



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
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Shares on issue	142.6m ¹
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Market capitalisation	A\$377.9m
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Cash (30-Jun-20)	A\$31.2m
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Debt (30-Jun-20)	Nil
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Enterprise value	A\$346.7m
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1: Excludes 3.28m unquoted options (various expiration dates and prices)

Top shareholders %

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



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 validated¹



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*TM products built on 3baseTM 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*TM Detection assays **simultaneously detect a larger number of pathogen targets** in a shorter time than conventional methods.



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



Patients

- ✓ **qPCR¹ 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	✓	✓	EUA ² application submitted	\$627m
	SARS-CoV-2	✓	✓		\$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

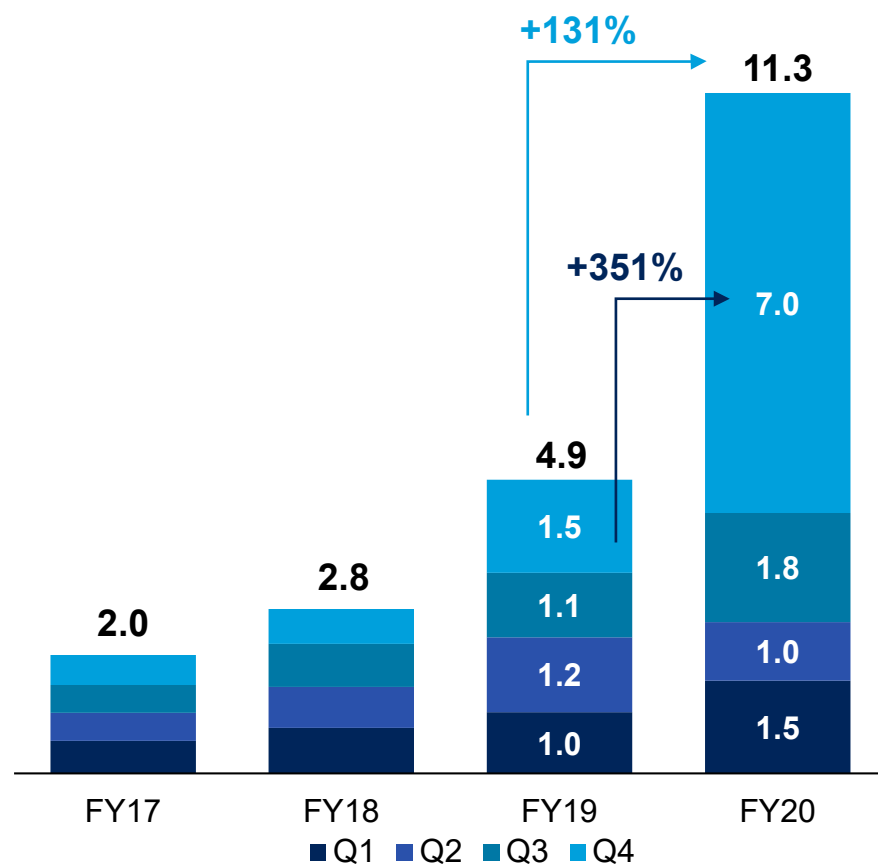
FY20 milestones: Genetic Signatures has made significant operational progress in FY20, reflected by positive share price performance



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*

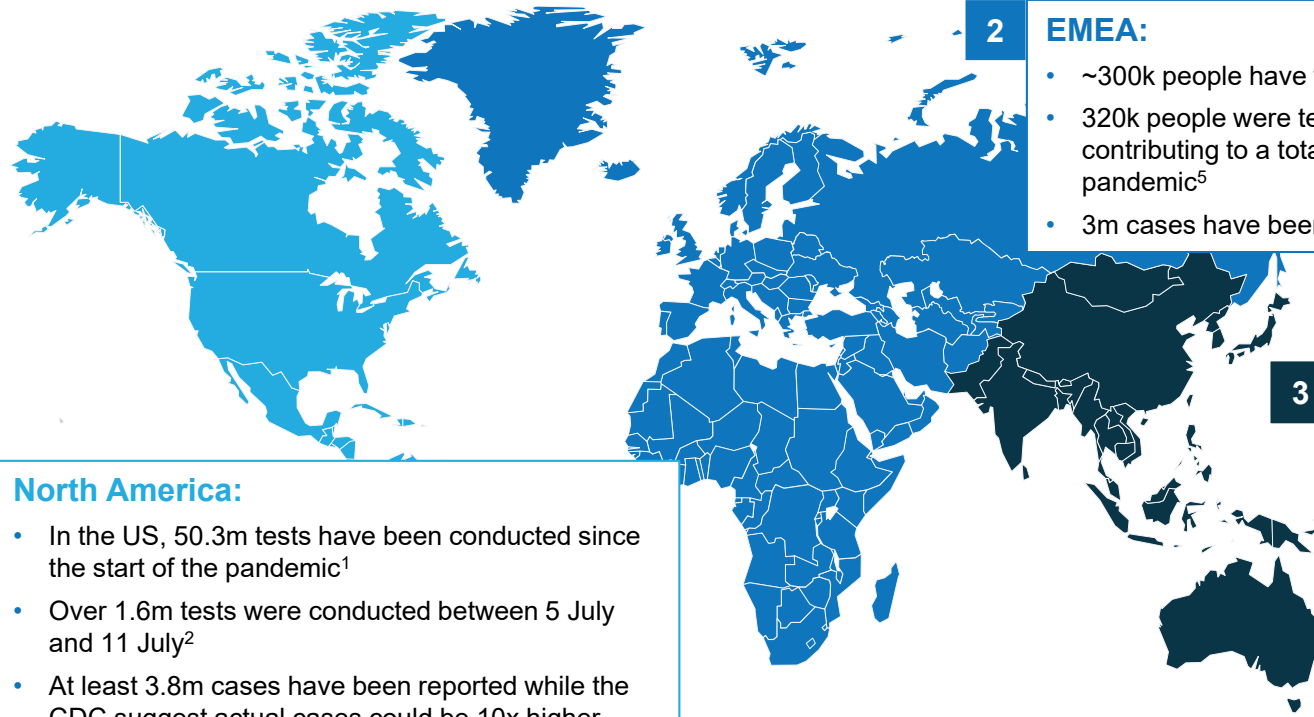
47% *core revenue CAGR (FY15-19)*

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 pandemic¹
- Over 1.6m tests were conducted between 5 July and 11 July²
- At least 3.8m cases have been reported while the CDC suggest actual cases could be 10x higher based on antibody tests³

2

EMEA:

- ~300k people have tested positive to COVID-19 in the UK⁴
- 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 pandemic⁵
- 3m cases have been reported in Europe⁶

3

APAC:

- In Australia, ~12k cases have been confirmed, resulting in 126 deaths⁷
- ~3.6m tests have been conducted to date⁷
- Australian government has established a dedicated Medicare funded and bulk billed pathology test for COVID-19 worth \$170m⁸
- 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	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• 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:<ul style="list-style-type: none">– 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	<ul style="list-style-type: none">• 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



**Genetic
Signatures**

Transforming
Molecular
Diagnostics

Appendices

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

G	C	C	T	C	A	C	T	T	C
	↓	↓		↓		↓			↓
G	T	T	T	T	A	T	T	T	T

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 **Cellectis** (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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