Genetic Signatures

Investor presentation

28 July 2020

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A global leader in the supply of molecular diagnostic solutions

A specialist molecular diagnostics company

- Focused on becoming a global leader in the supply of molecular diagnostic solutions
- Developing and commercialising its proprietary platform technology, ***3base***™
- Implementing its commercial strategy through teams in Australia, Europe and North America
- Scalable business which has achieved strong core revenue growth

Financial information

Share price (24-Jul-20)	A$2.65
Shares on issue	142.6m[1]
Market capitalisation	**A$377.9m**
Cash (30-Jun-20)	A$31.2m
Debt (30-Jun-20)	Nil
Enterprise value	**A$346.7m**

1: Excludes 3.28m unquoted options (various expiration dates and prices)

Top shareholders %

Asia Union (Chris Abbott private investment)	26.7%
Karst Peak (HK-based investment manager)	13.3%
Perennial Value Management	9.4%
Fidelity International	7.7%
Directors, management & advisors	3.5%

Investment highlights

Genetic Signatures

Significant opportunity created by COVID-19

- Rapid development of the *EasyScreen*™ SARS-CoV-2 Detection Kit to support international pandemic response

Trusted and proven technology

- 100% customer retention since 2016 and the accuracy of the technology has been clinically validated[1]

Competitive advantage

- Underpinned by novel **3base**™ technology providing increased throughput capacity, reduced time to results and significant cost savings

Global expansion strategy

- Increasing international recognition through the SARS-CoV-2 launch creates new avenues to expand customer base

Attractive and scalable

- Business model with favourable unit economics expected to underpin growth through FY21 and beyond

Multiple upcoming catalysts in FY21

- Multiple global growth opportunities to be pursued in tandem, each representing potential upside

1. https://geneticsignatures.com/au/publications/

Trusted and proven technology: *EasyScreen™* products built on **3base™** technology

Our Products

Transforming **molecular diagnostics** via streamlined sample processing methods linked to highly **multiplexed real-time PCR screening assays.**

Our automated **sample preparation** method is suitable for **bacterial, protozoan and viral** (DNA & RNA) targets.

The *EasyScreen*™ Detection assays **simultaneously detect a larger number of pathogen targets** in a shorter time than conventional methods.

GS-mini | GS1-HT | GS-1000

Competitive advantage: Genetic Signatures' **3base™** technology creates potential benefits for multiple key stakeholders

Patients

- ✓ **qPCR[1] detection methodology** used, the gold standard for infectious disease diagnosis
- ✓ **Rapid time to results**, with results processed from 4 hours, for up to 188 specimens
- ✓ Screening for **more targets** per patient specimen **increases accuracy of diagnosis**
- ✓ **Accelerates treatment path** and **reduces mortality and morbidity**

Laboratories

- ✓ **Clear competitive advantage** for target customer base of **high throughput labs**
- ✓ **Reduces customer costs** through accurate detection and minimising hands on time
- ✓ **Reduced complexity** in molecular testing

Governments

- ✓ **Reduced hospital stays** with **broad and accurate** detection of infectious disease
- ✓ Fast turnaround and accurate detection **reduces the spread of disease**
- ✓ Testing for **more targets per specimen reduces repeat doctor visits**
- ✓ **Reduces overuse and misuse of antibiotics**

1. Real-time polymerase chain reaction (real-time PCR), also known as quantitative polymerase chain reaction (qPCR)

Significant product and market expansion plans: underpins long-term business growth and shareholder value

