EDISON

Actinogen Medical

H123 update

Getting ready for the next Alzheimer's study

Pharma and biotech

Actinogen is on track to start US recruitment in Q2 CY23 for the six-month, placebo-controlled Phase IIb portion of the XanaMIA study. The study portion is designed to assess Xanamem in a population of patients with mild cognitive impairment (CI) and/or mild Alzheimer's disease (AD), who at baseline will have been confirmed as biomarker-positive for progressive AD. We believe market participants will be keen to observe whether this study portion will confirm the positive efficacy findings shown in a subset biomarker analysis from the earlier XanADu study. We expect the next material clinical data milestone for the company over the next 12 months will be the XanaCIDD study results, due in late CY23 or early CY24. This study aims to demonstrate whether Xanamem can show efficacy signals in patients with CI associated with major depressive disorder (MDD). After rolling our model forward and adjusting for forex, we now obtain an rNPV valuation of A$702m (vs A$651m previously).

Year end	Revenue (A$m)	PBT* (A$m)	EPS* (A$)	DPS (A$)	P/E (x)	Yield (%)
06/21	2.0	(3.3)	(0.002)	0.0	N/A	N/A
06/22	3.6	(7.9)	(0.005)	0.0	N/A	N/A
06/23e	4.0	(9.4)	(0.005)	0.0	N/A	N/A
06/24e	4.1	(37.6)	(0.021)	0.0	N/A	N/A

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

XanaMIA Part IIb could lead to value uplift

We anticipate top-line results from the Phase IIb portion of XanaMIA in late CY24 or in H1 CY25. If positive, we believe the results may lead to material out-licensing or value realisation opportunities given the significant unmet need in AD, the drug's favourable safety profile demonstrated to date and its convenient oral dosing form. Considering that AD pivotal trials are reported to cost more per patient than studies in nearly any other therapeutic area, we believe the company will likely explore partnerships or non-dilutive funding strategies if the data are positive.

H123 financials broadly in line with expectations

Actinogen's H123 operating cash burn rate of A$2.8m was dampened by the company's receipt in Q4 CY22 of an A$4.2m R&D tax rebate, leading the company to finish CY22 with a cash balance of A$14.5m. After adjusting for the R&D tax rebate, the company's H123 operating cash outflows trended mildly above our prior forecast of A$8.4m in net FY23 operating cash outflow. Altogether, our forecasts for FY23 and FY24 are little changed, as we anticipate expenditures to increase in FY24 as the XanaMIA Phase IIb study portion ramps up.

Valuation: Benefiting from a stronger US dollar

We have rolled forward our estimates and updated our forex assumptions to reflect a stronger US dollar versus the Australian dollar. The effect of these changes, notably the stronger US dollar, increases our total equity valuation to A$702m (vs A$651m previously), or A$0.39 per share (vs A$0.36 previously. We estimate Actinogen's funds on hand will last into Q4 CY23 and continue to model the company will raise A$20m in FY23 (now H223) and A$40m in FY24.

15 March 2023

Price	**A$0.07**
Market cap	**A$126m**
	A$0.66/US$
Net cash (A$m) at 31 December 2022	14.5
Shares in issue	1,806m
Free float	90%
Code	ACW
Primary exchange	ASX
Secondary exchange	N/A

Share price performance

%	1m	3m	12m
Abs	(18.0)	(26.3)	(17.0)
Rel (local)	(13.1)	(23.8)	(14.5)
52-week high/low	A$0.14		A$0.04

Business description

Actinogen Medical is an ASX-listed Australian biotech developing its lead asset Xanamem, a specific and selective 11β-HSD1 inhibitor designed to treat cognitive impairment (CI) that occurs in chronic neurodegenerative and neuropsychiatric diseases. Currently, Actinogen is targeting CI in two indications: the early stages of Alzheimer's disease and major depressive disorder.

