Canaccord Genuity Capital Markets

Initiation of Coverage

Universal Biosensors Inc.

Biomedical Devices and Services

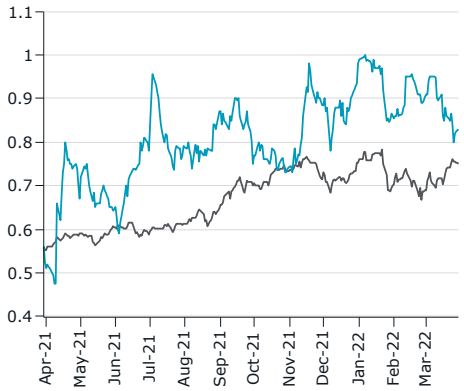
30 March 2022

Rating	Price Target
SPECULATIVE BUY	**A$1.25**
UBI-ASX	Price **A$0.83**

Market Data

52-Week Range (A$) :	0.47 - 1.04
Market Cap (A$M) :	153.9
Shares Out. (000s) :	178
Dividend /Shr (A$) :	0.00
Dividend Yield (%) :	0.0
Enterprise Value (A$M) :	136
Last Cash Balance (A$) :	18.1
Last Quarter Cash Burn (A$M) :	(0.5)

FYE Dec	2021A	2022E	2023E	2024E
Sales (A$M)	5.8	10.8	21.6	43.8
Gross Profit (A$M)	2.5	5.9	12.1	25.0
EBITDA Adj (A$M)	(7.9)	(7.1)	1.4	9.9
EV/Sales (x)	22.7	12.8	6.6	3.2
EV/EBITDA (x)	(16.6)	(19.6)	98.0	14.2



Source: FactSet

Priced as of close of business 29 March 2022

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Sensing the turnaround, with blue-sky potential

Investment Recommendation

We initiate coverage of **Universal Biosensors (UBI-ASX)** with a SPECULATIVE BUY rating. UBI develops, manufactures and commercialises hand-held point-of-care/use (POC/U) devices and test strips that measure different analytes across different and diverse industry segments including, Life Sciences, Food & Beverages, Environmental and Animal Health. The past 18 months have seen UBI lay the foundations for a significant turnaround in its prospects. It hired a new CEO, John Sharman (ex-MVP) to improve the commercialisation of its electrochemical biosensor platform technology, via building a multi-product stable of diverse biosensor tests. UBI launched its first product in seven years in early CY21 in the wine testing segment (Sentia) and is in the process of launching its next-generation coagulation testing product (Xprecia Prime). There are also pipeline products in development that are expected to emerge over the medium term, the most exciting being the Tn antigen cancer biomarker, which is a c.A$11bn+ opportunity, with significant scope to improve upon incumbent technologies. In its first full year under new management, UBI reported a c.78% increase in revenue, and we expect UBI to build on the new foundations to accelerate growth over the next three years to reach profitability by FY24E (EBITDA +ve in 2H23E). Our earnings estimates only include the wine testing and coagulation testing/ services offerings, leaving upside for better-than-expected execution and blue-sky potential from pipeline products as these are progressively launched. **We use a 10-year two-stage DCF method to value UBI at $1.25/CDI**.

Proven technology pedigree. Between 2010-13, UBI developed, manufactured and sold reusable device and test strips for LifeScan (JNJ), resulting in >10bn test strips sold to 2020. UBI also developed and launched a POC device and test strips for Siemens in the PT/INR blood coagulation segment, resulting in selling c.9m test strips in the decade to 2020. LifeScan paid UBI c.$45m to buy back the product in CY18, while UBI paid Siemens c.$18m in CY19 to buy back the rights to the blood coagulation product, with the Siemens relationship expiring in March 2023 and the existing global distribution network migrating across to UBI. In our view, these experiences proved that UBI has world-class technology, which it is now applying to expand into a range of segments noted above, where it can control its own destiny.

The Sentia wine testing product is the first new product in seven years, with UBI indicating the wine testing market to have a TAM of c.$800m and CG estimates it can build a c.10% share of test strips and c.$74m in revenue over the next five years. UBI is leveraging its electrochemical biosensor technology to launch six tests that can provide winemakers with significant cost and efficiency benefits compared to internal/external laboratory testing. The first test was launched in early CY21 and the second was recently launched with the balance to be launched over CY22. UBI has partnered with 14 distributors across 14 different markets, with a further 16 distribution agreements pending. It has also established its own sales team for the US market.

Following the buy-back of the global distribution rights to the PT/INR **blood coagulation business**, UBI is free to develop its own customers as well as service the existing Siemens distributor/customer base with 16/50 distributors converted to date. Xprecia Stride is currently sold in 36 countries and has an installed base of c.3,500 units. The next-generation product Xprecia Prime recently received EU approval and recruitment for a US FDA clinical trial is currently in progress with an expected launch in CY23. The global TAM for this product is c.A$1bn, with c.60% relating to the PT/INR finger prick market and c.40% focused on the pathology market. Roche holds c.80% of the finger prick market. UBI believes that Xprecia Prime can successfully carve out a c.7% share over the next five years, generating c.$20m in revenue. Timing issues in 2H21 should result in strong sales growth in FY22.

Veterinary blood glucose monitoring. UBI is rekindling its relationship with LifeScan via a global licence agreement to develop a POC device and test strip biosensor for monitoring diabetes in companion animals. UBI will own 100% of the IP and pay a small licence fee/royalty. The company indicated this is a c.$200m opportunity with the market growing at c.11% p.a. While two incumbents control c.60% of the market, the segment has lacked innovation, and UBI believes it can carve out a position. UBI expects to launch the product in 1QCY23 and advises there are no significant regulatory hurdles. We have not included this product in our forecasts at this stage, but UBI aims to achieve double-digit revenue over the medium term.

Extending detection limits to deliver a new product pipeline. The agreement with Lubris BioPharma LLC is on a global exclusive perpetual basis to supply the Lubricin coating, which is expected to combine with UBI's electrochemical biosensor technology to significantly expand UBI's detection limits from micromolar to picomolar, or up to 1bn times. This enables UBI to explore new biosensors, such as cancer and other human health-related biomarkers. The Tn antigen biomarker was developed by three Australian universities over the past five years. It is anticipated that this biomarker could have superiority over incumbents across major cancers, such as breast, colorectal, and prostate. The agreement with UBI to commercialise Tn antigen will see UBI hold the IP for all non-therapeutic products. UBI is currently undertaking a development study for which UBI should report to the market before 30 June. UBI recently successfully completed feasibility on aptamer-based sensing technology. The first aptamer-based product will be a COVID-19 test. UBI has commissioned the manufacture of three additional aptamers, which will measure female fertility. Development studies are also underway for the COVID-19 test, and feasibility on the fertility aptamers will begin in 1H22. Positive results on the cancer biomarker would enable UBI to proceed to clinical trials and scale up manufacturing, which may cost up to c.$10m. The aim is to achieve regulatory approval across the US/EU in CY24.

Figure 1: Earnings summary

Universal Biosensors (UBI)				$0.83					Year end 31 Dec
Profit & Loss (A$m)	**FY21**	**FY22E**	**FY23E**	**FY24E**	**Ratios**	**FY21**	**FY22E**	**FY23E**	**FY24E**
Sales revenue	**5.8**	**10.8**	**21.6**	**43.8**	**Valuation**				
Gross profit	**2.5**	**5.9**	**12.1**	**25.0**	EPS (norm.)	0.0	-5.9	5.2	9.4
EBITDA	**-7.9**	**-7.1**	**1.4**	**9.9**	P/E (x) (norm.)	-2075.0	-14.0	15.9	8.9
Depreciation	-0.9	-0.9	-1.2	-1.8	PE Rel - XAO	NMF	NMF	1.0	0.6
EBITA	**-8.8**	**-8.0**	**0.3**	**8.2**	PE Rel - XSO	NMF	NMF	1.1	0.7
Amortisation	-1.6	-1.6	-1.6	-1.7	EV/Rev (x)	22.7	12.9	6.6	3.2
EBIT	**-10.4**	**-9.6**	**-1.4**	**6.5**	EV/EBITDA (x)	-16.6	-19.6	98.0	14.2
Net interest	-0.1	0.0	0.0	0.0	EV/EBIT (x)	-12.5	-14.5	-103.3	21.7
Pre-tax profit	**-10.5**	**-9.6**	**-1.4**	**6.5**	DPS (cps)	0.0	0.0	0.0	0.0
Tax expense	0.0	0.0	0.0	0.0	Dividend Yield (%)	0.0	0.0	0.0	0.0
NPAT (pre-ISIs)	**-10.5**	**-9.6**	**-1.4**	**6.5**	Franking (%)	0.0	0.0	0.0	0.0
Significant items	0.0	0.0	0.0	0.0	CFPS (cps)	-5.3	-3.1	0.0	3.3
NPAT (reported)	**-10.5**	**-9.6**	**-1.4**	**6.5**	P/CFPS (x)	-15.6	-26.8	9811.0	25.4
NPAT (normalised)	**-10.5**	**-9.6**	**-1.4**	**6.5**	**Profitability**				
					Gross margin (%)	43.2	55.0	56.0	57.1
Cash Flow (A$m)	**FY21**	**FY22E**	**FY23E**	**FY24E**	EBITDA margin (%)	-136.2	-65.6	6.7	22.6
Operating EBITDA	**-7.9**	**-7.1**	**1.4**	**9.9**	EBIT margin (%)	-180.6	-88.9	-6.4	14.9
Interest and tax	0.0	0.0	0.0	0.0	ROE (%)	-38.1	-53.3	-8.3	28.1
Working capital	-1.6	1.6	-1.4	-4.1	ROA (%)	-23.7	-26.2	-3.9	14.6
Other	0.0	0.0	0.0	0.0					
Operating Cashflow	**-9.4**	**-5.5**	**0.0**	**5.8**	**Capital structure**				
Capex	-0.6	-2.5	-3.0	-5.2	Enterprise Value ($m)	131.0	139.0	141.9	141.4
Net acquisitions	0.0	0.0	0.0	0.0	Net Debt (cash)	-16.3	-8.3	-5.4	-5.9
Free Cashflow	**-10.0**	**-8.0**	**-3.0**	**0.6**	Gearing (%)	cash	cash	cash	cash
Dividends	0.0	0.0	0.0	0.0	EFPOWA (m)	177.5	177.5	177.5	177.5
Net equity issued	0.1	0.0	0.0	0.0	**Growth**				
Net Cashflow	**-9.9**	**-8.0**	**-3.0**	**0.6**	Sales revenue (%)	78.5	87.0	99.9	103.1
Opening cash	28.1	18.1	10.1	7.1	Gross profit (%)	189.7	138.1	103.5	107.0
Borrowings/other	0.0	0.0	0.0	0.0	EBITDA (%)	48.1	-10.0	-120.5	585.2
Closing cash	**18.1**	**10.1**	**7.1**	**7.7**	EBIT (%)	38.4	-8.0	-85.7	-574.1
					NPAT (norm.) (%)	42.0	-8.6	-85.7	-574.1
Balance Sheet (A$m)	**FY21**	**FY22E**	**FY23E**	**FY24E**	EPS (norm.) (%)	33.3	14682.0	-188.2	79.4
Cash	18.1	10.1	7.1	7.7	DPS (%)	0.0	0.0	0.0	0.0
Receivables	0.5	1.0	2.1	5.0	**Product revenue**				
Inventories	2.1	2.2	2.7	6.1	Wine Testing - Sentia	1.1	4.7	13.6	32.8
PPE	3.8	5.1	6.8	10.0	Blood Coag. - Xprecia	2.7	3.9	5.6	8.4
Intangibles	12.7	11.3	9.9	8.4	Lab Services - HRL	2.0	2.2	2.4	2.6
Other assets	6.9	6.9	7.1	7.3		**5.8**	**10.8**	**21.6**	**43.8**
Total Assets	**44.1**	**36.6**	**35.6**	**44.6**	**Valuation**				**FY24E**
Borrowings	1.8	1.8	1.8	1.8	**Target EBITDA Multiple**				
Payables	3.2	5.4	5.5	7.8	EBITDA (A$m)				9.9
Other Liabilities	11.9	11.5	11.7	11.9	EBITDA Target (x)				20
Total Liabilities	**16.9**	**18.7**	**19.0**	**21.5**	**Per Share**				**$ 1.12**
NET ASSETS	**27.2**	**18.0**	**16.6**	**23.1**					
					Discounted Cash Flow				
					Cost of equity	11.5%	WACC		11.5%
					Cost of debt	3.0%	TGR		3.5%
					Debt weighting	0.0%	**Per Share**		**$1.25**
Board and shareholders			**(m)**	**%**	**Substantial Shareholders**			**(m)**	**(%)**
Craig Coleman			28.8	16.2	Viburnum Funds			28.8	16.2
Judith Smith			0.3	0.2	Bendigo & Adelaide Bank			23.3	13.1
David Hoey			0.6	0.3	JM Financial Asset Management			17.4	9.8
					Jencay Capital			17.0	9.6
					Top 20 shareholders			**103.6**	**58.4**

