

(ASX: ANP)

AGM Presentation
November 2022

Forward Looking Statements

This presentation contains forward-looking statements regarding the Company's business & the therapeutic & commercial potential of its technologies & products in development. Any statement describing the Company's goals, expectations, intentions or beliefs is a forward-looking statement & should be considered an at-risk statement. Such statements are subject to certain risks & uncertainties, particularly those risks or uncertainties inherent in the process of developing technology & in the process of discovering, developing & commercializing drugs that can be proven to be safe & effective for use as human therapeutics, & in the endeavor of building a business around such products & services. Actual results could differ materially from those discussed in this presentation. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in the Antisense Therapeutics Limited Annual Report for the year ended 30 June 2022, which is available from the Company or at www.antisense.com.au.

'In the spirit of reconciliation, and on behalf of Antisense Therapeutics and its Board, I begin today by acknowledging the Kulin people, Traditional Custodians of the land on which we meet today as well as their ongoing connections to land, sea and community. We welcome the continuation of cultural, spiritual and educational practices and pay our respect to their Elders past, present and emerging extending that respect to all Aboriginal and Torres Strait Islander peoples today".

Charmaine Gittleson MD
Board Chair

Agenda

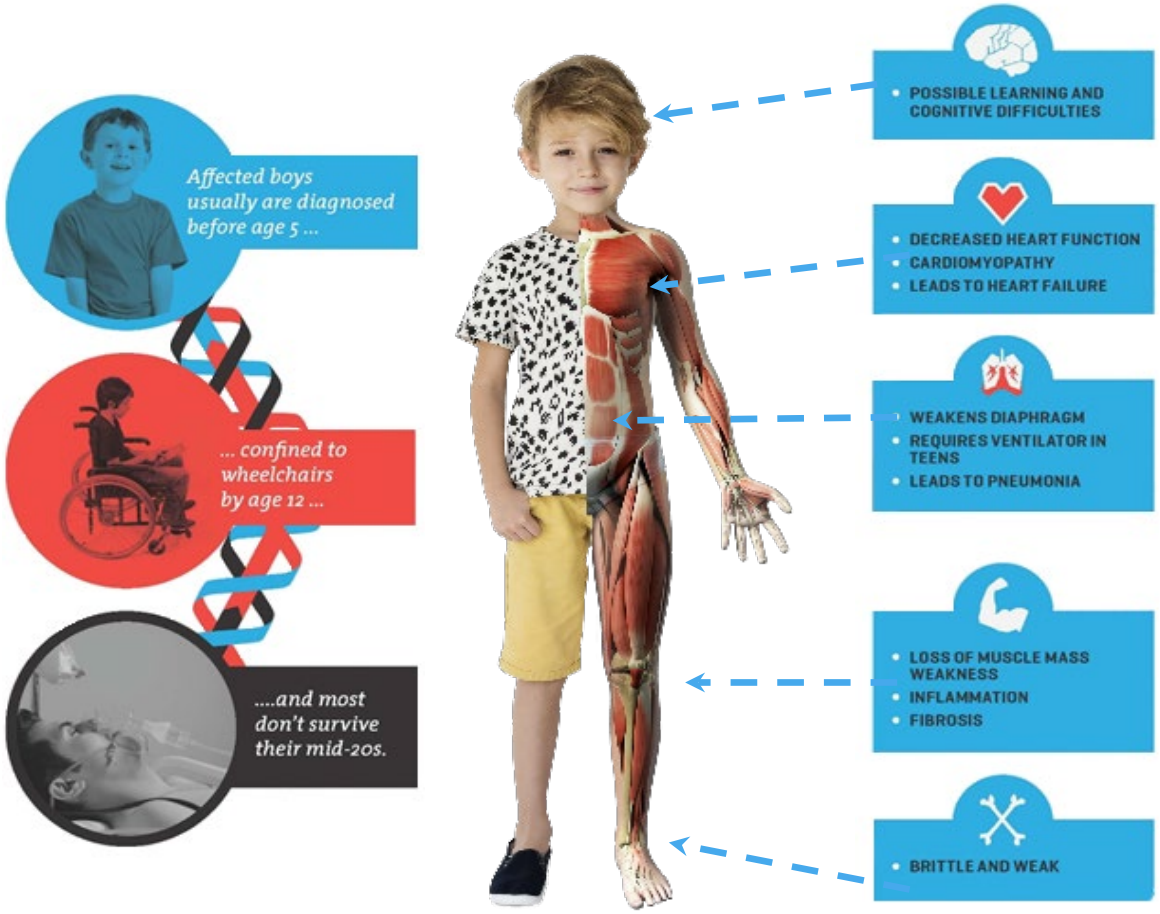
- Welcome
- Formal proceedings - Resolutions
- Presentations
- Q&A

Phillip Hains
Formal Proceedings - Resolutions

Charmaine Gittleson MD
Board Chair

What is Duchenne's Muscular Dystrophy?