Next events

Start enrolment for XanaMIA Part IIb study in biomarker-confirmed early AD	Q2 CY23
Results for Phase II XanaCIDD study in cognitive impairment associated with major depressive disorder	Q4 CY23 or H1 CY24

Analyst

Pooya Hemami OD MBA CFA +1 646 653 7026

healthcare@edisongroup.com

Edison profile page

H123 update shows continued progress for Xanamem

Actinogen's H123 update confirmed that the company is on track to start US recruitment in Q2 CY23 for the six-month, placebo-controlled Phase IIb portion of the XanaMIA study. This study will assess the company's lead drug candidate Xanamem in patients with biomarker-positive AD, as determined through an elevated level of pTau-181 (phosphorylated Tau-181) protein in the blood. The company has completed initial development of a new tablet formulation that will be more convenient for patients to use, and Actinogen expects this formulation to be ready to be used in the Part IIb portion of XanaMIA and all subsequent Xanamem trials. Actinogen in December 2022 announced that the first patient was randomised and treated in its XanaCIDD Phase II study in MDD, assessing the effects of Xanamem (using the original drug formulation) on cognitive performance and depression.

XanaMIA Phase IIb aims to confirm therapeutic effect

The Phase IIb portion of XanaMIA is designed to assess the safety and efficacy of Xanamem in a population of patients with mild CI and/or mild AD, who at baseline will have been confirmed as biomarker-positive for progressive disease, as determined through the presence of an elevated level of pTau-181 protein in the blood. This study is designed to enrol 330 patients with mild AD and progressive disease. Patients will be randomised to treatment with 5mg, 10mg or placebo once a day, over a six-month period. The study's key efficacy endpoints will be the FDA-recognised Clinical Dementia Rating – Sum of Boxes (CDR-SB) scale and the Cogstate computerised test battery of attention and working memory. In Q422, the company received the necessary approvals from the FDA to proceed with US enrolment for the Phase IIb portion of XanaMIA.

The premise behind the planned Phase IIb portion of XanaMIA was discussed in our initiation report. While the initial results reported in 2019 from the earlier 185-patient XanADu study in patients with suspected AD did not meet the primary endpoint (when all per-protocol patients were included), the company subsequently explored the effect and dynamics of blood biomarkers. Biomarker analysis was not included in the original trial design, but the company studied stored plasma samples from 72 of the 185 original patients in the study (reflecting data at both baseline and at week 12). At the time top-line XanADu results were reported in 2019, blood-based AD biomarker analysis was not available and AD clinical diagnosis was not confirmed by any biomarkers. In October 2022, the company reported positive biomarker data whereby a subset of patients from the XanADu study with elevated pTau (a recognised AD diagnostic biomarker) at baseline taking Xanamem demonstrated clinical activity and a relatively large effect size at 12 weeks using the CDR-SB scale.

Patients with pTau at or above 6.74pg/mL, representing 34 patients (16 on Xanamem 10mg daily, 18 on placebo), showed a 0.6 mean difference (effect size) on CDR-SB (representing a 60% relative reduction in disease progression versus placebo) at 12 weeks between the placebo and treatment arms.

This difference in CDR-SB versus placebo exceeded the level of CDR-SB improvements shown for Aduhelm in its EMERGE study and for Leqembi as shown in the Clarity AD study (both at 78 weeks). We note that the XanADu biomarker analysis sample size is relatively small and recognise that there may be limitations in forecasting future trial outcomes based on study analyses determined using retrospective clinical data. Nonetheless, we view these biomarker results as highly encouraging in that they demonstrate the potential for meaningful Xanamem clinical activity in biomarker-confirmed AD patients, if replicated in a prospective trial. The objective of the Phase IIb portion of XanaMIA is to confirm whether Xanamem can reproduce a similar treatment effect in a

prospectively designed study that enrols patients with elevated pTau (such as the Phase IIb portion of XanaMIA).

