Paranta Biosciences Limited
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SHAREHOLDER UPDATE

Melbourne, Australia 28 August 2017:

The Company is pleased to provide the following update on progress across its preclinical and clinical development programs, and its upcoming plans. Key highlights include:

- Positive preclinical results in the Cystic Fibrosis (CF) program support the ongoing development of inhaled PB01 for treating CF lung disease. The Company is currently defining the most appropriate pathway to advance the clinical development of PB01 for this indication.
- Following positive preclinical results in the Oncology program, planning has commenced for a Phase 1 clinical study in cancer patients of intravenously administered PB01 to sensitize tumours to platinum-chemotherapies.
- Promising preclinical data in the Nephrology program showing PB01 is effective in protecting against the development of diabetic kidney disease and fibrosis. A patent application has been filed and the Company is expanding its collaborative program in Canada.

<u>CF Program Update</u>

⇒ **Positive safety outcomes for inhaled PB01 in healthy volunteers across three Phase 1 clinical studies.**

⇒ **Encouraging results from a preclinical study in CF mice at Case Western Reserve University (CWRU), US, pave the way for further clinical development.**

PB01 is being developed as a first-in-class, inhaled therapy for the treatment of chronic inflammation associated with CF lung disease. The Company, together with its CF Medical Advisory Board, are encouraged by the positive results from the preclinical work recently completed at CWRU in the US. The CWRU study is supported by a Therapeutics Development Award from Cystic Fibrosis Foundation Therapeutics, Inc.

In this study, inhaled PB01 did not worsen or impair the clearance of *Pseudomonas aeruginosa* lung infection in *Cftr*-knockout (CF) mice. This is a pleasing and important

result as some anti-inflammatory therapies in CF are known to exacerbate lung infections thereby presenting a safety risk to patients. *Pseudomonas aeruginosa* lung infection is a clinically important and common bacterial infection in CF patients, affecting 50% of people with CF. We are encouraged that treatment with inhaled PB01 in these CF mice did not exacerbate the lung infections, further supporting PB01's development as a potential treatment for CF lung disease.

Another positive outcome from the CWRU study is that PB01 modulated key markers of lung inflammation in CF mice, after repeat dosing over 10 days. The Company has now demonstrated the benefit of inhaled PB01 in two different and clinically relevant mouse models of CF lung disease. Both models demonstrate the capacity of inhaled PB01 to reduce lung neutrophil levels in CF mouse models to levels found in healthy lungs (neutrophils are a type of white blood cell implicated in the progression of CF lung disease).

Given the favourable outcome from the CWRU study, the Company's priority is now defining the most appropriate pathway to advance clinical development for the CF program. This is being undertaken with input from our CF Medical Advisory Board, global CF experts and the US Cystic Fibrosis Foundation.

The Company's recent Phase 1 study at Medicines Evaluation Unit in Manchester, UK, was undertaken for the purpose of generating clinical data in a model of acute lung inflammation in healthy participants. The study did not demonstrate an anti-inflammatory effect of PB01 in acute lung inflammation. This study, whilst it is not predictive of inhaled PB01 for treating chronic lung inflammation such as that found in CF patients, nonetheless added to our understanding of PB01 for treating respiratory diseases.

Oncology Program Update

- ⇒ **Effectiveness of PB01 as a platinum-chemotherapy sensitizing agent has been demonstrated in additional mouse models of non-small cell lung cancer (NSCLC).**
- ⇒ **Biomarkers have been identified to assist with selection of patients most likely to benefit from combined platinum-chemotherapy plus PB01 therapy.**
- ⇒ **Planning has commenced for an Australian Phase 1 clinical study in cancer patients.**
- ⇒ **Additionally, PB01 has been shown to be effective in a preclinical model of cancer cachexia (muscle wastage).**

The Company's collaborative research program with the Hudson and Garvan medical research institutes is focused on the use of an injectable form of PB01 for increasing the

response rates of NSCLC tumours to platinum-chemotherapies, whilst reducing unwanted platinum-related toxicities. The collaborative program is supported by a National Health and Medical Research Council Development Grant.

Recent results from the research collaboration have demonstrated the capacity of PB01 to increase the sensitivity of innately resistant tumours to platinum-chemotherapy in several different animal models of NSCLC, including human patient-derived and mouse-derived tumours. Collectively, these results increase confidence that the platinum-sensitising effect of PB01 has potential to translate to a clinical setting. Planning for preclinical studies, to support a future Australian Phase 1 clinical study in cancer patients, has commenced.

In the last shareholder update we noted that recent research suggested PB01 may have broader utility in cancer therapy than previously reported. Accordingly, the Oncology program has been expanded into cancer cachexia, a muscle wasting syndrome. Cancer cachexia affects 50-80% of cancer patients and is attributed to causing 20% of all cancer-related deaths. Currently there are no approved therapies for cancer cachexia with unapproved therapies offering patients only limited, short-term benefit.

An initial proof-of-concept study undertaken at the Baker Institute in Melbourne has shown that PB01 was effective in reversing cancer-induced muscle loss in a well-established mouse model of cancer cachexia. Further studies will be limited to focus on generating new intellectual property.

Nephrology (Kidney Disease) Program

- ⇒ **Promising data showing PB01 is effective in protecting against the development of diabetic kidney disease and fibrosis.**
- ⇒ **PB01 significantly reduced kidney damage, and other markers of diabetes, in a preclinical model of type 1 diabetes undertaken by McMaster University, Canada.**
- ⇒ **A patent application was filed in April 2017 based on these research results.**
- ⇒ **The research program at McMaster University and St Joseph's Healthcare is being expanded with a view to further understanding PB01's potential role in the treatment of chronic kidney disease.**

Paranta commenced a collaborative research project with McMaster University, Canada, in early 2015. The project focused on the use of PB01 to treat kidney damage caused by diabetes. This work has benefitted from the support of the Kidney Foundation of Canada and the Canadian Diabetes Association.

The initial project has generated promising data in diabetic mice treated with PB01 over 12 weeks. Notably, PB01 was shown to be effective in protecting against the development of diabetic kidney disease and fibrosis. Based on these encouraging results, and given the need for safe and effective therapies for diabetic kidney disease, the Company has decided to expand its program with McMaster University and their affiliated clinical research group, St Joseph's Healthcare. Further preclinical studies are in progress or planned, including the evaluation of PB01 in a different model of chronic kidney disease.

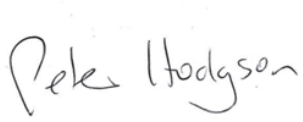
Capital Raise

In the March 2017 update to shareholders we foreshadowed a potential capital raise in late 2017. The Company's spend has been modified particularly with the need to manufacture additional PB01 deferred to 2018 as well as external funding and R&D tax credits helping to defray costs of our programs. Nevertheless with the positive outcomes that we are seeing across a range of programs, a raising is likely in early 2018. Further information on the raising will be provided at the Company's Annual General Meeting.

Annual General Meeting

The date for the Company's 7th Annual General Meeting of shareholders has been scheduled for 10:00 am Tuesday 14 November 2017. The notice of meeting and a copy of the Company's Annual Report will be emailed to shareholders in October.

Yours sincerely



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Chairman

Ross Barrow
Chief Executive Officer