Duchenne's Muscular Dystrophy (DMD) is a rapidly progressing genetic disease resulting in low Quality of Life and 100% mortality into patients' 30's



Duchenne Muscular Dystrophy (DMD) is a devastating genetic muscular disease caused by loss of dystrophin with progressive muscle wasting & associated muscle injury leading to inflammation & fibrosis (100% mortality)

Affects boys with an incidence of ~1 in 3,500 newborns[1] & prevalence of up to ~18,000 in US[1] and up to ~26,000 in EU[2]

Key challenge in management of DMD patients is to reduce the inflammation and muscle fibre damage[3]

Corticosteroids (CS) are the only therapy used to treat the inflammation in DMD[4] but have insufficient efficacy[5] & significant side effects including weight gain, reduced bone density & growth retardation[3]. CS not as effective in boys with a > number of T cells with high CD49d receptors[6].

ATL1102 is designed to inhibit CD49d expression on lymphocytes and is being developed as a treatment to reduce inflammation in DMD.

Source of Image Cure Duchenne

[1] McNeil et al, Muscle Nerve, 2010, 41(6): p. 740-5
[2] http://www.ema.europa.eu/ema/index.jsp?curl=pages/medicines/human/orphans/2015/05/human_orphan_001571.jsp&mid=WC0b01ac058001d12b
[3] Angelini and Peterle Acta Myologica 2012, XXXI: p. 9-15
[4] *Rosenberg et al,* Science Translational Medicine 2015, 7. p.299
[5] Miyatake et al Drug Design, Development & Therapy 2016, 10: p 2745–58
[6] Pinto-Mariz et al Skeletal Muscle 2015, 5: p. 45-55

antisense THERAPEUTICS

ANP Strategy



Key Strategic Factors for ANP Success

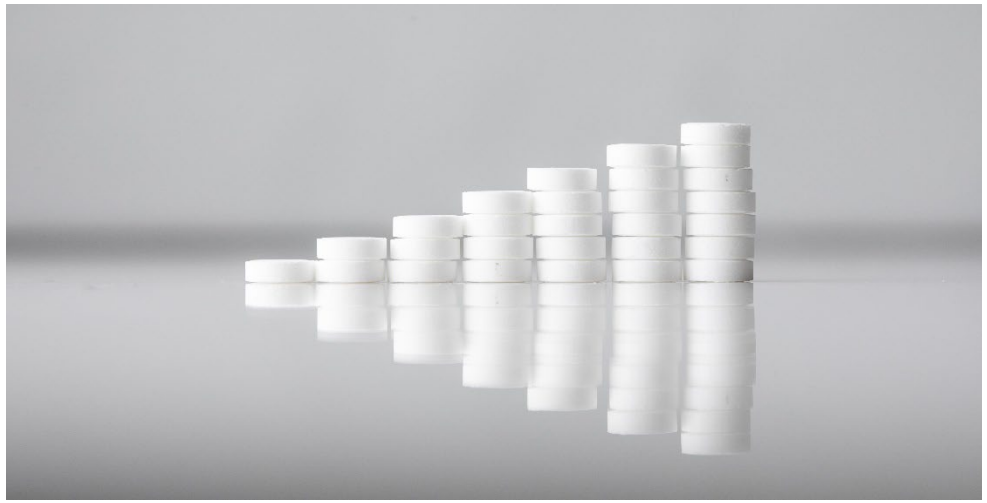
Leverage research for future • MCRI collaboration • Long Covid	Mark Diamond
Expand value proposition • Phase IIb clinical trial in DMD	Gil Price
Refine ANP business model • Position in the market • Capital markets strategy	Mark Diamond
Deliver on ATL1102 Promise • EU plans • FDA plans	Charmaine Gittleson
Leverage expertise • Board and management renewal	Charmaine Gittleson

Mark Diamond
Managing Director and CEO

ATL1102 New Indications

Expanding the clinical application of ATL1102

- Capitalising on the extensive data package generated to date to deepen the product pipeline
- Add further shareholder value and to diversify possible indication risk
- Leverage established core competencies (rare disease experience, scientific partnerships and collaborations)
- Commercially attractive space with limited competition, premium pricing, and Orphan Drug Designation incentives
- Potential for ANP to move rapidly into the clinic based on positive animal data or out-license



ATL1102 New Indications (*continued…*)

- **Collaboration with Murdoch Children's Research Institute (MCRI) the largest child health research institute in Australia***
  - Rare muscle disease "Limb Girdle Muscular Dystrophy R2"
    - ✓ No approved treatment. Prevalence of 1-9 / 1 000 000**. Approx 4000 sufferers in the US
    - ✓ ANP have reported positive animal results in a first study - reducing target & immune cells RNA in muscle
    - ✓ Planned chronic mouse study to assess disease progression endpoints
    - ✓ Mice with the dysferlin mutation and disease characteristics have been sourced via Jain Foundation in the US
    - ✓ Updated Jain Foundation recommendation to use older mice (8 months) accordingly treatment to be initiated in January 2023
    - ✓ Mice to be dosed for 4 months with results anticipated 2Q'23
  - Dosing underway in blinded controlled combination study with the dystrophin restoration drugs in mouse model of DMD
    - ✓ Sales of the dystrophin restoration drugs in the US for the 2Q'22 alone were in > US$233 million
    - ✓ Dystrophin restoration drugs are used in combination with corticosteroids
    - ✓ To test potential of the combination of antisense to CD49d with dystrophin restoration drugs to improve on therapeutic outcomes
    - ✓ Dosing to be completed in November'22 with samples being processed November/December and data set to follow