Phase IIb results could lead to value realisation opportunities

Top-line results from the Phase IIb portion of XanaMIA, which we anticipate in late CY24 or in H1 CY25, could, if positive, introduce the possibility of material out-licensing or value realisation opportunities, in our view. Given that AD pivotal trials are reported to cost more per patient than studies in nearly any other therapeutic area, we believe the company will likely explore partnerships or non-dilutive funding strategies if the data are positive, given the high amount of funding likely to be needed to fund AD registration studies through to completion. We expect the AD programme would require two separate Phase III studies prior to a possible FDA regulatory approval filing. While the Phase IIb portion of XanaMIA may potentially qualify as one of the pivotal studies required for approval in early AD, our base case forecasts assume that two additional AD studies will be required for approval (although we may revisit our assumptions once the Phase IIb study is completed and/or further information on the AD development plan becomes available).

The AD market remains substantial, in our view, and the recent FDA accelerated approval of Biogen/Eisai's Leqembi may raise investor awareness of the sector. We note that the Centers for Medicare & Medicaid Services (CMS) has decided against expanding reimbursement coverage for the drug until it can obtain an approval through the traditional FDA pathway, which could occur in July 2023 given the PDUFA date for Eisai's supplemental Biologics License Application (sBLA) seeking traditional approval for the drug. The US Veterans Health Administration recently announced it will provide coverage for Leqembi. Nonetheless, potential advantages of Xanamem are its oral mode of administration and its favourable safety record thus far, as shown in multiple Phase I and II studies to date.

XanaCIDD to investigate Xanamem effects in patients with MDD

The XanaCIDD study started in late 2022 and aims to enrol about 160 patients across Australia and the UK who have persistent depressive symptoms and CI despite taking standard-of-care anti-depression therapy. Having demonstrated the ability to improve cognition in two trials (XanaHES and the Phase Ib portion of XanaMIA) in healthy adults, Actinogen is confident that Xanamem can exert similar cognitive improvement effects in MDD patients; this study will also explore whether the drug can have effects on depression as well.

Xanamem 10mg daily or placebo will be added to patients' existing anti-depressant therapy and effects on cognition (using the Cogstate Cognitive Test Battery) and depression (using the Montgomery Asberg Depression Rating Scale) will be evaluated.

MDD is a common disorder, with a c 5% prevalence globally. CI is a feature in most MDD patients and commonly persists even when depression symptoms subside. Elevated cortisol levels have been associated with depression and modification of brain cell cortisol levels has been proposed as a strategy to treat both depression and its associated CI. As Xanamem targets excess brain cortisol, and given the benefits shown in healthy adults in XanaHES and the Phase Ib portion of XanaMIA, we believe it is plausible for cognitive benefits to be shown in patients with persistent MDD. If the XanaCIDD study is successful in showing CI improvement, the company may then move to advance it into pivotal studies. Given that no US-approved antidepressant has a CI label, we believe there is a significant opportunity for Xanamem in this market if it can demonstrate an improvement in CI in this population. Study results are expected in late CY23 or early CY24.

Increasing US representation on corporate team

The company recently appointed Dr Dana Hilt as its chief medical officer (CMO). Dr Hilt is based in the United States and has over 25 years of drug development experience, largely focused on treatments targeting central nervous system diseases, notably including AD. Actinogen also recently appointed US-based Dr Nicki Vasquez as an independent non-executive director. Dr Vasquez, currently chief portfolio strategy & alliance officer at Sutro Biopharma, is an immunologist and biopharmaceutical executive with over 25 years of drug discovery research and development experience. Previously, Dr Vasquez was vice president of program & portfolio management at StemCells, where she established project management functions for research and clinical stage programs in indications including AD. We view the appointment of US-based executives as supportive of the company's planned entrance in H1 CY23 into US clinical AD drug development and US study sites through the XanaMIA Phase IIb study.