Source: Company reports, Canaccord Genuity estimates

Contents

Overview

UBI was incorporated in 2001 and focuses on the development, manufacture, and commercialization of point-of-use devices for measuring analytes across various industries. It offers SENTIA Wine Analyzer to test Free Sulphur Dioxide and Malic Acid with associated test strips; prothrombin time international normalized ratio (PT/INR) coagulation test analyser and test strips; as well as coagulation testing and calibration services. The company also has a license agreement with LifeScan Global Corporation to develop a biosensor strip and a meter to be used for the detection and monitoring of diabetes in animals. UBI is developing a Tn antigen cancer biomarker in conjunction with three university partners, which offers significant blue-sky potential, and has also recently signed a global exclusive license with IQ Science to develop a N-Protein based test for COVID-19 designed to deliver a result and with potential to reveal a person's viral load within 30 seconds. UBI is also developing a fertility-based test using aptamers with IQ Science.

UBI currently operates (leases) out of 5,000sqm of floor space to house office, R&D and manufacturing facilities in Rowville in Melbourne. In Canada, Subsidiary HRL operates from 418sqm of office and laboratory space in Ontario. The company employs c.77 staff (56 in Australia and 21 overseas).

History provides context

UBI was established in September 2001, and in April 2002 employed a scientific and technical team in Australia that had worked together on biosensors since 1995 and were the inventors of key patents for novel electrochemical cell technologies owned by LifeScan (previously part of Johnson & Johnson – JNJ), and subsequently licensed to UBI.

LifeScan partnership 2002-18

In 2002, LifeScan granted a global royalty free license agreement to certain electrochemical cell technologies to UBI, in all fields excluding diabetes and blood glucose management. This gave UBI rights to an extensive portfolio of patents granted and pending by LifeScan (183 patents with an additional 227 pending at the time), as well as 14 patents pending that were owned and lodged by UBI. UBI still holds these patents and there are also patents that LifeScan licensed to UBI which have now been reassigned to UBI. Some of the patents will soon be nearing the end of their life.

In addition, LifeScan contracted with UBI to conduct R&D in the field of diabetes and to develop a blood glucose test for diabetes.

In 2006, JNJ held a pre-IPO position that equated to c.14.2% post IPO.

In November 2009, LifeScan was granted its CE Mark for the EU, to sell the OneTouch Verio human blood glucose monitoring system, developed jointly by UBI and LifeScan. The device comprises a novel test strip and reusable device offering superior accuracy to rival products, with no requirement for calibration code entry. The simple-to-use portable test device requires a finger prick of blood and is designed to be used at the point-of-care (POC) to provide quick and accurate results to drive the treatment regimen. Historically, most diagnostic testing was conducted at centralised testing sites (hospital and commercial pathology labs).

Figure 2 POC blood glucose system developed for Doctor's offices, clinics and hospitals

Source: Company reports

UBI received a US$16m milestone payment in 2009 and was to receive a quarterly service fee based on sales volume regardless of where it was manufactured, as well as a fee for test strips manufactured in Rowville.

Between 2010 to 2013, UBI manufactured single-use test strips at its Rowville plant for LifeScan, after which production progressively moved to LifeScan in Inverness Scotland. LifeScan was always responsible for making the metered devices, as well as distribution of the product.

In 2018, JNJ accepted a buyout offer for LifeScan from private equity firm, Platinum Equity, for US$2.1bn. At that point LifeScan had net sales of US$1.5bn, serving 20m patients in over 90 countries. In September of that year, LifeScan gave notice to UBI it was going to buy out the quarterly service fee obligation, and in December UBI received a A$44.6m (US$31.5m) lump sum service fee from LifeScan to unwind the arrangements.

In March 2019, UBI subsequently scaled down its workforce by c.30% with expected annual savings of c.$3m.

Siemens' partnership 2011 – March 2023

In September 2011, UBI formed a strategic partnership and collaboration agreement with Siemens' healthcare Diagnostics Inc. to develop and commercialise products for the POC Coagulation testing market. UBI was to develop a range of test strip and reader products.

The first test was a modified version of UBI's PT/INR test developed in 2006 followed by other tests for the coagulation market. Siemens was one of the largest suppliers to the healthcare industry, a leader in the haemostasis market, and would register, market and sell the products globally. The POC coagulation market was valued at c.$750m at the time and PT/INR testing was the largest segment at c.$400m with strong growth expected. UBI received an initial technology access fee of c.US$3m, plus up to six milestone payments relating to feasibility, regulatory submissions and product launches. UBI was to also generate revenue from test strip manufacture.

UBI received two tranches of c.US$1.5m in 2012, and in 2013 Siemens released the Xprecia Stride Coagulation Analyser, which received its CE Mark in 2014 and subsequent access to 31 countries in the EU. The launch led to a further c.US$1m milestone payment.

In 2015, a further milestone was achieved when Siemens lodged a 510(k) submission with the US FDA.

In September 2019, the agreement was renegotiated, with UBI continuing to supply Siemens-branded test strips until March 2023, and Siemens paid c.US$4m for pre-payment of a minimum order commitment. UBI was free to develop new distribution and customer relationships beyond Siemens. In this renegotiation, UBI paid c.US$12.5m/c.A$18.2m to effectively buy out Siemens.

Figure 3: Xprecia Stride

Source: Company reports

The new Xprecia Prime product produced by UBI has been approved in the EU in February CY22 with product launch in Q3 CY22.

Bionsensors 101

The term "biosensor" is short for "biological sensor. A biosensor is a device that measures biological or chemical reactions by generating signals proportional to the concentration of an analyte in the reaction. It has the potential to detect a particular substance or analyte with high specificity. Examples of such analytes include glucose, lactate, glutamate and glutamine.

The device is made up of a transducer and a biological element that may be an enzyme, an antibody or a nucleic acid. The bio-element interacts with the analyte being tested and the biological response is converted into an electrical signal by the transducer.

Based on the application, biosensors are classified into different types, including resonant mirrors, immune, chemical canaries, optrodes, bio-computers, glucometers & biochips.

Biosensors are operated on the principle of signal transduction. These components include a bio-recognition element, a bio-transducer and an electronic system composed of a display, processor and amplifier. The bio-recognition element, essentially a bioreceptor, is allowed to interact with a specific analyte.

The most important characteristics of biosensors include selectivity (or specificity), sensitivity, response time, regenerability, and simplicity.

Types of Biosensors

According to Thomasnet.com, there are three major categories of commercial suppliers of biosensors:

- **Chemical detectors**, such as assays or a disposable device which changes color, such as with pregnancy tests.
- **Electronic devices**, which identify biomarkers using an electronic method, such as spectroscopy (measuring light) or other electro-chemical reactions.
- **Lab-based products**, where one sends a sample to a lab which then performs a proprietary test using various methods similar to the first two categories.

IP and technology overview

UBI's technology and expertise is in the development and manufacture of electrochemical cells used to measure markers in various sample types.

In the blood glucose monitoring market, history has shown the ease of use, reliability and affordability, of electrochemical based tests, which have proven to be commercially successful. However, across the industry, limitations in the performance of these tests on blood samples meant that historically, the results were never quite as accurate as test results from the laboratory.

These first-generation electrochemical cells used by the industry in the early 1990's traditionally used electrodes positioned within the cell in a side-by-side or 'co-planar' layout to minimise electrical interference between the electrodes. This configuration limited the ability to correct for chemical interferences or test-to-test variations.

In the late 1990's, UBI scientists and engineers made a breakthrough in understanding that the interference between electrodes is predictable and can be described mathematically. This new understanding reveals additional information about the sample including information which can correct test-to-test variations that may be present in a specific sample type.

The novel opposing electrode configuration used in UBI's platform also removed the limitations which previously prohibited expansion of electrochemical cell technology to the testing of other substances. This opposing electrode technology formed the basis for extension into other POC devices as well as other point of use devices in alternative industries. This electrode configuration is the core IP of UBI and was the basis upon which it conducted its IPO in 2006.

This technology has the following advantages:

- Greater information leading to improved accuracy;
- Smaller volume requirements;
- Low-cost automated manufacturing; and
- Almost immediate response time.

UBI has an extensive portfolio of more than 20 patent families and patents pending relating to the design and manufacture of biosensors, and patents for Sentia tests have been granted; the bulk of these patents have c.5 yrs+ remaining. The Tn Antigen patent is in provisional stage and N-protein aptamer patent is non provisional, and includes immunosensors, test strips, measurement/reader devices, devices with reaction chambers, electrochemical detection chambers, amplifying mechanisms, heating and cooling.

UBI also has access to some patents held by LifeScan that it may use outside of human blood glucose monitoring.

In addition, it owns and holds patents for the inventions created by Siemens that are in UBI's name and were licensed to Siemens. These patents have c.10 years left to run.

The Sentia patents have c.20+ years to run, as do the Lubricin and Aptamer patents.

Strategy

UBI has historically been known as a costly R&D business with long lead times. New management has been pivoting toward building a multi-product stable of biosensors that can be used on UBI's proven hand-held platform technology in large markets that generate ongoing revenue streams. Examples of this include:

- Human health (coagulation with an opportunity in oncology – cancer remission monitoring, women's health);
- Animal health via blood glucose and diabetes;
- Food and beverage (wine-oenology); and
- Environmental testing.

