

# THE PASSIONATE INVESTOR

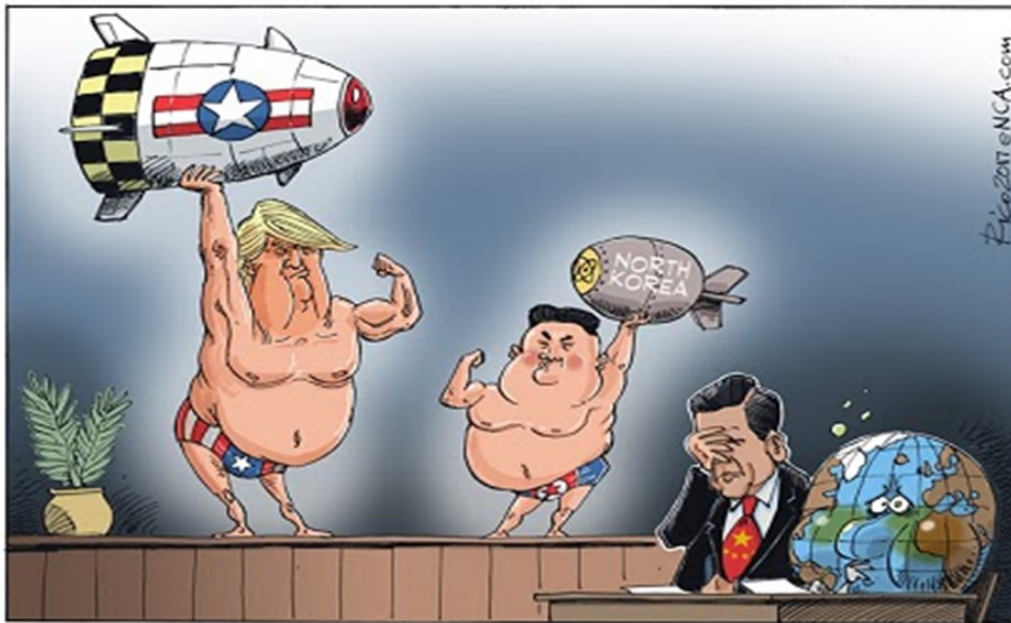
SEEKING PROFITABLE INVESTMENT IN INVENTIONS FOR A BETTER WORLD

Jenny Prabhu & Gerald Stanley, OzEquities

April 21, 2017

## ***Points to Ponder***

**IF POLITICAL AGENDAS CAUSE US TO LOSE FOCUS  
- WHEN SCIENCE IS SHACKLED AND FREEDOM IS  
SABOTAGED -  
WHAT WILL SAVE OUR PLANET?**



Cartoon from RICO's newsletter: Mine is bigger than yours



Theresa May has called an election on June 8, to win the right to a "hard Brexit"

## **In This Issue**

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WHAT WILL SAVE OUR PLANET?**

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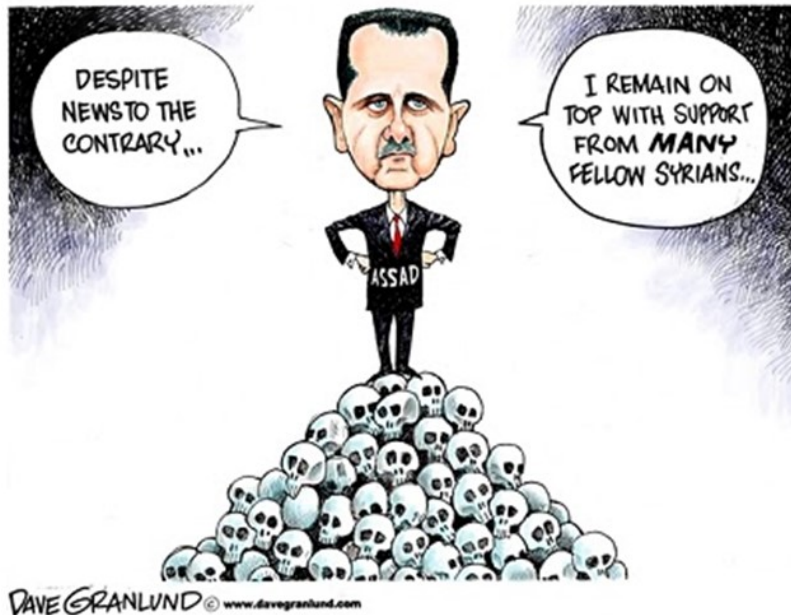
**Updates to Prior Issues**

## Points to Ponder

**IF POLITICAL AGENDAS CAUSE US TO LOSE FOCUS..... WHAT WILL SAVE OUR PLANET?**



Turkish President Tayyip Erdogan "wins" referendum



France says it can prove Basher el-Assad carried out chemical attack in Syria - The Independent,

### Our thought only

While the developed and developing world has once again become hostage to politicians seeking personal aggrandisement at any cost - supported by the under educated and misled - we, who were fortunate enough to be reared in conditions that enabled our physical well being and academic education - can no longer afford to be "the silent majority", because the future of the planet is at stake.

## ***Points to Ponder***

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### **IF POLITICAL AGENDAS CAUSE US TO LOSE FOCUS..... WHAT WILL SAVE OUR PLANET?**

**North Korea in perspective - what we were not told**

#### **North Korea's repeated offers to abandon nuclear program ignored**

Kim Jong-Un's father Kim Jong-Il had at least three times between 2000 and 2004 offered to give up North Korea's nuclear program in return for various concessions. Australia had also played a significant part in the persuasion. Kim Jong-Il had stated at various times that the reason for its nuclear program was solely because it did not want to suffer the fate of Iraq.

Source: Axis of Evil & Rogue States, 2000-2004 by Glen Segell, 2005.

#### **Offers to give up nuclear program if S Korea/US war games timing is altered**

Anonymous source in response to "The Independent" article on April 16, 2017:

"...three years in a row, NK has offered to give up its nuclear program in exchange for the US/SK halting their war games during the rice planting/harvesting seasons. This is a matter of survival for them.

"Each time the US and South Korea launch their very large manoeuvres, the North Korean conscription army (1.2 million strong) has to go into a high state of defense readiness.. The US-South Korea maneuvers are intentionally held during the planting (April/May) or harvesting (August) season for rice when North Korea needs each and every hand in its few arable areas. Only 17% of the northern landmass is usable for agriculture and the climate is not favorable. The cropping season is short. Seeding and harvesting days require peak labor. The southern manoeuvres directly threaten the nutritional self sufficiency of North Korea".

\*In France, with first-round balloting on April 23, there was no clear winner in sight among the four main contenders - 4 of whom want to stay in the Euro, Le Pen wants a Frexit.

\*Prime Minister Turnbull (in a non sequitur worthy of Mr Trump) on April 18 said in the same sentence Australia is an immigrant country and that he is working to sustain "Australian Values" - jumping on the populist band wagon to lift his preference rating.

He is re-jigging the 457 visa (unlikely to have much actual effect, since currently Indians make up 27% of skilled-worker visa holders in Australia, followed by people from the UK and China - none of whom are likely to have difficulty meeting either the work experience or the English language criteria).

New Zealand has - sadly in our opinion - followed suit, echoing President Trump's "US first", the UK's "British first", Australia's "Australians first" with "New Zealanders first" - meaningless slogans because surely the only reason why overseas skilled workers are employed by a firm in preference to locals is because locals are either under-educated and do not meet the criteria needed by employers, or don't want the jobs.

#### **Australia was instrumental in the Universal Declaration of Human Rights**

Australia was one of eight nations involved in the drafting of the Universal Declaration of Human Rights, adopted by the UN General Assembly in 1948 - as well as being a founding member of the UN (largely due to the influential leadership of Dr Herbert Vere Evatt, the head of Australia's delegation to the UN. In 1948, Dr HV Evatt became President of the UN General Assembly. That same year he oversaw the adoption of the Universal Declaration.

**Prior to coming to the UN, he had been a judge of the High Court, Attorney-General and Minister for External Affairs. Dr HV Evatt was renowned for being a champion of civil liberties and the rights of economically and socially disadvantaged people).**



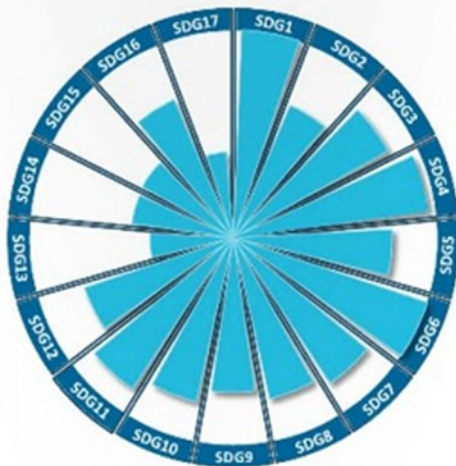
## Points to Ponder

### IF POLITICAL AGENDAS CAUSE US TO LOSE FOCUS..... WHAT WILL SAVE OUR PLANET?

**So how are "Australian values" different, and worth protecting?**

Perhaps Prime Minister Turnbull means beer and footy and the beach culture - and the right to continue to under - educate our children vs all of Asia - inspiring them instead to aim for brief stardom on food shows or singing contests - as well as in sports - instead of qualifying for high level jobs.

AVERAGE PERFORMANCE BY SDG



SDG DASHBOARD



**Australia in 2016 ranked 20th of 149 countries in progress towards Sustainable Development Growth (SDG)**

#### THE CONVERSATION

By John Thwaites

July 21, 2016

"Australia ranks 20th in the world – well behind Canada and many European countries but ahead of the United States – according to a new index that compares different nations' performance on the SDGs, which were adopted last September.

The ranking, called the SDG Index and Dashboard and prepared by the UN Sustainable Development Solutions Network and the German think tank Bertelsmann Stiftung, ranks countries' performance using a set of 77 indicators.

#### Australia: good water, bad energy

Australia, with some of the world's highest carbon emissions per person, rates poorly on the clean energy and climate change goals. It also falls down on the environmental goals, with high levels of solid waste and land clearing as well as loss of biodiversity.

**Despite the long life expectancy and general good health of Australians, the index highlights that Australia has one of the highest rates of obesity in the world.**

Australia rates relatively highly on lack of poverty, education and water quality. Inequality, while increasing, is not as bad as it is in the United States or the United Kingdom.

The best-performing countries on the list are mainly the northern European countries. Sweden, Denmark and Norway are at the top of the pile. Yet even these nations have significant challenges to achieve the climate change and environmental goals.

At the bottom of the rankings are sub-Saharan African countries: the Democratic Republic of Congo, Liberia and the Central African Republic, which face extreme poverty, hunger and major health problems.

In Asia, Japan and Singapore both rate above Australia, in 18th and 19th places respectively. Thailand (61st), Malaysia (63rd) and China (76th) are in the middle of the pack.

## Points to Ponder

### IF POLITICAL AGENDAS CAUSE US TO LOSE FOCUS..... WHAT WILL SAVE OUR PLANET?

The purpose of the report is to help countries identify the gaps that must be closed in order to achieve the Sustainable Development Goals by 2030 and to identify priorities for early action.

Our thought only: Australia may rank higher this year, given the widespread adoption by households of solar power.