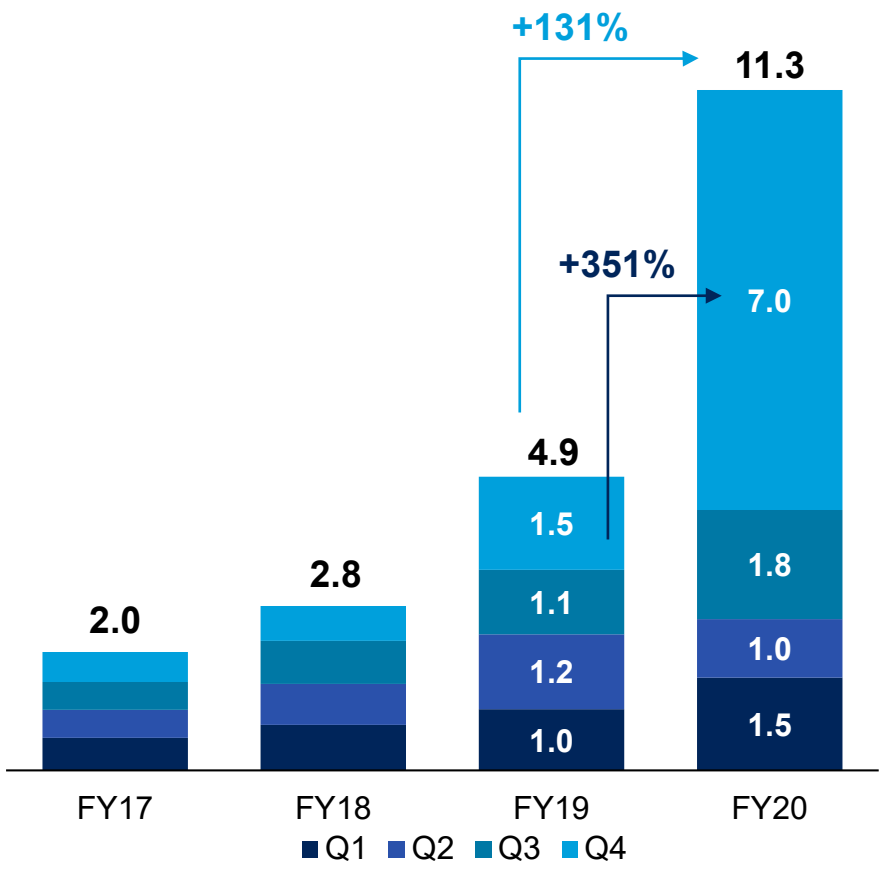
EasyScreen™ products		Asia Pacific (TGA)	EMEA (CE-IVD)	Americas (FDA)	Global market size[1] (A$ per annum)
Enteric	Protozoan	✓	✓	*Clinical trials delayed due to COVID-19*	**$573m**
	Viral	✓	✓		
	Bacterial	✓	✓		
Respiratory	General	✓	✓		**$627m**
	SARS-CoV-2	✓	✓	*EUA[2] application submitted*	**$6.3bn[3]**
ESBL & CPO / 'Superbug'		✓	✓		***Emerging market***
STI / Genital		*Application submitted*	*Application submitted*		**$1.9bn**
Alphavirus / Flavivirus		*Deferred due to COVID-19*			**$69m**
Meningitis		*In development*			**$156m**
Atypical Respiratory		*In development*			***See Respiratory***

1. World Market for Molecular Diagnostics, 5th. Edition (Infectious Disease, Oncology, Blood Screening, Pre-Natal and Other Areas) Kalorama Information, Published: 1/9/2013 & company estimates. 2. Emergency use authorization in the United States is an authority granted to the FDA to facilitate availability of an unapproved product, or an unapproved use of an approved product, during a declared state of emergency. 3. Molecular Diagnostics Markets in the COVID-19 Era (Markets for Molecular COVID-19 IVD Tests, Respiratory Tests, Blood Screening, Cancer Markers and Other IVD Tests) Kalorama Information, Published: 9/7/2020

FY20 milestones: Genetic Signatures has made significant operational progress in FY20, reflected by positive share price performance

Significant revenue growth: continued to achieve strong year-on-year revenue growth and a milestone quarter in 4Q FY2020

Revenue (A$m)