* www.mcri.edu.au

** Prevalence estimate: Orphanet (www.Orphanet.org)

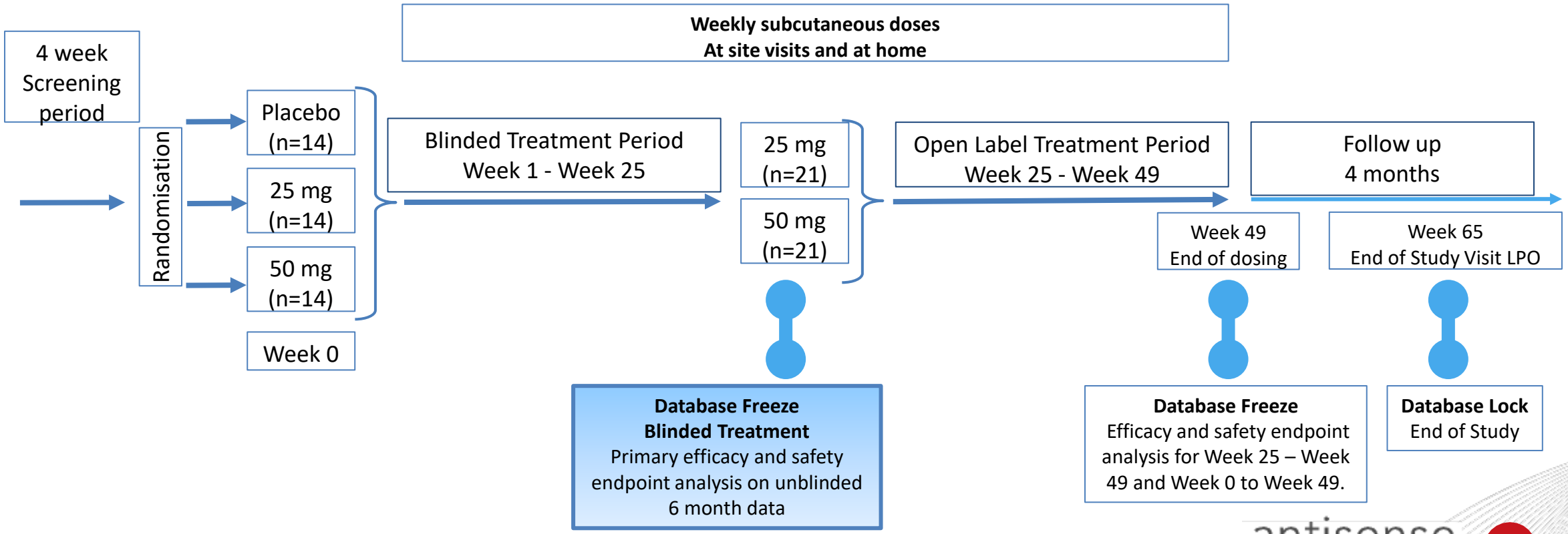
Long Neuro COVID-19

- **Collaboration to study the neurological aspects of Long COVID-19 (Long Neuro COVID-19)**
  - Reported to be more than 20 million people afflicted by the condition in the US alone
    - Up to 4 million Americans of working age are out of work due to long COVID-19 (up to 2.4% of working age population) https://www.brookings.edu/research/new-data-shows-long-covid-is-keeping-as-many-as-4-million-people-out-of-work/
  - Identification of appropriate biomarkers of Long COVID-19 has proved elusive
  - ANP undertook world first study that identified novel blood markers as potential diagnostic and therapeutic targets
  - Provisional patent applications filed in the US to seek protection for these inventions
  - Part of ANP results were included in a recent scientific publication https://www.medrxiv.org/content/10.1101/2021.08.08.21261763v4
  - Further new provisional patent applications to be filed this year for additional protection
  - Commercial discussions with targeted companies underway
    - Discussions with diagnostic company on potential development collaboration
    - Interactions have identified interest in a diagnostic development program; possible development path relatively quick and inexpensive
    - Explore interactions with companies that have therapeutic drugs with relevant MoA and may have interest in our IP
    - Newly appointed Chief Commercial Officer to actively follow up BD opportunities