The fifth meeting of the Inter-agency and Expert Group on Sustainable Development Goal Indicators (IAEG-SDGs), was held from 28 to 31 March 2017 in Ottawa, Canada

#### Plant Growth Promoting Microorganisms as Drivers of Agricultural Sustainability

From "Frontiers in Microbiology"

April 18 2017

4Articles, 52Authors

(excerpt)

"The human population is projected to reach 9.5 billion by the year 2050 and will demand at least a 50% additional increase in global food production. The increasing population will also compel the enhanced production of fodder, fibre and biomass for producing biofuel. Apart from that, climate change may also induce various biotic and abiotic stresses in the near future. This may lead to an increase in the use of chemical fertilizers and pesticides to protect the crops under such adversaries. However, the indiscriminate use of agrochemicals would further result in the widespread pollution of the biosphere. Moreover, synthetic agrochemicals are not affordable to farmers in low-resource environments. Therefore, it is imperative to develop sustainable agricultural practices to meet the food requirements of the growing population while considerably reducing environmental pollution.

"In this backdrop, the plant growth promoting microorganisms (PGPMs; the microorganisms that support plant life by providing vital nutrients to the plants and protecting the plant from various biotic and abiotic stresses) can be harnessed as a tool for sustainable agriculture as their applications help to not only increase soil fertility, agricultural production, and food and nutritional quality, but also to improve agroecosystem functions. They are indeed the most natural inhabitants of the rhizosphere keeping the whole rhizosphere system alive by facilitating the ionic and metabolic exchanges and nutrient solubilization and mobilization. It also shapes the soil microbiome through myriads of signaling molecules and provides tolerance against biotic and abiotic stresses to crops. This is why the applicability of PGPMs holds a great promise in sustainable agriculture".



#### "A little dirt might help save the world"

Proof of concept established..

Mother Jones, Apr 15 2017

Originally published by Grist

(excerpts - some connecting words added)

"When Jonathan Sanderman was working as a soil scientist in Australia (he's now at Woods Hole Research Center in Massachusetts), he'd figured out a way to test if it was possible to produce bumper crops on a piece of land while also banking carbon in it - that could save the world. Farmers could turn their fields into giant greenhouse gas sponges, potentially offsetting as much as 15% of global fossil fuel emissions a year, simply by

## *Points to Ponder*

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### **IF POLITICAL AGENDAS CAUSE US TO LOSE FOCUS..... WHAT WILL SAVE OUR PLANET?**

coaxing crops to suck more CO<sub>2</sub> out of the air.

(To test his theory) "he needed to find a farm that kept decades of soil samples and precise records of its yields...

"The question that Sanderman (based in Adelaide at the time) wanted to answer was laid out by the Canadian soil scientist Henry Janzen. In 2006, Janzen published a paper, "The soil carbon dilemma: Shall we hoard it or use it?"

"Grain is 45 percent carbon by weight, so when you truckaway a load of grain you are exporting carbon which, in a natural system, would have mostly returned to the soil.

"To feed our growing population we keep extracting more and more carbon from farms to deliver solar energy to our bodies. This leads to what Janzen dubbed the soil carbon dilemma: Can we both increase soil carbon and increase harvests? Or do we have to pick one at the expense of the other?

"Sanderman (who had found old soil samples in the Waite Agricultural Research Institute in Adelaide) "in January 2017 with his colleagues published the results of their study. Carbon wasn't simply going into the ground and staying there, they found. It was getting chewed up by microbes and floating into the air again. Fields with the biggest harvests also had the most carbon in their soils.

"To answer that, it helps to think of carbon like money. We have an impulse to hide our savings under a mattress. But if you want more money, you have to invest it.

"It's the same with carbon. Life on earth is an economy that runs on carbon - the conduit for the sun's energy. You have to keep it working and moving if you want your deposits to grow. The more busily plants and microbes trade carbon molecules, the more prosperous the ecological economy becomes.

"That's the key - you've got to use carbon to store carbon.

(But) "Solving one puzzle often opens up many, many more .. One issue is that the high-yield Australian fields in Sanderson's study were growing grass, not wheat or corn. Grass directs its carbon into roots that stay in the soil, while grains are bred to shove carbon into their seeds. That doesn't compromise the point of the study; the grass was still able to produce tons of hay for harvest while also making the dirt carbon-rich.

But it does add a new riddle: How do we get food crops to act like grass and spend more of their carbon budget on their roots, while still producing bountiful harvests?

"The simplest answer, Janzen says, would be to boost yields. Anything farmers can do to allow more plants to thrive will mean more carbon flowing into the soil...

"Another approach is to grow plants on fields that would otherwise be bare.. Some farmers are already doing this - growing cover crops like clover and ryegrass and experimenting with a suite of techniques often called "climate-smart agriculture".

"But there's yet another barrier here: money. For farmers, the costs of planting cover crops often outweigh the immediate benefits ..

"Some companies have already started paying farmers to employ these techniques.. The food and cosmetics giant Unilever and the grain trader ADM (Arthur Daniel Midlands) offer farmers a premium price for adhering to practices that accrue carbon .. Its one more link in the chain humans are forging to hold back the worst ravages of climate change".



## Points to Ponder

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#### Sustainable agricultural intensification in smallhold farms ..

CGIAR

April 2017

Sustainable intensification has recently been developed and adopted as a key concept and driver for research and policy in sustainable agriculture. It includes ecological, economic and social dimensions, where food and nutrition security, gender and equity are crucial components. Much of the work represents outputs of the three CGIAR Research Programs on Integrated Systems for the Humid Tropics, Aquatic Agricultural Systems and Dryland Systems... based around four themes: the conceptual underpinnings of systems research; sustainable intensification in practice; integrating nutrition, gender and equity in research for improved livelihoods; and systems and institutional innovation.



#### Hawaiians swapping big sugar for green sugar

DW News, Apr 18

(excerpts)

Only a few years ago, Hawaii produced more than a million tons of sugar a year - or 20 percent of all sugar produced in the United States. The closure of the last sugar mill on the second-largest island Maui in December 2016 marked the end of an era of big agriculture there.

When the last sugar plantation closed, Maui Mayor Alan Arakawa expressed sympathy about workers who lost their jobs - but said the change was inevitable.

The last large-scale sugar mill harvest in Maui

"Fruit trees, taro, biomass, papayas, avocados and much more have gone through trial testing - leaving us very confident that while sugarcane is dead, agriculture will remain very much alive here," he said in a statement. Sustainable farming advocates point out the impacts of massive sugar plantations. The practice of burning sugarcane to remove excess leaves before harvesting creates clouds of smoke that darkens skies and affects breathing of residents living downwind.

Beyond pollution from burning, and pesticides for monoculture cultivation that get absorbed into the aquifers, is the impact on the island's water. Sugarcane is a notoriously thirsty crop, and A&B has long diverted millions of gallons of water daily from streams to quench it.

"Monocropping of sugar has diverted water from streams - water that should flow from the top of the mountain to the sea," said Ashley Lukens, director of the Center for Food Safety, an environmental nonprofit based in San Francisco.

"And with concentrated land ownership, people have felt left out of their own futures."

Simon Russell, vice president of the Maui chapter of the Hawaii Farm Union United, says his organization wants to convince politicians to create laws favoring local, organic farmers over A&B.

## Points to Ponder

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Russell, who is also a small-scale farmer growing tropical fruits and vegetables - and even sugarcane - on the north shore of Maui, says the job of natural farming is to manage soil health so plants won't need chemical fertilizers.

"It's called nutrient cycling," he says. "You have to manage the vitality of soil microbes. Monoculture farming has stripped the soil of those microbes."



#### There's an environmental superhero growing near you

Washington Post

Tamar Haspel Columnist, Food April 13

(excerpts)

Alex Lopez and other students at Alcoa Intermediate School in Maryville, Tenn., plant an Eastern Red Bud tree during an Arbor Day event in March. (Mark A. Large/Daily Times via AP)

#### Trees!

.. They take carbon dioxide out of the air and turn it into carbohydrates that are stored in the tree and its root system, locking away that carbon and releasing oxygen in the process.

All green plants do this, of course, so what makes trees so

special? Size. The bigger the plant, the bigger the sequestration, and trees are enormous.

I asked Thomas Crowther, of the Netherlands Institute of Ecology and recently the lead author of a global tree census, to walk me through the math.

On average, a tree will sequester 50 pounds of carbon per year — small trees, less; big trees, more. Compare that to the savings you get when you switch to a hybrid car — about 3,300 pounds per year — and it sounds like a small number. But factor in a tree's life span, which is often centuries, and the tree looks better and better. By the time the tree you plant this Arbor Day (April 28) is 70 years old, it'll have the same carbon value of one Prius-year. If it lives to 200, well, you see the potential. The net of it is that a step as simple as a yearly tree planting can be as effective as a switch to a hybrid at reducing the atmosphere's carbon load.

So let's widen the lens. Could we have a real impact on CO2 levels if we Americans started taking Arbor Day seriously, and planted trees? "I think it's a beautiful idea," said Crowther.

"If each of those 300 million new trees were planted and monitored and grew, that's not an insignificant little chunk. It would show people how easy it is to have an effect, and it would connect people with the environment. It might spur on a hell of a lot more." ..

But can they help fight the problems on American farms? Incorporating trees into farming — agroforestry, it's called — has benefits beyond carbon sequestration. Ravi Prabhu, deputy director general for research of the World Agroforestry Center, ticked off that list of benefits: as windbreaks, they decrease the stress on crops; they can decrease temperatures; they can fix nitrogen and increase soil fertility; they decrease erosion and nutrient runoff; they can prevent water from running off, forcing it into the ground. And, some trees can be harvested for timber or grow fruits or nuts.

In the developing world, where farms tend to be smaller and more diverse than they are in the United States, the potential for agroforestry is large and varied. Here at home, where a typical farm is hundreds, or maybe



## Points to Ponder

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### IF POLITICAL AGENDAS CAUSE US TO LOSE FOCUS..... WHAT WILL SAVE OUR PLANET?

thousands, of acres of just a few crops, it's harder to find an economically feasible way to incorporate trees. I talked with Richard Straight, technology transfer leader at the Agriculture Department's National Agroforestry Center (NAC), about how American farmers use — or can use — trees.

The most common use is as a windbreak, Straight explains. Plant a row of trees alongside a field, and it can increase the downwind yield to a distance of about 10 times the height of the tree. Farmers also use trees as riparian borders — forested strips along waterways that reduce runoff, increase biodiversity and act as windbreaks.

The USDA doesn't have good data on how many farmers use these techniques, but Straight says that the NAC is seeing increased interest. The biggest obstacle, as it so often is in farming, is cost.

It's just a back-of-the-envelope calculation, but Straight walked me through an example that came to just under \$200 per acre. If you're farming 1,500 acres, that's a big chunk of money that you won't see much return on for a decade.

And it's possible there won't be a return at all. Charles Barden, professor of forestry at Kansas State University, is researching the effect of windbreaks on yield and has found that the percentage of fields with windbreaks that saw a statistically significant increase in yield varies from 17 to 45 percent. Yield isn't the only benefit, but it's the one that's reflected in the farm's bottom line.

#### Our thought only

\*As individuals, apart from continually working to diminish our own carbon footprint, we can plant trees -in our backyards, or if we don't have backyards, in waste spaces - and monitor them, watering them through droughts.

\*As individuals we can join the March for Science - or contribute - tomorrow, April 22, that is also Earth Day. The March for Science is supported by the Bulletin of the Atomic Scientists.