Financials and valuation

Actinogen reported an H123 operating cash burn rate of A$2.8m, which was dampened by the company's receipt in October 2022 of an A$4.2m R&D tax rebate, leading the company to finish CY22 with a cash balance of A$14.5m. After adjusting for the R&D tax rebate, the company's H123 operating cash outflows trended mildly above our prior forecast for A$8.4m in net FY23 operating cash outflow. Following the H123 results, we have adjusted our forex assumptions (to A$0.66/US$ vs A$0.69/US$ previously) and also mildly increased our FY23 R&D and G&A cost assumptions, while modestly reducing FY24e R&D expenses to reflect the pushing back of a portion of future AD study costs into FY25. Altogether, we now model FY23e and FY24e free cash outflow rates of A$9.6m and A$38.4m, versus our prior assumptions of A$9.5m and A$39.4m, respectively. We expect the burn rate to ramp up significantly in FY24 to fund the bulk of the XanaMIA Phase IIb portion and XanaCIDD study costs.

Our valuation continues to be based on a risk adjusted NPV analysis, which includes A$14.5m in net cash at the end of December 2022. We apply a discount rate of 12.5% and include Xanamem in the two lead indications. We continue to use a probability of success of 10.0% for Xanamem to reach the market in the AD project and 12.5% in the MDD project. We note the company has expressed potential interest in expanding Xanamem development to CI related to schizophrenia and/or bipolar disorders, which may offer upside potential, but we will await the commencement of clinical studies in such programmes prior to including such initiatives in our valuation.

Our local-currency sales forecasts and timing estimates are unchanged from our initiation report, but we have rolled forward our estimates and updated our forex assumptions to reflect a stronger US dollar versus the Australian dollar. The effect of these changes, notably the increased strength of the US dollar, increases our total equity valuation to A$702m (vs A$651m previously), or A$0.39 per share (vs A$0.36 previously). Our valuation is sensitive to the A$/US$ exchange rates, given that the majority of our expected future potential revenue for Xanamem will come from the US market. Had the forex rate been unchanged (compared to our initiation note) at A$0.69/US$, our valuation would now be A$670m, or A$0.37 per share. Hence, every 1 cent change in the A$/US$ exchange rate would result in a c A$10.5m change in our equity valuation, or about c A$0.0058 per share, with a strengthening US dollar causing appreciation in our Actinogen valuation, and a weakening US dollar doing the reverse.

While the company's share price has decreased c 40% since our initiation report on 18 October 2022, there have been no fundamental adverse developments affecting Xanamem's commercial prospects or potential market launch timing, in our view. If fact, we view the FDA acceptance in December 2022 of the company's request to enrol US patients the Phase IIb portion of XanaMIA as

a positive event. Altogether, we believe recent market performance is primarily due to macroeconomic factors and increased investor caution in an environment of rising interest rates amid general concerns of an economic recession. We estimate this level of risk-aversion is affecting development-stage biopharmaceutical companies, and particularly those expected to require additional capital within approximately 12–18 months given market expectations of challenges associated with raising funds in the current environment.

Exhibit 1: Actinogen rNPV valuation

Product	Market	Launch	Sales (A$m) in 2034	NPV (A$m)	Probability of success	rNPV (A$m)	rNPV/basic share (A$)
Xanamem in cognitive impairment related to Alzheimer's disease	US	H2 CY27	3,994	3,827.7	10.0%	340.5	0.19
Xanamem in cognitive impairment related to Alzheimer's disease	EU5 & Australia	H2 CY27	1,890	1,853.0	10.0%	185.3	0.10
Xanamem in cognitive impairment related to major depressive disorder	US	H2 CY27	1,301	1,116.8	12.5%	117.8	0.07
Xanamem in cognitive impairment related to major depressive disorder	EU5 & Australia	H2 CY27	759	677.2	12.5%	84.6	0.05
Corporate costs				(41.0)	100%	(41.0)	(0.02)
Net cash at 31 December 2022				14.5		14.5	0.01
Total equity value				7,448.1		701.8	0.39