Gil Price
Non-Executive Director

Phase IIb Study Program

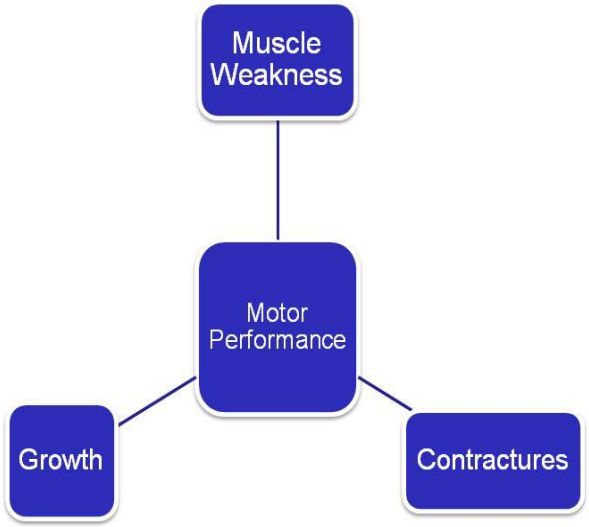
A multicentre, randomised, double-blind, placebo-controlled and open label extension study to assess the efficacy, safety, and pharmacokinetic profile of two dose levels of ATL1102 administered by subcutaneous (sc) injection once weekly for 49 weeks in non-ambulatory participants with Duchene Muscular Dystrophy

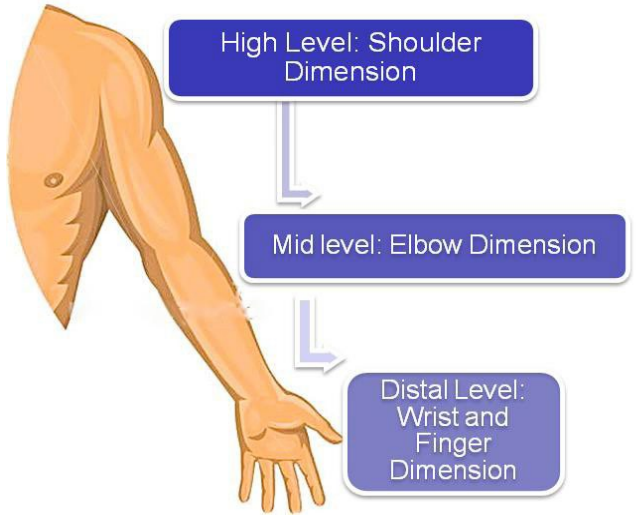


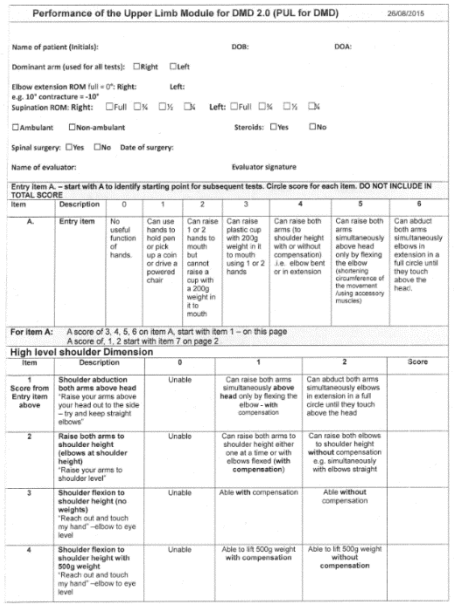
Phase IIb Study Program *(Continued….)*

Target population:

- Participants with genetically confirmed DMD, ≥10 & <18 yrs, non-ambulatory, defined as unable to walk 10 meters without assistance or help
- If on corticosteroid therapy, therapy initiated at least six months prior to the baseline visit and stable (≥0.25 mg/kg/day prednisone or equivalent dose) for at least 3 months prior to baseline.
- PUL 2.0* Entry Item A score ≥2







Performance of the Upper Limb Module for DMD 2.0 (PUL for DMD) 26/08/2015

Name of patient (initials): DOB: DOA:

Dominant arm (used for all tests): ☐Right ☐Left

Elbow extension ROM full = 0°: Right: Left:
e.g. 10° contracture = -10°
Supination ROM: Right: ☐Full ☐¾ ☐½ ☐¼ Left: ☐Full ☐¾ ☐½ ☐¼

☐Ambulant ☐Non-ambulant Steroids: ☐Yes ☐No

Spinal surgery: ☐Yes ☐No Date of surgery:

Name of evaluator: Evaluator signature

Entry item A. – start with A to identify starting point for subsequent tests. Circle score for each item. DO NOT INCLUDE IN TOTAL SCORE

Item	Description	0	1	2	3	4	5	6
A.	Entry item	No useful function of hands.	Can use hands to hold pen or pick up a coin or drive a powered chair	Can raise 1 or 2 hands to mouth but cannot raise a cup with a 200g weight in it to mouth	Can raise plastic cup with 200g weight in it to mouth using 1 or 2 hands	Can raise both arms (to shoulder height with or without compensation) i.e. elbow bent or in extension	Can raise both arms simultaneously above head only by flexing the elbow (shortening circumference of the movement /using accessory muscles)	Can abduct both arms simultaneously elbows in extension in a full circle until they touch above the head.