## News From Everywhere

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### WeWork all over the world

#### DW News

#### (excerpts)

#### WeWork Potsdamer Platz (WeWork Europe)

When Adam Neumann and Miguel McKelvey founded WeWork Cos. in 2010, they had two office spaces in New York. Now the office-space rental startup is valued at \$17 billion (16 billion euros) and has more than 130 locations in 30 cities across the world.

From the pendant lighting and leather couches to the fruit water on tap and the ambient low-fi hip hop mix playing softly from seemingly everywhere, much thought has

gone into designing this space. It is almost antithetical to the fluorescent lit cubicles of the old offices of lore.

## News From Everywhere

The idea is "Do What You Love," and to let WeWork take care of the rest. The amenities like internet and printing, and even healthcare and payroll support in some cases, illustrate the kinds of services that WeWork provides with its membership. "You come in with your laptop and you can start working from the minute you get here," said Eugen Miropolski.

To date there are over 100,000 members working out of the 7 million square feet that make up WeWork locations across the world. WeWork Paris opened this April and the company has plans to open an office in India soon.

### CSIRO Develops Barleymax

#### CSIRO Blog Apr 7

"Poor diet is a leading contributor to obesity, heart disease, stroke, Type 2 diabetes and cancer. Even if you have a moderately healthy diet getting enough of the good stuff can be a challenge.

"That's why we developed BARLEYmax – a wholegrain with superior health benefits that can help combat cardiovascular disease, Type 2 diabetes and colorectal cancer.

"BARLEYmax is rich in fibre, has a low glycemic index and contains high levels of resistant starch. Eating foods rich in resistant starch nourishes your gut bacteria, which helps maintain intestinal health and reduces the risk of developing colorectal cancer and other chronic illnesses".



### The Instant Pot

**Does the work of 7 kitchen appliances, saves time and 70% of electricity**

A programmable (up to 24 hours) electric pot, the Instant Pot is simplifying cooking appliances.

With multiple sensors and a micro-processor, Instant Pot is an intelligent multi-cooker, capable of completely replacing pressure cooker, slow cooker, rice cooker/porridge maker, sauté/browning pan, steamer, yogurt maker and stockpot warmer. Most importantly, Instant Pot cooks meals faster with less energy while preserving more nutrients.

\*12 turn-key function keys for the most common cooking tasks. Planning the meal with delayed cooking up to 24 hours, reducing cooking time by up to 70%.

\*Absolutely quiet, no steam, no smell, no spills, no excessive heat

in the kitchen. 6-in-1 capability reduces clutter in the kitchen. Read more about why electric pressure cooker keeps your kitchen clean and pleasant ...

\*Energy efficient: saves up to 70% of energy.

It's a bestseller on Amazon. The New York Times took it for a spin, as did NPR's The Salt. Bon Appétit claimed it "will change your life."

But there's one group that applies exceptional creativity to the Instant Pot: people who cook Indian food. On a private Facebook group called Instant Pot for Indian Cooking, home chefs adapt traditional dishes—dals, biryanis, curries, and more—and post the photos and recipes to 70,000 members.

Our note: available at \$59 in Kmart . Other versions at prices up to \$190 - may not all be available in Australia.

## SNIPPET

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### Phage therapy for treatment of multidrug organisations: FDA positive feedback for AmpliPhi

From Business Wire, a Berkshire Hathaway company, April 17, 2017

(excerpts)

AmpliPhi Biosciences Corporation (NYSE MKT: APHB), a global leader in the development of therapies for drug-resistant bacterial infections using bacteriophage technology, announced that the U.S. Food and Drug Administration (FDA) provided positive feedback on the Company's previously submitted detailed development proposal to commence a Phase 2 trial with its proprietary bacteriophage cocktail AB-SA01 for the treatment of antibiotic-resistant *Staphylococcus aureus* (*S. aureus*) infections in patients with chronic rhinosinusitis (CRS). The FDA's feedback followed a Type B telephonic meeting held with AmpliPhi on February 21, 2017. In the official minutes from the meeting, the FDA acknowledged that phage therapy is an exciting approach to treatment of multidrug-resistant organisms and expressed a commitment to addressing the unique regulatory challenges that might arise during product development.

Our Note: Grateful thanks for lead to John Beveridge





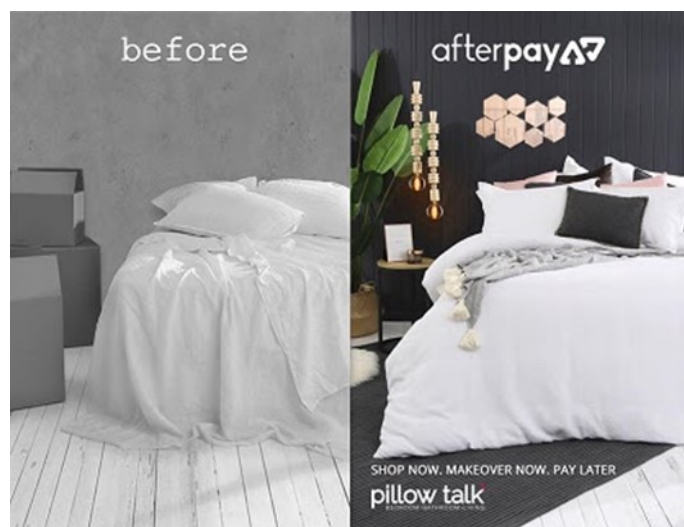
## Companies Featured

**A COMPANY WITH A WIN/WIN "BUY NOW PAY LATER" TECHNOLOGY;  
A COMPANY PROGRESSING A CURE FOR ACNE, PSORIASIS AND EXCEMA;  
A COMPANY WITH A COMMERCIAL INSULIN TESTING PRODUCT**

### Afterpay Holdings Ltd

**\*AFY: AFTERPAY'S BUY NOW, RECEIVE NOW, PAY IN 4 EQUAL FORTNIGHTLY INSTALMENTS, NO INTEREST, EVER, NO LOAN STRUCTURE, NO EXTENSIVE PERSONAL DETAIL VETTING - IS A WIN/WIN PRODUCT THAT HAS SEEN FAST TAKEUP BY MERCHANTS AND CONSUMERS. MYER, HARVEY NORMAN, OFFICEWORKS, SUPER RETAIL GROUP, AMONG 2,600 MERCHANTS AND 450,000 CUSTOMERS.**

**CURRENTLY MERGING WITH RELATED COMPANY TOUCHCORP**



**Afterpay Holdings Ltd's** highly attractive cloud based platform has been rapidly taken up by many of Australia's leading businesses and a huge number of retail clients, with its success reflected in its current share price of \$2.46 vs a float price of \$1 when it listed in May 2016. Wilson HTM and Bell Potter were brokers to the float.

Melbourne based Afterpay Holdings has announced a scrip based merger with the creator and holder of its intellectual property, Melbourne based Touchcorp Ltd (TCH).

Touchcorp has developed, built, owns and operates a scalable software platform (the Touch System) used by blue chip corporates in the convenience retail,

healthcare, government and telecom sectors. The platform enables the delivery of non physical products, services and entitlements to consumers via in store and self service methods.

The Touch System provides an integrated, cloud based end to end Electronic Product delivery and payment platform. (Mike Jefferies, founder and executive chairman of Touchcorp was a founding director of Afterpay Holdings Ltd, resigning on April 6 to avoid any potential conflict of interest).

### The Afterpay business

\*For online transactions, Afterpay is typically positioned on the merchant's product page and offers a fast and frictionless process resulting in reduced abandoned online "shopping carts".

\*For in-store transactions, Afterpay offers an easily generated mobile phone barcode for use at the merchant's Point of Sale terminal.

Instalment payment terms are presented to end customers for a maximum of 56 days. The purchase value is recouped by Afterpay from the end-customer usually in four equal, fortnightly instalments.

Retail merchants benefit from providing the Afterpay service to its end-customers because end-customers are more inclined to make a purchase and/or increase the value of their purchase because of the affordability and flexibility attributes of the Afterpay service. Afterpay pays the retail merchant upfront and assumes all end-customer payment collection.

Customers are attracted because they don't have to apply for or enter into a traditional loan; or pay any

## Companies Featured

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### Afterpay Holdings Ltd (Cont.)

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additional amount by way of interest or upfront fees or need to provide extensive personal information that in itself curbs enthusiasm for a purchase.

Afterpay's merchants include Officeworks, Myer, Harvey Norman, Super Retail Group, Billabong, Telstra, Kookai, General Pants, Cue Clothing, Country Road, Top Shop, Glue, House, Peters of Kensington, Seafolly, Optus, MJ Bale, Aquila, Cotton On, Surfstitch, Pacific Brands, Sheridan.

Its pipeline of new retail merchants is substantial and includes several major, well-recognised and high turnover brands that have signed contracts and are in the process of integrating onto the platform. These retailers will be announced to the market as they become live.

Afterpay now has 16 retail brands offering its platform through an in-store network of more than 800 storefronts. Moreover, Afterpay has completed its integration with Australia's leading fashion Point of Sale system, Apparel21, which allows Afterpay's existing online retailers to easily and seamlessly offer Afterpay in store.

#### **The available market** - from AfterPay prospectus

The Australian retail market as measured by the Australian Bureau of Statistics (ABS) was approximately A\$293 billion for the 12 months to January 2016. This comprises a number of key sectors:

Food retailing and food services \$160 billion

Household goods \$52 billion

Clothing, footwear and personal accessories \$23 billion

Department stores \$19 billion

Growth over this 12 month period was 4.3% over the previous corresponding period.

In addition to these sectors, there are other large consumer facing sectors which are driven by consumer demand. These include travel services and consumer sales by utilities and telecommunication companies A\$17.6 billion.

#### **Australian online economy**

Australia is one of the leading nations in terms of internet penetration as a proportion of the total population (90% penetration). Ranked on internet users as a percentage of total population, Australia has the 5th highest level of internet penetration in the world.

In addition, Australians have shifted a significant proportion of their retail spending to online retailers. This is occurring through pureplay online merchants and also through retail merchants which operate multichannel operations. NAB estimated (in dollar terms) that Australians spent \$19.1 billion on online retail in the 12 months to December 2015, equivalent to 6.5% of traditional, in-store retail sales in the same period.

#### **The largest categories of online retail spend:**

Homewares and appliances 21%

Groceries and liquor 18.2%

Fashion 15.5%

Media 16.1%

Departments and variety stores 9.1%

Personal and recreational goods 8.4%

#### **Sources quoted:**

1. Australian Bureau of Statistic, Retail Trade January 2016
2. The 12 months to December 2015, Australian Bureau of Statistic, Retail Trade January 2016
3. Page 2, The Australian online Consumer Landscape, March 2012, The Nielsen Company
4. NAB Online Retail Sales Index In Depth Report, December 2015

## Companies Featured

### Afterpay Holdings Ltd (Cont.)

5. Page 5, NAB Online Retail Sales Index In Depth Report, December 2015

#### Afterpay's business update, April 13

Afterpay Holdings Limited announced for the 3rd quarter 2017 ending March 31, underlying merchant sales rose 41% on the 2nd quarter to \$144.9 million, with more than 575,000 individual end consumers on the platform, up 56% on the 2nd quarter and more than 3,700 retail merchants are live and transacting on the platform, up 75% on the 2nd quarter. The company expects annualised underlying sales to be greater than \$700 million, based on recent monthly trading performance.

