Prima BioMed

Annual General Meeting
CEO Presentation

November 25, 2016

ASX:PRR; NASDAQ:PBMD

Marc Voigt

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2016 Highlights

Corporate

- Sound financial management
- Sydys partnering of CVac™
- Significant analyst coverage
- JP Morgan, ASCO, ESMO,SITC conferences
- 3 Patents granted

Clinical

- First Chinese manufactured biologic dosed in Europe
- TACTI-mel initiated and first patients dosed – encouraging safety data
- AIPAC initiated -first safety, PK and IM data and dose escalation
- AIPAC first and second cohort recruitment complete

Collaborations

- Ongoing clinical development of our partners GSK and Novartis
- MTA with Yamaguchi /NEC for IMP321
- INSIGHT Trial Announced
- WuXi MoU

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Key Financials

Ticker	ASX: PRR; NASDAQ: PBMD
Market Cap	AUD $78.72M (23 Nov 16)
Shares on Issue **Options on Issue**	2,071,537,809 (23 Nov 16) 77,378,693
Net Operating cash outflow FY 16	AUD $11.3M
G&A **Expenses FY 16**	AUD $6.98M
R&D and Intellectual Property **Expenses FY16**	AUD $7.06M
Cash in bank	AUD $18.2M (3Q,2016)

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PROGRAM UPDATE

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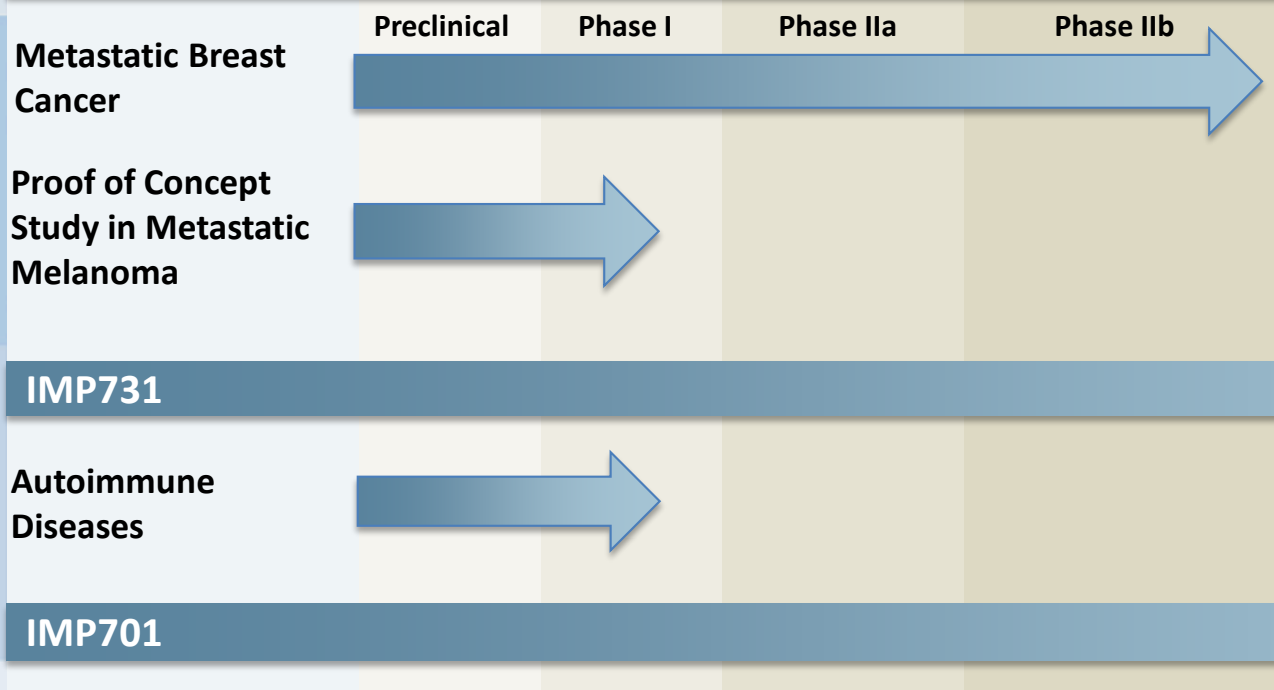
Pipeline

LAG-3 Technologies

IMP321



WW Prima (ex China: Eddingpharm)

Phase IIb trial began Oct 2015
MOA: APC activator following first-line chemotherapy

WW Prima (ex China: Eddingpharm)