Source: Edison Investment Research

We estimate the company's funds on hand will last into Q4 CY23 (Q224). We continue to model the company will raise A$20m in FY23 (now H223) and A$40m in FY24. In total, we forecast A$410m in additional financings (up from A$390m previously) will be required before FY29 to fund the development of both the CI-MDD and AD programmes, after which, provided it receives regulatory approval, the company should be able to generate sufficient operating revenues to reach recurring profitability. Our model assumes all financings will be raised through illustrative debt, as per usual Edison methodology. If our projected funding need of A$410m is raised through equity issuances at the prevailing market price of c A$0.07, our effective value per share would decrease to A$0.14 per share.

The amount of fund-raising estimated to be necessary for Actinogen to independently bring Xanamem to commercialisation in these indications is larger than the company's current market capitalisation, although we note that the funding intervals may be staggered over the next several years, which may alleviate potential challenges associated with raising amounts of funds in excess of a company's market capitalisation. We also believe the company will be seeking non-dilutive funding arrangements and/or partnership arrangements (actions towards the latter would likely particularly increase after the XanaMIA Phase IIb portion is completed), which may reduce the overall funding need, but such scenarios are not included in our forecasts.

Exhibit 2: Financial summary

A$(000)	2020	2021	2022	2023e	2024e
Year end 30 June	IFRS	IFRS	IFRS	IFRS	IFRS
PROFIT & LOSS					
Revenue	3,516	1,984	3,640	4,004	4,086
Cost of Sales	0	0	0	0	0
Gross Profit	3,516	1,984	3,640	4,004	4,086
Sales, General & Administrative	(2,962)	(3,111)	(4,558)	(4,999)	(4,337)
Net Research & Development	(5,537)	(2,406)	(8,215)	(9,394)	(36,364)
EBITDA	(4,983)	(3,533)	(9,133)	(10,389)	(36,614)
Amortisation of intangible assets	(314)	(313)	(313)	(313)	(313)
Depreciation & other	(99)	(74)	(88)	(93)	(279)
Normalised Operating Profit (ex. amort, SBC, except.)	(4,888)	(3,318)	(7,933)	(9,614)	(36,894)
Operating profit before exceptionals	(5,396)	(3,920)	(9,533)	(10,795)	(37,206)
Exceptionals including asset impairment	0	0	0	0	0
Other	(194)	(289)	(1,288)	(869)	0
Reported Operating Profit	(5,590)	(4,209)	(10,821)	(11,664)	(37,206)
Net Finance income (costs)	65	5	36	261	(736)
Profit Before Tax (norm)	(4,822)	(3,313)	(7,897)	(9,353)	(37,629)
Profit Before Tax (FRS 3)	(5,331)	(3,915)	(9,497)	(10,534)	(37,942)