The company is processing approximately 3% of total Australian online retail transactions currently.

#### The business of related company Touchcorp Ltd

Touchcorp owns the intellectual property, and continues to develop applications, for Afterpay. Afterpay outsources the processing of all Afterpay transactions to Touchcorp on its behalf in return for an ongoing transaction fee. As part of the development fee paid by Afterpay to Touch, Touch was issued with 50 million shares in Afterpay, about 36% of pre-offer issued share capital.

While AfterPay had its beginnings in 2012 (with Touchcorp a major shareholder), Touchcorp's antecedents stretch back some 2 decades before TCH listed in 2015 (with Goldman Sachs global co-ordinator, sole bookrunner and sole underwriter and joint lead manager (with Wilson HTM) to the IPO, priced at \$1.40 per share).

Earlier, Touchcorp assets had been acquired by Intellect Holdings (IHG) in May 2005 for scrip. Intellect Holdings Ltd (IHG) had listed in 1998 and was highly successful for many years - establishing SmartCard enabled terminals around the world - including Germany, the Netherlands, Indonesia, and St George Bank, Coles Myer and others in Australia - with exponential sales growth but a chequered financial history, going into administration in 2008, when IHG's core IP was acquired by TAFMO Ltd of Melbourne in 2009, renamed Touch Holdings Ltd in 2009, before listing as Touchcorp in 2015.

### WHAT THE BROKERS SAY

#### Why the Afterpay Holdings Ltd share price is going nuts today Motley Fool, by Tom Richardson, April 13, 2017

(excerpt)

"The Afterpay Holdings Ltd (ASX: AFY) share price has climbed 7% in morning trade to \$2.34 after the deferred payment provider reported another strong quarter of growth for the period ending March 31 2017.

Its fees from retailers for providing its services hit \$6 million this quarter versus just over \$4 million for the quarter ending December 2016, which represents an impressive quarter-on-quarter climb of 40%.

Perhaps more impressive is the fact that Afterpay was not too far off doubling the number of retailers using its services quarter-on-quarter, with total retailers signed up now around 3,500 compared to 2,000 at the float.

The group added the likes of Myer Holdings Ltd (ASX: MYR) and Telstra Corporation Ltd (ASX: TLS) as clients over the last quarter, although the impressive headline or growth numbers are limited by the fact that the company has not as yet revealed its cash flow statement for the quarter...

At today's share price it looks to be on a giant valuation given it reportedly has around 180 million shares on issue. However, the valuation is complicated by the fact the business is due to complete a scrip-based merge with the profitable payment services provider Touchcorp Ltd (ASX: TCH) by late June 2017.

The combined Afterpay / Touchcorp group will definitely be one to watch for investors prepared to take on more risk in pursuit of superior returns. For now though it's too speculative for me, but I will keep it on the watch list for further research given the strong track records of both businesses".



## Companies Featured

### Afterpay Holdings Ltd (Cont.)

#### WHAT THE BROKERS SAY

#### **The Touchcorp Ltd share price goes berserk on merger plans: Is it a buy?**

**Motley Fool, James Mickleboro | February 23, 2017**

The Touchcorp Ltd (ASX: TCH) share price has gone gangbusters today after the payments solution company announced its plan to merge with fast-growing payments company Afterpay Holdings Ltd (ASX: AFY).

At the time of writing the Touchcorp share price is up 36% to \$1.43. The Afterpay share price is down slightly to \$2.40.

According to an announcement this morning the two companies have signed a heads of agreement relating to an in principle agreement for a proposed merger under a newly incorporated Australian holding company.

Both companies believe a merger would deliver significant benefits to both sets of shareholders, as well as enhance the attractiveness of its combined customer proposition...

#### **Should you invest?**

I believe the merger does make a lot of sense. As well as the expected benefits of scale with input cost synergies and process efficiencies, management believes the revenue growth opportunities that Afterpay's extensive retail network provides Touchcorp could prove to be invaluable.

At the last count the number of integrated retail merchant clients using Afterpay's service had reached 2,600 and was growing fast. These retailers include the likes of Super Retail Group Ltd (ASX: SUL), Optus, Cotton On, and General Pants Co.

Whilst I think overall the proposed merger could prove to be a success, I wouldn't necessarily recommend rushing into an investment. The Afterpay business has been growing like wildfire in the last 12 months, whereas the Touchcorp business has been a huge disappointment.

If Touchcorp isn't able to successfully leverage Afterpay's network, then it may ultimately act as a drag on Afterpay's explosive growth. Because of this I would suggest investors leave the pair on their watch list for now and keep an eye on their progress".

#### WHAT THE BROKERS SAY

#### **From Choice Magazine**

#### **Afterpay: What is it and can it be trusted?**

**By Tony Ibrahim**

**Last updated: 20 March 2017**

Afterpay is a digital service that makes it possible for a consumer to buy something now and pay it off in fortnightly instalments. Unlike layby, you'll get the product right away, whether you're buying online or in-store. And in the best of scenarios you'll pay nothing more.

The checkout method is quickly gaining popularity in Australia with more than 500,000 active customers using it to make purchases in 3100 retailers.

What's the catch?

Most of the purchases made using Afterpay will be paid in fortnightly instalments. Missing an instalment results in a \$10 fee and, if you fail to make the repayment within a week, another \$7 fee will be charged. Missing all of the repayments on a pair of \$100 jeans, then, has the potential to put you back an additional \$68.

## Companies Featured

### Afterpay Holdings Ltd (Cont.)

#### WHAT THE BROKERS SAY

On the other hand, Afterpay compares favourably to payday loans. As it says in the company's terms and conditions at the time of writing: "No interest charges are payable by you for the use of our products." This means you could pay off the \$100 jeans over eight weeks without paying anything extra.

What if I don't make my payments?

Sure, you can skip your repayments, but we don't think that's wise. According to the terms and conditions, Afterpay has the right to sell any unpaid debt to "third party collections agencies".

Debt collection agencies have a chequered history. They've been the subject of ACCC investigations for badgering consumers with phone calls, threatening letters and claims of defaulting people's credit.

Does Afterpay make money? And if so, how?

Most of Afterpay's revenue comes from charging retailers. The company generated more than \$6 million in fees from retailers in the first half of the 2017 financial year, with an additional \$1.2 million in late fees. Some customers couldn't make their repayments, leading to \$700,000 in unpaid debt being written off by the company.

Retailers appear to like the 'buy now, pay later' service because it makes it easier for shoppers to buy their products. What retailers spend in fees, they hope to make up in increased sales.

Currently the service appeals to a young demographic. Millennials (born between 1980 and 1999) make up 73% of Afterpay's customer base. In comparison, millennials account for 28% of all Australian consumers, according to data from the Australian Bureau of Statistics.

What does this mean for payment cancellations and refunds?

Paying with Afterpay can complicate the relationship you have with a retailer; now there's a third party mediating between you and them.

Afterpay's involvement in a sale dissolves after 120 days, once all repayments have been made, but matters can turn complicated if there's a dispute within that time. Asking for a refund within 120 days of buying a product will see the retailer reimburse Afterpay first, which in turn then refunds the money back to you.

Sorting disputes with Afterpay can take a lot of time. One part of the company's terms and conditions that caused us to raise an eyebrow was its policy on disputes between you and Afterpay. The company "aims to...resolve all complaints within 45 business days". We'd like to place emphasis on 'business days'.

And even then, there's no guarantee the dispute will be resolved within that time.

Should I pay with Afterpay?

Afterpay is a preferable service to payday loans, but be sure to stick to your repayments to avoid the pesky late fees.

## Companies Featured

### Afterpay Holdings Ltd (Cont.)

#### Financials

Code	AFY	
Last Traded price (cents)	230	
Shares Issued (m's)	180.0	
Options Issued (m's)	16.0	
Market Cap (\$m's)	414.1	
Year ended June 30, Values in \$000's		
INCOME	2017 Int	2016
Operating Revenue	6,011	1,383
Operating (Loss)	(1,867)	(3,690)
Net (Loss)	(1,389)	(3,552)
(Loss) Per Share (Cents)	(0.8)	na
BALANCE SHEET	2017 Int	2016
Current Assets	72,306	27,521
Non Current Assets..	12,564	11,471
Current Liabilities	12,755	928
Non Current Liabilities	11	3
Net Assets & Shareholders' Funds	72,104	38,061
Intangibles	12,492	11,443
Net Tangible Assets	59,612	26,618
Gearing (Net of Cash) %	nil	nil
NTA per share (cents)	33.1	16.1
Shares Issued (m's)	180.0	165.0
Cash Flows:	2017 Int	2016
Cash on hand (at open)	19,723	4
Operating Activities	(31,353)	(8,308)
Investing	(3,163)	(2,958)
Financing Activities	42,533	30,985
Exchange Rate Impacts		
Cash on hand at Year end	27,740	19,723

Code	TCH	
Last Traded price (cents)	143	
Shares Issued (m's)	127.7	
Market Cap (\$m's)	182.6	
Year ended June 30, Values in \$000's		
INCOME	2016	2015
Operating Revenue	36,817	42,297
Operating Profit (Loss)	15,072	8,507
Net Profit (Loss)	11,572	9,387
Earnings Per Share (Cents)	10.0	8.0
2016 Incl. "Gain on deemed disposal of Associate \$15.1m"		
BALANCE SHEET	2016	2015
Current Assets	49,087	32,163
Non Current Assets..	50,366	26,846
Current Liabilities	17,228	14,920
Non Current Liabilities	96	70
Net Assets & Shareholders' Funds	82,129	44,019
Intangibles	20,358	18,519
Net Tangible Assets	61,771	25,500
Gearing (Net of Cash) %	nil	nil
NTA per share (cents)	48.4	22.3
Shares Issued (m's)	127.7	114.2
Cash Flows:	2016	2015
Cash on hand (at open)	9,496	2,654
Operating Activities	3,185	(3,365)
Investing	(9,838)	(7,259)
Financing Activities	24,903	17,466
Exchange Rate Impacts		
Cash on hand at Year end	27,746	9,496

#### Merger of Afterpay Holdings and Touchcorp to form Afterpay Touch Group

The merger is beneficial to both Afterpay (AFY) and Touch (TCH) shareholders because it represents the market value of Touchcorp's holding in Afterpay being shared with both groups' shareholders, 50m shares at AFT's price was \$2.46 on April 13 which is \$123m. However, the gain is greater for Touchcorp shareholders as they owned the 50m shares.

Based on the share prices before the merger announcement ie February 22, the calculated price for Afterpay Touch Group shares is \$2.69, representing a gain of 9% for Afterpay shareholders and a 64% gain for Touch Shareholders. From the April 20 prices the gains are 17 and 20 percent respectively.

#### Proposed board after merger

##### Anthony Eisen, Executive Chairman

Anthony has over 20 years' experience in investing, maintaining public company directorships and providing corporate advice across a variety of sectors with a special focus in financial services and technology. Prior to co-founding Afterpay, Anthony was the Chief Investment Officer at Guinness Peat Group plc (GPG) and was responsible for maximising shareholder value in a large, diversified portfolio of mainly publicly listed companies in Australasia and the United Kingdom. He was actively involved in a number of financial services, software and technology companies in which GPG was a major shareholder, including Australian Wealth Management, Tower



## Companies Featured

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### Afterpay Holdings Ltd (Cont.)

Australia, ClearView Wealth, eServGlobal, Touchcorp and Solution 6.