Phase I trial began Jan 2016
MOA: APC activator + PD-1 checkpoint inhibitor

IMP731

Autoimmune Diseases

WW GSK

Phase I trial began Jan 2015
MOA: LAG-3 depleting antibody

IMP701

Cancer

WW Novartis

Phase I trial began Aug 2015
MOA: Blocking LAG-3 antibody

Autologous Dendritic Cell Therapy

CVac™

Ovarian Cancer

WW Sydys Corporation (ex Israel: Neopharm)

Phase IIb completed; New trials to be initiated

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IMP321 – one product, many applications

- **Chemoimmunotherapy**- AIPAC
- **I-O Combination Therapy** – TACTI-mel
- **Direct Injection** - INSIGHT
- **Cancer Vaccine Therapy** – Yamaguchi/NEC

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AIPAC- Active IMmunotherapy with PAClitaxel

Chemoimmunotherapy – adding an antigen presenting cell (APC) activator after chemotherapy treatment to boost immune responses.

- ✓ Encouraging scientific advice from EMA July 2015
- ✓ Initiated Dec 2015
- ✓ First patient dosed Feb 2016
- ✓ First safety, PK and immune monitoring data June 2016 – dose escalation
- ✓ Second safety cohort recruitment completed
- ✓ First safety run in phase and IM data expected Dec 2016

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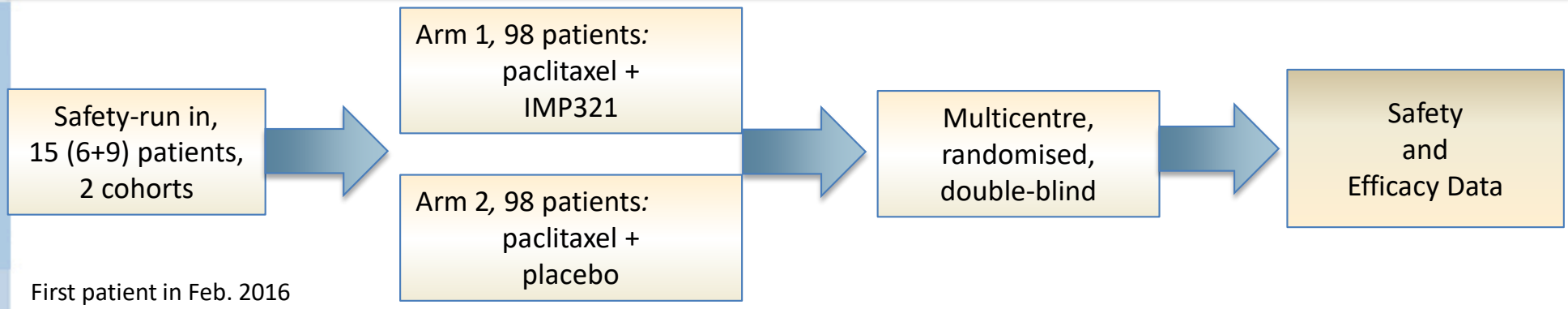
IMP321 – AIPAC

AIPAC trial: Active Immunotherapy PAClitaxel

Phase IIb chemo-immunotherapy in metastatic breast cancer in different EU countries



First patient in Feb. 2016

Overview	
Design	Phase IIb, randomised, placebo controlled, double blinded, multinational
Primary Objective	Run-In: Recommended phase II dose Randomised: paclitaxel + IMP321 vs. paclitaxel + placebo
Other Objectives	Safety, efficacy
Patient Population	Patients with advanced metastatic breast cancer indicated to receive first line chemotherapy with weekly paclitaxel
Treatment	Safety run-in: IMP321 + Paclitaxel Arm 1: Paclitaxel + Placebo Arm 2: Paclitaxel + IMP321
Current Countries	NL, BL, HUN (11 sites active as of Oct 16) , stage II will be conducted in more countries and sites

Status report

- Initial safety data of the first cohort of patients confirmed the safety and tolerability of IMP321 with no dose limiting toxicities, June 2016
- Recruiting in the safety-run in is completed
- Start of randomised phase expected early 2017

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TACTI-mel Two Active Immunotherapies in melanoma

Combination therapy – combining an APC activator and a checkpoint inhibitor to kick start the immune response after removing the brake.