Enhancing core technology through Lubricin

In April 2021, UBI announced an exclusive global license with Lubris BioPharma LLC of Florida USA to apply a proprietary coating Lubricin in UBI's biosensor products.

Lμbris BioPharma is a development-stage life science company producing and commercializing a recombinant version of the human protein, lubricin. Lubricin is expressed in numerous parts of the human body and plays an important role in protecting surfaces from damage and wear.

Lubricin (PRG4) is a large endogenous complex glycoprotein that binds to, and protects tissue surfaces from friction-induced wear & damage in much the same way that Teflon coats and protects the surface of the non-stick pans in one's kitchen. It is understood to be the most lubricating and anti-adhesive molecule in the human body. It is believed that Lubricin increases UBI's detection limits by c.1 billion times or better via specific analyte targeting from micromolar to picomolar, by reducing background interference on the sensor strip.

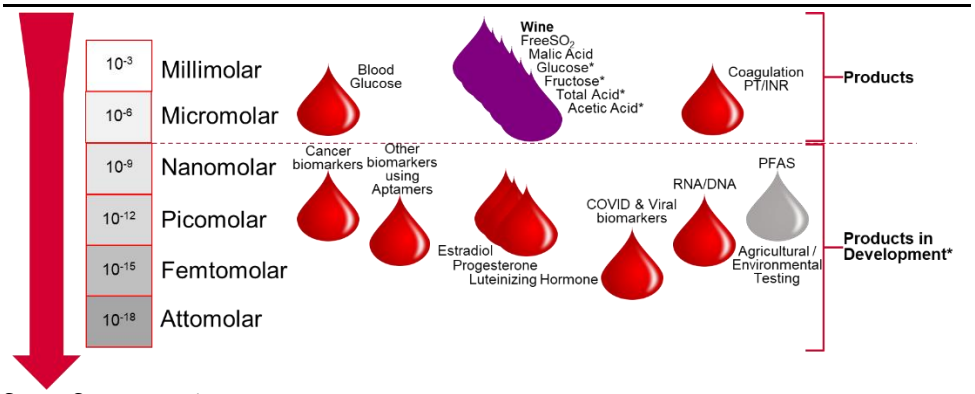
UBI believes Lubricin can deliver unprecedented sensitivities in raw unprocessed bodily fluid samples (finger prick whole blood, saliva) and is unlike other biochemical anti-adhesive coatings with virtually no impact on electrical processes.

Academics at Deakin University Frontier Materials and Swinburne University software and electrical engineering departments, along with Wollongong University have worked for the past five years to develop a biosensor for Tn Antigen using Lubricin.

UBI believes it can develop new products to enhance UBI's diagnosis and monitoring product range including, Oncology, Women's Health, COVID-19 virus detection, Veterinary and Aptamer technology.

UBI considers the application of lubricin to be a generational advancement that brings analyte detection, which was once out of reach, to within its grasp.

Figure 4: The importance of detection limits



Source: Company reports

Product portfolio

Sentia Wine Analyser

In March 2021 UBI launched the Sentia Wine Analyser, a portable device that measures the concentration of various oxides, sugars and acids in post-fermentation wine.

The first test strip related to measuring the concentration of Free Sulfur Dioxide (Free SO2), measuring the sulfur dioxide that has not bound to other chemicals such as aldehydes, pigments or sugars.

Sulfur dioxide is an additive in wine production and in bottled wine Free SO2 acts as a preservative. It was invented by the Romans over 2,000 years ago. It is very reactive in wine which prevents, microbes, oxidation and other chemical changes. This drives the motivation of measuring Free SO2. The volatility of SO2 makes it hard to analyse. Standard methods seem to capture other substances within the wine, yielding results containing errors. It is claimed that Sentia does not do this, delivering a cleaner set of results. In addition, the wine sample never touches the device, with the sample dropped onto a test strip which is inserted into the device for analysis. This is important as it avoids needing to clean the device between tests, which is a significant benefit relative to other testing methodologies.

In late 2020 an independent study was conducted by California State University (Fresno). The Viticulture and Enology Research Centre is widely recognized within the wine industry, and they evaluated 200 wine samples using the Ripper and FOSS FT2 WineScan SO2 method for comparison. The wines selected were based on the following criteria:

- Still white and red wines only;
- Residual sugar less than 30g /L (no dessert wines); and
- Expected free SO2 levels between 3 and 50 mg/L.

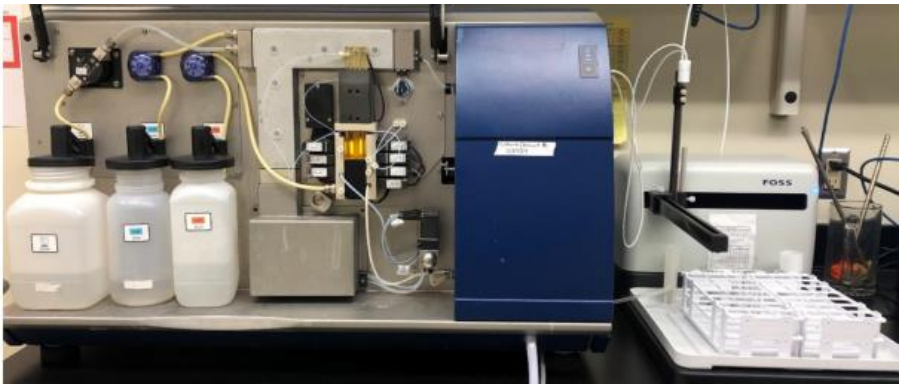
The report concluded the following:

- Sentia has multiple advantages for a winery production environment with the possibility of untrained personnel conducting the analyses.
- Sentia's flexibility allows the user to move around the winery freely with the hand-held instrument, either filling tank cards with the results directly or transferring the data into winemaker software.
- Sentia confirms that the electrochemical analysis in a handheld instrument can provide the same level of accuracy and reliability that could be expected from a standard laboratory method.
- The compact design and simple procedure eliminate sources of human error that can make the analysis of sulfur dioxide extremely challenging.
- Based on the results of the study, Sentia can be highly recommended for the use in finished and clarified still wines.

Figure 5: Compare the pair – Sentia hand-held device versus…

Source: Company reports

Figure 6: …FOSS FT2 WineScan with SO2 Module – standard lab kit



Source: Fresno State Viticulture and Enology Research Centre

The data range for Sentia analysis is between 3 and 50 mg/L free SO2, which is sufficient for the majority of commercially available wines.

Figure 7: Sentia instructions for use

Source: Company reports

UBI intends to launch six different tests for the global wine industry. The second of these tests is the Malic Acid Test, and UBI launched this product in late January 2022 in the US, Australian and NZ markets.

Malic Acid is one of the most important, time consuming and difficult tests performed by winemakers and typically takes winemakers 30 minutes but can take up to several hours to complete.

Malic Acid is often sent to third party laboratories for testing which can be expensive and take several days for results to be delivered. The Sentia Malic Acid Test may provide wine makers with accurate and timely measurement of the Malic Acid in their wine within 60 seconds of sample application, and at a low cost by using the Sentia portable, handheld device.

Malic Acid is one of the main acids found in the acidity of grapes. Its concentration decreases the more a grape ripens, and it is used in the wine industry to determine the ripeness and variety of grapes. Malic acid is the principal acid found in wine and the course of malolactic fermentation is monitored by tracking the falling level of L-Malic Acid, and the simultaneous increasing level of L-Lactic acid. Typically, a winemaker will track and test the levels of Malic Acid in each variety of wine many times during the secondary fermentation process. The number of Malic Acid tests performed globally is estimated at c.15m.

This provides UBI the two most important tests used in winemaking through its Sentia platform.

Advantages

The Sentia product has a number of key advantages over incumbent products including:

- Speed – 60 seconds to result compared with 10-20 min or several days for external testing;
- Accuracy and repeatability;
- Usability and portability;
- Productivity via improved processing speed and low labor costs, particularly avoiding external lab costs;
- Qualitative, with internal quality control checks for each test; and
- Convenience – automatically calibrated with data automatically uploaded or shared.

Figure 8: Product comparison showing key advantages of Sentia

	SENTIA	Aeration Oxidation	Thermo Gallery	Spectro-photometer	External Testing
Cost[1]	$1,950 / $3.50	$1,000 / $0.60	$75,000 / $1	$4,000 / $3	$35
Labour cost[2]	$0.60	$12.00	$6.00	$12.00	NA
Usability	Anyone	Wine / Lab staff	Lab staff	Wine / Lab staff	NA
Time	1 min	20 mins	10 mins	20 mins	2+ days
Accuracy	Calibrated to Gold Standard	Operator dependent	Gold Standard	Operator dependent	Operator dependent
Data	Automatically stored to upload	Manual	Automatically stored to upload	Available on some models	Results provided
Competitive Advantage	Time, Cost Accuracy Simplicity Portability Quality				

Source: Company reports

UBI is aiming to release another four wine test products this year including:

- Glucose – 2Q22
- Fructose – 3Q22
- Total Acid – 4Q22
- Acetic Acid – 4Q22

Distribution across 14 countries with more to come in CY22

We detail below the various distribution agreements that UBI has signed over the past 12 months.

- Australia – In December 2020, Grapeworks Pty Ltd was appointed exclusive distributor under a five-year term.
- US – In January 2021, Enartis Inc was appointed on a non-exclusive basis. The distributor was established in 2003, has 200 employees and has access to c.10,000 wine producers across 50 countries and spends €2m p.a. on research.

Enartis is a family-owned industrial chemical group focused on the manufacture of inorganic chemicals and wine making products for the past century.

- US – In April 2021, Wine & Beer LLC out of Virginia was appointed non-exclusive distributor for a five-year period. It has eight staff.
- US – In October 2021, Vinmetrica was appointed non-exclusive distributor for a three-year term, with an initial commitment to purchase volumes for Sentia devices and strips which will be delivered during October. The agreement covers both the US and Mexico.
- Canada – In April 2021, Vines to Vintages Inc (VTV) was appointed as a non-exclusive distributor for a three-year period. VTV has access to 700 wineries.
- Chile – In April 2021, Singularity SpA was appointed non-exclusive distributor for a three-year term. Chile is the eighth-largest wine producing nation and Singularity is a leading distributor covering Chile's 200,000 hectares of acreage.
- South Africa – In April 2021, Vicard SA was appointed non-exclusive distributor for a three-year term. Vicard has 20 years' experience supplying the local wine industry, which numbers, c.500 wineries.
- New Zealand – In April 2021, Grapeworks NZ Ltd was appointed exclusive distributor for a five-year term.
- France – In October 2021, Vivelys SAS, which is part of the Oeneo Group of companies, was appointed non-exclusive distributor for a three-year term. The Oeneo group has more than 10,000 customers globally and has a reputation for developing and selling high-end products. Vivelys completed several months of diligence on Sentia before committing to UBI. Vivelys also intends to participate in the development of other wine testing capabilities to be used on UBI's Sentia platform. In the announcement, Vivelys referred to UBI's expertise and practicality of its measurement solution.