Prior to joining GPG, Anthony was involved in investment banking, specialising in mergers and acquisitions and providing corporate advice, having practiced extensively in Australia and the United States (with Credit Suisse, Caliburn Partnership and Hambros). Anthony commenced his professional career as an accountant in Australia (with Price Waterhouse). Anthony is currently a director of Foundation Life (N.Z) Limited. Anthony was previously a director of Onthehouse Holdings Limited, eServGlobal Limited, Turners & Growers Limited, MMC Contrarian Limited, ClearView Wealth Limited, Tower Australia Limited (Alternate) and Capral Limited. Anthony holds a Bachelor of Commerce (double major Accounting and Finance) and is a member of the Institute of Chartered Accountants in Australia.

### Nicholas Molnar, Co-Founder and Managing Director of Afterpay.

Nicholas has extensive experience in online retail, having launched the leading American online jeweller, Ice.com, into Australia under the local brand Iceonline.com.au. Given Nicholas' family has been in the Australian jewellery industry for the past 30 years, he was able to combine specialised local product knowledge with technical online marketing expertise to exploit the gap in the market. Nicholas successfully grew Ice in Australia to become the largest online-only jewellery and watch retailer. Prior to launching Ice, Nicholas was an Investment Analyst at venture capital fund M. H. Carnegie & Co., where he was primarily responsible for growth stage investment opportunities in the technology sector. Nicholas holds a Bachelor of Commerce from Sydney University.

### David Hancock, Independent Nonexecutive Director

David was appointed an independent non-executive director in March 2016.

David has over 25 years of broad experience in financial services. This experience includes being Executive General Manager at the Commonwealth Bank of Australia, with a variety of roles including capital markets, fixed income and equities. Prior to that he served in senior investment banking roles at JPMorgan where he was a Managing Director with responsibilities in New Zealand, Australia and Asia across various operations in Debt and Equity Markets. He has served on a number of boards and is currently a director and advisor to Tower Insurance Limited and a board member of the Insurance Council of New Zealand.

### Clifford Rosenberg, Independent Nonexecutive Director

Clifford has spent more than 20 years working at digital companies leading innovation and change in the industry both as an entrepreneur and senior executive. Clifford has been a senior executive at LinkedIn for six and half years and currently serves as the Managing Director of LinkedIn for South East Asia, Australia and New Zealand. Prior to LinkedIn, Clifford was Managing Director at Yahoo Australia and New Zealand, and previously the founder and Managing Director of iTouch Australia and New Zealand, one of the biggest mobile content and application service providers in Australia. Prior to iTouch Clifford was the head of strategy for Vodafone Australasia. Clifford is also a non-executive director of ASX listed companies Nearmap Ltd and Pureprofile Ltd. Clifford has a Bachelor of Business Science (Honours) degree and a Master of Science in Management.

### Elana Rubin, non executive director

Elana Rubin was appointed to the board of TouchCorp in January 2015. Elana Rubin has been a long standing director of a number of public and private companies with extensive experience in property and financial services. Elana is currently a non executive director of Mirvac Ltd and several unlisted companies. Elana was previously a non executive director of TAL Life Ltd and was a director of Bravura Solutions. Elana was the former Chair of AustralianSuper and the Victorian WorkCover Authority.

## Companies Featured

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### Afterpay Holdings Ltd (Cont.)

Elana has over 20 years experience in the property and financial services sector.

#### **Nadine Lennie, Chief Financial Officer**

Ms. Nadine Lennie has been Chief Financial Officer of Touchcorp Limited since January 2017. Ms. Lennie served as the Chief Financial Officer of Australia Pacific Airports (Melbourne) Pty Limited. Prior to Melbourne Airport, She served as Chief Financial Officer of Australia Pacific Airports Corporation Limited. She served as a Director of Infrastructure at Australian Government Future Fund. Ms. Lennie served as a Director of Private Markets at the Future Fund since April 2008 and served as its Director of Infrastructure and Timberland. She served as an Investment Director at Hastings Funds Management. Prior to that, she was in project finance at PricewaterhouseCoopers. She served as a Director of Australia Pacific Airports (Melbourne) Pty Limited since January 2011. She served as a Director of Australia Pacific Airports Corporation Limited since January 20, 2011 until December 16, 2014.

### Key Management

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#### **Nicholas Molnar, Managing Director**

##### **Richard Harris, Chief Finance & Risk Officer**

Richard has 15 years' experience in retail banking including senior roles in Australia, Japan, Hong Kong and Vietnam. After completing his graduate programme at Westpac, Richard joined the Commonwealth Bank of Australia (CBA) where key roles included General Manager Performance and Productivity for the Retail Bank and the Country Head for the CBA in Japan. Most recently at CBA Richard was the General Manager for the Self-Managed Superannuation Fund Segment. In his time with CBA Richard was also seconded to Vietnam International Bank (VIB), where CBA is a strategic shareholder. At VIB Richard was a member of the Bank's Executive Committee and the Head of the Retail Bank where he led a team of 2,000 staff across 160 branches, Digital Banking, Product, Marketing and Call Centres. Richard holds a Bachelor of Economics (double major International Trade + Banking & Finance) and has completed a Global Advanced Management Programme from the University of California – Berkeley (Haas School of Business)

##### **David Whiteman, Director of Product**

David has over 15 years' experience leading product and marketing in technology businesses. Before joining Afterpay, David was CEO and co-founder of Hynt.com, a recommendations and native advertising platform for e-commerce stores. Prior to that he was Director of Product & Marketing for Getprice, Australia's leading online comparison shopping engine. David also spent 3 years with Google as Head of Market Insights, working across Google's entire portfolio of industry verticals in Australia and New Zealand. He holds a Bachelor of Commerce from the University of the Witwatersrand.

##### **Fabio de Carvalho, Director of Strategic Partnerships at Afterpay.**

Fabio has 8 years' experience in sales interacting with retail merchants across several verticals including ecommerce, gaming and legal. Prior to joining Afterpay, Fabio led the Channel Partnerships and the SMB telesales team for eBay Australia. Fabio was actively involved on building and developing relationships with local and global ecommerce platforms and engaging with medium to large size Australian retailers. Prior to eBay, Fabio worked for 3.5 years at PayPal where he spent two years supporting from a product, client and sales perspective the Payflow Gateway. This included leading the relationships with clients such as Dominos, Flight Centre, First Data and others.

## ***Companies Featured***

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### **Afterpay Holdings Ltd (Cont.)**

#### **Paz Vlahodimos, Head of Finance and Administration**

Paz has 20 years of professional experience in financial and operational roles in Australia and Europe. More recently, he has worked with Touchcorp and Afterpay after returning to Australia. He formerly held senior executive roles with SCA Group and PMP Group. Paz is a Certified Practising Accountant and holds a Bachelor of Economics  
(Accounting Major)

### **Substantial Shareholders**

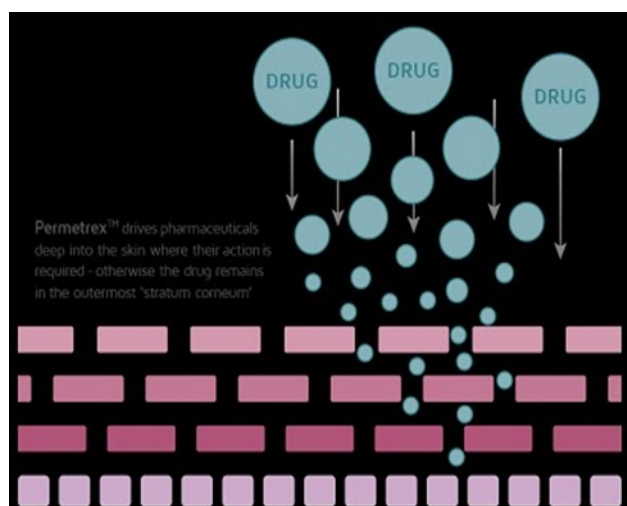
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Touchcorp existing shareholders will own approx 36% of Afterpay Touch Group Ltd

## Companies Featured

### Botanix Pharmaceuticals Ltd

**BOT: CLINICAL TRIAL OF PROPRIETARY PERMETREX TECHNOLOGY (TO DRIVE MEDICATIONS INTO DEEPER LAYERS OF THE SKIN) CONDUCTED IN THE US WAS FOUND TO HAVE NO SAFETY ISSUES - A FIRST STEP FOR BOTANIX'S BTX-1503 SYNTHETIC CANNABIDIOL TREATMENT FOR SUFFERERS FROM ACNE, PLAQUE PSORIASIS AND SEVERE EXCEMA. PRESTIGIOUS MANAGEMENT, WELL KNOWN INVENTORS**



**Botanix Pharmaceuticals Ltd**, listed on July 15, 2016 via an RTO of Bone Medical. The company, founded in Australia, had migrated to the US to develop its products, returning to base itself in Australia and list on the ASX.

Botanix is focussed on using its three BTX-1503 proprietary products derived from synthetic cannabidiol for the treatment of widely prevalent skin conditions including acne - a scourge of teenagers worldwide, as well as plaque psoriasis and severe excema.

Because cannabidiol - naturally derived or synthetic - has very low takeup when orally administered, BTX is using its licensed transdermal drug delivery technology, Permetrex, that penetrates the skin effectively without the use of

chemicals, to deliver its treatment.

Permetrex is a technology developed by Dr Eugene Cooper, a consultant to the Company, who has granted a licence to Botanix Pharmaceuticals for the use of Permetrex. Dr Cooper also co-invented the NanoCrystal® drug delivery technology which has been utilised in six products approved by the Food and Drug Administration of the United States (FDA).

#### Clinical trial of Permetrex in the US had no safety issues

The Phase 1 clinical trial of Permetrex conducted in the US under ethics approval involving 28 healthy volunteers who were tested daily over a 14 day period found minimal or weak irritancy potential and no product related adverse effects, announced on December 7 2016.

Permetrex creates substantial kinetic energy when applied to the skin, which facilitates the rapid delivery of active pharmaceutical ingredients across the stratum corneum and into the lower layers of the skin; Permetrex can accommodate other chemicals which can selectively leave parts of the formulation on the skin in a protective coating for extended absorption and/or protection of the skin.

Also transdermal delivery avoids the 'first-pass' effect of liver metabolism, potentially enabling lower dosage levels of active pharmaceutical ingredients to be rapidly and reliably absorbed with high bioavailability.

#### Synthetic cannabidiol avoids the need to comply with FDA guidelines for natural cannabidiol extract

Botanix Pharmaceuticals on July 29 announced it has secured a supply of synthetic cannabidiol, manufactured for commercial sale by its US based partner, so that it will not be required to comply with the extensive testing and controls of the FDA "guidance for Botanical Drug Products" that apply to natural cannabidiol extract based products.

The recent FDA filing by Botanix's partner for industrial quantities of pure synthetic cannabidiol provides a first mover advantage and a unique opportunity for the company to rapidly advance its first products into the clinic.



## Companies Featured

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### Botanix Pharmaceuticals Ltd (Cont.)

Botanix is using a drug substance already filed with the FDA that has achieved high quality and purity standards - an important hurdle for the eventual FDA approval of the company's BTX1503 acne product.