Tax	0	0	0	0	0
Profit After Tax and minority interests (norm)	(4,822)	(3,313)	(7,897)	(9,353)	(37,629)
Profit After Tax and minority interests (FRS 3)	(5,331)	(3,915)	(9,497)	(10,534)	(37,942)
Average Basic Number of Shares Outstanding (m)	1,118.0	1,405.2	1,717.1	1,802.3	1,831.6
EPS - normalised (A$)	(0.004)	(0.002)	(0.005)	(0.005)	(0.021)
EPS - normalised and fully diluted (A$)	(0.004)	(0.002)	(0.005)	(0.005)	(0.021)
EPS - (IFRS) (A$)	(0.005)	(0.003)	(0.006)	(0.006)	(0.021)
Dividend per share (A$)	0.0	0.0	0.0	0.0	0.0
BALANCE SHEET					
Fixed Assets	3,772	3,287	2,889	3,534	4,029
Intangible Assets	3,346	3,033	2,720	2,908	3,095
Tangible Assets	19	17	13	627	934
Investments in long-term financial assets	408	237	156	0	0
Current Assets	8,164	15,091	20,417	31,189	32,752
Short-term investments	0	0	0	0	0
Cash	5,040	13,457	16,370	27,556	29,119
Other	3,123	1,634	4,047	3,633	3,633
Current Liabilities	(744)	(755)	(1,480)	(1,708)	(1,708)
Creditors	(744)	(755)	(1,480)	(1,708)	(1,708)
Short term borrowings	0	0	0	0	0
Long Term Liabilities	(304)	(165)	(87)	(20,038)	(60,038)
Long term borrowings	0	0	0	(20,000)	(60,000)
Other long term liabilities	(304)	(165)	(87)	(38)	(38)
Net Assets	10,889	17,458	21,740	12,978	(24,964)
CASH FLOW STATEMENT					
Operating Income	(5,590)	(4,209)	(10,821)	(11,664)	(37,206)
Movements in working capital	(3,591)	(1,513)	(3,143)	597	0
Net interest and financing income (expense)	65	5	36	261	(736)
Depreciation & other	99	74	88	93	279
Taxes and other adjustments	6,161	3,920	4,323	2,165	313
Net Cash Flows from Operations	(2,856)	(1,724)	(9,517)	(8,548)	(37,350)
Capex	(23)	(6)	(3)	(1,051)	(1,087)
Acquisitions/disposals	0	0	0	0	0
Interest received & other investing activities	0	0	0	0	0
Net Cash flows from Investing activities	(23)	(6)	(3)	(1,051)	(1,087)
Net proceeds from share issuances	0	10,195	12,491	903	0
Net movements in long-term debt	0	0	0	20,000	40,000
Dividends	0	0	0	0	0
Other financing activities	282	(84)	(71)	(39)	0
Net Cash flows from financing activities	282	10,111	12,420	20,864	40,000
Effects of FX on Cash & equivalents	0	0	49	(80)	0
Net Increase (Decrease) in Cash & equivalents	(2,596)	8,381	2,949	11,186	1,563
Cash & equivalents at beginning of period	7,637	5,040	13,422	16,370	27,556
Cash & equivalents at end of period	5,040	13,422	16,370	27,556	29,119
Closing net debt/(cash)	(5,448)	(13,694)	(16,527)	(7,556)	30,881
Lease debt	390	236	165	127	127
Closing net debt/(cash) inclusive of IFRS 16 lease debt	(5,058)	(13,458)	(16,361)	(7,429)	31,008
Free cash flow	(2,878)	(1,730)	(9,520)	(9,599)	(38,437)