As per the 4Q21 update, c.9% of Australian production wineries now use Sentia, which is encouraging being only 12 months post launch. UBI is working on another c.19 distribution deals across another c.13 countries. A global digital marketing campaign is being rolled out, and in addition to the earlier independent evaluation, two institutions in Europe and one in Chile are working on independent reviews of the Sentia product.

We estimate the global market size is c.$785m, and we assume that UBI can reach a c.10% share by FY26E.

Figure 9: Sentia TAM

	ANZ	US	ROW	Total
Devices				
Devices	2,311	7,929	50,100	60,340
Price	1,950	1,786	1,786	
Revenue	**4.51**	**14.16**	**89.46**	**108.13**
Sensors				
FSO2				
Sensors	1,329,560	4,433,985	15,660,000	21,423,545
Price	3.50	5.00	5.00	
Revenue	**4.65**	**22.17**	**78.30**	**105.1**
Glucose Acid				
Sensors	1,063,648	3,547,188	12,528,000	17,138,836
Price	3.50	5.00	5.00	
Revenue	**3.72**	**17.74**	**62.64**	**84.1**
Fructose Acid				
Sensors	1,063,648	3,547,188	12,528,000	17,138,836
Price	3.50	5.00	5.00	
Revenue	**3.72**	**17.74**	**62.64**	**84.1**
Malic Acid				
Sensors	930,692	3,103,789	10,962,000	14,996,481
Price	8.00	11.43	11.43	
Revenue	**7.45**	**35.48**	**125.30**	**168.2**
Total Acid				
Sensors	664,780	2,216,992	7,830,000	10,711,772
Price	6.00	6.00	6.00	
Revenue	**3.99**	**13.30**	**46.98**	**64.3**
Acetic Acid				
Sensors	1,329,560	4,433,985	15,660,000	21,423,545
Price	8.00	8.00	8.00	
Revenue	**10.64**	**35.47**	**125.28**	**171.4**

Source: Company reports

Figure 10: Sentia TAM summary

Revenue summary ($m)	ANZ	US	ROW	Total
Devices	4.51	14.16	89.46	108.13
Sensors				
FSO2	4.65	22.17	78.30	105.12
Glucose Acid	3.72	17.74	62.64	84.10
Fructose Acid	3.72	17.74	62.64	84.10
Malic Acid	7.45	35.48	125.30	168.22
Total Acid	3.99	13.30	46.98	64.27
Acetic Acid	10.64	35.47	125.28	171.39
Total Sensors	**34.17**	**141.89**	**501.14**	**677.20**
Total revenue opportunity	**38.68**	**156.05**	**590.60**	**785.33**

Source: Company reports

Figure 11: Estimated Sentia revenue at different levels of market share

($m)	ANZ	US	ROW	Total
Total revenue opportunity	**38.7**	**156.1**	**590.6**	**785.3**
10% share	**3.9**	**15.6**	**59.1**	**78.5**
20% share	7.7	31.2	118.1	157.1
30% share	11.6	46.8	177.2	235.6
40% share	15.5	62.4	236.2	314.1
50% share	19.3	78.0	295.3	392.7

Source: Canaccord Genuity Estimates

Xprecia Stride (Blood Anticoagulation)

Figure 12: Xprecia Stride

Source: Company reports

The Xprecia Stride Coagulation Analyser is a hand-held POC device that reports PT/INR levels with laboratory accuracy for patients taking the blood thinning drug Warfarin.

The Prothrombin Time (PT) and International Normalised Ratio (INR) are assays that evaluate the time to blood clotting, and the tests seek to understand if clotting is occurring normally and whether Warfarin is operating as expected.

Xprecia Stride has been sold by Siemens Healthineers AG (Siemens) since December 2014. Siemens is a leading German medical device business with over EUR14bn in revenue. In September 2019, UBI bought back the global distribution rights for US12.5m (A$18m). This left UBI free to develop new customers and distribution relationships beyond Siemens and its existing hospital customers/distributors.

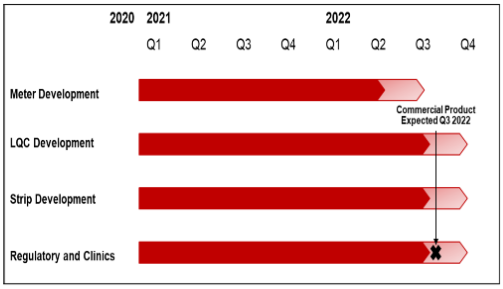
There are currently 3,500 units installed across the world that UBI will continue to service beyond the March 2023 expiry of the contract.

According to a Siemens white paper and a Wikipedia reference, in 2005 there were c.800m PT/INR tests world-wide. By 2017, this had declined to over 200m tests, according to the NCBI/NIH (National Centre for Biotechnology Information/National Institute of Health) and has now stabilised at that level. However, once a patient is prescribed Warfarin, they are generally considered to be on it for life.

UBI plans to have a new, improved version of the product available to launch in 2022, to better compete with the leading player. From its investigations, UBI believes Roche has c.60-70% market share. Other players include Alere, ITC, Abbott, iLine.

Figure 13: Market size and timelines

PT-INR Global Market	USA	EU	ROW	Total
Total Hospital POC PT-INR	223	168	63	454
Total Doctor Office POC PT-INR	151	113	42	306
Total Home-Testing PT-INR	179	106	40	325
Total POC PT-INR	**553**	**387**	**145**	**1,085**



Source: Company reports

UBI aims to operate in the Hospital and Doctor office market in the EU only at this stage, which equates to a c.$280m market size out of the total c.$1bn TAM estimated for PT/INR testing.

UBI has to date converted c.16 of 50 distributors, with others to follow over CY22. Xprecia Prime is the name of the next-generation product which has been in development for seven years. In Figure 13 above, UBI lays out the timeline for regulatory approval, with an expectation that FDA approval should occur by the end of CY22 in time for an early CY23 launch. Currently, 114 patients out of a total of 360 patients have been recruited.

UBI currently has a run-rate of c.1.8m strips p.a. at $2.08 per test (c.$3.75m). UBI believes the change in the distribution arrangement should significantly lift revenue over the next 12 months. UBI is aiming for a long-term target of 7% market share of its defined market, equating to c.$20m p.a. in revenue.

UBI believes that Xprecia Prime can successfully compete with Roche on product quality and at a better price.

On 28 February 2022, UBI announced that it has received EU approval for Xprecia Prime across the 32 countries of the EU. The CE Mark shows that Xprecia Prime conforms with European Directives for IVD Medical in Vitro Diagnostics (98/79/EC) and covers the Coagulation Analyser, PT controls and PT-INR test strips. The first generation Xprecia Stride is currently sold in 36 countries.

UBI believes it now has the best performing PT/INR POC device across the world and can grow sales and market share. UBI indicated in its recent market update it believed 1Q22 sales would show strong sales growth.

Figure 14: Competitive product landscape

	UBI: Next Gen	iLine: MicroINR	Roche: CoaguChek Vantus	Roche: CoaguChek Plus
FDA Reg Status	PRO, PST, CLIA	PRO, PST, CLIA	PST	PRO, PST, CLIA
Sample Size (µL)	8	3	8	8
Unit of Measure	INR & SEC	INR	INR	INR, SEC %Q
Measuring Range	0.8 – 8.0	0.8 – 6.0	0.8 – 6.0	0.8 – 8.0
Touchscreen	Y	N	N	Y
Data Communication	Wired / Wireless	Wired	Wired / Wireless	Wireless
Power	Rechargeable	Rechargeable	4 AAA Batteries	Rechargeable
Test Memory	2000	199	400	2000
Price	<< $650	$650	$650 - $900	$1050 - $1550

Source: Company reports, Canaccord Genuity estimates

Adjunct to Xprecia is the HRL laboratory services business

HRL is a specialist blood laboratory and conducts all of the validation testing needed to release UBI's coagulation product. The services that HRL perform are essential to the release of UBI's Xprecia Stride and Xprecia Prime products. Those services were previously outsourced and proved too expensive such that UBI bought this Canadian business several years ago to keep the validation requirement in house. HRL is one of a handful of laboratories globally that can validate coagulation test strips.

For each batch of coagulation test strips (Xprecia Stride/Prime) manufactured, the strips are required to undergo external validation to ensure they meet certain performance characteristics before being sold commercially.

HRL also perform blood testing services in clinical trials for major pharmaceutical companies such as Bayer, and this part of the business has developed over the last few years, resulting in HRL having a number of contracts generating c.$2m in revenue in CY21.

The strategy for HRL going forward is to grow the blood testing services in the clinical trials segment as well explore new avenues to grow the business.

In late CY21 a project commenced to expand HRL's testing capabilities into the testing of cytokines, which are commonly tested in hospital patients, clinical trials and other settings. UBI is also targeting inflammatory disease and a Multiplex Immunoassay Platform. The project is expected to be completed by 2HCY22.

Through the growth in the blood testing services in clinical trials UBI expects HRL's revenue to grow to between $7m to $10m in the next 5 years.

Product pipeline

Veterinary Biosensor (Animal blood glucose monitor)

In December 2020, UBI announced a new global exclusive license from LifeScan Global Corporation to allow UBI to develop a biosensor test strip and device to be used in the detection and monitoring of diabetes in animals.

LifeScan was a former partner of UBI, and using its technology, LifeScan sold more than 10 billion human diabetes test strip products globally. LifeScan bought back the rights to that product for c.$44.6m in December 2018. The relationship is now being rekindled in the animal diabetes segment.

This new product is expected to launch by early CY23 with no significant regulatory hurdles. The new product will be owned by UBI and marketed by UBI-appointed distributors, with a small single-digit royalty to LifeScan.

UBI estimates the global Vet Blood Glucose Monitoring market is valued at c.$200m, is growing at >11% p.a. and should reach c.$370m by CY26. We note recent disclosures indicating c.25% of a future market value would equate to c.$82m pa.

Growth is being driven by:

- Increasing pet ownership.
- Increasing obesity in pets globally due to the humanization of pets by owners. Up to 56% of dogs and 60% of cats are understood to be overweight in 2018 according to www.petobesityprevention.org.
- There are two operators that are understood to control c.60% of the US market, but it is claimed these products are old. AlphaTRAK 2 by Zoetis Inc (ZTS-NYSE) and CentralVet GK by Acon Laboratories Inc – unlisted. The AplhaTRAK 2 product has not been updated for a decade according to UBI.

In the ASX announcement, UBI stated that the contract, once commenced, will terminate if sales drop below US$10m annually after a pre-determined number of years from first sale of the product. CG is not forecasting this new revenue stream until it commences, but the termination clause suggests both parties expect revenue to rise quickly, and the product could become a significant revenue generator over the medium term.

Blue sky with cancer remission monitoring via Tn Antigen detection

UBI is aiming to develop a finger prick blood test that can be used by oncologists in clinics, hospitals, GP clinics or at home and can be used to accurately measure a patient's cancer status (monitoring of remission and reoccurrence) in easier, cheaper and more frequent tests.

There are 78m cancer remission patients globally with the monitoring of remission patients market estimated to have a TAM of c.$17bn.