#### Phase 1 and Phase 2 clinical trials will be necessary

It is intended that the Merged Group will conduct Phase 1 and Phase 2 clinical trials using synthetic cannabidiol. As a result, the Merged Group will likely be subject to controlled substance laws and regulations from the TGA in Australia, the FDA in the United States, as well as other regulatory agencies in other countries where the Merged Group chooses to develop, manufacture or commercialise products in the future.

The company plans to advance the first of its products for the treatment of acne into clinical trials in humans in Australia in 2017, and is exploring opportunities to leverage its skin delivery technology and growing team to rapidly advance other products into the clinic.

Botanix's three drug candidates utilize a synthetic form of a chemical also found in natural extracts known as 2-[(1R,6R)-6-isopropenyl-3-methylcyclohex-2-en-1-yl]-5-pentylbenzene-1,3-diol to initially treat three skin diseases:

#### ACNE

BTX1503 is a transdermal gel formulation for the treatment of serious acne in adults and teenagers.

Acne is a skin condition that manifests in pimples, lumps and cysts and is the leading cause of visits to dermatologists and a leading cause of psychological difficulties in adolescents. It is the most common skin disorder in the US affecting 40-50 million Americans and in 2013 was reported to cost more than \$2.3 Billion in prescriptions.

Botanix has filed a patent application to protect its first product, BTX503, for the treatment of acne.

#### PLAQUE PSORIASIS

BTX1308 is a transdermal gel formulation for the treatment of plaque psoriasis.

Psoriasis is a serious medical condition affecting the autoimmune system with about 80% of patients having plaque psoriasis, characterized by raised reddish skin covered with white scales. About 7.5 million Americans have psoriasis and a significant proportion of severely affected patients cannot be treated with the current standard of care, which is high doses of steroids or monoclonal antibodies.

Psoriasis is an inflammatory disease characterised in part by epidermal keratinocyte hyper-proliferation. The active ingredient being studied by Botanix has been shown to inhibit keratinocyte proliferation in a concentration dependent manner and has anti-inflammatory and anti-bacterial properties.

BTX1308 could reduce the occurrence and severity of psoriasis lesions and could reduce keratinocyte proliferation and inflammation which along with its anti-bacterial properties may have a synergistic total effect on the disease.

#### ATOPIC DERMATITIS

BTX1204 is a transdermal gel formation for the treatment of atopic dermatitis.

Atopic dermatitis (or severe eczema) is an inflammatory skin disease most commonly seen in children. An estimated 31.6 million people in the United States have symptoms of eczema or eczematous conditions and at least 17.8 million people have symptoms of atopic dermatitis, considered a more severe form of eczema. Atopic dermatitis is characterized by a loss of barrier function, which is the impermeable outer layer of the skin, and skin inflammation.

The endocannabinoid system of the skin has a crucial role in skin derived sensory phenomena such as pain and

## Companies Featured

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### Botanix Pharmaceuticals Ltd (Cont.)

itch. The active ingredient being studied by Botanix can exert potent analgesic effects by activation of CB1 and/or CB2 receptors in the skin and possibly other receptors at sensory nerve terminals and/or inflammatory cells.

#### Permetrex™

Dr Cooper, a consultant of Botanix Pharmaceuticals, has developed a drug delivery technology known as Permetrex™, which is designed to deliver pharmaceuticals into and through the skin more efficiently.

**Along with Dr Cooper, the Botanix Pharmaceuticals team has unique experience in the drug delivery industry,** having been closely involved in developing and/or gaining approval for more than 10 combined FDA approvals for products that utilise novel drug delivery systems between them. Mr Callahan, Dr Bosch and Dr Cooper have previously worked with each other in other companies and have access to a broader network of knowledgeable and experienced executives and consultants that will assist in developing, testing and gaining approval for Botanix Pharmaceuticals' product candidates.

Botanix Pharmaceuticals has also engaged Emeritus Professor James Leyden from the University of Pennsylvania and Professor Diane Thiboutot from Penn State University as consultants to help guide the development of Botanix Pharmaceuticals' product candidates. These individuals are two of the leading acne researchers and clinicians in the United States and have been involved in the development of numerous skin disease products, both from basic research through to clinical trials and patient treatment.

The Company has an exclusive licence for the use the Permetrex™ drug delivery technology from Dr Cooper pursuant to the Permetrex™ Licence Agreement dated 1 May 2015.

#### Overview of the medical dermatology market

##### (From the prospectus)

Skin is the largest and fastest-growing organ in the human body and there are over 3,000 different skin conditions and diseases, many of which have a significant effect on patients' lives. Dermatologists are medical specialists that work with patients to find solutions for their skin conditions. These solutions can be categorised broadly into either medical dermatology (which focuses for example on the treatment of diseases such as acne, psoriasis and atopic dermatitis), or aesthetics (which focuses on improving the patient's appearance, most frequently the signs of aging).

**Botanix Pharmaceuticals' business focuses on the medical dermatology market,** which addresses many commonly-found conditions that can have significant effects on patients' quality of life, including their physical, functional and emotional well-being.

For example, psoriasis has been shown to affect a patient's quality of life to an extent similar to that seen in other chronic diseases such as cancer, heart disease, diabetes and depression. Likewise, acne patients have also equated their condition as comparable to other serious diseases, such as asthma and arthritis.

In 2010, there were an estimated 39 million office visits dermatologists in the United States.

#### The competition

While the sufferers from acne in their teens are a huge global population, psoriasis is a global scourge and severe eczema sufferers is also a large market segment, R&D focussed on curing these diseases is a crowded market, involving thousands of companies.

Transdermal delivery technology also has several products - including Acrux's (ASX ACR) transdermal formulation of fentanyl (delivered via a spray, other products being developed) and Phosphagenics (AX POH) Targeted Penetration Matrix (TPM) (delivered via a patch).

## Companies Featured

### Botanix Pharmaceuticals Ltd (Cont.)

#### Financials

Code	BOT	
Last Traded price (cents)	5.1	
Shares Issued (m's)	506.7	
Options Issued (m's)	39.3	
Market Cap (\$m's)	25.8	
Year ended June 30, Values in \$000's		
INCOME	2017 Int	2016
Operating Revenue		
Operating (Loss)	(1,246)	(1,708)
Net (Loss)	(1,246)	(1,708)
(Loss) Per Share (Cents)	(0.30)	(1.1)
BALANCE SHEET	2017 Int	2016
Current Assets	2,415	3,697
Non Current Assets..		
Current Liabilities	399	516
Non Current Liabilities		
Net Assets & Shareholders' Funds	2,016	3,181
Intangibles		
Net Tangible Assets	2,016	3,181
Gearing (Net of Cash) %	nil	nil
NTA per share (cents)	0.49	0.78
Shares Issued (m's)	408.8	405.5
Cash Flows:	2017 Int	2016
Cash on hand (at open)	3,652	0
Operating Activities	(1,165)	(7)
Investing		404
Financing Activities	(115)	3,255
Exchange Rate Impacts		
Cash on hand at Year end	2,372	3,652
April 5: Raised \$7.4m.		

#### Directors

##### Graham Griffiths, Non-Executive Director and Chairman

Mr Griffiths has an executive career spanning 39 years in technology based companies, including various senior executive sales, marketing and product development positions with multi-nationals in the United States and Asia Pacific region respectively. In 2000, he became Managing Director of ASX

listed company ipernica Ltd, a diversified technology and intellectual property commercialisation group, where he had overall responsibility for the company's operations including strategy, corporate governance, human resources, investor relations, partnership development and acquisitions, including nearmap.com (ASX:NEA).

His current non-executive directorships include:

- Pointerra Pty Ltd (online service provider for managing, distributing and visualising massive point cloud data sets);
- iintegrate Systems Pty Ltd, trading as Indji Systems (online service provider for managing the impact of natural phenomena on utility assets); and
- iperative Pty Ltd (specialist in monetising intellectual property).

Mr Griffiths has a Bachelor of Business (Accounting) degree and is a fellow of the Australian Institute of Company Directors.

## Companies Featured

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### Botanix Pharmaceuticals Ltd (Cont.)

#### **Matthew Callahan, Executive Director**

Mr Callahan is an experienced life sciences executive based in Philadelphia. He is the founding CEO of iCeutica Inc and a co-inventor of some of the technologies that comprise the SoluMatrix Fine Particle Technology™ drug delivery platform that iCeutica uses to develop new pharmaceuticals. iCeutica has developed 3 products to date that have received FDA approval. He has more than 20 years legal, intellectual property and investment management experience and is also a director of Orthocell Limited (ASX:OCC) and Glycan Bioscience LLC.

Mr Callahan has worked as an investment director for two venture capital firms investing in life sciences, clean technology and other sectors and was General Manager and General Counsel with Australian listed technology and licensing company ipernica, now Nearmap (ASX:NEA), where he was responsible for the licensing programs that generated more than \$120 million in revenue.

#### **Dr H. William Bosch, Executive Director/Chief Scientific Adviser**

Dr Bosch is a seasoned pharmaceutical executive with more than 20 years of experience in the industry, focusing on applications of nanotechnology to drug product development. Dr Bosch also works with iCeutica Inc and is a co-inventor of the SoluMatrix™ technology and has been instrumental in the development and scale up of the platform and the development of the 3 FDA approved products that use that drug delivery technology.

Before iCeutica, he was Director of Pharmaceutical Research at Elan Corporation where he managed the development activities for four commercial products, which incorporate nanotechnology. Dr Bosch was a cofounder of NanoSystems LLC in 1995 and a co-inventor of NanoCrystal® Technology.

#### **Robert Towner, Non-Executive Director**

Mr Towner has over 20 years' corporate advisory and executive experience in the financial markets. Mr Towner is the founder and sole director of Cornerstone Corporate Pty Ltd, a corporate advisory company and has served as a board member of publicly listed and unlisted companies. Mr Towner's skills include maintaining board awareness of financial markets, corporate governance, capital structuring and working capital requirements. In addition,

Mr Towner has considerable experience in public and private capital raising initiatives. Mr Towner has demonstrated the ability to build a successful life science company. From 2004, Mr Towner was a founding Executive Director of ASX listed bioMD Limited. In 2011, Mr Towner played a major role in the merger of bioMD Limited, with then-private Allied Health Care Limited to create Admedus Limited (ASX: AHZ), a diverse healthcare company with a

market capitalisation of \$200 million. Mr Towner is also an executive director of an ASX listed company Triangle Energy (Global) Limited.

### Substantial Shareholders

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(Following recent over subscribed \$7.4 million placement)

Shenasaby Investments Pty Ltd 13.93%

Caperi Fund 13.93%



## Companies Featured

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### Universal Biosensors Ltd

**UBI: UBI IS A HIGHLY CREDENTIALLED AND WELL KNOWN MANUFACTURER OF TESTING STRIPS FOR DIABETES - A GROWING GLOBAL SCOURGE. WHILE SALES TO LIFESCAN, A J&J COMPANY AND A MAJOR PLAYER IN THE BLOOD TESTING MARKET, ARE STILL THE MAJOR SOURCE OF INCOME, SALES OF PRODUCT TO GLOBAL GIANT SIEMENS - FDA APPROVED IN DEC 2016 - REPRESENTS CONSIDERABLE "BLUE SKY". \$20 MLN CASH AT BANK, MAIDEN PROFIT**



One Touch® Verio® Flex™

"A small spec of blood giving you results in 5 seconds: OneTouch® Verio® IQ Test Strips use our smallest sample size (0.4µL). Plus, you can apply blood to either side of the test strip, so it's great for righties and lefties" - from LifeScan advertisement.

