

ASX Release 26 November 2020

**ASX code: PIQ** 

LABORATORIES LTD

#### **AGM Investor Presentation**

Proteomics International Laboratories Ltd (Proteomics International; ASX: PIQ) is pleased to release a copy of the AGM Investor Presentation to be provided by Dr Richard Lipscombe to shareholders at the Annual General Meeting to be held in Perth commencing at 9:30 am AWST today.

Authorised by Dr Richard Lipscombe (Managing Director) on behalf of the Board of PIQ.

**ENDS** 

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# Proteomics International

LABORATORIES LTD

# **AGM Presentation**

26<sup>th</sup> November 2020

BUILDING A GLOBAL DIAGNOSTICS BUSINESS



## Disclaimer

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# **Corporate Overview**

Proteomics International Laboratories Ltd (ASX: PIQ) is a medical technology company at the forefront of predictive diagnostics and bioanalytical services

#### **DIAGNOSTICS**

#### **PromarkerD**

- Predictive test for early identification of diabetic kidney disease (DKD)
- Patented, cost-effective, easy to use technology
- Additional tests in the pipeline Endometriosis, Gastro, Oxidative Stress,
   Oesophageal cancer, COVID-19, Asthma & Lung Disease

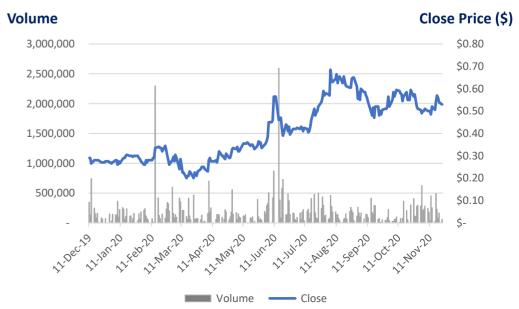
#### **BIOANALYTICAL SERVICES**

- Strong demand from industry for these specialised analytics
- Year on year revenue growth
- Enhanced capabilities with >\$4m invested in cutting-edge facility
- Revenue offsets the cash burn from R&D and product development

#### **FINANCIAL & CORPORATE**

- Raised \$6m in heavily oversubscribed placement (October 2020)
  - Implementing expansion strategies to accelerate growth

CORPORATE SNAPSHOT – 23/11/2020	
ASX code	PIQ
Share Price	\$0.53
Shares on issue (+ 5.6m options)	104.9m
Market Capitalisation	\$56m
Cash	\$8+m
Revenue & other income – FY20	\$3.0m
Directors Shareholding	22%



# 22%

# Board & Management

DIRECTORS HOLD 22%



Terry Sweet FAICD, Chairman

Director of several listed companies over the past 30 years in both executive and non-executive capacities. Companies include XRF Scientific Ltd, where he was Managing Director for 4 years, Western Biotechnology Ltd, Heartlink Ltd, and Scientific Services Ltd.



**Richard Lipscombe** PhD (London), MA (Oxon), Founder & Managing Director Successfully managed the Company since listing in April 2015. 30 years experience in research and development globally in academic and commercial entities. Technical expertise in chemistry, immunology, & biomarker discovery.



Roger Moore R (Denmark), BPharm (U.Syd), Non-Executive Director International pharmaceutical industry experience spanning 40 years, including almost 30 years as President of Novo Nordisk Japan. From 2000, he was appointed Novo Nordisk's Senior Vice President, Japan & Oceania Region. He has also served as a member of the Senior Management Board, Novo Nordisk A/S.



Paul House GAICD, BCommerce (UWA), Non-Executive Director

Over 25 years with multi-national corporations, CEO of Imdex (ASX:IMD), recently serving as MD of SGS India for 8 years. Previously held CFO and COO roles, and was Senior Manager at a leading global management consultancy firm.