Exceptional year for Genetic Signatures

- ✓ Unaudited revenue for **FY20 of $11.3m**, a **+131%** on pcp
- ✓ Record quarterly revenue in 4Q FY20 of **$7.0m,** a **+351%** on pcp, includes instrument sales of **~$1.0m**
- ✓ Rapid development of **SARS-CoV-2 kit** driving significant domestic and international sales
- ✓ First **material sales out of Europe** in 2H FY20 and **strong demand** from existing domestic customers
- ✓ **Increased manufacturing capacity** within existing infrastructure to cater for the increased demand
- ✓ Dramatically **increased inventory holdings** and made a considerable **investment in instrumentation**
- ✓ Strong cash balance as at 30 June 2020 of **$31.2m**

Growth underpinned by scalable revenue model: attractive unit economics

Attractive revenue model

- **High throughput with predictable orders**
  - Target customers are **high throughput** pathology groups, hospitals or government run programs
  - Customers **secure long-standing contracts** with set prices and **relatively predictable volumes**
  - **Regular orders** (bi-monthly) with **fast payment terms** – relatively low working capital needs
- **Sticky annuity revenue:**
  - **"Printer & cartridge"** model - tests become **embedded in workflow**
  - Customers may **adopt new tests** once workflow established
- **Attractive return on investment:**
  - Potential to fund new customer installations to **speed up customer acquisition**, particularly offshore
  - **Consumable revenue model** - customers pay per test