For item A: A score of 3, 4, 5, 6 on item A, start with item 1 – on this page
A score of, 1, 2 start with item 7 on page 2

High level shoulder Dimension

Item	Description	0	1	2	Score
1 Score from Entry item above	Shoulder abduction both arms above head "Raise your arms above you/ head out to the side – try and keep straight elbows"	Unable	Can raise both arms simultaneously above head only by flexing the elbow - with compensation	Can abduct both arms simultaneously elbows in extension in a full circle until they touch above the head	
2	Raise both arms to shoulder height (elbows at shoulder height) "Raise your arms to shoulder level"	Unable	Can raise both arms to shoulder height either one at a time or with elbows flexed (with compensation)	Can raise both elbows to shoulder height without compensation e.g. simultaneously with elbows straight	
3	Shoulder flexion to shoulder height (no weights) "Reach out and touch my hand" –elbow to eye level	Unable	Able with compensation	Able without compensation	
4	Shoulder flexion to shoulder height with 500g weight "Reach out and touch my hand" –elbow to eye level	Unable	Able to lift 500g weight with compensation	Able to lift 500g weight without compensation	

antisense THERAPEUTICS

* Development of the Performance of the Upper Limb module for Duchenne muscular dystrophy. Mayhew, A.Dev Med Child Neurol 2013 Nov;55 (110; 103-45

Phase IIb Study Program *(Continued….)*

Blinded Phase - Study Objectives

Primary objective:

To evaluate the effect of ATL1102 on upper limb muscle function in non-ambulant participants with DMD as assessed by change in the Performance of Upper Limb Module for DMD 2.0 (PUL 2.0) score compared to placebo

Secondary objectives:

To evaluate the effects of ATL1102:

- in a responder analysis on the PUL 2.0 score compared to placebo
- on upper limb muscle strength as assessed by change in percent predicted MyoGrip and MyoPinch compared to placebo
- on respiratory function as assessed by change in % predicted PEF and % predicted FVC compared to placebo
- on Quality of Life (PedsQL assessments) assessed by participants and their study partner (Parent/Guardian) compared to placebo
- safety and tolerability of ATL1102 including events associated with the Safety Monitoring Plan and Stopping Rules
- PK profile of ATL1102

Analysis Timepoint for the Blinded Phase of the Study:

The Primary efficacy and safety endpoint analysis of the unblinded 6 month data will be undertaken once the last participant randomised has completed the Week 25 efficacy and safety assessments in the Blinded Phase of the study