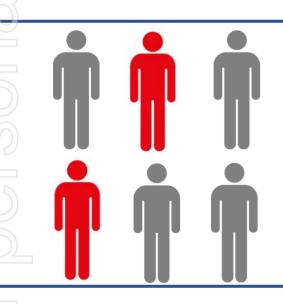
**Chuck Morrison** MBA (Boston), BSc (Boston), Business Development Over 35 years in life sciences, biotechnology, and diagnostic industries including DuPont and PerkinElmer.



# Promarker – Platform Technology

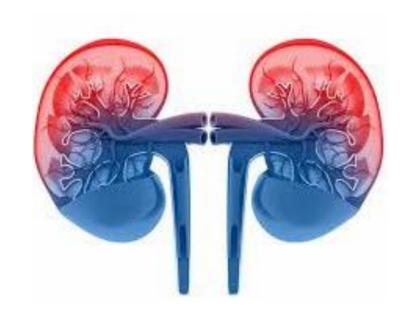


Promarker<sup>TM</sup> is a platform technology that can identify unique protein biomarkers 'fingerprints'



The platform identifies and links the unique protein biomarkers to specific diseases, enabling Proteomics International to formulate commercial diagnostic tests

# PromarkerD



PREDICTIVE TEST FOR DIABETIC KIDNEY DISEASE



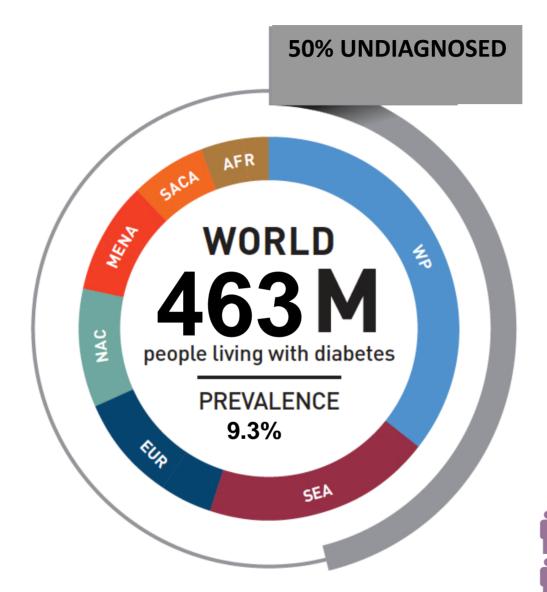
# **Building a Global Diagnostics Business**

# PromarkerD is <u>revenue ready</u> and Proteomics International is currently in discussions to bring the test to markets globally

<b>Enormous Market</b>	✓	463m adults have diabetes globally - 1 in 3 currently have DKD
High Statistical Performance	<b>√</b>	Peer reviewed publications - Analytical & Clinical validity evidence
Simple Technology Platform PromarkerD Immunoassay ready	✓	Clinical pathology laboratories can easily introduce the PromarkerD immunoassay as an IVD kit or LDT
Regulatory Approval in Europe	✓	CE Mark registration received for the PromarkerD Immunoassay
Big Pharma Interested	✓	Collaboration with Janssen ongoing - global multi-centre clinical study
Therapeutic Treatments Available	✓	SGLT2 inhibitor class drugs used for type 2 diabetes recently approved as a new treatment of diabetic kidney disease
Reimbursement		Engaged industry leading consultant to ensure payment coverage in the USA & obtain a unique US reimbursement code
Regulatory Approvals Globally		Engaging with partners and national regulators

#### MARKET SIZE?

- Global IVD market worth US\$67 billion in 2019, projected to reach \$91 billion by 2027
- Proteomics market
  valued at US\$24 billion
  in 2017, expected to
  reach \$72 billion by 2025
  at CAGR of 14.5%
- Both markets driven by developments in personalized medicine and identification of biomarkers for disease diagnosis



Targeting Type 2 Diabetes (~90% of diabetics)

