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# **Benitec Biopharma Reports Positive Data from Two Subjects Treated with Low-Dose BB-301 in Phase 1b/2a Study Presented at 29th Annual Congress of the World Muscle Society**

*-Subject 1 and Subject 2 experienced durable, clinically meaningful improvements in swallowing at 9-months and 6-months post-BB-301 treatment, respectively, with Subject 2 achieving a Sydney Swallow Questionnaire Score Representative of Clinically Normal Swallowing-*

*-Management plans to host a conference call on October 14 at 8:30 am EDT to discuss the interim results, details below-*

HAYWARD, Calif., Oct. 12, 2024 (GLOBE NEWSWIRE) -- Benitec Biopharma Inc. (NASDAQ: BNTC) ("Benitec" or "Company"), a clinical-stage, gene therapy-focused, biotechnology company developing novel genetic medicines based on its proprietary "Silence and Replace" DNA-directed RNA interference ("ddRNAi") platform, today announces continued durable improvements in swallowing following administration of the low-dose of BB-301 in the study's first two subjects treated in the BB-301 Phase 1b/2a single-arm, open-label, sequential, dose-escalation cohort study (NCT06185673) in Oculopharyngeal Muscular Dystrophy (OPMD). Interim clinical study data were presented today in an oral late-breaking podium presentation at the 29<sup>th</sup> Annual Congress of the World Muscle Society, taking place in Prague, Czech Republic by the study's principal investigator, Professor Milan R. Amin, M.D., Department of Otolaryngology-Head and Neck Surgery, New York University Grossman School of Medicine, Director, New York University Langone Voice Center.

The interim clinical study update presented at the Annual Congress of the World Muscle Society detailed the 9-month (270-day) post-dose results for the first subject and the 6-month (180-day) post-dose results for the second subject, both of whom have been safely treated with BB-301. Key efficacy endpoints presented included videofluoroscopic swallowing study ("VFSS") assessments of Total Pharyngeal Residue ("TPR", i.e., the amount of solid food or liquid material remaining in the pharynx after the first swallow) and the Subject-Reported Outcome Instrument (i.e., the Sydney Swallow Questionnaire or "SSQ"). The post-dose results were compared to the average pre-dose results for each subject as evaluated during the five clinical assessment visits conducted during their enrollment in the Benitec-sponsored OPMD Natural History (NH) Study. The post-dose results for each subject were also compared to the pre-dose result derived from the final pre-dose clinical visit prior to the administration of BB-301. A detailed description of the

interim clinical trial results can be found in the presentation available on the Company website [here](#).

“We are grateful to the subjects and their families for their strong support and continued participation in the BB-301 clinical development program. We are highly encouraged by the significant, clinically meaningful improvements observed for both subjects treated at the low-dose of BB-301, with Subject 2 achieving a clinically normal swallowing profile based on the results of the Sydney Swallow Questionnaire,” said Jerel A. Banks, M.D., Ph.D., Executive Chairman and Chief Executive Officer of Benitec. “The third subject will be treated with the low dose of BB-301 this month, and we are optimistic about the potential for continued benefit in subjects enrolled in the ongoing study. We look forward to enrolling additional subjects at the next, higher doses of BB-301 in 2025.”

### **Summary of Results:**

- Two subjects have received the lowest-dose of gene therapy BB-301 (1.2e13 vg/subject), and there were no Significant Adverse Events.
- Dysphagic symptoms at baseline for Subject 1 (7-years post diagnosis) were more severe than those of Subject 2 (6-years post diagnosis) as assessed by pre-dose SSQ and TPR results, but both Subjects experienced significant levels of clinical benefit per the post-dose SSQ scores and TPR results.
- The SSQ Total Scores and SSQ Sub-Scores correlate strongly with the VFSS TPR results.
- Subject 1 experienced clinically meaningful improvements in post-dose SSQ Total Score and SSQ Sub-Scores at Day 270 driven by corresponding reductions in VFSS TPR values.
- Subject 2 experienced clinically meaningful improvements in post-dose SSQ Total Score and SSQ Sub-Scores at Day 180, with an SSQ Total Score representative of a normal swallowing profile, driven by a corresponding reduction in the frequency of pathologic low-volume sequential swallows.
- These data represent the first reported successful improvements in swallow function using a novel gene therapy for OPMD.

Subjects enrolled in the NH Study and the BB-301 Phase 1b/2a Clinical Study have been shown to be impacted by:

- Excessive accumulation of pharyngeal residue post-swallow
- Pathologic low-volume sequential swallows (i.e., rapid contractions of the pharyngeal muscles during the consumption of low volumes of thin liquids)

### **Subject 1 (270 Days post-BB-301 dose):**

Global inefficiency of swallowing for solid food, thin liquid, and thick liquids drives dysphagia for Subject 1.

Subject 1 displayed continued clinically meaningful reductions (i.e., improvements) in SSQ Total Score (35% reduction) and SSQ Sub-Scores (42% reduction for Thin Liquid, 16% reduction for Solid Food, and 22% reduction for Thick Liquids). Subject 1 displayed correspondingly significant reductions (i.e., improvements) in VFSS TPR (33% reduction for Thin Liquid, 18% reduction for Solid Food, and 30% reduction for Thick Liquids) following the

administration of the low-dose of BB-301 as compared to the average values recorded for Subject 1 during the pre-dose period.