**Universal Biosensors Inc**, incorporated in the State of Delaware in the US in 2001, listed in Australia on December 13, 2006. The ASX is still the company's sole listing.

Universal Biosensors is a specialist medical diagnostic company with a pipeline of products, 11 owned patents and a considerable number exclusively leased, for a range of in vitro diagnostic tests.

The OneTouch Verio glucose test strips for monitoring diabetes (sold to LifeScan since 2002) is its major earner. LifeScan, a Johnson & Johnson company is one of the major players in the blood testing market, and UBI's

product being chosen by LifeScan in April 2002 was a major coup and a company maker for UBI.

However, UBI is no longer manufacturing new product for LifeScan, and there is the likelihood that LifeScan will terminate their profit share agreement this year or the next, paying out the balance lumpsum agreed (more in Taylor Collison report below).

Meanwhile, Siemens, that has developed the Xprecia Stride Coagulation Analyzer in collaboration with UBI has now received CE Mark Approval (in December 2014) and FDA approval on October 4 2016.

The Xprecia Stride™ Coagulation Analyzer is now available in Europe, the Middle East, Africa, Asia Pacific, Latin America.

Siemens, an industrial and engineering giant, established in Germany in 1847, has a comparatively modest share of the blood testing market - but given its engineering expertise and market nous is likely to advance rapidly.

This is the major "blue sky" for UBI currently.

UBI is the manufacturer of test strips for the Siemens Stride Coagulation analyzer, with two further tests still in development with Siemens.

#### Acquisition of LifeLabs in Canada

\*On December 16 2016 Universal Biosensors Inc announced its wholly-owned Canadian operating subsidiary signed an agreement with LifeLabs LP (LifeLabs) to acquire the assets of LifeLabs' Hemostasis Reference

## Companies Featured

### Universal Biosensors Ltd



Xprecia Stride Coagulation Analyzer - advertised on eBay

Xprecia Stride Coagulation Analyzer for Primary Care, Urgent Care  
EBay advertisement

Laboratory business (HRL) in preparation for future increased production requirements of Siemens' Xprecia Stride™ test strips.

The HRL business has provided high-quality coagulation testing and calibration services to international customers for more than 20 years, including 5 years of services for UBI. HRL has one of the most diverse offerings of specialised coagulation services in the world.

UBI also continues to progress in vitro diagnostic test devices for consumer and professional point of care use, with the Point of Care home testing market for other conditions also growing exponentially as chronic medical conditions are increasingly self monitored.

The global blood testing market is expected to reach \$US 62.9 billion by 2024 - diabetes the major driver

#### Grandview Research, June 2016

(extract)

"Growing adoption of testing and screening methodologies that enhance near patient diagnosis through enhanced blood testing that reduce diagnostic turnaround times and lower hospital stay duration is a major factor expected to provide lucrative growth in demand for the market...

"Increasing levels of patient awareness that have been

witnessed in a number of demographic factions across developed and developing countries alike is another notable factor expected to drive growth.

"Growth prevalence of chronic diseases such as diabetes that warrant long term disease management is also a considerable factor attributive of growth potential over the forecast period ..

"Glucose testing is estimated to be the dominant segment ..

"Market revenue from lipid panel tests is second only to blood glucose monitoring and their strong market position can be accounted for by higher incidence of cholesterol associated cardiovascular disorders ..

"Glycated haemoglobin is anticipated to witness relatively faster growth among the market segments ..

"North America dominated the industry in 2015 with over 40% of total revenue.

"Asia Pacific is estimated to witness the fastest growth over the forecast period owing to presence of high unmet medical needs pertaining to target disease segments such as cardiovascular disorders, prostate cancer, diabetes, liver diseases, hepatotoxicity and hyperlipidemia".

#### Major players in the blood testing market

From a competition perspective, four companies dominate the SMBG business, controlling approximately 90% of the market: Roche Diagnostics (Hoffman-LaRoche, Basel, Switzerland), LifeScan (Milpitas, CA, a Johnson & Johnson company), Bayer Healthcare Division (Tarrytown, NY), and Abbott Laboratories (Abbott Park, IL). The "big four" offer a wide variety of SMBG products and have dominated the market since the late 1990s. Numerous second-tier and third-tier competitors, including several in Asia, hold the remaining 10% of the market. Among

## Companies Featured

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### Universal Biosensors Ltd

the most notable are Arkray (Kyoto, Japan), Home Diagnostics, Inc. (Ft. Lauderdale, FL), and AgaMatrix (Salem, NH).

#### **The leading players operating in the global anticoagulant market - expected to reach \$30 bln by 2020** **Technavio report, March 8, 2017**

(extract)

The leading players operating in the global anticoagulant market include Bayer HealthCare, Boehringer Ingelheim, Bristol-Myers Squibb, Daiichi Sankyo, Johnson & Johnson and Sanofi.

The other key vendors in the market include AstraZeneca, Eli Lilly, Keryx Biopharmaceuticals, LEO Pharma, Pfizer, and The Medicines Company.

\*Strategyr expects the global anticoagulant market to reach \$30 billion by 2020.

From a UK report, May 24 2016: "Blood-based diagnostics are huge right now. There are many new diagnostics from blood samples coming up, thanks to research on biomarkers – in indications like colorectal cancer, lung cancer, liver disease and even depression. There are also digital health companies like Kiweno that are offering the public access to standard blood tests.

"Then there are MedTechs developing technology to make blood tests available anywhere – without the need for a lab..."

#### **UBI Facilities**

The company leases 5,000 sq m of office, R&D and manufacturing facilities in Melbourne, with options to renew the lease and leases approximately 482 sq m of office and laboratory facilities in Hamilton, Ontario following the acquisition of the assets of the Hemostasis Reference Laboratory Business in December 2016.

#### **UBI's R&D Focus**

##### **From annual report:**

"Core to our business strategy is the extension of our intellectual property platform to enable other tests currently done in the central laboratory to be migrated to the point-of-care settings. Our belief is that much testing done in the central lab can more efficiently and profitably be performed at the point-of-care. With the exception of blood glucose testing, most point-of-care testing is currently conducted in professional settings. The healthcare professional has a choice and can request tests from a central laboratory, or services provider, or choose to have the test performed at the point-of-care. Thus we face competition not just from other companies active in the point-of-care space, but also the providers of testing who operate in centralized settings".

#### **In the R&D pipeline**

UBI is developing its own patient self-testing coagulation testing device.

UBI has undertaken some early stage feasibility work assessing the possibility of using DNA binding chemistries to build a low-cost test for DNA, RNA and as a possible alternative method for improving the sensitivity of protein assays. The company entered into a license with SpeedX Pty Ltd ("SpeedX"), an Australian technology company focused on the development of catalytic nucleic acid enzymes for medical diagnostics and other applications.

This concept work is at an early stage and may not yield any positive results.

**Contract R&D:** No revenue was generated from contract R&D during 2016 - however following the acquisition of LifeLabs' Hemostasis Reference Laboratory business in December 2016 - a provider of coagulation testing and calibration services to international customers for more than 20 years - this is likely to be an additional source of income in years to come (our thought only).

## Companies Featured

### Universal Biosensors Ltd

#### WHAT THE BROKERS SAY

Taylor Collison, in a comprehensive report dated February 7 2017 placed an "outperform" on UBI with a price target of 47c.

The broker said in the report, "We are initiating on UBI with an Outperform and price target of 47c. We think the market has failed to recognize the potential value associated with the Siemens partnership, despite significant R&D spend.

UBI also anticipates receiving a \$A39 million lumpsum payment from LifeScan in the 2018/2019 timeframe. ...

"We think J&J (LifeScan) will elect to terminate their profit share agreement with UBI in the 2018 timeframe which would mean that at the time, J&J had paid \$US45 million to UBI of which \$US30 million has been paid. Exiting the agreement would also trigger a lump sum payment of \$US29 million. We like the J&J deal right now for the de-risked payment structure. We think the payments from the J&J deal are already priced into the stock".

The broker valued the Siemens opportunity as worth \$60 million or potentially more.

While the use of Warfarin use has been gradually declining since the approval of anticoagulants (DOACs) that do not require frequent monitoring and dose adjusting, the broker expects there will always remain a meaningful population of patients prescribed Warfarin.

The broker adds, "UBI is also working to create coagulation tests which are applicable to patients on DOACs (direct oral anticoagulants) which we think would also garner rapid uptake among DOAC patients because there are no other tests for monitoring DOACs, and compliance on DOACs is extremely important, but also difficult to assess".

## Financials

Code	UBI		
Last Traded price (cents)	48		
Shares Issued (m's)	176.4		
Options Issued (m's)	18.4		
Market Cap (\$m's)	84.7		
<b>Year ended December 31, Values in \$000's</b>			
<b>INCOME</b>	<b>2016</b>	<b>2015</b>	<b>2014</b>
Operating Revenue	18,831	16,775	9,530
Operating Profit (Loss)	1,250	(6,576)	(9,316)
Net Profit (Loss)	1,250	(6,576)	(9,316)
Profit (Loss) Per Share (Cents)	0.7	(3.7)	(5.3)
<b>BALANCE SHEET</b>	<b>2016</b>	<b>2015</b>	
Current Assets	35,242	28,824	
Non Current Assets..	14,747	16,128	
Current Liabilities	5,940	4,782	
Non Current Liabilities	30,795	26,914	
Net Assets & Shareholders' Funds	13,254	13,256	
Intangibles			
Net Tangible Assets	13,254	13,256	
Gearing (Net of Cash) %	1.9	30.6	
NTA per share (cents)	7.51	7.52	
Shares Issued (m's)	176.4	176.4	
<b>Cash Flows:</b>	<b>2016</b>	<b>2015</b>	<b>2014</b>
Cash on hand (at open)	14,350	16,330	23,742
Operating Activities	7,049	(528)	(7,468)
Investing	(1,272)	(1,270)	(947)
Financing Activities	45	(1,379)	262
Exchange Rate Impacts	230	1,197	741
Cash on hand at Year end	20,402	14,350	16,330



## Companies Featured

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### Universal Biosensors Ltd

#### Directors

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**Andrew Denver, executive chairman**, a director since 2002

Mr. Andrew L. Denver is Non-Executive Chairman at SpeedX Pty Ltd., a Director at PFM Cornerstone Ltd., Non-Executive Chairman at Universal Biosensors, Inc., and a Director at The Principals Funds Management Pty Ltd. He is on the Board of Directors at Vaxxas Pty Ltd., Cochlear Ltd., PFM Cornerstone Ltd., Universal Biosensors Pty Ltd., The Principals Funds Management Pty Ltd., Vaxxas, Inc., CathRx Ltd., and Anzon Australia Ltd.

Mr. Denver was previously employed as Non-Executive Director by Anzon Australia Ltd., Non-Executive Director by CathRx Ltd., President by Pall Asia International Ltd., President-Filtration & Separations Business by Micro Metallic Co., President & Chief Operating Officer by USFilter Corp., President, Chief Operating Officer & MD by Memtec Ltd., and President-Medical Devices Division by Baxter Healthcare Corp. He also served on the board at Australian Environment Management Export Corp. Ltd., Environment Management Industry Association of Australia, and The Principals Cornerstone Fund Pty Ltd. He received his undergraduate degree from The University of Manchester and an MBA from Harvard Business School.