Nth America & Caribbean

Europe

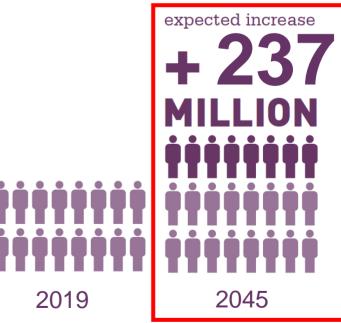
South-East Asia

**Western Pacific** 

**Africa** 

Sth/Ctrl America

Middle East & North Africa





# PromarkerD - a Major Opportunity

#### THE PROBLEM

- ▶ 463 million people have diabetes
- ▶ 1 in 3 diabetic adults currently have chronic kidney disease (CKD)
- ▶ There are no early symptoms of diabetic kidney disease Kidney function can fall below 15-20% with no symptoms
- ▶ The current standard-of-care tests cannot predict the onset of diabetic kidney disease
- ▶ Diabetic kidney disease leads to end stage renal disease (ESRD) which requires dialysis (US\$72,000 p.a.) or kidney transplant
- ► Total **cost** of diabetic kidney disease = **US\$50 billion** per year in USA alone

#### THE SOLUTION

PromarkerD: A predictive test for diabetic kidney disease

- PromarkerD can predict the onset of disease before clinical symptoms appear
- Doctors can then prescribe an early therapeutic treatment to slow or stop the onset of disease





## PromarkerD Platforms

#### PREDICTIVE TEST for DIABETIC KIDNEY DISEASE

PromarkerD assay can be readily ported to different pathology lab platforms



**Immunoassay Kit** 



**Laboratory Developed Test - LDT** 

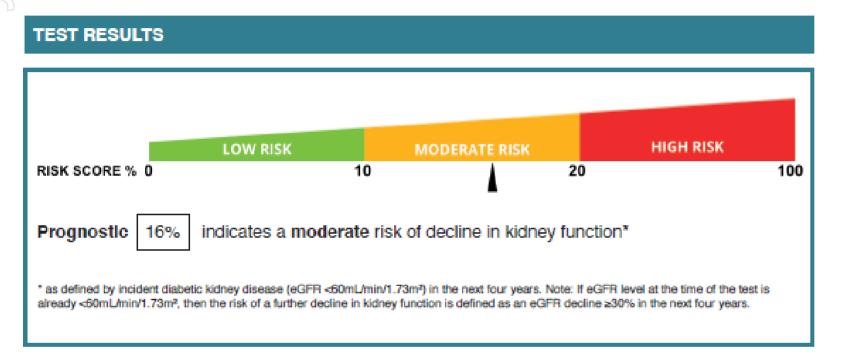


**Automated Immunoassay** 

- Cost-effective, easy-to-use technology platforms
- Regulatory approval European CE Mark registered (allows entrance into multiple markets globally)
- In commercial discussions with pathology laboratories, diagnostics manufacturers, and pharmaceutical companies



## PromarkerD in the Clinic



#### **Result Interpretation**

Low Risk	Standard diabetes management; Status tested annually.
Moderate Risk	More frequent monitoring; Optimisation of lifestyle factors; Review of glycemic targets and management; Review of non-glycemic risk factors and their management including blood pressure and lipids; Avoidance of potentially nephrotoxic drugs; Utilisation of therapeutic drugs with evidence of renoprotection; Status tested every 3-6 months.
High Risk	Very close monitoring; Intensive management strategies based on those for 'Moderate risk' above with optimisation of treatments for diabetes and other risk factors. Status tested every 3 months.

Interpretation of Risk Scores (based on recommendations from the ADA DKD Consensus report)

# PREDICTIVE TEST for DIABETIC KIDNEY DISEASE

PromarkerD patient reports use a traffic light scoring system for optimal performance

A simple blood test that measures three plasma proteins combined with three clinical factors (age, cholesterol, eGFR)

In published clinical studies
PromarkerD predicted 86% of
otherwise healthy diabetics who
went on to develop kidney
disease within 4 years



# PromarkerD - Janssen Collaboration

Proteomics International and Janssen are studying the performance of PromarkerD in predicting decline in kidney function and treatment response in patients from a Janssen completed clinical trial