Figure 15: Tn antigen market opportunity

Current Remission Monitoring Protocols	
Number of people in remission from carcinomas per year	78,000,000
Average number of tests per person per year	1.5
Number of tests per year	122,252,509
Average cost per test	AUD $139
Cost of remission monitoring per year	**17,010,592,215**
Potential Remission Monitoring Protocols Tn Antigen	
If each person in remission is tested monthly with a Tn Antigen test.	
Average number of tests per person per year	12
Number of tests per year	936,000,000
Average cost per test (say)	AUD $12
Cost of remission monitoring per year	**11,232,000,000**

Source: Company reports

The Tn antigen biosensor was developed by Deakin University, Swinburne University of technology and The University of Wollongong using technology supplied by Lubris. The three universities have been working on the Tn antigen biosensor for over five years, which reduces the development time to market

Under an exclusive license and supply agreement with Lubris to commercialise the Tn antigen biosensor for use in detection, staging and monitoring of cancer, UBI will:

- Have a global exclusive perpetual license to commercial products using lubricin and UBI's discrete single point measurement technology.
- Hold all IP, commercialisation, development and manufacturing rights, to all non-therapeutic products including Tn Antigen in various sample matrices including, but not limited to blood, saliva, urine, beverages, effluent streams and chemical waste using lubricin.
- UBI will own all new IP and products developed.
- Be subject to reasonable commercial endeavor clauses to ensure the supply of lubricin remains exclusive.
- Pay a non-material upfront and annual maintenance fee.
- Pay a single-digit royalty on sales after deducting the cost of Lubricin.

Tn antigen is primarily associated with the development and progression of cancer (carcinoma), with false positives being rare.

Tn antigen is an O-glycan (sugars that have numerous functions in the body and may be important in diseases such as cancer, diabetes and Alzheimers) that is very rarely expressed in healthy blood cells or peripheral tissues (Springer GF).

In UBI's 9/4/21 ASX release it highlighted that Tn antigen is expressed in many cancers with high levels of prevalence, with many references to substantiate the claim.

UBI has been undertaking a development clinical study in 338 patients via the Peter MacCallum Cancer Centre, Victorian Cancer Biobank and CIC bioGUNE in Spain. The development study is due for completion in April and results are expected to be released shortly thereafter.

Each patient blood sample is being used to:

- Determine the clinically relevant range of Tn concentrations
- Confirm the role of Tn antigen in multiple cancer types
- Validate the performance of UBI's handheld POC device and test strip
- Determine the sensitivity and specificity of the Tn Antigen biosensor and
- Benchmark the performance of the Tn Biosensor against existing biomarker performance

Figure 16: Cancer expression in multiple cancers

Cancer	Expression
Pancreas	93 - 100% [3,4,16]
Colorectal	70 - 100% [1,3,6,7,14,17]
Breast	90 - 96% [3,6,14,18]
Stomach	70 - 92% [3,6,14]
Lung	70 - 90% [3,6,14]
Prostate	70 - 90% [6,14]
Ovary	70 - 90% [6]
Bladder	70 - 90% [3,6,14]
Cervical	45 - 90% [3,6,14]
Thyroid	61 - 89% [19,20]

Source: Company reports

The study will use existing cancer biomarkers PSA, CEA and CA 15-3 as comparators to measure performance. Should the development study generate positive results, then UBI intends to conduct regulatory clinical trials during CY23 and aim for regulatory approval in the US/EU/RoW in CY24.

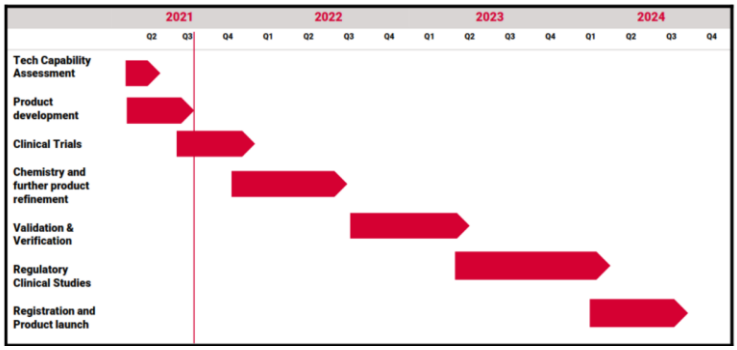
Existing biomarkers have their own limitations as per the following:

PSA (screening/diagnosis and monitoring of patients with prostate cancer) – has limited clinical sensitivity (85% and specificity (30%) but UBI advised global revenue for the PSA test in CY21 is estimated at c.$3.5bn.

CEA (monitoring colorectal cancer tumor growth) has limited clinical sensitivity (55%) and specificity (83%), but it is estimated that CY21 global revenue was c.$3.4bn.

CA 15-3 is approved for monitoring breast cancer patients but has limited clinical sensitivity (54%) and specificity (91%).

Figure 17: Cancer biosensor development timeline



Source: Company reports

The total development cost over the expected three-year time frame is c.$5-7m.

While UBI's existing product portfolio offers material potential to generate shareholder value, the Tn antigen biosensor development is a company-making opportunity, in our view.

Aptamer-based technology

UBI advises that it has proven in feasibility studies that aptamers (very specific functional and targeted tests for analytes of interest) can be laid down onto its biosensor strips and specific targets can be detected and measured from a very small sample size delivering almost instant results. Aptamers:

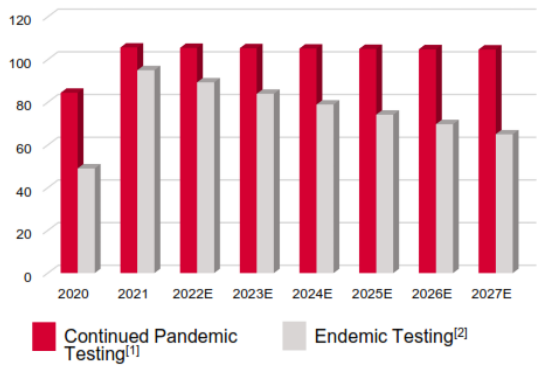
- Are synthetically made molecules structured as single-stranded DNA or RNA oligonucleotides.
- Are designed to mimic the functional properties of monoclonal antibodies.
- Bind to very specific target molecules with high affinity and specificity at picomolar detection limits.
- Are an alternative to therapeutic antibodies.

UBI is working on two new products using the aptamer-based sensing platform:

- Saliva/nasal-based test that can instantly detect SARS-CoV-2 N-Protein (COVID).
- Fertility hormones (Estradiol, Progesterone and Luteinizing Hormone) to be used in IVF and advance fertility treatments.

Note that while COVID-19 might be entering the endemic phase, the testing market for endemic COVID-19 could still be worth c.US$60bn five years from now, according to Research Dive. UBI indicates the fertility opportunity is valued at c.$1.35bn.

Figure 18: Global COVID-19 testing market



Source: Company reports

Figure 19: Fertility market opportunity

Region	Number of Cycles	Testing Market ($AUD)
Asia	1,025,917[1,2]	553,995,180
Europe	918,159[3]	495,805,860
North America	347,625[4,5]	187,717,500
Latin America	93,600[6]	50,544,000
AUS & NZ	88,929[7]	48,021,660
Africa	25,770[8]	13,915,800
Worldwide	2,500,000[2]	1,350,000,000

Source: Company reports

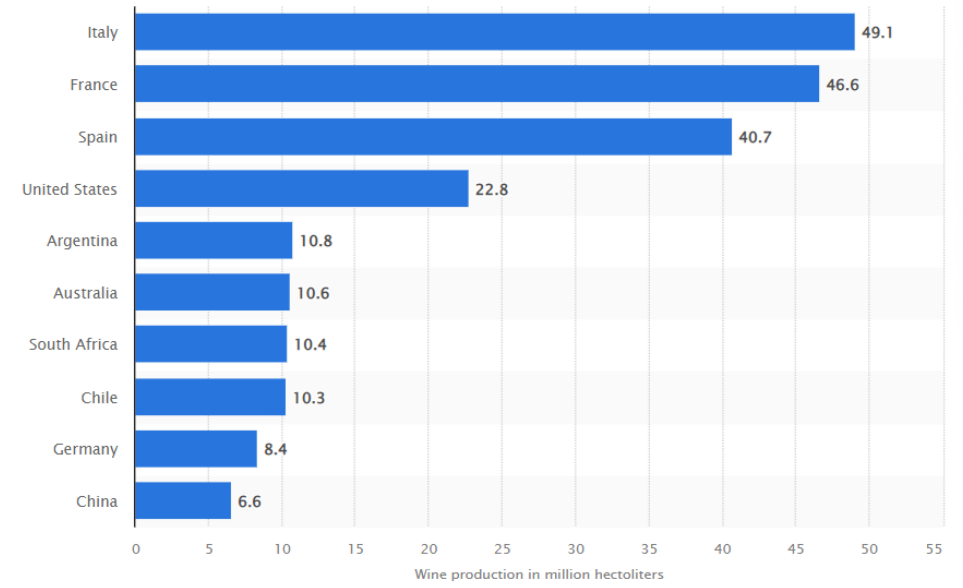
Industry overview

Wine

The dominance of EU countries and the US demonstrate where UBI needs to focus its activity, with Australia being meaningful but acting more as a testing ground for the larger markets. South America is also prospective.

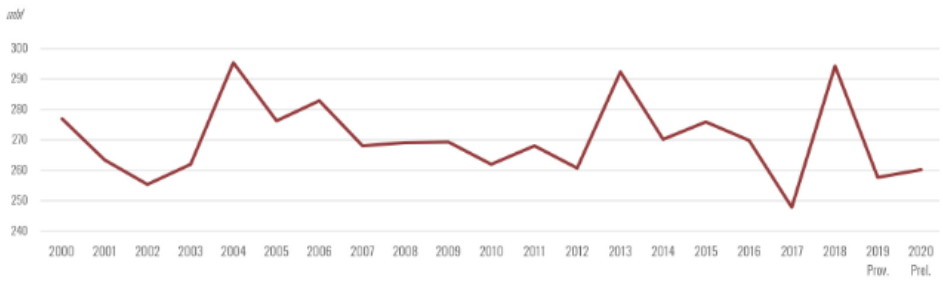
Global wine production was expected to decline c.4% to c.250 mhl, and c.7% below the 20-year average according to OIV (International Organisation of Vine and Wine). OIV's projection of production decline represents the third successive year, and production is approaching six-decade lows. Bad weather in the EU is one cause with overall production expected to have declined c.13% yoy. Southern hemisphere wines were expected to increase c.19% yoy.

Figure 20: International wine production league ladder for 2020



Source: Statista

Figure 21: Global wine production is stagnant



Source: OIV Statistical Report on World Vitiviniculture

However, UBI's business model for Sentia is not based on the volume of production, but rather the number of wineries it can sell the Sentia device and test strips to.

On this basis, the dominance of small to medium size wineries across the key markets is instructive and provides UBI a strong foundation for marketing its innovative device to smaller wineries that cannot afford to send wine samples to expensive and elaborate laboratories for testing. The Sentia device should enable these wineries to test every barrel efficiently rather than a small sample.