Contributing to attractive economics

100% ***customer retention since 2016***

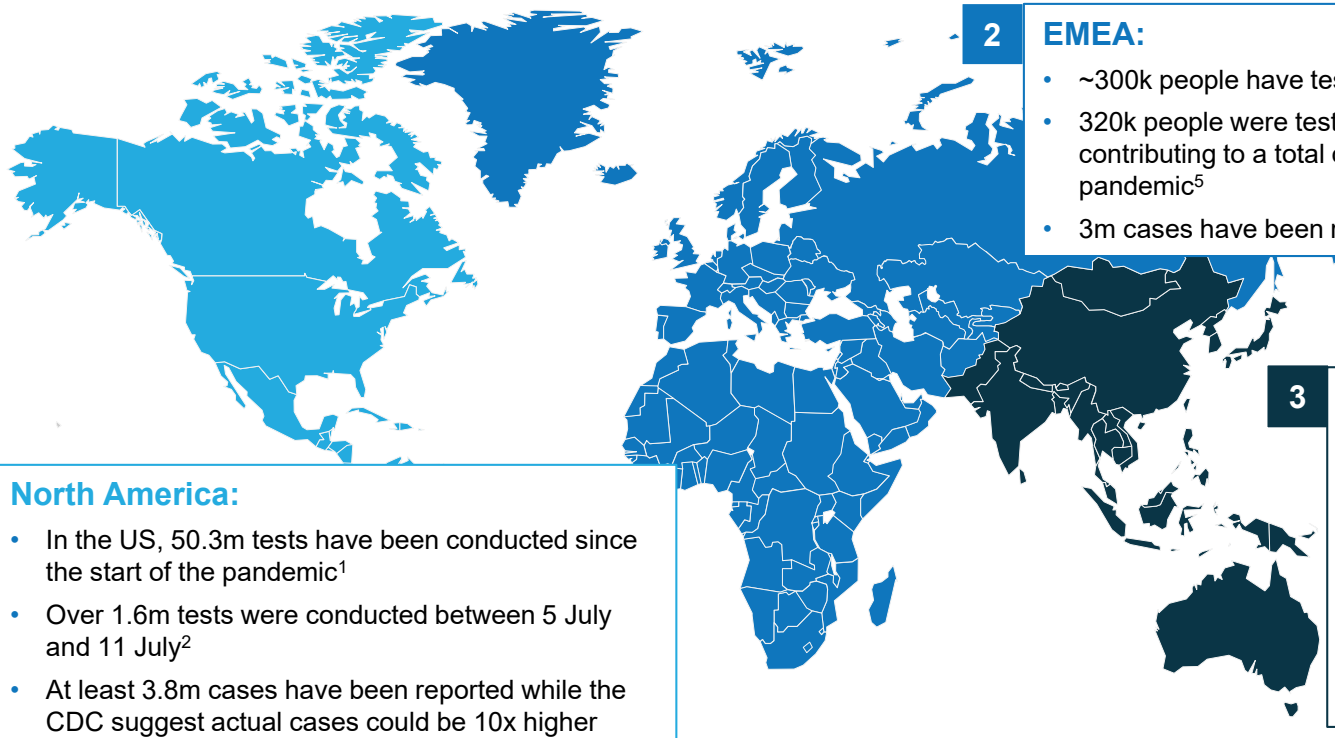
47% ***core revenue CAGR (FY15-19)***

65% ***gross margins on diagnostic kits***

3-5 ***year contracts typically secured***

Scalability supported by expanding pipeline of new customers / tenders

COVID-19 global pandemic: as countries move towards re-opening, the burden on testing is expected to significantly increase



1 North America:

- In the US, 50.3m tests have been conducted since the start of the pandemic[1]
- Over 1.6m tests were conducted between 5 July and 11 July[2]
- At least 3.8m cases have been reported while the CDC suggest actual cases could be 10x higher based on antibody tests[3]

2 EMEA:

- ~300k people have tested positive to COVID-19 in the UK[4]
- 320k people were tested for COVID-19 between 2 July and 8 July contributing to a total of 13.6m tests conducted since the start of the pandemic[5]
- 3m cases have been reported in Europe[6]

3 APAC:

- In Australia, ~12k cases have been confirmed, resulting in 126 deaths[7]
- ~3.6m tests have been conducted to date[7]
- Australian government has established a dedicated Medicare funded and bulk billed pathology test for COVID-19 worth $170m[8]
- Market dominated by large private pathology groups and state government labs

The COVID-19 pandemic has created an opportunity for Genetic Signatures to accelerate international expansion and increase customer acquisitions

1.Testing Data in the US, Centers for Disease Control and Prevention (21 July 2020). 2. COVID View Weekly Summary, Centers for Disease Control and Prevention (17 July 2020) 3. National Coronavirus Cases and Deaths, The Washington Post (22 July 2020). 4. Coronavirus in the UK, Department of Health and Social Care (22 July 2020). 5. Coronavirus cases in the UK: daily updated statistics, Department of Health and Social Care (21 July 2020). 6. Tracking the coronavirus across Europe, The Economist (3 July 2020). 7. Coronavirus current situation and case numbers, Department of Health (22 July 2020). 8. '$2.4 billion plan to fight COVID-19', Prime Minister of Australia media release 11 March, 2020.

On track to achieve multiple commercial milestones: multiple upcoming milestones in FY21 that could accelerate revenue growth

Near term opportunities for SARS-CoV-2 commercialisation	• CE-IVD received allowing marketing of the kit in Europe with ***orders received*** • TGA registration received allowing marketing of the kit in Australia with ***orders received*** • FDA EUA has been submitted for SARS-Cov-2 kit and ***clearance expected this quarter*** • First US customer contract for SARS-CoV-2 product
Launching *EasyScreen™* products in new markets	• TGA / CE-IVD submission for the STI / Genital kit filed in 4Q FY20 ***with clearance anticipated in the coming months*** • Work set to recommence once COVID-19 restrictions are lifted: – FDA submission for the Enteric Protozoan kit – TGA / CE-IVD submissions for the Flavivirus / Alphavirus kit
Leverage growing international exposure to drive new contract wins	• Interest in the SARS-CoV-2 products likely to drive interest in Genetic Signatures' broader range of *EasyScreen™* multiplex kits and facilitate ***new contracts in US and Europe***

Appendices

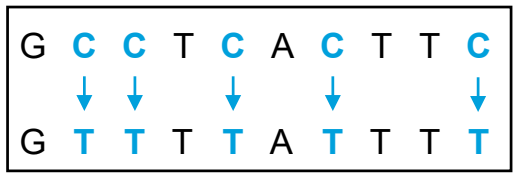
Genetic Signatures

Transforming Molecular Diagnostics

Novel proprietary technology: proprietary 3base™ platform technology underpins the *EasyScreen™* product range

