



GENETIC SIGNATURES: AUSTRALIA'S RAPID GROWTH DIAGNOSTICS COMPANY

BY COLIN HAY

GENETIC SIGNATURES' GROWTH STRATEGY IS ABOUT BUILDING ITS CUSTOMER NUMBERS, THE RANGE OF ITS PROPRIETARY TESTS FOR COVID-19 AND A RANGE OF VIRAL, PROTOZOAN, FUNGAL AND BACTERIAL INFECTIONS.

Genetic Signatures (ASX:GSS) is continuing to develop its unique, rapid and adaptable 3base EasyScreen™ technology to help tackle global health challenges. Its customers can confidently and quickly test for up to 20 possible causes of infection from the same patient sample.

Its novel technology is expanding into profitable new markets. For example, Genetic Signatures has this year registered a 3base test for sexually transmitted infections in Europe, which can detect 10 common STIs, and has commenced the clinical studies needed to register enteric protozoan testing in the US.

By the end of March total sales had already doubled FY2020 sales, with profit of A\$4.5m in the first half of FY2021 and positive cash flow.

One of the company's value inflection points last year was after it rapidly developed a reliable SARS-CoV-2 test, selling its kits into US, European and Australian markets.

"Our tests are now in use every day in Australia, Europe, the US and parts of Africa," says CEO John Melki. "Capital raised at the end of 2019 enabled Genetic Signatures to take products developed in Australia into Europe and the US, which make up more than 70% of growing molecular diagnostic markets."

Genetic Signatures' 3base technology enables hospitals and laboratories to rapidly and accurately screen for the genetic information of a wide range of infectious pathogens. Its 3base process helps to overcome the genetic variations and mutations often seen in microorganisms. The 3base process can detect the most common genetic mutations that other technologies cannot.

"We are not an overnight success," CEO John Melki explains.

"Genetic Signatures is 20 years old this year and we have been developing our 3base technology for a decade. We were able to rapidly develop SARS-CoV-2 screening based on our existing capability to accurately screen seasonal coronaviruses.

"3base technology has striking benefits over traditional 4 base genetic screening. Melki notes, "3base technology is less likely to be impacted by mutations. As we've demonstrated with SARSCoV-2, we are better able to detect groups or subclasses of organisms, or variants that come up over time."

Moreover, Genetic Signatures' technology provides 'syndromic' diagnostic testing that can identify the specific pathogens (including bacteria, protozoa and viruses) that together can cause a range of symptoms, enabling effective treatment.

For example, gastroenteritis, which remains a leading cause of death worldwide especially for children, can cause varied symptoms of cramping, diarrhoea and vomiting. Genetic Signatures' technology simultaneously tests for 20 pathogens that can cause gastroenteritis.

Genetic Signatures also has a test kit for antibiotic resistant bacteria – aka superbugs – a growing global challenge. "This can become a major tool for pathologists as we are able to identify how to manage bacterial infections with some antibiotics becoming ineffective," says Melki.

"We have a range of new kits coming through our development channels including for tropical diseases, meningitis, measles/mumps/rubella and tick borne infections. While infectious diseases will always be a key part of our market, we are also working in other areas to see where 3base is applicable such as in cancer diagnostics and epigenetics."

While Genetic Signatures' diagnostic kits can be used on most commercially available instruments, the company has already developed customised instruments that optimise 3base™ technology, and is currently developing its own 'Sample to Result' diagnostic instrument. "We have quadrupled the number of instruments we have in the field and plan to leverage these placements," says Melki.

COVID has played an important role in taking Genetic Signatures' technology to the world. The 3base EasyScreen technology is successfully providing rapid, targeted results to patients in high throughput environments. With substantial on-going demand for COVID testing, sale of newly registered STI kits and a strong pipeline of new products and technologies, Genetic Signatures is emerging as one of Australia's biotech success stories.

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