Source: Actinogen Medical accounts, Edison Investment Research

General disclaimer and copyright

This report has been commissioned by Actinogen Medical and prepared and issued by Edison, in consideration of a fee payable by Actinogen Medical. Edison Investment Research standard fees are £60,000 pa for the production and broad dissemination of a detailed note (Outlook) following by regular (typically quarterly) update notes. Fees are paid upfront in cash without recourse. Edison may seek additional fees for the provision of roadshows and related IR services for the client but does not get remunerated for any investment banking services. We never take payment in stock, options or warrants for any of our services.

Accuracy of content: All information used in the publication of this report has been compiled from publicly available sources that are believed to be reliable, however we do not guarantee the accuracy or completeness of this report and have not sought for this information to be independently verified. Opinions contained in this report represent those of the research department of Edison at the time of publication. Forward-looking information or statements in this report contain information that is based on assumptions, forecasts of future results, estimates of amounts not yet determinable, and therefore involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of their subject matter to be materially different from current expectations.

Exclusion of Liability: To the fullest extent allowed by law, Edison shall not be liable for any direct, indirect or consequential losses, loss of profits, damages, costs or expenses incurred or suffered by you arising out or in connection with the access to, use of or reliance on any information contained on this note.

No personalised advice: The information that we provide should not be construed in any manner whatsoever as, personalised advice. Also, the information provided by us should not be construed by any subscriber or prospective subscriber as Edison's solicitation to effect, or attempt to effect, any transaction in a security. The securities described in the report may not be eligible for sale in all jurisdictions or to certain categories of investors.

Investment in securities mentioned: Edison has a restrictive policy relating to personal dealing and conflicts of interest. Edison Group does not conduct any investment business and, accordingly, does not itself hold any positions in the securities mentioned in this report. However, the respective directors, officers, employees and contractors of Edison may have a position in any or related securities mentioned in this report, subject to Edison's policies on personal dealing and conflicts of interest.

Australia

Edison Investment Research Pty Ltd (Edison AU) is the Australian subsidiary of Edison. Edison AU is a Corporate Authorised Representative (1252501) of Crown Wealth Group Pty Ltd who holds an Australian Financial Services Licence (Number: 494274). This research is issued in Australia by Edison AU and any access to it, is intended only for "wholesale clients" within the meaning of the Corporations Act 2001 of Australia. Any advice given by Edison AU is general advice only and does not take into account your personal circumstances, needs or objectives. You should, before acting on this advice, consider the appropriateness of the advice, having regard to your objectives, financial situation and needs. If our advice relates to the acquisition, or possible acquisition, of a particular financial product you should read any relevant Product Disclosure Statement or like instrument.

New Zealand

The research in this document is intended for New Zealand resident professional financial advisers or brokers (for use in their roles as financial advisers or brokers) and habitual investors who are "wholesale clients" for the purpose of the Financial Advisers Act 2008 (FAA) (as described in sections 5(c) (1)(a), (b) and (c) of the FAA). This is not a solicitation or inducement to buy, sell, subscribe, or underwrite any securities mentioned or in the topic of this document. For the purpose of the FAA, the content of this report is of a general nature, is intended as a source of general information only and is not intended to constitute a recommendation or opinion in relation to acquiring or disposing (including refraining from acquiring or disposing) of securities. The distribution of this document is not a "personalised service" and, to the extent that it contains any financial advice, is intended only as a "class service" provided by Edison within the meaning of the FAA (i.e. without taking into account the particular financial situation or goals of any person). As such, it should not be relied upon in making an investment decision.

United Kingdom

This document is prepared and provided by Edison for information purposes only and should not be construed as an offer or solicitation for investment in any securities mentioned or in the topic of this document. A marketing communication under FCA Rules, this document has not been prepared in accordance with the legal requirements designed to promote the independence of investment research and is not subject to any prohibition on dealing ahead of the dissemination of investment research.

This Communication is being distributed in the United Kingdom and is directed only at (i) persons having professional experience in matters relating to investments, i.e. investment professionals within the meaning of Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended (the "FPO") (ii) high net-worth companies, unincorporated associations or other bodies within the meaning of Article 49 of the FPO and (iii) persons to whom it is otherwise lawful to distribute it. The investment or investment activity to which this document relates is available only to such persons. It is not intended that this document be distributed or passed on, directly or indirectly, to any other class of persons and in any event and under no circumstances should persons of any other description rely on or act upon the contents of this document.

This Communication is being supplied to you solely for your information and may not be reproduced by, further distributed to or published in whole or in part by, any other person.

United States

Edison relies upon the "publishers' exclusion" from the definition of investment adviser under Section 202(a)(11) of the Investment Advisers Act of 1940 and corresponding state securities laws. This report is a bona fide publication of general and regular circulation offering impersonal investment-related advice, not tailored to a specific investment portfolio or the needs of current and/or prospective subscribers. As such, Edison does not offer or provide personal advice and the research provided is for informational purposes only. No mention of a particular security in this report constitutes a recommendation to buy, sell or hold that or any security, or that any particular security, portfolio of securities, transaction or investment strategy is suitable for any specific person.

London | New York | Frankfurt
20 Red Lion Street
London, WC1R 4PS
United Kingdom