#### **STAGE 1 STUDY**

#### Global multi-centre study of over 3,000 people (at baseline)

- PromarkerD assessed for predicting disease outcomes in patients from the completed CANVAS clinical trial (CANagliflozin CardioVascular Assessment Study)
- PromarkerD independently validated for predicting DKD
- PromarkerD predicted DKD outcomes of the 4 year trial
- Patients predicted by PromarkerD to be at high-risk of DKD were 13.5 times more likely than the low-risk group to develop the disease, with the results showing high statistical significance (P =  $1.3x10^{-104}$ )
- Results co-presented at the 80<sup>th</sup> Scientific Sessions of the American Diabetes Association (June) & published in international journal (Oct)
- PromarkerD disease modelling ongoing
- Statistical analysis continuing to assess PromarkerD for predicting other kidney decline outcomes and cardiovascular disease (CVD)

#### **STAGE 2 STUDY**

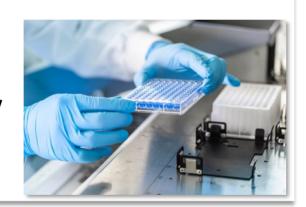
- Global multi-centre study of over 3,000 people (at trial end)
- Janssen elected to expand the collaboration in March 2020 and further to extend the agreement until November 2021
- Stage 2 study to determine if PromarkerD can help assess the effectiveness of canagliflozin as a treatment for DKD
- PromarkerD scores measured using the immunoassay test
- PromarkerD as a potential Complementary Diagnostic (CDx)
- The PromarkerD test could be used:
  - to capture at risk patients up to 4 years earlier
  - determine which patients are prescribed higher cost therapies
  - monitor a patient's response to treatment (potentially lifetime) and the ongoing risk of developing DKD
- PromarkerD vs drug treatment modelling ongoing
- Laboratory measurements completed & statistical analysis commenced: Results due early 2021



## PromarkerD - Route To Market

#### LABORATORY DEVELOPED TEST (LDT)

- Immunoassay or Mass spectrometry
- Tests run via certified laboratories
- The LDT permits fast
  adoption of a new test in
  advanced markets
  - Fast regulatory pathway
    - Builds market demand



#### IN VITRO DIAGNOSTIC TEST (IVD)

- Immunoassay kit or automated machine platform
  - both platforms standard to pathology laboratories
- Assay validated
- CE Mark approved
  - Roll-out commenced



#### **Example of out-licensing model for a Pathology Laboratory**

- PIQ licences test to be run in certified lab via Immunoassay (e.g. US) or Kit (e.g. EU)
- PIQ facilitates the production and delivery of reagents to laboratory
- Lab conducts tests using reagents and sends results (raw data) to the PromarkerD hub (server)
- PromarkerD algorithm calculates risk score (Low, Moderate, High) and returns report to lab
- Lab pays PIQ a royalty (5-15%) per test



# PromarkerD - Market Opportunity

#### Market assumptions:

year per patient on
average [Standard of care: Highrisk patients are tested every 3-6

months; Low-risk every 2 years].

- Test price of US\$55-\$150
  [\$55 is based on use of existing
  CPT codes for similar analytes to
  the PromarkerD panel; \$150 is
  based on stakeholder engagement
  responses in a market access study
  conducted by independent
  consultant].
- Standard industry royalty rates range from 5-15%

#### **Proteomics International patent portfolio and Market size**

Country	Patent/ Application No.	Status	Diabetes Prevalence 1
Australia <sup>2</sup>	2011305050	Granted	1,288,300
Brazil	BR1120130067640	Granting	16,780,800
Canada	2811654	Granted	2,793,500
China	ZL201180053583.9	Granted	116,446,900
Europe <sup>2,3</sup>	3151012	Granted	59,322,100
<b>Hong Kong</b>	18115912.3	Pending	723,400
India	3012/DELNP/2013	Pending	77,005,600
Indonesia	W00 2013 01585	Granted	10,681,400
Japan	2013-528474	Granted	7,390,500
Russia	2596486	Granted	8,288,500
Singapore	188527	Granted	640,400
USA <sup>2,4</sup>	US 9,146,243	Granted	30,987,900
			332,349,300 Total

<sup>&</sup>lt;sup>1</sup> International Diabetes Federation (IDF) Atlas 9th Edition 2019 [Age group 20-79 years; Total = Diagnosed (48.7%) + Undiagnosed (51.3%)].