- ✓ Initiated Jan 2016
- ✓ Being conducted at 6 sites in Australia
- ✓ First patient dosed May 2016
- ✓ First safety and immune monitoring data Dec 2016 – then dose escalation

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IMP321 – TACTI-mel

TACTI-mel trial: Two ACTive Immunotherapeutics in melanoma

Phase I study in immuno-immuno combination in unresectable or metastatic melanoma in Australia

up to 24 patients, 3 cohorts, max. 8 patients each → IMP321 + anti-PD-1 (Keytruda®) → Multicenter, open label, dose escalation → Safety and tolerability

First patient in May 2016

Overview	
Design	Phase I, multi-centre, open-label, dose escalation
Primary Objective	Safety, tolerability and recommended dose finding for phase II with pembrolizumab + IMP321 in unresectable or metastic melanoma
Other Objectives	Pharmakokinetic and pharmakodynamic of IMP321, objective response rate, time to next treatment, progress-free survival
Patient Population	Patients with asymptomatic or suboptimal response after three cycles of pembrolizumab
Treatment	Up to 24 patients 3 cohorts: 1/6/30 mg IMP321; s.c. q2w + pembrolizumab; starting with the 5th cycle of pembrolizumab

Status report

- 6 clinical sites are approved and all are activated
- Dose escalation decision of the interim data of the first cohort will be expected at the end of this/beginning of next year

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Partner IMP321 trials…

- Yamaguchi/NEC have commenced clinical research using IMP321 as an adjuvant together with their own peptides and adjuvant in solid tumours.
- INSIGHT trial – German investigator sponsored trial in solid tumours testing direct intra-tumoral injection – currently waiting CA and EC approvals

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IMP731 Update

- GSK2831781, GSK's investigational product derived from **IMP731** antibody, in ongoing clinical trial in the context of autoimmune diseases
- To our knowledge, no other company has yet generated an antibody capable of depleting LAG-3 expressing activated T cells
- Up to £64m in total upfront and milestones + royalties
- A phase I study comprising two cohorts has completed in healthy subjects (Part A) and has commenced in patients with psoriasis (Part B)
- Pending results of the phase I study and any future clinical development plans, regulatory filing by GSK potentially between 2021-2025*

*GSK 2015 investor presentation: Slide 108

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IMP701 update

- Phase I milestone received August 2015
- LAG-525 derived from **IMP701,** in ongoing clinical trials in context of melanoma, lung and renal cancer
- Works by blocking LAG-3-mediated immune down-regulation (removes brake)
- In June 2016, Novartis amended their trial to increase enrollment from 240 to 416 patients and added a third treatment group to the trial that involves treating Japanese pts.
- Estimated study completion date is October 2018

CVac™

- May 2016 - Sale and Licensing Agreement with Sydys to advance **CVac™** Program
- Prima received a 9.9% equity stake in Sydys for the assets being transferred
- In the event of successful commercialisation of CVac, Prima could receive milestone payments and low single digit royalties on sales
- Provides opportunity for second chance for CVac

