ASX Announcement

25 Feb 2021

Paediatric Investigation Plan for ATL1102 in DMD submitted to European Medicines Agency

- **PIP submitted with PDCO feedback anticipated in 2Q'21**
- **Manufacture of clinical supplies in progress**
- **CRO selection process underway**

Antisense Therapeutics Limited [ASX:ANP | US OTC:ATHJY | FSE:AWY], (the Company) is pleased to advise that the Paediatric Investigation Plan (PIP) for the development of ATL1102 for Duchenne muscular dystrophy (DMD) has been submitted to the European Medicines Agency (EMA) Paediatric Committee (PDCO). A paediatric investigation plan is a development plan aimed at ensuring that the necessary data are obtained through studies in children, to support the authorisation of a medicine for children. The PIP addresses the entire paediatric development program for ATL1102 in DMD.

The ATL1102 DMD PIP submission incorporates the planned Phase IIb clinical trial of ATL1102 in non-ambulant DMD patients to be conducted in Europe. The Company is looking to confirm the Phase IIb trial design through the PIP and initial PDCO feedback ahead of submission of the Phase IIb trial application anticipated in 2Q'21.

The Company is planning to conduct a multi-centre, randomised, double-blind placebo-controlled study of ATL1102 in non-ambulant patients dosed with ATL1102 for 12 months at two dose levels to be conducted as a potentially pivotal (approvable) trial with a follow-on open label extension phase. Further trial details will be outlined once the Company has received PIP feedback and has submitted its trial application.

The Company has commenced the manufacture of ATL1102 active ingredient for the Phase IIb trial and is planning to have this material formulated into injectable product in Q2'21.

In parallel with above, the Company is in the process of selecting a suitably experienced Contract Research Organisation (CRO) for the running of the Phase IIb trial. The CRO will be responsible for the provision of clinical trial services such as clinical trial site selection and site set-up, patient recruitment, clinical trial monitoring services, data management, statistics, medical monitoring, pharmacovigilance and quality control processes.

Given that clinical trial approval in the EU is under national sovereignty, submissions will be made to the respective national authorities of the European states where the Company expects to conduct the Phase IIb trial (locations to be confirmed following completion of the site feasibility assessments by the CRO). Approvals will likely then be staggered depending upon the approval timelines of the individual states. All going well first approvals would be anticipated in Q3'21 with site initiation in Q4'21.

Mark Diamond CEO of Antisense Therapeutics said: "By commencing the formal EMA process to establish the clinical and commercial path for ATL1102 in Europe, the world's 2nd largest pharmaceutical market, the PIP submission represents a major step in the advancement of ATL1102 as a potential treatment for DMD patients in that region. We look forward to receiving PDCO's feedback on the Phase IIb trial design and following this to submission of the trial application".

This announcement has been authorised for release by the Board

For more information please contact:

Antisense Therapeutics
Mark Diamond
Managing Director
+61 (0)3 9827 8999
www.antisense.com.au

Investment Enquiries
Gennadi Koutchin
XEC Partners
gkoutchin@xecpartners.com.au
1300 932 037

About Antisense Therapeutics Limited [ASX: ANP | US OTC: ATHJY | FSE: AWY] is an Australian publicly listed biotechnology company, developing and commercializing antisense pharmaceuticals for large unmet markets in rare diseases. The products are in-licensed from Ionis Pharmaceuticals Inc. (NASDAQ: IONS), an established leader in antisense drug development. The Company is developing ATL1102, an antisense inhibitor of the CD49d receptor, for Duchenne muscular dystrophy (DMD) patients and recently reported highly promising Phase II trial results. ATL1102 has also successfully completed a Phase II efficacy and safety trial, significantly reducing the number of brain lesions in patients with relapsing-remitting multiple sclerosis (RRMS). The Company has a second drug, ATL1103 designed to block GHr production that successfully reduced blood IGF-I levels in Phase II clinical trials in patients with the growth disorder acromegaly.

About ATL1102 ATL1102 is an antisense inhibitor of CD49d, a subunit of VLA-4 (Very Late Antigen-4). Antisense inhibition of VLA-4 expression has demonstrated activity in a number of animal models of inflammatory disease. ATL1102 has also shown to be very effective in reducing inflammatory brain lesions in a patients with MS (Limmroth, V. et al Neurology, 2014; 83(20): 1780-1788) and recently delivered highly promising clinical results in patients with Duchenne muscular dystrophy (DMD) a rare and fatal muscle wasting disease where inflammation in the muscle leads to fibrosis and death of muscle tissue.

About DMD Duchenne Muscular Dystrophy (DMD) is an X-linked disease that affects 1 in 3600 to 6000 live male births (Bushby *et al*, 2010). DMD occurs as a result of mutations in the dystrophin gene which causes a substantial reduction in or absence of the dystrophin protein. Children with DMD have dystrophin deficient muscles and are susceptible to contraction induced injury to muscle that triggers the immune system which exacerbates muscle damage as summarized in a publication co-authored by the Director of the FDA CDER (Rosenberg et al, 2015). Ongoing deterioration in muscle strength affects lower limbs leading to impaired mobility, and also affects upper limbs, leading to further loss of function and self-care ability. The need for wheelchair use can occur in early teenage years for patients on corticosteroids with a mean age of 13, with respiratory, cardiac, cognitive dysfunction also emerging. Patients with a greater number of immune T cells expressing high levels of CD49d have more severe and progressive disease and are non-ambulant by the age of 10 despite being on corticosteroid treatment (Pinto Mariz et al, 2015). With no intervention, the mean age of life is approximately 19 years. The management of the inflammation associated with DMD is currently addressed via the use of corticosteroids, however they are acknowledged as providing insufficient efficacy and are associated with significant side effects. As a consequence, there is an acknowledged high need for new therapeutic approaches for the treatment of inflammation associated with DMD.

Rosenberg AS, Puig M, Nagaraju K, *et al*. Immune-mediated pathology in Duchenne muscular dystrophy. *Sci Transl Med* 2015, 7: 299rv4.

Bushby et al for the DMD Care Consideration Working Group/ *Diagnosis and management of Duchenne muscular dystrophy, part 1* Lancet Neurol. **2010** Jan;9(1):77-93 *and part 2* Lancet Neurol. **2010** Feb;9(2):177-89 .

Pinto-Mariz F, Carvalho LR, Araújo AQC, *et al*. CD49d is a disease progression biomarker and a potential target for immunotherapy in Duchenne muscular dystrophy. *Skeletal Muscle* 2015, 5: 45-55.