Figure 22: Winery industry segmentation

		Volume	Barrels	Number
ANZ	Small	<266t	<665	2,512
	Medium	266t - 4,900t	665-1,2250	391
	Large	>5,000t	>12,500	51
US	Small	<266t	<665	8,537
	Medium	266t-4,900t	665-12,250	1,396
	Large	>5,000t	>12,500	161
ROW	Small	<266t	<665	91,000
	Medium	266t - 4,900t	665-12,250	7,000
	Large	>5,000t	>12,500	2,000

Source: Company reports, OIV Statistical Report on World Vitiviniculture, New Zealand Wine Growers Annual Report, Australian and New Zealand Wine Industry Directory

Anticoagulation therapy market

Indications for oral anticoagulant therapy (OAT) with warfarin to prevent thromboembolic disease without increasing risk of hemorrhagic complications have increased over time to include a variety of cardiac and vascular diseases. The most common indications for OAT include patients at the risk of forming blood clots because of atrial fibrillation, prosthetic heart valve replacements, inherited or acquired disorders, and to prevent the reoccurrence of heart attacks. Prothrombin times must be monitored frequently in patients taking OAT to determine the safest dose and minimise risk for complications by maintaining the INR within the appropriate therapeutic range. The duration of warfarin therapy depends on the indication and the patient's risk of VTE or stroke, and ranges for three months to indefinitely.

Use of the INR or PT (standard measurements for reporting the blood's clotting time), allows physicians to determine the level of anticoagulation in a patient independent of the laboratory reagents used. The INR is the ratio of the patient's PT compared to the mean PT for a group of normal individuals. Maintaining patients within prescribed therapeutic range minimises adverse events associated with inadequate or excessive anticoagulation, such as serious bleeding events.

Warfarin has been and is the first line drug therapy for OAT. Warfarin treats and prevents blood clots by decreasing the production of several clotting proteins that rely on vitamin K. Warfarin is taken orally once daily and the dose varies subject to inherited factors, reason for the medication and diet. As dosage varies according to patient, warfarin requires frequent laboratory monitoring and dose adjustment to maintain blood levels within the target range. Below the target range, patients have an increased risk of clotting, and above the target range, the risk of bleeding increases.

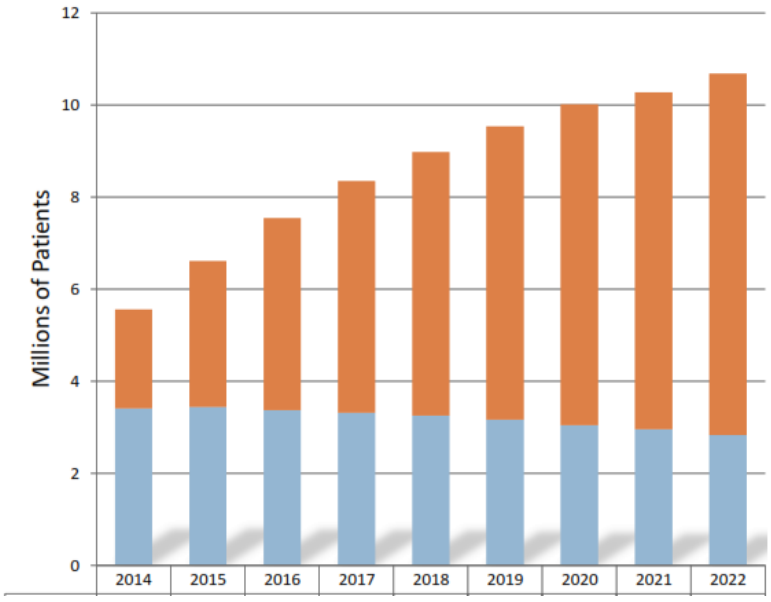
Warfarin is a vitamin K antagonist that has been widely used for the treatment of DVT and PE. Warfarin inhibits vitamin K-dependent clotting factors and anticoagulant proteins. However, as warfarin has limitations that can impede appropriate use in patients with VTE or stroke prevention, there are drug developers pursuing alternatives.

Alternatives to warfarin have been building market share over time and these therapies do not require ongoing monitoring of blood levels as they reach predictable levels in most patients.

Subsequently, warfarin and the patient monitoring tools' that service this segment of the OAT market are mature and in gradual decline. Even so, it is estimated there are still c.3m US patients using warfarin, which continues to offer a market opportunity for best-of-breed products.

As UBI has been involved in the anticoagulation market for nearly a decade through the Siemens arrangement, the opportunity for UBI relies on a multi--distribution strategy, a next-generation product with better pricing than the incumbent Roche and viewing the opportunity as a niche position.

Figure 23: US patients Warfarin v NOACs



Source: Greystone estimates

Current models of anticoagulation management include laboratory testing coupled with warfarin dosage adjustment by health practitioners. Self-management of warfarin is an evolving model where the patient can test their INR using self-test stems and adjust dosages accordingly. Self-testing offers an alternative and simplified method to traditional laboratory testing. A key feature of self-testing is the ability to produce an INR within minutes to enable timely drug dosage adjustments and increase patient convenience. It could be particularly useful to patients without easy access to laboratories or those who experience difficulty with venous blood draws.

The success of self-testing depends on the accuracy and reliability of POC systems. While UBI is primarily targeting the professional use market, and this drives our earnings estimates, it does intend to target the home-testing market with an estimated TAM of c.$100m in the EU and c.$180m in the US. UBI believes its next generation Xprecia Prime model can successfully compete with the leading market operator, Roche, that has c.60-70%+ market share, albeit UBI is only aiming for <10% share over the next five years.

Financials

FY21 result

UBI reported a strong c.79% yoy growth in revenue to c.$5.8m, reflecting the initial contribution from the new wine testing division and a tripling in the testing services business at HRL.

The wine testing business had contributions from multiple distribution points across 15 countries. The result also only reflected the first year from the first test offered under the Sentia product being, Free Sulphur Dioxide. In the domestic market, Sentia is now used by c.9% of production wineries and in Canada, Sentia has commenced its first year with a c.5% share. While the split between 1H/2H is relatively even, the 1H contained initial stocking orders of metres/test strips, whereas the 2H reflected growth in customers.

In coagulation testing, the increase in sales reflected the launch of direct distribution of Xprecia Stride in 1H21 where there are now 16 country distribution agreements, in addition to the Siemens arrangement. Sales declined in 2H21 due to a delay in an order from Siemens, which was subsequently made in early CY22. Sales in 2H21 largely reflected non-Siemens' customers that generate a better margin.

Coagulation testing services via HRL in Canada increased revenue substantially via a new contract with Bayer Inc., and in the 2H there was an increase in work from 13 of HRL's clients.

Gross margins nearly doubled yoy from the introduction of Sentia, the transition to direct distribution for Xprecia Stride driving higher unit pricing, as well as improving leverage from a fixed service cost base.

The rise in opex was solely due to R&D costs, which reflected the range of wine tests developed to be launched in CY22, the next generation of the coagulation testing platform, the Tn Antigen cancer biosensor, the animal blood glucose product and the COVID-19 testing product.

Figure 24: FY21 result

($m)	FY20	1H21	2H21	FY21
Wine testing (Sentia)	0.0	0.6	0.6	1.2
Coagulation Testing Products (Xprecia)	2.6	2.0	0.7	2.7
Coagulation Testing Services (HRL)	0.6	0.8	1.1	2.0
Other	0.1	0.0	0.0	0.0
Total revenue	**3.2**	**3.4**	**2.4**	**5.8**
COGS	2.6	2.0	1.7	3.7
Gross Profit	**0.6**	**1.4**	**0.7**	**2.1**
GP Margin	19.6%	40.1%	31.0%	36.5%
Other Income	4.9	1.8	2.6	4.5
Opex	10.9	5.3	9.6	14.9
EBITDA	**-5.4**	**-2.1**	**-6.2**	**-8.3**

Source: Company reports, Canaccord Genuity

Forecasts

Wine testing

In UBI's first year of launching the Sentia device and the first test Free SO2, it generated c.$1m in revenue across 14 different countries/distribution agreements. It established a US sales team, achieved c.9% share of Australian production wineries and c.5% in Canada. Another six tests are expected to be launched over CY22, beginning with the Malic Acid test that was recently launched. A further 13 distribution contracts are under negotiation.

We expect UBI to make meaningful gains in CY22 amongst the small-to-medium winery cohort, which dominates the total number of wineries, as it is these that cannot afford internal testing labs. The combination of speaking with technical and industry experts, as well as public testimonials, suggests that Sentia should be a successful product and change the nature of wine testing globally at the SME level.

By FY26E, we think UBI can capture a c.10% share of the test strip market, leading to Sentia revenue of c.$74m. UBI achieved a gross margin of c.54% in FY21, and this should rise with scale. We have capped our expectations at c.58% pending further evidence of margin improvement.

Figure 25: Wine testing divisional forecasts

($m)	FY20	FY21	FY22E	FY23E	FY24E
Sentia Wine Testing					
Sentia Device Revenue	0.0	0.7	2.0	3.6	4.0
Sentia Sensors (Test Strips) Revenue	0.0	0.4	2.7	10.0	28.8
Total Sentia Revenue	**0.0**	**1.1**	**4.7**	**13.6**	**32.8**
Revenue Growth			309.7%	188.6%	141.2%
Gross Profit	**0.0**	**0.6**	**2.7**	**7.9**	**19.0**
Growth			340.1%	188.6%	141.2%
Gross Profit Margin	0.0%	54.0%	58.0%	58.0%	58.0%

Source: Company reports, Canaccord Genuity estimates

Xprecia Stride/Prime

Timing delays from Siemens ordering more tests impacted 2H21 results, but UBI has advised these orders to have come through from Siemens and should drive a substantial increase in Xprecia Stride sales in 1Q22. Ahead of the expiry of the Siemens contract in March 2023, UBI has completed converting 16 of the 50 Siemens hospital and clinic customers, with the balance expected over the course of CY22. UBI has also received EU approval for Xprecia Prime and expects the first 1,000 units to be delivered into inventory during 1H22.

The contribution from converted and to be converted distributors should drive sales growth in FY22, and which should set up growth in FY23 post the expiry of the Siemens contract.

We do not allow for US sales of Xprecia prime but note that the trial for an FDA application is well underway with c.20% of patients recruited to date. A regulatory submission is expected by 2H22 and approval by 1Q23.

A more consistent revenue profile in FY22 should see gross margin improve. Gross margins should improve from the Stride model due to selling directly to capture the whole margin and a lower COGS from advancement in manufacturing of the Prime model. Scale should also improve margins.

Figure 26: Anti-Coagulation product testing divisional forecasts

($m)	FY20	FY21	FY22E	FY23E	FY24E
Xpecia Stride/Prime (Coagulation Platform)					
Total Xprecia Revenue	**2.6**	**2.7**	**3.9**	**5.6**	**8.4**
Revenue growth			47.6%	42.9%	50.0%
Gross Profit	**0.0**	**0.8**	**2.4**	**3.4**	**5.1**
Growth			185.4%	42.9%	50.0%
Gross Profit Margin	0.0%	31.0%	60.0%	60.0%	60.0%

Source: Company reports, Canaccord Genuity estimates

Anti-coagulation testing services (HRL)

Validation of coagulation test strips and the contract with Bayer led to substantial growth in FY21. Gross margin improved as the validation service was brought in house. UBI intends to expand its service offering to include inflammatory disease, cytokines and a multiplex immunoassay platform. New customers have been secured; however, we see this business primarily as an adjunct to the Xprecia business and so only assume steady growth in our forecasts.