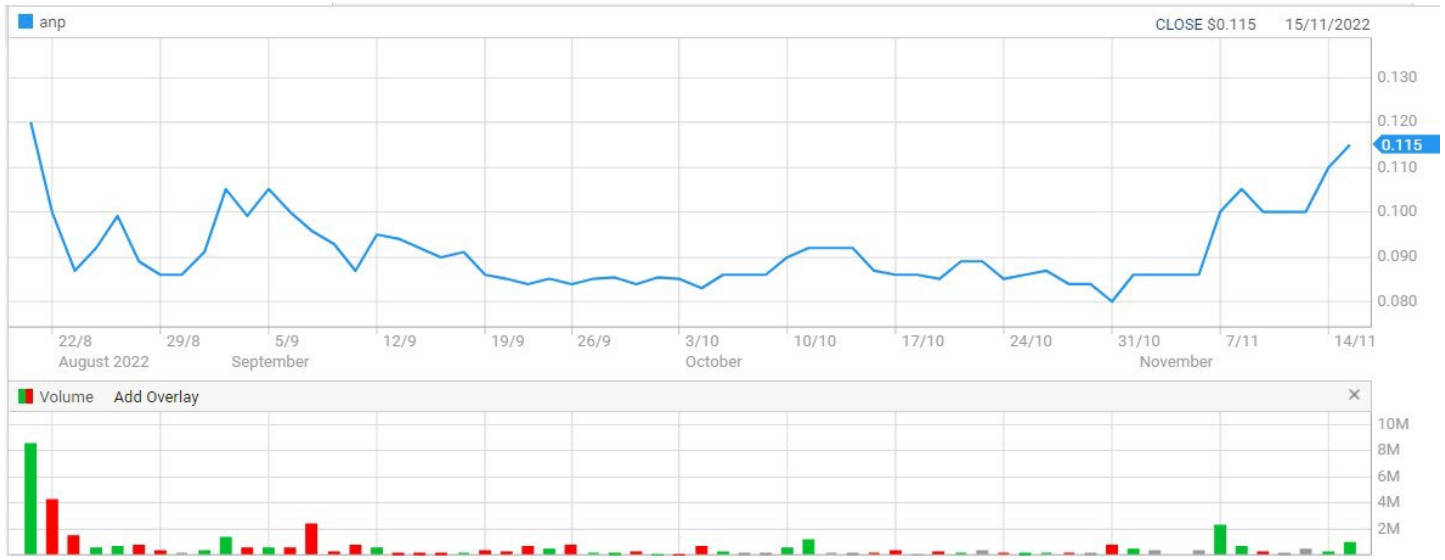
Study Execution

- Globally renowned Clinical Research Organisation (CRO) Parexel to conduct and manage the Phase IIb study
- Prof Thomas Voit MD (Director of NIHR GOSH UCL Biomedical Research Centre, UK) will be the Coordinating Principal Investigator
- All thirteen clinical trial sites confirmed
- Study drug being shipped for inclusion into final study packages for participant dispensing
- Clinical trial application submissions commencing for the four countries, possible 1st approval in 2022 dependant on agency and ethics committee responses and workload
- The reporting of the blinded phase of the trial is anticipated in 1H 2024

Mark Diamond
Managing Director and CEO

Antisense Corporate Overview

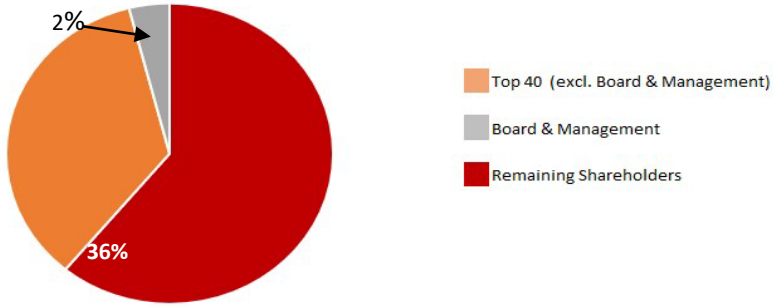
Share Price Performance



Company Details

- Market Capitalisation @ $0.10 = $67M
- Ordinary fully paid shares on issue = 669M
- Cash at Sept'22 A$18m (no debt)
- Largest shareholder - **Platinum Asset Management**
- Top 40 Shareholders - *Shares at 15 Nov'22 = 252M (38%)*

Current Register



Lead Program: ATL1102 in DMD - Profile Summary

ATL1102 clear differentiation in DMD space positions it for global success within high-growth multi-billion-dollar DMD market

- **Novel and Differentiated MOA:** ATL1102 is the only therapy in development for DMD targeting CD49d to slow disease progression by reducing inflammation and resultant muscle damage with potential application across a broad range of inflammatory diseases
- **Efficacy Data:** Phase II shows activity across multiple measures of muscle strength and function with superiority to historical controls
- **Competitive Profile:** ATL1102's differentiated mechanism of action has the potential to be synergistic with other marketed compounds and those in development for DMD allowing for higher levels of market penetration. Additionally, ATL1102 has the potential to be used across all DMD subtypes.
- **Underserved Target Population:** Non-ambulant DMD patients who currently rely on corticosteroid therapy with associated significant side effects to treat muscle inflammation. New anti-inflammatory steroids, dystrophin restoration and micro dystrophin gene therapies are being trialled predominantly in ambulant boys.
- **IP Portfolio:** ATL1102 has been in-licensed from Ionis Pharmaceuticals Inc. (NASDAQ:IONS). Antisense Therapeutics has a substantial patent estate surrounding ATL1102 supplemented by Orphan Drug Designations in EU and US providing additional market exclusivity. Rare Paediatric Disease Designation in the US provides opportunity for rare pediatric disease priority review voucher (PRV)
- **Potential Expedited Regulatory Pathway:** Potential accelerated approval pathways in the US (e.g. Fast Track and Breakthrough Designation)

Major Achievements in 2022*

- ✓ Poster presentation 2022 MDA conference – plasma protein data supports bone density improvement in DMD
- ✓ Bonus Option Issue to shareholders
- ✓ Long Covid study identifies diagnostic and therapeutic targets
- ✓ Submission of Clinical Trial Application (CTA) to German Regulator, BPharm
- ✓ Dosing commenced in DMD mouse combination study
- ✓ New indication for ATL1102 Limb Girdle Muscular Dystrophy R2 - positive animal results
- ✓ Receipt of further R&D tax incentive payment following approved overseas finding
- ✓ ATL1102 Revised Clinical Plans for DMD accelerate reporting of unblinded data
- ✓ FDA feedback received on 9-month chronic toxicology study protocol
- ✓ Appointment of Chief Commercial Officer
- ✓ Initiation of ATL1102 toxicology study to support clinical program in the US

* Not necessarily in chronological order

Upcoming Key Events / Catalysts*

- ✓ Progress of Phase IIb ATL1102 DMD Clinical trial: CTA submission, approval, trial initiation
- ✓ Results of combination study with the dystrophin restoration drugs in mdx (DMD) mouse model
- ✓ Publication of Phase II DMD clinical trial results in peer reviewed scientific journal
- ✓ Initiation/conduct of Limb Girdle Muscular Dystrophy R2 chronic animal study
- ✓ Further outcomes from the collaboration to study the neurological aspects of Long COVID-19 (Long Neuro COVID-19)
- ✓ Initiation of 9-month chronic toxicology study