### **Subject 2 (180 Days post-BB-301-dose):**

Pathologic low-volume sequential swallowing for thin liquid drives dysphagia for Subject 2. Pathologic low-volume sequential swallows are experienced by the subject as multiple swallows and are detected during VFSS as a series of rapid contractions of the pharyngeal muscles interrupting the discrete peristaltic contraction pattern typically observed during swallows of low volumes of thin liquids.

Subject 2 displayed clinically meaningful reductions (i.e., improvements) in SSQ Total Score (89% reduction) and the SSQ Sub-Score for the necessity of repeat swallows during consumption (84% reduction) as compared to the average values recorded for Subject 2 during the pre-dose period. The average post-dose SSQ Total Score of 82 is representative of a clinically normal swallowing profile for Subject 2. Subject 2 displayed correspondingly significant reductions (i.e., improvements) in the post-dose frequency of low-volume sequential swallows as evaluated by VFSS (92% reduction) following the administration of the low-dose of BB-301 as compared to the pre-dose values recorded for Subject 2 during the pre-dose period.

All study Subjects are blinded to their SSQ Total Scores and VFSS TPR assessment results, and the Central Reader for the VFSS assessments is blinded to the SSQ Total Scores and SSQ Sub-Scores for all Study Subjects.

### **Company Webcast Information:**

A live webcast of the interim clinical data presentation, including management and Emily Plowman, PhD, CCC-SLP, FASHA – Professor, Department of Otolaryngology – Head and Neck Surgery, The Ohio State University College of Medicine, will be held at 8:30AM EDT on Monday October 14<sup>th</sup>, 2024, and can be accessed [here](#). Investors may also dial in toll-free at 1-877-269-7751 or 1-201-389-0908 (international). The conference ID is 13749637. The event replay will be placed on the News & Events tab on the Investor page of the Benitec website.

### **About OPMD**

OPMD is a rare progressive muscle-wasting disease caused by a mutation in the poly(A)-binding protein nuclear 1 (PABPN1) gene, for which there is currently no effective drug therapy. The disease is characterized by swallowing difficulties (dysphagia), limb weakness and eyelid drooping (ptosis). Dysphagia worsens over time and can lead to chronic choking, regurgitation, aspiration pneumonia, and in severe cases, death. Available clinical and surgical interventions are limited in scope and effectiveness and do not address the underlying progressive muscle weakness.

### **About BB-301**

BB-301 is a novel, modified AAV9 capsid expressing a unique, single bifunctional construct promoting co-expression of both codon-optimized Poly-A Binding Protein Nuclear-1 (PABPN1) and two small inhibitory RNAs (siRNAs) against mutant PABPN1. The two siRNAs are modeled into microRNA backbones to silence expression of faulty mutant PABPN1, while allowing expression of the codon-optimized PABPN1 to replace the mutant

with a functional version of the protein. We believe the silence and replace mechanism of BB-301 is uniquely positioned for the treatment of OPMD by halting mutant expression while providing a functional replacement protein.

#### **About Benitec Biopharma, Inc.**

Benitec Biopharma Inc. (“Benitec” or the “Company”) is a clinical-stage biotechnology company focused on the advancement of novel genetic medicines with headquarters in Hayward, California. The proprietary “Silence and Replace” DNA-directed RNA interference platform combines RNA interference, or RNAi, with gene therapy to create medicines that simultaneously facilitate sustained silencing of disease-causing genes and concomitant delivery of wildtype replacement genes following a single administration of the therapeutic construct. The Company is developing Silence and Replace-based therapeutics for chronic and life-threatening human conditions including Oculopharyngeal Muscular Dystrophy (OPMD). A comprehensive overview of the Company can be found on Benitec’s website at [www.benitec.com](http://www.benitec.com).

#### **Forward Looking Statements**

Except for the historical information set forth herein, the matters set forth in this press release include forward-looking statements, including statements regarding Benitec’s plans to develop and potentially commercialize its product candidates, the timing of completion of pre-clinical and clinical trials, the timing of the availability of data from our clinical trials, the timing and sufficiency of patient enrollment and dosing in clinical trials, the timing of expected regulatory filings, the clinical utility and potential attributes and benefits of ddRNAi and Benitec’s product candidates, the intellectual property position, and other forward-looking statements.

These forward-looking statements are based on the Company’s current expectations and subject to risks and uncertainties that may cause actual results to differ materially, including unanticipated developments in and risks related to: unanticipated delays; further research and development and the results of clinical trials possibly being unsuccessful or insufficient to meet applicable regulatory standards or warrant continued development; the ability to enroll sufficient numbers of subjects in clinical trials; determinations made by the FDA and other governmental authorities; the Company’s ability to protect and enforce its patents and other intellectual property rights; the Company’s dependence on its relationships with its collaboration partners and other third parties; the efficacy or safety of the Company’s products and the products of the Company’s collaboration partners; the acceptance of the Company’s products and the products of the Company’s collaboration partners in the marketplace; market competition; sales, marketing, manufacturing and distribution requirements; greater than expected expenses; expenses relating to litigation or strategic activities; the Company’s ability to satisfy its capital needs through increasing its revenue and obtaining additional financing, given market conditions and other factors, including our capital structure; our ability to continue as a going concern; the length of time over which the Company expects its cash and cash equivalents to be sufficient to execute on its business plan; the impact of local, regional, and national and international economic conditions and events; and other risks detailed from time to time in the Company’s reports filed with the Securities and Exchange Commission. The Company disclaims any intent or obligation to update these forward-looking statements.

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