**Denis Hanley, Non Executive Director** since 2001.

Mr. Denis M. Hanley is Executive Chairman at PFM Cornerstone Ltd., Independent Non-Executive Director at Universal Biosensors, Inc., and a Director at The Principals Funds Management Pty Ltd. He is on the Board of Directors at Wyong Race Club, Universal Biosensors, Inc., The Principals Funds Management Pty Ltd., and Sunday Silicon Technologies Pty Ltd. Mr. Hanley was previously employed as Executive Chairman & Chief Executive Officer by CathRx Ltd., Independent Chairman by Pharmaxis Ltd., Executive Chairman by Memtec Ltd., a Managing Director by Baxter Healthcare Pty Ltd., Chairman by The Northcare Foundation Ltd., and Non-Executive Director by Lochard Ltd. He received his MBA from Harvard Business School. Mr Hanley has flagged his intention to retire from the board.

**Marshall Heinberg, Non Executive Director**, appointed 2010

Mr Heinberg serves as Senior Managing Director and Head of Investment & Corporate Banking at Oppenheimer & Co., a leading U.S. based investment bank. Previously, Mr Heinberg was Head of CIBC's U.S. Investment Banking Department. During his career, Mr. Heinberg has worked with many leading growth companies. Mr. Heinberg has held responsibility for various sectors including environmental, industrial growth, technology and telecommunications. His transaction experience includes public and private financings, exclusive sale and strategic advisory assignments. Mr. Heinberg graduated from the University of Pennsylvania, the Wharton School with honours, with a degree in economics, and received his law degree from Fordham Law School

**Judith Smith, Independent Non Executive Director**, appointed 2015

Judith Ann Smith joined Industry Fund Services (IFS) in 1998, having been involved with private equity in the Australian market since 1990. She had an 11 year long career at National Mutual Funds Management where she successfully managed various Australian equity portfolios. Prior to that, she worked in the export industry as an investment analyst. She participates in a range of private equity fund advisory committees, was elected to the AVCAL Board for 2006-2007, and is on the Victorian State Government Venture Capital Working Group.

Ms. Smith holds a Master of Applied Finance from the University of Melbourne, Bachelor of Economics (Honours) from Monash University and is a Fellow of Finsia (Financial Services Institute of Australia), an Affiliate of the Association for Investment Management and Research and was a member of the JASSA Editorial Board for seven years.

## Companies Featured

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### Universal Biosensors Ltd

#### **David Hoey, Non Executive Director**, appointed 2016

Mr Hoey has more than 25 years experience in technology financing and commercialisation. Based in the US, he is currently the CEO and a director of Vaxxas Pty Ltd, a Brisbane based company developing and commercialising a novel vaccine delivery technology, the "Nanopatch". He also serves as an adviser to US based Healthcare Ventures LLC. Mr Hoey has served in a number of business development roles in the healthcare industry internationally.

#### **Craig Coleman, Non Executive Director**, appointed 2016

Mr Coleman's career of 30 years has spanned banking and finance, corporate advisory and funds management. He was a managing director of Home Building Society Ltd and earlier held a number of senior executive positions with ANZ Banking Group Ltd. Craig is currently executive chairman of Viburnum Funds, an Australian based specialist investment manager founded in 2007. He is a director of Bell Financial Group, Pulse Health Ltd and Republic Financial Ltd. Craig holds a Bachelor of Commerce degree from the Uni of WA.

### Key Management Personnel and Consultants

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#### **Andrew Denver, interim CEO, a founding director**

#### **Dr Alastair Hodges**, Chief Scientist

Alastair has been working in the field of electrochemical sensors for the last 18 years and has served as the Chief Scientist since April 2002. Alastair worked as a principal research scientist in the DSTO and the CSIRO in electrochemistry and transport processes. In 1995 he joined Memtec Ltd to work on sensor technologies.

#### **Garry Chambers, VP Tech Ad Development**

Garry was Head of Engineering at UBI since April 2002 and VP of Operations from September 2006. In April 2013 he became VP of Technology Development. Prior to joining UBI Garry was a senior engineer with MediSense (UK). In 1991 Garry relocated to Australia to join Memtec Ltd with Alastair.

#### **Dr Adrian Oates, VP Quality and Regulatory**

Adrian joined UBI in Sep 2007 having spent over 20 years in the device, biological and pharmaceutical healthcare industries. His early career was as a research scientist and head of project management at CSL Ltd. In 2004 he joined Cochlear Ltd as VP Quality and Regulatory. Adrian then returned to CSL Ltd as Quality Director.

#### **Salesh Balak, CFO**

Salesh joined UBI as CFO in November 2006 and as a director since Sep 2010. Prior to UBI he was CFO and company secretary of Pearl Healthcare Ltd. Prior to this he spent 13 years in the Business Services, Audit and Financial Advisory Services of KPMG.

#### **Cameron Billingsley, Secretary**, appointed 2006

Mr. Cameron D. Billingsley is a Principal at PFM Legal Pty Ltd., Secretary & General Counsel at CathRx Ltd., Secretary at Universal Biosensors, Inc., and Secretary & General Counsel at PFM Cornerstone Ltd. He is on the Board of Directors at The Principals Funds Management Pty Ltd. He received his undergraduate degree from the University of Technology Sydney and a graduate degree from the University of Technology Sydney.

### Substantial Shareholders

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Board and Management own 13%

## Updates / Responses for companies featured in earlier TPI reports

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### **ANQ: Sunset date for completion of XEPT transaction extended to Jul 15**

AnaeCo Ltd on April 18 announced an extension to the sunset date for completion of the XEPT transaction has been agreed as July 15, when if all conditions precedent are not satisfied, the Tripartite Deed of Sale and Cooperation may be terminated.

Whilst the Tripartite Deed of Sale and Cooperation remains current AnaeCo's funding requirements will be met through the Loan Agreement with Monadelphous Group Ltd.

TPI issue of Aug 26 2016. AEQ was trading at 0.3c. AEQ recently traded at .02c

### **CYP: Collaboration /files new patent application/granted pre IND mtg**

On April 11 Cynata Therapeutics Ltd announced it has commenced a collaboration with Critical Care Research Group to investigate Cynata's proprietary Cymerus MSCs as a treatment for acute respiratory distress syndrome with extracorporeal membrane oxygenation.

The study to be conducted in association with the Prince Charles Hospital in Brisbane by world leading academic groups, funded by a group including the Queensland State Government.

On April 12 Cynata announced it has filed a further patent application covering certain novel and innovative applications for its Cymerus mesenchymal stem cell technology particularly to focus on fields related to cancer treatment.

On April 19 Cynata announced it has been granted a pre-Investigational New Drug (IND) meeting with the US FDA to discuss the regulatory approval path for Cynata's proprietary Cymerus mesenchymal stem cell products in the USA.

TPI issue of May 13 2016. CYP was trading at 37.5c. CYP recently traded at 48c

### **EMC: First jointly developed project in China**

On April 7 EMFCY announced its first project jointly developed by Emefcy and RWL Water, one of the fastest growing water solutions companies in the world, to be deployed in Tianjin. The project was developed in partnership with one of EMFCY's China distributors, Interflow Control Technologies and involves a multiphase agreement to utilise EMFCY's MABR waste water treatment technology at one of five treatment plants in the city. The installation will mark the first use of a submerged derivative of EMEFCY's MABR solution for centralized waste water aeration basin. Expected to begin operation in the 3rd quarter 2017.

TPI issue of Mar 31 2016, EMC was trading at 34c. EMC recently traded at 79.5c

### **IFT/MEQ: Infratil agrees to sell its 19.98% of Metlifecare shares**

On April 6 Infratil Ltd announced the offmarket sale of 42.4 million shares, 19.9% in Metlifecare Ltd for a sale price of \$NZ5.61 per share for aggregate consideration of \$NZ237.931 million, settlement to occur on April 11, 2017.

TPI issue of Apr 29 2016. IFT was trading at \$NZ3.24. IFT recently traded at \$A2.68

### **LMG: Awaiting response from ENGIE-Hazelwood**

On March 31 2017 in its quarterly activities report Latrobe Magnesium said it is awaiting response from ENGIE-Hazelwood on its proposal to access the Hazelwood power station ash and is awaiting their response.

On April 19 the company confirmed its proposed 3,000 tpa magnesium plant is estimated to break even or return a small profit and will provide the necessary information and confidence for LMG to proceed directly to a 40,000 tpa plant.

TPI issue of May 20 2016. LMG was trading at 2c. LMG recently traded at 1.8c

## Updates / Responses for companies featured in earlier TPI reports

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### **MXC: First cannabinoid extracts, commercial production 3rd qtr**

On April 10 MXC announced it has successfully produced its first cannabinoid extracts at its European Extraction Facility with commercial production targeted for the 3rd quarter.

Also its Panax Pharma medical cannabis growing operations (MXC 80%) at the Institute of Experimental Botany in the Czech Republic are on schedule. MXC has the option to acquire 100% of Panax.

TPI issue of May 27 2016. MXC was trading at 5c. MXC recently traded at 6.2c

### **PHK: Widens China biz/multi purpose manufacturing facility in China**

Phoslock Water Solutions Ltd on April 10 announced it is forming a new wholly owned subsidiary Phoslock (Beijing) Environment Engineering Technology Co Ltd to focus on engineering solutions for polluted Chinese water bodies, expanding products to include remediation of nitrates and bacteria in addition to its treatment of phosphate in water bodies.

\*On April 11 Phoslock announced it is in the final stage of establishing a multi purpose manufacturing facility in Changxing, 150 km from Shanghai.

The new factory has the capacity to meet the rapidly expanding global demand for anti pollution measures, in particular, for China.

TPI issue of July 8. PHK was trading at 8.7c. PHK recently traded at 10c

### **SAS: Launch date confirmed/successful communications system**

On April 12 Sky and Space Global announced it has successfully completed a thorough testing cycle of its Ground and Space Communication systems and software, validating the performance of the full communication cycle.

On April 6 Sky and Space Global Ltd had announced its 3 Diamonds nano-satellites will be launched on the ISRO's Polar Satellite Launch Vehicle (PLSV) from its launch site at the Satish Dhawan Space Centre in Sriharikota, India Campaign 38 in late May 2017.

TPI issue of Mar 11. SAS closed at 19c. SAS recently traded at 22c

### **VLT: New major customer, key 1 mln plus user milestone achieved**

On April 18 Vault Intelligence Ltd announced its new corporate customer, Restaurant Brands has advised Vault it is its nominated tender provider. Vault expects to provide its full range of Apps as well as the Vault Enterprise platform into Restaurant Brands sites across Australia and New Zealand.

Vault has passed the 1 million barrier in terms of its customers' employees and contractors managed by Vault software.

TPI issue of July 8 2016. VLT was trading at 3.3c. VLT recently traded at 3c

### **WGL: Deal with Telethon Kids Institute on mobile monitoring**

On April 10 Wangle Technologies Ltd announced it has signed an exclusive commercial agreement with the Telethon Kids Institute to partner on the development of the company's Wangle Family Insites, a disruptive and ground breaking approach to discovering the opportunities and dangers faced online by children and teenagers.

TPI issue of Feb 17 2016. WGL (still under code VTX) was trading at 3.6c. WGL recently traded at 2c

### **Have your say!**

All feedback welcome, and will be published at your request!

Write to: [jenny.d.prabhu@gmail.com](mailto:jenny.d.prabhu@gmail.com)