in period in which there would be no treatment, SBP had to be 145-170mmHg. Patients start 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 go on 250mg BID, 500mg BID or 500mg BID with 25mg of hydrochlorothiazide, an often-used diuretic, added in.

Exhibit 1: NEW-HOPE study design



Source: Quantum Genomics

The baseline patient demographics appear to be favourable (see Exhibit 2). In the company's small, 34-patient hypertension study, those with the highest baseline blood pressure responded best to the drug. In that study, the baseline SBP (mmHg) for patients was 148, whereas in NEW-HOPE the baseline is 154, indicating a less well-controlled patient population.

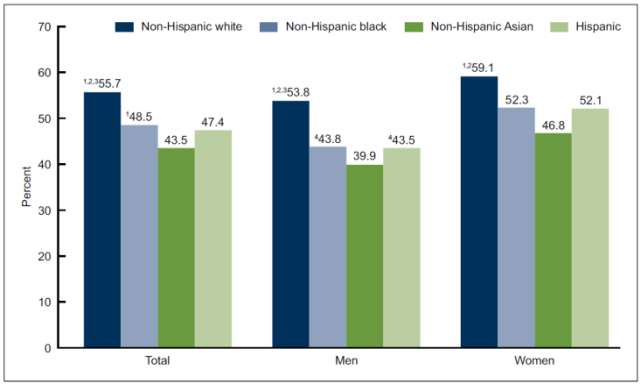
Exhibit 2: Baseline demographics differences between Phase IIa and NEW-HOPE

	Phase IIa pilot study	NEW-HOPE
Office systolic blood pressure (mmHg)	148	154
Body mass index (kg/m^2)	27	33
% minorities	12	54

Source: Quantum Genomics

Importantly, NEW-HOPE also had a much higher percentage of minorities, 54% versus 12% in the pilot study. 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. The demographics of this study also indicate a much more obese patient population.

Exhibit 3: Percentage of adults with hypertension who have it controlled, by race and sex



Source: Yoon S et al., NCHS Data Brief. 2015 Nov;(220):1-8

Valuation

We have increased our valuation of Quantum Genomics from €207m or €18.45 per share to €281m or €23.46 per share, mainly due to an increase in the probability of success for firibastat for hypertension from 15% to 20% because of the much faster than expected pace of recruitment. In our opinion, the faster recruitment is a sign that physicians were happy with the results they saw (the trial is open label so physicians are not blinded to the results), otherwise they would not have enrolled additional patients at such a pace. This valuation increase was mitigated in part by a slightly larger number of shares outstanding.

Exhibit 4: Quantum Genomics valuation table

Product	Main Indication	Local	Status	Prob. of success	Launch year	Peak sales ($m)	Patent protection	rNPV (m)
Firibastat (QGC001)	Hypertension	US	Phase II	20%	2023	$1,110	2031	€162.13
Firibastat (QGC001)	Hypertension	Europe	Phase II	20%	2023	$959	2031	€137.54
Firibastat (QGC001)	Development costs							(€128.49)
Firibastat (QGC001)	Heart Failure	US	Phase IIb	15%	2023	$574	2031	€77.52
Firibastat (QGC001)	Heart Failure	Europe	Phase IIb	15%	2023	$687	2031	€91.98
Firibastat (QGC001)	Development costs							(€70.28)
Total								€270.40
Cash and cash equivalents (31 December 2017) (€m)								€11.09
Total firm value (€m)								€281.49
Total shares (31 August 2018) (m)								12.00
Value per basic share (€m)								€23.46

Source: Edison Investment Research

Financials

Quantum ended 2017 with €11.1m in cash and investments (H118 results are expected on 4 October). In March, it announced an equity line of credit with Kepler Cheuvreux, which could raise €24m over three years in four tranches. The company has stated that it believes the equity line would fund it 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 (such as Phase III trials) to be financed via a partnership.

Exhibit 5: Financial summary

€000s	2016	2017	2018e	2019e
Year end 31 December	PCG	PCG	PCG	PCG
PROFIT & LOSS				
Revenue	0	0	0	0
Cost of Sales	0	0	0	0
Gross Profit	0	0	0	0
EBITDA	(6,216)	(10,292)	(10,948)	(14,792)
Operating Profit (before amort. and except.)	(6,216)	(10,292)	(10,948)	(14,792)
Intangible Amortisation	0	0	0	0
Other	1	0	0	0
Exceptionals	0	0	0	0
Operating Profit	(6,216)	(10,292)	(10,948)	(14,792)
Net Interest	0	0	(481)	(1,440)
Other	18	(176)	0	0
Profit Before Tax (norm)	(6,216)	(10,292)	(11,429)	(16,232)
Profit Before Tax (FRS 3)	(6,198)	(10,468)	(11,429)	(16,232)
Tax	958	1,150	1,486	2,110
Deferred tax	0	0	0	0
Profit After Tax (norm)	(5,258)	(9,142)	(9,943)	(14,122)
Profit After Tax (FRS 3)	(5,240)	(9,318)	(9,943)	(14,122)
Average Number of Shares Outstanding (m)	8.7	9.9	13.6	14.1
EPS - normalised (c)	(59.79)	(92.81)	(73.20)	(99.97)
EPS - FRS 3 (€)	(0.60)	(0.95)	(0.73)	(1.00)
Dividend per share (c)	0.0	0.0	0.0	0.0
BALANCE SHEET				
Fixed Assets	701	439	434	431
Intangible Assets	142	91	91	91
Tangible Assets	60	52	48	44
Other	500	296	296	296
Current Assets	13,809	13,478	15,540	13,422
Stocks	1,011	189	189	189
Debtors	1,599	2,197	2,197	2,197
Cash	11,198	11,089	13,151	11,033
Other	1	3	3	3
Current Liabilities	(3,481)	(4,572)	(4,572)	(4,572)
Creditors	(3,480)	(4,571)	(4,571)	(4,571)
Short term borrowings	(1)	(1)	(1)	(1)
Long Term Liabilities	(506)	(474)	(6,474)	(18,474)
Long term borrowings	(18)	(19)	(6,019)	(18,019)
Other long term liabilities	(488)	(454)	(454)	(454)
Net Assets	10,524	8,871	4,929	(9,193)
CASH FLOW				
Operating Cash Flow	(5,531)	(7,977)	(9,931)	(14,110)
Net Interest	0	0	0	0
Tax	0	0	0	0
Capex	(66)	32	(8)	(8)
Acquisitions/disposals	0	0	0	0
Financing	7,744	7,733	6,000	0
Dividends	0	0	0	0
Other	399	104	0	0
Net Cash Flow	2,546	(108)	(3,939)	(14,118)
Opening net debt/(cash)	(8,573)	(11,179)	(11,069)	(7,131)
HP finance leases initiated	0	0	0	0
Exchange rate movements	0	0	0	0
Other	60	-2	0	0
Closing net debt/(cash)	(11,179)	(11,069)	(7,131)	6,988

Source: Edison Investment Research, company reports

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