The Market Opportunity for IMP321

Activator and Inhibitor

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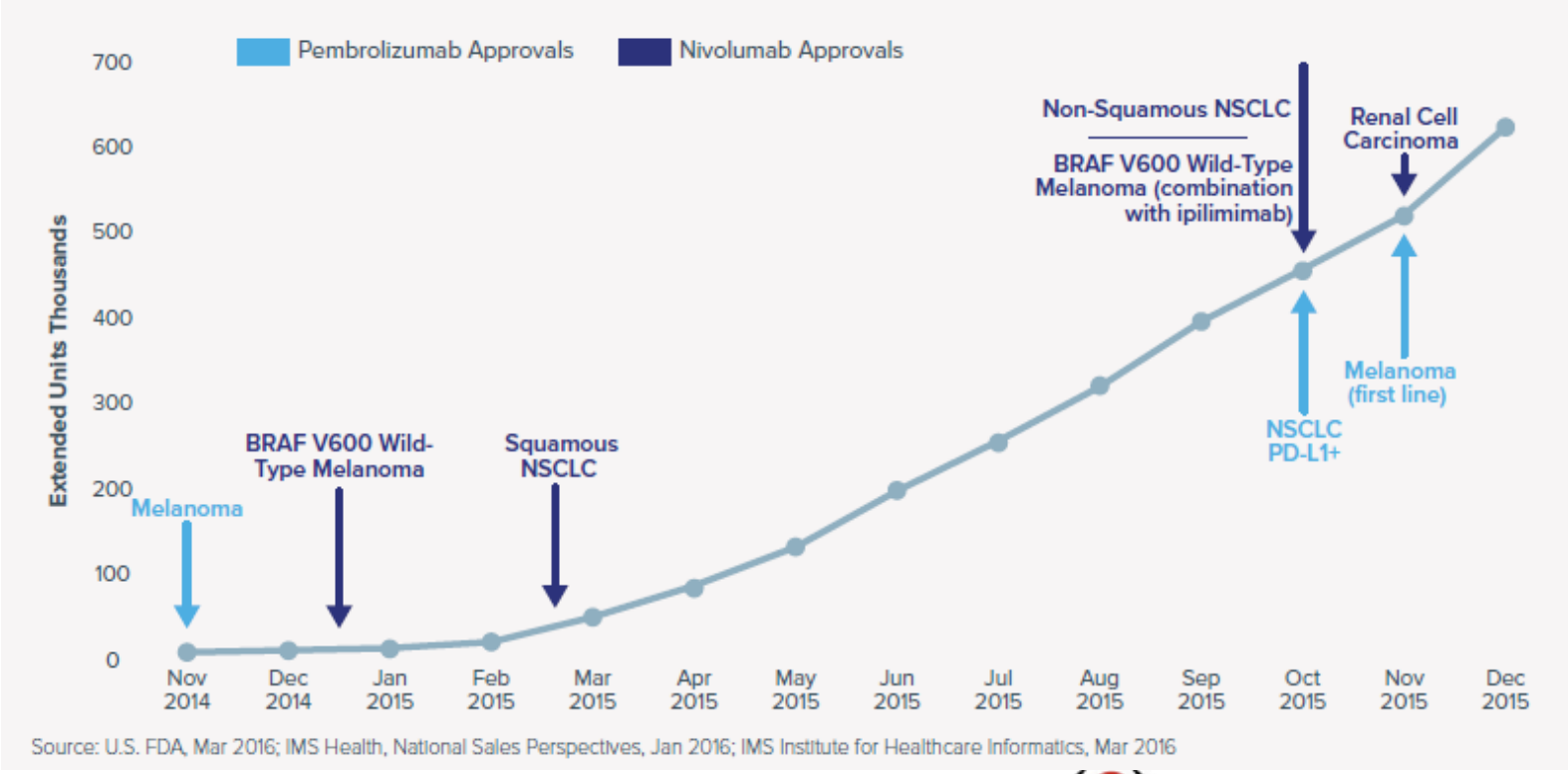
The I-O market is hot

The global cancer immunotherapy market is expected to reach

- **US$35 Billion by 2023***

World-wide **Q2 2016 sales** for the following drugs were

- Yervoy® (US$241m), Opdivo® (US$840m), Keytruda® (US$314m), Tecentriq® (19m CHF)



*Citi Research: Immunotherapy the beginning of the end. Andrew Baum 22 May 2013

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The LAG-3 landscape - beyond IMP321

- **Prima** together with its partners, is the **global leader in developing LAG-3 related products (IMP321, IMP701 and IMP731)**
- Increasing global R&D of LAG-3 related product candidates – we are in the right space!

clinical trials	pre-clinical trials
Novartis (Prima's partner)	Agenus
GSK (Prima's partner)	Tesaro
BMS	Sanofi/Regeneron
Merck	Macrogenics
Boehringer Ingelheim	Peregrine Pharmaceuticals
	RXi Pharmaceuticals Corporation/MirImmune, Inc

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IP Portfolio

- 12 patent families providing broad protection across all LAG-3 assets
- Comprises 89 pending or granted applications excluding those licensed to GSK and Novartis
- Protection for methods of use of IMP321 may extend to 2036 excluding SPC or term adjustments
- Regularly review our R&D activities to file new improvements wherever possible

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Opportunity in Metastatic Breast Cancer

- **30%** of breast cancer patients have **metastatic disease** (at diagnosis or more frequently through recurrence)[1] and 2 out of 3 are HR positive[2]
- Metastatic breast cancer (MBC) patients have a **median survival** of **2-4 years**[3]
- **5-year relative survival rate** is approximately **22%**[4,5]
- MBC currently remains almost **incurable**[6]
- In the U.S., **annual indirect cost to society** attributable to MBC for women under 65 was estimated to be **over US$ 572 million** including[7]:

US$ 270 million	Premature deaths
US$ 253 million	Lost productivity
US$ 50 million	Caregiving

The global breast cancer treatment market will reach **US$17.2 billion** by 2021.[8]