* Indicative and not necessarily in anticipated chronological order

General Capital Management Considerations

- Non-dilutive funding
  - Partnerships - clear feedback received on importance/value of placebo-controlled study results
  - Grants – application with government funding program in 2022 however the program's overall investment strategy undergoing review
- Capital raising
  - Unlisted options with December 24 expiry (ANPAF) remain important potential source of future funding (A$39 million if all fully exercised)
  - Alternatives include equity issue or convertible notes - as/if and when required

Understanding the USA

- Recognise importance of accessing overseas funding and for further growth
- Engaged Edison, a global investor relations company experienced in supporting Australian biotech listed on Nasdaq https://www.edisongroup.com/investor-relations/
- Facilitated Antisense team calls through one on one calls with Nasdaq and a selection (>10) of ‘Tier 2’ and “Tier 3’ investment banks with notable experience in small to mid-sized transactions in the healthcare sector and/or prior experience in uplifting ASX listed Co’s onto Nasdaq
- Antisense company strategy presented and feedback gathered on optimal approach to capital raising in the USA and potential Nasdaq listing

Feedback from USA Bankers

- Investor appetite for risk, particularly with healthcare stocks, is at a low point. The XBI, the main Biotech index in the USA, hit an all-time nadir in June 2022, and generalised investors have been selling out of their positions in health care stocks, creating downward pressure on the sector
- Important to generate awareness through value add news and ideally have an appropriate catalyst (such as definitive data), around the time of a Nasdaq listing, to generate investor traction
- Increased number of ASX listed companies uplifting to Nasdaq that has generated experience and comfort level with this approach
- Sufficient institutional backing is important otherwise stock re-ratings that many anticipate on performing an uplifting sometimes don’t occur, particularly for binary stocks

Key Takeaway Points

- Nasdaq listing can add value to share price and facilitate access to US funding but co-ordination and timing is important and
  - requires a proactive targeted campaign of relationship building
  - alignment with a recognised inflection point
- Need further understanding of potential, value, requirements and obligations associated with strategic move of uplisting onto Nasdaq
- Important pathway to achieve validation of ANP as a biotech company by overseas institutions
- Increased awareness of and interest in our programs with potential corporate partners will support future capital raising activity

Proposed Focused Global Capital Management Activity

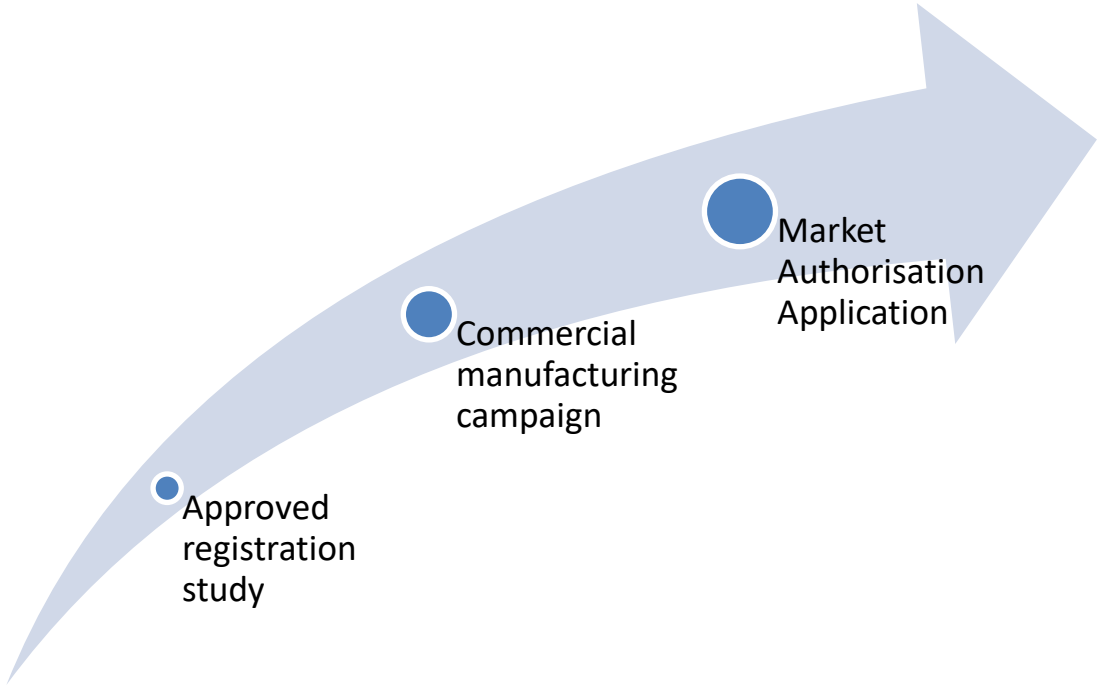
Extend & develop awareness of ANP across EU, Asia and USA	Build knowledgeable ANP and DMD supporters	Initiate and build key relationships