<sup>&</sup>lt;sup>2</sup> Australia, Europe, USA patent extended to cover use of the test for any form of kidney disease (NB Further studies are required to prove efficacy of PromarkerD for applications beyond DKD)

<sup>&</sup>lt;sup>3</sup> Covers France, Germany, Italy, Spain, Turkey, and the United Kingdom, which cumulatively have 29.6 million adults with diabetes.

<sup>&</sup>lt;sup>4</sup> USA patent further extended to cover method for identifying drugs for abnormal kidney function using one of the PromarkerD biomarkers (CD5L).



# PromarkerD - Recent Licence Agreements

#### **ITALY**

- First licence agreement for high throughput immunoassay October 2020
  - 3.7m people in Italy have type 2 diabetes (1 in 12)
  - Initial 2 year agreement with innovative Italian distributor Medical Horizons SRL
  - KOL's engaged to drive awareness and understanding of PromarkerD's benefits
  - Test registered for use with Italian Ministry of Health
  - Sales expected early CY21
  - Terms and pricing in line with company estimates

#### **ISRAEL**

- ➢ First licence agreement for high throughput immunoassay in the Middle East − November 2020
  - 1.1m people in Israel have type 2 diabetes (1 in 8)
  - Israel is recognised as a global leader in the lifescience industry and renowned for its early adoption of cutting-edge medical technologies.
  - Initial 2 year agreement with experienced and well known healthcare distributor, Zotal Ltd
  - KOL's being engaged to drive awareness and understanding of PromarkerD's benefits
  - Test is being registered with Israeli Department of Medical Devices at the Ministry of Health (~6 months)
  - Terms and pricing in line with company estimates

Proteomics International is actively seeking to enter into further licence agreements across its primary target markets of Europe, the US and Asia

# Diagnostics Pipeline

# The Promarker<sup>TM</sup> research pipeline and typical timeline is:

- Ethics & gov approval (3 months)
- Discovery (3-6 months),
- Proof of concept (6 months)
- Clinical studies (12 months)

#### **Further Global Potential in New Markets**

- ▶ Proteomics endeavours to leverage its <u>Promarker<sup>TM</sup> Platform</u> to develop and commercialise a suite of diagnostic tests
- ▶ Potential for faster market adoption for a new diagnostic test, post a successful PromarkerD commercialisation
- Enormous markets and revenue potential

#### DIAGNOSTICS RESEARCH AND DEVELOPMENT - THE PROMARKER™ PIPELINE





# Diagnostics in Development: Endometriosis

#### What Is Endometriosis?

- ▶ A debilitating condition in which tissue that normally lines the uterus grows outside the uterus (on the ovaries, fallopian tubes or the intestines)
- ▶ The most common symptoms are chronic pain and menstrual irregularities
- Diagnosis typically takes 7 to 12 years due to the lack of a diagnostic tool beyond invasive surgery = Significant unmet medical need
- ► Affects 1 in 9 women and costs Australia over AU\$10 billion a year Global opportunity significantly higher

#### **Promarker<sup>™</sup> for Endometriosis**

- Newly identified biomarkers via the Promarker<sup>™</sup> platform provide breakthrough in the effort to create a world-first test standard blood sample test for endometriosis
- Proof of concept study performed on 54 women returned statistically significant results
- Patent filed for new invention
- Proteomics is in advanced discussions to access a large cohort for its clinical validation study