1. O'Shaughnessy J. Extending survival with chemotherapy in metastatic breast cancer. The Oncologist. 2005
2. American Cancer Society. (2014). Hormone therapy for breast cancer. Breast Cancer. Accessed on September 30, 2014 from http://www.cancer.org/cancer/breastcancer/detailedguide/breast-cancer-treating-hormone-therapy.
3. Mosher, C. E., Johnson, C., Dickler, M., Norton, L., Massie, M. J., DuHamel, K. (2013). Living with metastatic breast cancer: A qualitative analysis of physical, psychological, and social sequelae. Breast J, 19, 3, 285-92.
4. http://www.cancer.org/cancer/breastcancer/detailedguide/breast-cancer-survival-by-stage
5. Madell, R. Metastatic breast cancer: Life expectancy and prognosis. Healthline. 2014 at http://www.healthline.com/health/breast-cancer/metastatic-prognosisF# Overview1.
6. American Cancer Society. (2013). Detailed Guide: Breast cancer. American Cancer Society. Accessed on September 6, 2014 at http://www.cancer.org/acs/groups/cid/documents/webcontent/003090-pdf.pdf.
7. Sorensen , S. V. et al. (2012). Incidence-Based Cost-Of-Illness model for metastatic breast cancer in the United States. International Journal of Technology Assessment in Health Care, 28, 1,http://dx.doi.org.proxy1.athensams.net/10.1017/S026646231100064X.
8. http://www.researchandmarkets.com/research/mg3gms/breast_cancer

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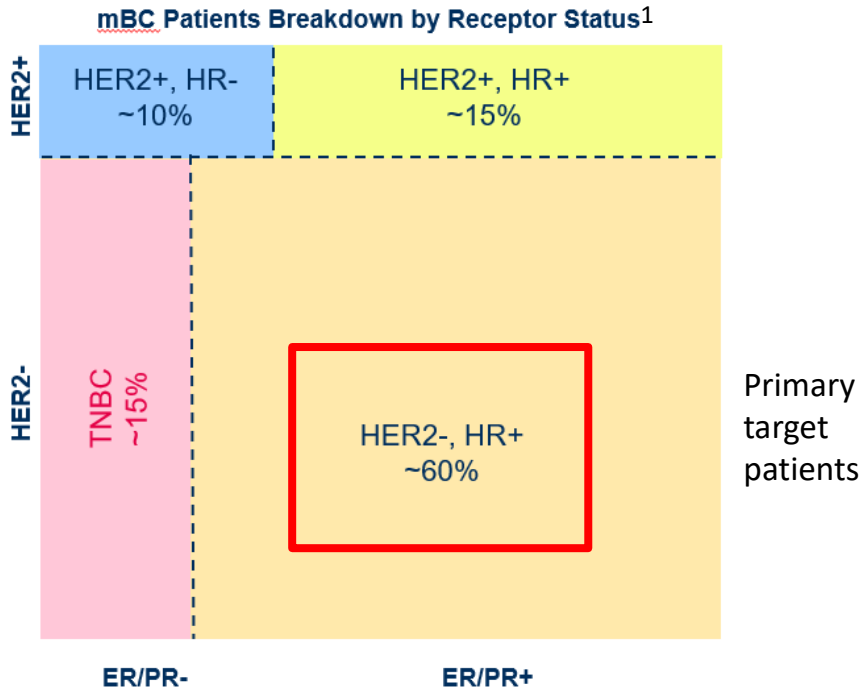
Metastatic Breast Cancer Market

- **HER2^{-} HR^{+}** patient group is our primary target
- Potential label extension is feasible
- AIPAC: study in hormone receptor-positive (ER^{+}PR^{+}) metastatic breast carcinoma patients with **IMP321 + paclitaxel**



- Global incidence of new cases of all breast cancer is estimated at 1,671,149 cases/yr of which 20% will potentially become metastatic (Globocan 2012)

1. Decision Resources 2010

Commercial Development Strategy

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Work in Progress

- Active business development
- Manufacturing discussions ongoing to secure future clinical and commercial supply of IMP321
- International Nonproprietary Name (INN) filed – to be announced 2017
- Active research
- Opportunity for IMP321 approval by EMA – subject to Ph IIb positive results

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UPCOMING MILESTONES AND SUMMARY

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Upcoming Milestones

Clinical

- Dec 2016: Safety-run-in results of AIPAC: immuno-monitoring data and safety data; first TACTI-mel data
- Q1 2017 Start of randomised phase for AIPAC
- Q1 2017: TACTI-mel: Dose escalation
- Throughout 2017: TACTI-mel results from different cohorts
- Mid 2017 Efficacy data from AIPAC Safety Run-in (15pts)
- 2017: First results of INSIGHT study

Other

- Potential milestones from development partners in the coming years
- Continued expansion of IP
- R&D for new products
- Updates regarding LAG-3 landscape
- Ongoing business development

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Summary

- We have multiple ongoing clinical developments with several value inflection points
- We have strong partners with demonstrated commitment to continued development in clinical phases
- We have a solid cash position and sound financial management

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NASDAQ: PBMD, ASX: PRR

Thank you!