Our proprietary 3base™ solution…

1. ***3base™*** platform technology converts original 4-base microbial genome to 3-base
2. Conversion occurs during standard procedures with no additional steps for the technician
3. ***3base™*** MDx can identify a wider array of pathogens and provide greater testing accuracy by reducing complexity in a multiplex environment



1,048,576
combinations for a 10 digit number with 4-base

59,049
combinations for a 10 digit number with 3-base

…improves workflow and increases throughput

EasyScreen™ kits **are compatible with most existing** automated nucleic acid extraction and real-time PCR instruments and **streamline the preparation process**

High throughput labs can achieve **further workflow automation** with compatible hardware. Creates **workflow efficiencies and reduce costs**

Currently offering over 100 pathogen targets across enteric, respiratory, anti-microbial resistance, sexual health and tropical diseases

Board of Directors: proven track records of commercialisation success across key geographic regions

Nick Samaras

Non-Executive Chairman

- Significant experience in leading international sales expansions of biotech companies
- Former Managing Director of **Applied Biosystems** (acquired by ThermoFisher, US$76.8bn market cap)
- Held senior roles with **Perkin Elmer** and **AMRAD Corporation** (now part of CSL)

John Melki

Managing Director & Chief Executive Office

- **Led global commercialisation efforts of GSS since 2011** and the product development team since 2003
- Successfully **commercialised seven products globally**
- Authored 20 peer-reviewed articles and listed as an inventor on eight patent applications

Michael Aicher

Executive Director

- Founder and former CEO of **National Genetics Institute** (subsidiary of LabCorp, US$15.3bn market cap)
- Led Lab-Corp's Esoteric Business Units which generated over US$1b revenue p.a.
- Former executive roles at **Central Diagnostics Laboratory**
- Recipient of Ernst & Young "**Entrepreneur of the Year**" award for emerging technologies

Tony Radford AO

Non-Executive Director

- Former Co-Founder and CEO of **Cellestis** (ASX:CST, acquired by QIAGEN for c.A$350m in 2011)
- Former member of CSIRO team that invented QuantiFERON
- Former Head of Development at **AMRAD** (later acquired by CSL)

International management team: highly skilled researchers and executives bring a broad array of experience and knowledge

	**Dr. Doug Millar** **Chief Scientific Officer**	• One of the pioneers of the bisulphite genomic sequencing protocol with a PhD in Molecular Genetics • Key inventor on over **30 patents** or pending patent applications held by the company • Authored **23 peer reviewed scientific papers** and presented at 20+ international conferences
	**Peter Manley** **Chief Financial Officer & Company Secretary**	• Led the recent Genetic Signatures capital raise, successfully securing $37.5m • Served as CFO and Company Secretary for **AtCor Medical** (now Cardiex) and **Sirtex Medical** • Senior financial positions including 8 years with **Dow Chemical** and 4 years at **Goodman Fielder**
	**Jackson Jones** **Director of Global Sales & Marketing**	• **20+ years experience** in clinical diagnostics, blood banking, and life sciences sector • Joined Genetic Signatures in 2017 and brings significant commercial experience from working with **several large US multinationals** and roles across **Australasia, Europe, and North America**
	**Derek Joesting** **Director of Sales - North America**	• **20+ years of medical sales experience** with broad sector experience • Previously held **leadership roles in molecular diagnostics** and pathology sales in North America • Holds a Bachelor of Science degree in Biology from Syracuse University
	**John Buckels** **Director of Sales & Support - Europe**	• **20+ years' experience** in molecular biology and sales across the EMEA • Former **Senior Director and Head of Infectious Diseases sales at QIAGEN** and 13 years experience in sales and marketing
	**Neralie Coulston** **Regulatory Affairs Manager**	• Supported Genetic Signatures since 2002 and **brings significant experiences in Quality System and Regulatory Affairs** • Former roles at the **CSIRO and UNSW** on both **therapeutic development** and **research** programs

Contact us

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