Figure 27: Anti-Coagulation testing services divisional forecasts

($m)	FY20	FY21	FY22E	FY23E	FY24E
HRL Canada - Calibration Services					
Revenue	**0.6**	**2.0**	**2.2**	**2.4**	**2.6**
Revenue growth		245.5%	10.0%	10.0%	10.0%
Gross Profit	**-0.2**	**0.7**	**0.7**	**0.9**	**1.0**
Growth			12.2%	16.4%	14.3%
Gross Profit Margin		33.5%	34.2%	36.2%	37.6%

Source: Company reports, Canaccord Genuity estimates

We assume ongoing growth in opex reflecting general growth in the business. We note that c.$3.5m in R&D for FY22E relates to the development and launch of the animal blood glucose monitoring product, which is expected in FY23, but which is not forecast at this stage, albeit UBI advises there are no material regulatory hurdles. This is a one-off cost and opex should be lower in FY23E as a result

We allow for the reduction in R&D cost in FY23E and then assume cost growth resumes in lieu of new projects, including the Tn Antigen product and aptamer technology for both COVID-19 and fertility products.

We thus expect UBI to achieve an EBITDA positive result by FY23E (2H23E), with potential for upside if existing products prove more successful or new products are launched within our forecast horizon, as well as opex being lower than our estimates.

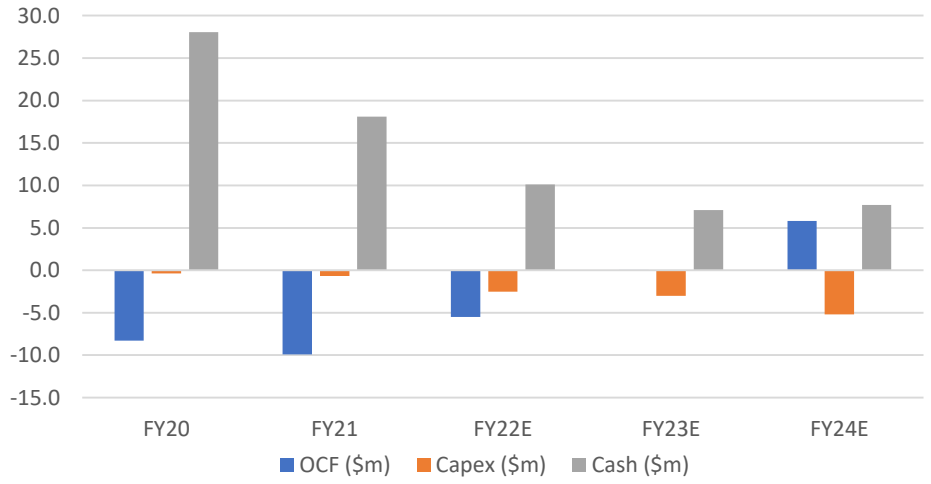
Figure 28: CG earnings estimates

($m)	FY20	FY21	FY22E	FY23E	FY24E
Products	2.6	3.8	8.6	19.2	41.2
Services	0.6	2.0	2.2	2.4	2.6
Revenue	**3.2**	**5.8**	**10.8**	**21.6**	**43.8**
Growth		*78.5%*	*87.0%*	*99.9%*	*103.1%*
COGS	*-2.4*	-3.3	-4.9	-9.5	-18.8
Gross Profit	0.9	2.5	5.9	12.1	25.0
Gross Margin		43.2%	55.0%	56.0%	57.1%
Growth		*189.7%*	*138.1%*	*103.5%*	*107.0%*
Other Income	4.8	4.6	4.0	4.0	1.0
OPEX	-11.0	-15.0	-17.0	-14.6	-16.1
EBITDA	-5.3	-7.9	-7.1	1.4	9.9
EBITDA Margin				6.7%	22.6%
EBIT	-7.5	-10.4	-9.6	-1.4	6.5
EBIT Margin					14.9%
NPBT	-7.4	-10.5	-9.6	-1.4	6.5
NPAT	-7.4	-10.5	-9.6	-1.4	6.5

Source: Company reports, Canaccord Genuity estimates

Historical cash levels reflect the buy-out of the blood glucose product by LifeScan, and subsequently, the operating cash flow reflects the loss of the quarterly fees being paid to UBI. Cash levels also declined via the buyback of the Siemens rights over the Xprecia coagulation product. Capex levels are starting to increase to reflect the investment in equipment necessary for the cancer biomarker and other pipeline products.

Figure 29: Cash low point should be c.$7m



Source: Company reports, Canaccord Genuity estimates

Valuation

We value UBI at $1.25/CDI using a DCF methodology and apply a 10-year two stage DCF with explicit forecasts over the first five years and fading growth for the second five-year period. We apply a WACC of 11.5% and terminal growth of 3.5%. Our valuation represents a c.50% premium to the current share price of $0.83/CDI. We expect UBI to reach positive OCF/FCF by FY24E.

Our valuation is driven by earnings estimates for the Wine testing (Sentia) and coagulation testing product (Xprecia) and services (HRL) businesses. We do not forecast the animal blood glucose monitor product (c.$200m opportunity) at this stage, but it is expected to be launched by 1H23. We also do not forecast the other pipeline products such as the cancer biomarker (c.$11bn+ opportunity), COVID-19 (c.$60bn endemic testing market) and fertility products (c.$1.35bn market opportunity).

In wine testing, we assume that UBI can achieve a c.10% market share of test strips by FY26E, which would equate to total wine testing revenue of c.$74m.

In the coagulation testing product, we assume UBI can achieve a 6% market share of the EU hospital and physician office market by FY26E, which would equate to revenue of c.$17m. We make no allowance for home testing in the EU or the US market in general, even though UBI is aiming to achieve regulatory approval and launch by 1H23.

We sensitise our valuation in two forms being WACC/terminal growth and wine testing test strip unit price and test strip market size. Across the six wine tests that UBI is rolling out, we use a blended price of $6.59/test, but unit prices vary across test and jurisdiction and range from $3.50 to $11.40/test. The test strip market has been estimated by UBI via a range of sources, and so may be subject to variation. We think we have been sufficiently conservative on the discount rate in our valuation settings but note there is downside valuation risk from the rising interest rate environment emerging.

Figure 30: DCF parameters

	$m		
Explicit Cashflows	61.4	Terminal gr rate	3.5%
Terminal Item	143.8	Risk Free rate	3.0%
Total Firm Value	205.2	Equity Risk Premium	6.5%
Add: Net Cash	-16.3	b	1.31
Total Equity Value	221.5	WACC	11.5%
Fully Diluted Number of shares	177.5		
Per CDI value	**$1.25**		

Source: Company reports, Canaccord Genuity estimates

Figure 31: Valuation sensitivities

		WACC				
		10.5%	10.9%	11.5%	12.1%	12.5%
	2.80%	$1.38	$1.29	$1.18	$1.08	$1.02
Terminal	3.15%	$1.43	$1.33	$1.21	$1.11	$1.04
Growth	3.50%	$1.48	$1.37	**$1.25**	$1.14	$1.07
Rate	3.85%	$1.54	$1.42	$1.29	$1.17	$1.10
	4.20%	$1.60	$1.48	$1.33	$1.21	$1.13

Source: Company reports, Canaccord Genuity estimates

Figure 32: Valuation sensitivities based of Sentia unit price and test strip market size

	80,000,000	90,000,000	102,833,015	110,000,000	120,000,000
$ 5.50	$ 0.69	$ 0.82	$ 0.98	$ 1.08	$ 1.21
$ 6.00	$ 0.78	$ 0.92	$ 1.10	$ 1.21	$ 1.35
$ 6.59	$ 0.89	$ 1.05	**$ 1.25**	$ 1.36	$ 1.52
$ 7.00	$ 0.97	$ 1.14	$ 1.35	$ 1.47	$ 1.63
$ 7.50	$ 1.06	$ 1.24	$ 1.47	$ 1.60	$ 1.77

Source: Company reports, Canaccord Genuity estimates

Figure 33: Peer group valuation metrics

Company Name	FYE	Ticker	Exchange	Currency	Price	Market Cap	Enterprise Value	EV/Sales FY22	EV/Sales FY23
Domestic Peers									
Sonic Healthcare Limited	Jun	SHL	ASX	A$	35.73	17,146	20,942	2.3	2.6
Pro Medicus Limited	Jun	PME	ASX	A$	47.40	4,947	6,083	65.5	53.3
Integral Diagnostics Ltd	Jun	IDX	ASX	A$	3.91	895	1,288	3.4	3.0
Capitol Health Limited	Jun	CAJ	ASX	A$	0.36	370	462	2.4	2.2
Cogstate Ltd	Jun	CGS	ASX	A$	2.31	400	206	3.6	3.0
Medical Developments International Limited	Jun	MVP	ASX	A$	3.94	281	275	12.3	8.2
Impedimed Limited	Jun	IPD	ASX	A$	0.14	249	107	7.6	4.6
Volpara Health Technologies Ltd.	Mar	VHT	ASX	A$	0.84	212	297	9.6	6.8
Genetic Signatures Ltd.	Jun	GSS	ASX	A$	1.17	167	131	3.7	6.2
Cyclopharm Limited	Dec	CYC	ASX	A$	1.64	153	122	5.8	4.9
Micro-X Ltd.	Jun	MX1	ASX	A$	0.21	97	103	8.5	2.4
Atomo Diagnostics Ltd.	Jun	AT1	ASX	A$	0.12	68	87	6.4	4.7
Lumos Diagnostics Holdings Ltd.	Jun	LDX	ASX	A$	0.41	61	58	2.8	2.4
Imricor Medical Systems	Dec	IMR	ASX	A$	0.70	100	108	18.3	4.5
ImExHS Limited	Dec	IME	ASX	A$	0.83	27	30	1.7	1.2
Group Average								**10.4**	**7.4**
Group Median								**6.1**	**4.5**
International Peers									
Abbott Laboratories	Sep	ABT	NYSE	US$	119.99	212,177	261,008	6.4	6.3
Siemens AG	Sep	SIE	Xetra	US$	129.20	109,820	158,091	2.3	2.2
Becton, Dickinson and Company	Sep	BDX	NYSE	US$	268.14	76,359	87,479	4.4	4.2
IDEXX Laboratories, Inc.	Dec	IDXX	NASDAQ	US$	539.54	45,456	57,891	16.3	14.7
Roche Holding Ltd	Sep	RO	SIX Swiss	US$	406.80	43,402	374,945	5.9	5.7
ICU Medical, Inc.	Dec	ICUI	NASDAQ	US$	223.15	5,308	4,648	1.9	1.9
Neogen Corporation	Jun	NEOG	NASDAQ	US$	31.52	3,410	4,564	8.0	7.6
Merit Medical Systems, Inc.	Dec	MMSI	NASDAQ	US$	63.26	3,579	3,821	3.4	3.2
OraSure Technologies, Inc.	Dec	OSUR	NASDAQ	US$	6.95	503	485	1.5	2.2
Group Average								**5.6**	**5.3**
Group Median								**4.4**	**4.2**
Universal Biosensors		**UBI**		**AUD**	**0.83**	**147.7**	**129.7**	**12.0**	**6.0**

Source: Company reports, Canaccord Genuity estimates. Priced as at 29 March 2022.