Global, reach via IR/PR companies ▪ DWGA (Europe) ▪ SparkPlus (Asia) ▪ Corporate Connect (Aus) ▪ Edison (USA and international) ▪ Appointment of CCO	▪ Regular cadence of in person non-deal roadshows ▪ Broker research analyst briefings and wide distribution of research notes ▪ Global press releases	• Key investment institutions • Investment banking interactions

Charmaine Gittleson MD
Board Chair

European Medicines Agency Approved Development Plan



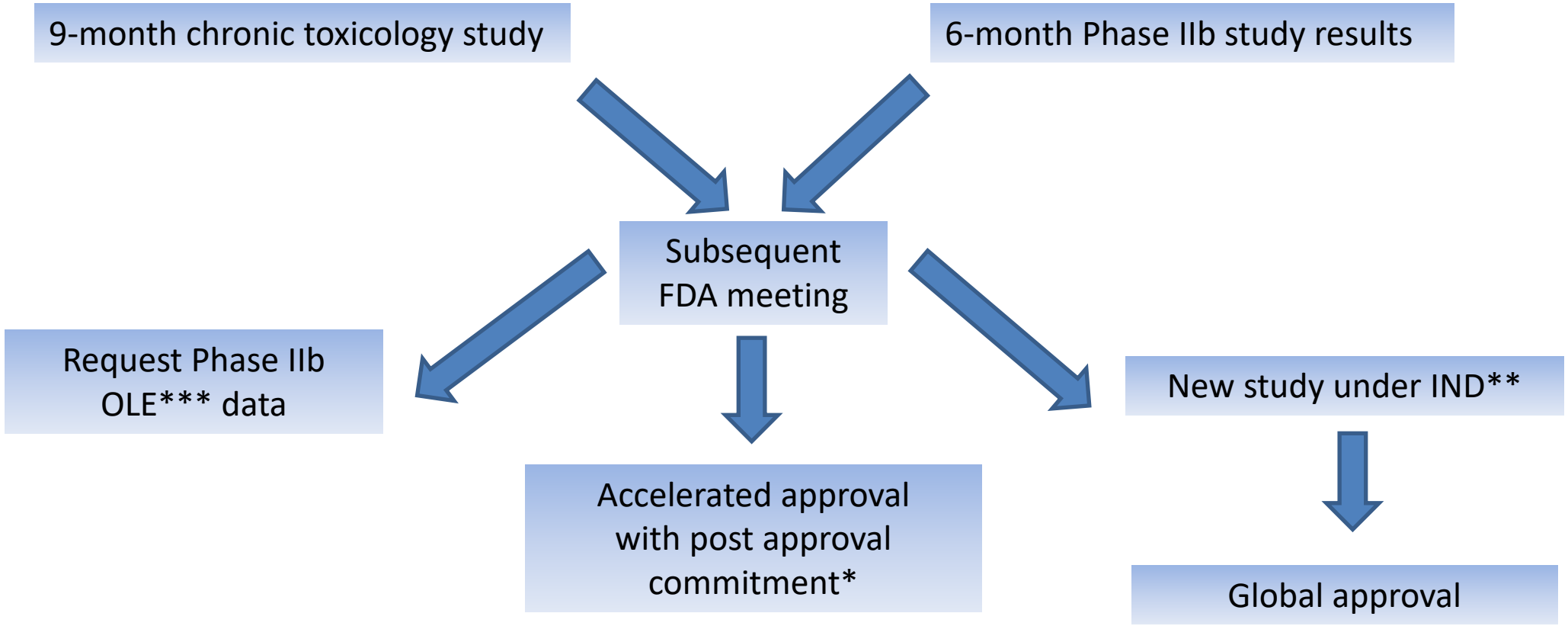
Current Phase IIb study introduces possibilities, dependent on renegotiation of Paediatric Investigational Plan (PIP)

i. Acceptance of current Phase IIb data (6 and 12 month efficacy and 12 month safety) with conditional approval; or

ii. Continued requirement as per PIP but with smaller study population (reduces recruitment time and overall study cost)

iii. No change to approved registration study

Possible FDA Pathways



* 9 month toxicology results and approved clinical protocol will lift partial hold enabling an IND clinical study with > 6 months dosing
** Global approval if US sites included EU PIP study
*** OLE – Open Label Extension

Leverage Expertise

- Expanded management team
  - Appointment of Dr. Filippis to enhance:
    - business development/ partnership interactions
    - support capital management activities
    - increase EU and USA investor relation activities
- Board renewal
  - Retirement of Dr. Gary Pace
  - Search for new non-executive director with capital market and / commercial aspects experience
- CEO transition – search to commence

ANP Strategy 2023

Toxicology and clinical study
Regulatory interactions



Funding opportunities
ANP story communicated

Ongoing mechanism of action studies

Management team / Board
Partnerships

Questions



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