# **Analytical Services**

#### Proteomics International state-of-the-art biomarker analysis facilities

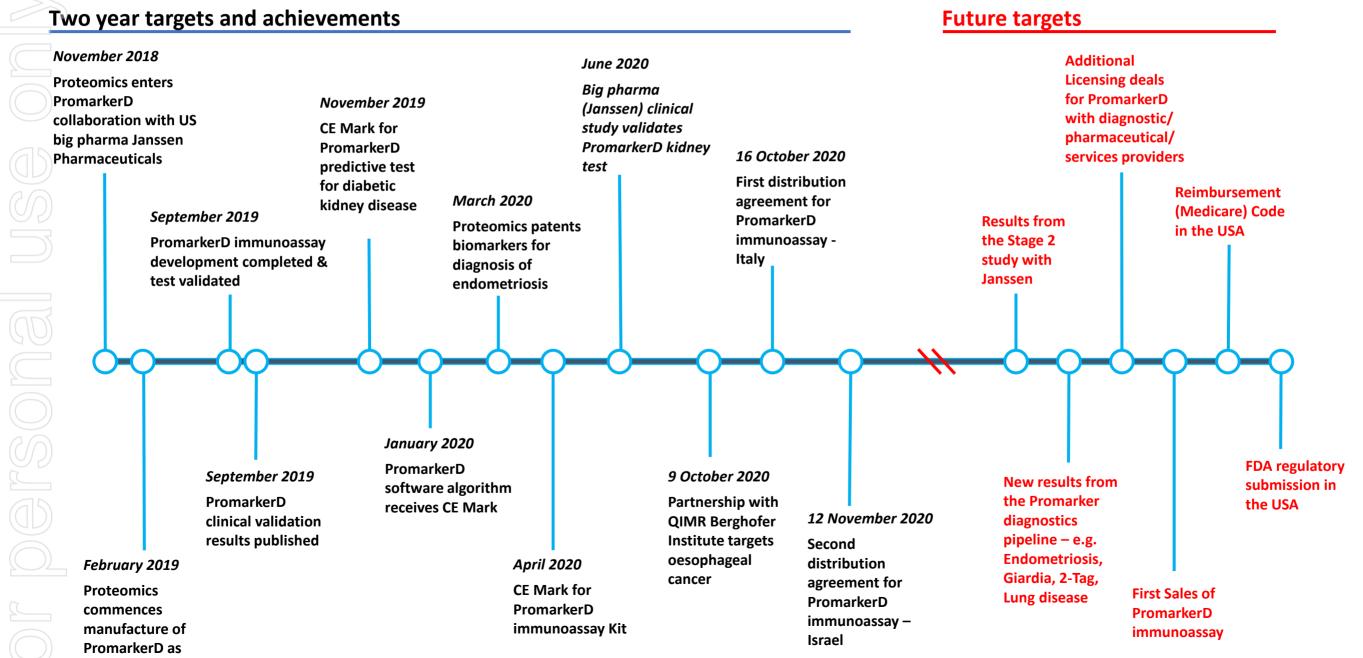


- World leading facility in Western Australia Public Private Partnership co-invested >\$4m including from Federal and State Government agencies
- Best in class Quality Control testing
- Biosimilars & biologics Assisting pharmaceutical companies develop generic drugs
- Food quality (e.g. milk)
- Pharmacokinetic (PK) testing for clinical trials
- World's first company to receive ISO 17025
  Laboratory Accreditation for proteomics services
  (protein testing)
- YoY Revenue growth



# Promarker™ Timeline & Upcoming Milestones

immunoassay (IVD)





# PIQ: Value Inflection Points 2021

#### **EXCEPTIONAL GLOBAL OPPORTUNITY**

- ✓ Cutting-edge technology & proven in-house diagnostics platform
- ✓ PromarkerD test de-risked, patented and rolling-out in easy-to-use, low cost format
- ✓ Scalable licensing model with high margins and accessible to diverse range of diagnostic providers
- ✓ Deepening pipeline of potential globally significant tests

#### **ANTICIPATED SHARE PRICE CATALYSTS 2021**

#### **PromarkerD**

- Licencing deals in major territories: diagnostics, pharmaceuticals, or service providers
- > Results from Janssen studies Stage 2 (drug treatment) and Stage 1 (other disease prediction)
- First commercial sales of PromarkerD immunoassay
- Reimbursement (Medicare) code in the USA
- Regulatory approvals: ISO 13485 (manufacturing), international jurisdictions