Key risks

Turnaround play creates a new set of risks

Through LifeScan buying out the successful blood glucose monitoring business and Siemens giving up on the coagulation testing business, having failed to compete with Roche, UBI is forced to start again. UBI starts from a low base, with an existing coagulation product testing and services business that needs new life, and several start-up opportunities with wine testing being the first to reach commercialisation. So the question to be answered by UBI is whether it can compete with Roche in coagulation, large operators like Zoetis (Pfizer spin-off) in animal health, and the major wine labs/internal wine labs in wine testing. There is an expectation that enhancements to the electrochemical biosensor technology (lubricin) and new focus breathes new life into UBI's opportunity set, but confirmation that past disappointment is behind it remains to be answered.

New product market acceptance/cash levels

UBI has extensive experience in electrochemical biosensors, with an 18-year history and success in the blood glucose product before the LifeScan buyout. UBI has c.$18m in cash, which should be sufficient to re-build the coagulation business and launch the various wine tests being launched through CY22. However, cash is down from c.$37m two years ago and UBI has a pipeline of development opportunities including animal health, cancer and fertility, which will require cash to develop and launch. UBI will need to succeed in rebuilding the coagulation business and the launch of the wine testing business to either avoid or mitigate the capital call required from the product pipeline.

Distribution risks

UBI was historically an R&D-focused business that had two customers. It now has to show it can build distribution capability. It has to convert and service the former Siemens customers (120 hospitals and distributors), as well as build new distribution partners and customers for its new suite of products. UBI is showing signs of progress with 14 distribution deals across 14 countries, with another 16 deals pending for the wine testing business in the first year of launch. It has also converted 16/50 Siemens' distributors. UBI has also established a sales force in the US where a majority of the SME wineries are located.

Concentration risk

UBI has one product with a reasonable level of experience, albeit with limited success to date, while the wine testing business has only recently launched. Over the medium-to-long term, investors should see a range of new products come to market that are unrelated to one another and diversify the risk profile of UBI.

Corporate structure

UBI is listed on the ASX with CDIs on issue via the incorporation being in Delaware, USA. This was probably due to global ambitions at the time, but now there are c.A$28m and c.C$0.9m in tax losses, so the structure is not going to change. UBI reports in AUD but has to use US reporting formats, which is different to local reporting structures and less efficient for domestic investors.

Regulatory risks

UBI is currently seeking FDA approval for its next generation coagulation testing product. It just received EU approval and is aiming to achieve US FDA approval by early CY23. UBI is also pursuing an FDA approval for its Tn antigen biomarker product, for which initial studies are expected to be revealed before 30/6/22. While the coagulation product seems relatively low risk, being a next generation of an existing product and approval already being provided for the EU, the Tn antigen application carries significant risk for investors for the concept itself and for investors that see this product having material blue sky potential.

Key person risk

UBI employs c.77 staff (56 in Australia/21 overseas) and it is in turnaround mode, therefore, the CEO that joined in late CY20 is key to the mission.

Board of directors and management

Figure 34: UBI Australia board and management team

Name/position	Holding/options	Description
Craig Coleman Non-Executive Chairperson	28,624,984	Appointed to the board in June 2016 and to the Chairman's role in August 2017, Coleman has 30 years' experience across banking and finance, corporate advisory an dfunds management. Coleman is currently Executive Chairman of Viburnum Funds. Coleman spent his executive career in various roles at ANZ Banking Group. Coleman currently sits on the board of Bell Financial Group (ASX-BFG) and is Chair of Pacific Star Network.
Judith Smith Non-Executive Director	300,000	Appointed to the board in March 2015, Smith is a veteran of the funds management industry, where she has been responsible for investing in listed and unlisted companies. Smith was formerly Head of Private Equity at IFM investors. Prior to IFM, Smith held various roles at National Mutual Funds Management for more than a decade, including managing Australian equity research and strategy and Australian equity portfolios.. Smith is currently a member of the Audit Committee for Australian Renewable Energy Authority, a director of Acorn Capital Fund Ltd (ASX-ACQ) and a director of industry super fund LUCRF. Smith is also on the board of SA Venture Capital Fund, and a board member of Scale Investors Ltd - a NFP organisation promoting women entreperneurs and women angel investors in early stage companies. In 2018, Smith was appointed to the board of Funds S4.
David Hoey Non-Executive Director	566,000	Appointed March 2016, Hoey has more than 25 years' experience in technology financing and commercialisation. Hoey is US based and his primary expertise is in business development, strategic planning, market development, corporate partnering and financing for medical technologies, diagnostics and drug development. Hoey is currently CEO and director of Vaxxas Ltd, which has developed and is commercialising a novel vaccine delivery technology - The Nanopatch TM. Hoey also served as Vice President of business development for PathoGenetixs Inc, which is pioneering single molecular detection technologies for biodefence, clinical and industrial applications.
Graham McLean Non-Executive Director	na	Appointed March 2022 McLean has more than 20 years' business and corporate governance experience and is an experienced senior executive leader with extensive service in the medical technology industry in Australia, Asia and US, most recently with Stryker Corporation ('Stryker') as President Asia Pacific. Whilst at Stryker, McLean led a transformation of Asia Pacific to renew growth in Japan and China and led an accelerated growth strategy for Australia/New Zealand. Previously, McLean was Lion Nathan's Finance Director International/Business Development and Director Group Risk Assurance & Audit
John Sharman Chief Executive Officer (CEO)	7,100,000	Appointed in June 2020 Sharman has had a long career in listed and unlisted businesses across Australia, UK, Europe, Asia and the US. Sharman has worked acorss the pharmaceutical, medical equipment manufacturing and distribution, finance, and FMCG sectors. Prior to UBI, Sharman was CEO of Medical Developments International (ASX-MVP) for over 10 years and for the previous 10 years, MD of private equity firm, CVC Venture Managers. Sharman had also been Director of Treasury and Finacnce at PwC.
Salesh Balak Chief Financial Officer (CFO)	267,000	Appointed CFO in November 2006 and Director of UBI since 2010, HRL since 2016 and Company Secretary since 2018. Prior to UBI, Balak was CFO of Pearl Healthcare (ASX-PHL) from 2003. At PHL, Balak was involved in the acquisition and integration of four businesses. Balak also spent 13 years at KPMG across Business Services, Audit and Financial Advisory Services

Source: Company reports

Appendix: Important Disclosures

Analyst Certification

Each authoring analyst of Canaccord Genuity whose name appears on the front page of this research hereby certifies that (i) the recommendations and opinions expressed in this research accurately reflect the authoring analyst's personal, independent and objective views about any and all of the designated investments or relevant issuers discussed herein that are within such authoring analyst's coverage universe and (ii) no part of the authoring analyst's compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed by the authoring analyst in the research, and (iii) to the best of the authoring analyst's knowledge, she/he is not in receipt of material non-public information about the issuer.

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Sector Coverage

Individuals identified as "Sector Coverage" cover a subject company's industry in the identified jurisdiction, but are not authoring analysts of the report.

Investment Recommendation

Date and time of first dissemination: March 29, 2022, 15:30 ET

Date and time of production: March 29, 2022, 06:11 ET

Target Price / Valuation Methodology:

Universal Biosensors Inc. - UBI

We value UBI at $1.25/CDI using a 10-year, two-stage DCF valuation methodology, with explicit forecasts over the first five years and fading growth of 20% scaling down to 6% over the following five years. We apply a WACC of 11.5% and terminal growth of 3.5%.

Risks to achieving Target Price / Valuation:

Universal Biosensors Inc. - UBI

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UBI is currently seeking FDA approval for its next generation coagulation testing product. It just received EU approval and is aiming to achieve US FDA approval by early CY23. UBI is also pursuing an FDA approval for its Tn antigen biomarker product, for which initial studies are expected to be revealed before 30 June 2022. While the coagulation product seems relatively low risk, being a next generation of an existing product and approval already being provided for the EU, the Tn antigen application carries significant risk for investors for the concept itself and for investors that see this product having material blue sky potential.

Key person risk

UBI employs c.77 staff (56 in Australia/21 overseas), and it is in turnaround mode. Therefore, the CEO that joined in late CY20 to turn around the business is key to the mission

Distribution of Ratings:

Global Stock Ratings (as of 03/29/22)

Rating	Coverage Universe		IB Clients
	#	%	%
Buy	654	69.57%	41.13%
Hold	124	13.19%	23.39%
Sell	10	1.06%	20.00%
Speculative Buy	147	15.64%	53.06%
	940*	100.0%	

*Total includes stocks that are Under Review

Canaccord Genuity Ratings System

BUY: The stock is expected to generate risk-adjusted returns of over 10% during the next 12 months.

HOLD: The stock is expected to generate risk-adjusted returns of 0-10% during the next 12 months.

SELL: The stock is expected to generate negative risk-adjusted returns during the next 12 months.

NOT RATED: Canaccord Genuity does not provide research coverage of the relevant issuer.

"Risk-adjusted return" refers to the expected return in relation to the amount of risk associated with the designated investment or the relevant issuer.

Risk Qualifier

SPECULATIVE: Stocks bear significantly higher risk that typically cannot be valued by normal fundamental criteria. Investments in the stock may result in material loss.

12-Month Recommendation History (as of date same as the **Global Stock Ratings** table)

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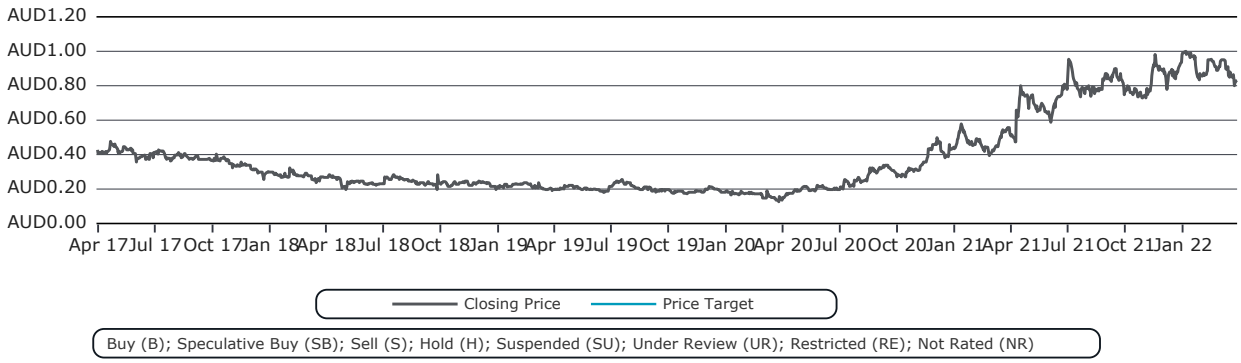
Universal Biosensors Inc. Rating History as of 03/28/2022



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