#### **Analytical services**

Major contracts for QC testing, biosimilars, PK testing, or biomarker discovery

#### **Diagnostic test development**

Novel tests established for endometriosis, gastro infection (Giardia), oesophageal cancer, oxidative stress, lung disease





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# Appendices: Peer Comparison

		Stock Code	Company Focus	Market Capitalisation	Share Price	FY20 Revenue	FY20 Net Profit/Loss	Addressable Market(s) US\$Bn
RENALITIX AI	Renalytix AI	RENX.LSE RNLX.US	DKD test based on AI and a combination of predictive blood-based biomarkers, genetic factors and electronic health records. Expensive (US\$950 per test), non-mass market.	£327m + US\$72m (~A\$692m)	455p & US\$11.63	N/A	For FY19 £6.9m (A\$12.6m) loss	US\$9.5Bn
volpara® healthtechnologies	Volpara Health Technologies	VHT.ASX	SAAS Diagnostic technology that utilises AI to improve the early detection of breast cancer.	A\$335m	A\$1.355	NZ\$16.5m	NZ\$20.8m loss	US\$750m
Genetic Signatures	Genetic Signatures	GSS.ASX	Specialist molecular diagnostics (MDx) for the routine detection of infectious diseases. High volume and rapid tests. COVID-19 Focus	A\$250m	A\$1.745	A\$11.3m	A\$2.0m loss	US\$8.4Bn
atomo	Atomo Diagnostics	AT1.ASX	Disposable rapid tests for COVID-19 and HIV.	A\$185m	A\$0.33	A\$5.4m	A\$2.4m loss	US\$4.57Bn
Proteomics International LABORATORIES LTD	Proteomics International Laboratories	PIQ.ASX	Predictive DKD blood test which identifies and measures panel of novel protein biomarkers. Simple, cost effective, mass market blood test.	A\$56m	A\$0.53	A\$3.0m	A\$1.7m loss	US\$33.2Bn

# Appendices:

# Treatments for DKD - SGLT2 Inhibitors



#### **The Gliflozins**

- SGLT2 inhibitors, known as Gliflozins, treat diabetes by helping the kidneys to lower blood glucose levels
- Empagliflozin (Lilly & Boehringer Ingelheim), Dapagliflozin (Astra Zeneca & Bristol-Myers Squibb), and Canagliflozin (Janssen) are class leading approved diabetes treatments
- 30 September 2019, Canagliflozin (Invokana™)
   became the first drug in 20 years to be approved for the treatment diabetic kidney disease
- The gliflozins all appear to exhibit renal-protective properties and able to reduce the risk of renal failure, dialysis or kidney transplantation for DKD patients
- 2019 drug sales for:
  - o Empagliflozin (Jardiance™) Est >US\$3 billion\*
  - Dapagliflozin (Farxiga™) US\$1.54 billion\*
  - Canagliflozin (Invokana<sup>™</sup>) US\$735 million\*

#### **Commercial Upside**

- PromarkerD could become a prognostic test for big pharma companies that are:
  - promoting an approved treatment a complementary diagnostic (CDx) will guide patients to their treatment
  - conducting clinical trials patient populations can be targeted/recruited to enhance overall efficacy (reduce placebo or negative response)
- Potential to capture at risk patients up to 4 years earlier
- Earlier treatment, could mean lower drug doses with lower side-effects and improved drug safety profile, and improved patient outcomes
- Upcoming FDA regulatory approval process should be accelerated by using the Janssen/PromarkerD data

<sup>\*</sup>https://pharmaphorum.com/news/fda-fast-tracks-lilly-boehringers-jardiance-in-chronic-kidney-disease/
\*https://www.fiercepharma.com/pharma/invokana-win-kidney-patients-could-help-i-i-right-sqlt2-ship