

Monday September 16 – Friday September 20, 2019

All the news on ASX-listed agriculture and veterinary companies

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MARKET REPORT

The Australian stock market was up 0.2 percent on Friday September 20, with the ASX200 up 13.3 points to 6,730.8 points. Thirteen of the Ag & Vet 41 stocks were up, 13 fell, 13 traded unchanged and two were untraded.

Wattle Health was the best, up 9.5 cents or 21.1 percent to 54.5 cents with 2.4 million shares traded. Abundant climbed 14.0 percent; Clover was up 12.8 percent; Pharmaust improved 7.4 percent; Memphasys rose 6.5 percent; Apiam was up 5.1 percent; Ocean Grown Abalone was up 3.1 percent; Synlait rose 2.7 percent; A2 Milk was up 1.6 percent; with Bega, Bubs, Huon and National Veterinary up by less than one percent.

Cann Global (Qld Bauxite) led the falls, down 0.2 cents or 5.9 percent to 3.2 cents with 10.9 million shares traded. Ecofibre fell 4.6 percent; Cannpal and Elixinol lost more than three percent; Althea and Ridley shed more than two percent; Cann Group, Costa, Elders, Select Harvests and THC lost more than one percent; with Tassal and Nufarm down by less than one percent.

DR BOREHAM'S CRUCIBLE: PHARMAUST

By TIM BOREHAM

ASX code: PAA

Share price: 14.5 cents; Shares on issue: 280,971,192; Market cap: \$40.7 million

Executive chairman: Dr Roger Aston

Board: Dr Roger Aston, Rob Bishop, Neville Bassett, Sam Wright

Financials: (Year to June 30, 2019): sales revenue \$3.7 million (up 28%), other revenue \$694,000 (up 63%), loss of \$1.6 million (previously \$2.5 million deficit), cash of \$2.1 million (up 11%), borrowings of \$324,614 (down 23%).

Identifiable major holders: Hybrid Holdings (Darcy family superannuation trust) 7.53%, Dr Roger Aston 5.35%, Gerard and Gillian Van Blommestein 4.36%, Longbow Croft Capital (Rob Bishop) 2.92%, Peter Howells 1.55%, Douglas Brewster Kitchen 1.48%

The notion of 'everything old is new again' applies not just to fickle fashion trends, but to drug development as well.

Drug reformulations are all the rage and it's not such a bad thing. Think of Paradigm Biopharmaceuticals with its promising efforts to repurpose a 60-year old drug - previously used to treat deep vein thrombosis and bladder diseases - as an orthopaedic treatment. Or Suda, with a range of oro-mucosal (spray) formulations. Or Medical Developments with Penthrox, a tizzed up version of a front-line pain treatment used here since 1975.

Pharmaust is reviving an old animal drug - a parasitic sheep drench called monepantel - as a cancer curative for both animals and humans. Marketed by Eli Lilly's animal health arm Elanco as Zolvix, the treatment has been long approved in Europe, the UK and here.

Monepantel is thought to inhibit the mTOR pathway which refers to mechanistic target of rapamycin: not a Harry Potter or Tolkien reference but a well-known oncology target.

"The fact that monepantel is already approved for animals in a number of major jurisdictions means that the development process is cheaper than it would be if monepantel were a new [approved pharmaceutical ingredient]," the company says.

Through its Epichem subsidiary, Pharmaust provides export award-winning synthetic and medical chemistry services (contract research work) at its accredited Perth facilities.

Travelling through time

Pharmaust has a long, convoluted ASX history, having listed in October 2001 as Echo Technologies. Echo's pursuits at the time were travel related, including an outfit called Tardis Travel.

By 2005, Pharmaust had turned from sonic screwdrivers to mimotopes (research grade peptides for the drug discovery) and by 2010 Epichem was well-established as a contract research facility.

Epichem provides products and services in synthetic and medicinal chemistry to the drug discovery and pharmaceutical industries. Specialties include custom synthesis of analogue libraries, scaffolds and intermediates; and reference standards of drug impurities, degradants and metabolites.

Out in the paddocks, meanwhile, a clinical oncologist and part-time sheep farmer named Prof David Morris fiddled with monepantel and chanced on its anti-cancer properties.

A spin off from St George's Hospital in Sydney, where Prof Morris works, Pitney Pharmaceuticals negotiated an option for the animal cancer rights with Novartis (now Elanco) in 2012. In return for handing over the rights, Elanco gets first dibs on any animal oncology drug developed by Pitney (now, of course, Pharmaust).

Pitney Pharmaceuticals was acquired by Pharmaust in 2015 in a \$6 million scrip deal that amounted to a back-door listing of Pitney.

Pitney was run by Dr Roger Aston, now Pharmaust's executive chairman. Dr Aston needs no introduction in biotech circles as the former chair of Mayne Pharma and current chair of Resapp Health and director of Oncosil Medical, not to mention founder of Psivida (now the US-based Eyepoint) and owner of a Scottish castle.

Along the way, Pharmaust has also shored up patent rights with St George's Hospital's commercialization subsidiary New South Innovations. In 2017 Pharmaust also acquired the patents to 50 anti-cancer compounds from Japanese crop protection group Nihon Nohyaku. This intellectual property is "related to but distinct from" monepantel.

Pharmaust is negotiating with Elanco to develop the veterinary health applications of monepantel, but given Elanco's monepantel composition patent starts expiring in 2023 the company may have free rein after that date anyway.

Elanco hived-off from pharma giant Eli Lilly last year and listed in the US, raising \$US1.5 billion. A key benefit of the Elanco tie-up is that Pharmaust can access the former's safety, toxicology and chemistry data used to support the sheep drench approvals.

"I personally had a bit of concern giving a cancer product to sheep that ends up on someone's dinner table," Dr Aston says.

"We downloaded the Novartis dossier and found that because (monepantel) is part of the food chain, they had done extensive safety studies."

While other canine cancer drugs are on the market, Pharmaust claims they are limited because of the side effects that the all-natural monepantel does not produce.

Adverse tox events in cancer chemotherapy are one of the key limiting factors in effective treatment.

What's happened and what's next

A previous pilot phase II canine study in 2017 and then a further study last year showed the drug was effective at improving progression-free survival (the length of time the pooch lives with the disease without it getting worse).

Of the four dogs treated in the 2017 study, three recorded tumor regression of between 2.0 percent and 19 percent, with an average shrinkage of 11 percent. A later trial in 2018 enrolled seven hounds with lymphoma and showed that monepantel significantly induced progression-free survival in six of them.

One historical problem with monepantel has been its foul taste - like floor polish we gather - which was fine for delivering down the throat of sheep via drench tubes but not for discerning dogs. Happily, the company has been able to re-formulate the medicine in a "taste neutral" tablet formulation that the dogs will take from the hand of the owner.

In alliance with Elanco, Pharmaust is preparing for a pivotal phase II clinical trial for dogs with B-cell lymphoma.

The New South Wales Department of Primary Industries gave the ethical go-ahead for the trial in July, expected to start recruiting shortly (in case you're wondering the dogs aren't required to sign the consent forms).

Led by the University of Melbourne's U-Vet Werribee Animal Hospital, the trial expects to treat 15 to 20 dogs initially, but the cohort will be expanded if the positive results continue.

On the human side, a phase I study at the Royal Adelaide Hospital established a reduction in cancer markers. Of the eight patients who started, two discontinued because of the drug palatability (foul taste) and two pulled out for other reasons.

Now the company is looking for clinical sites interested in doing a trial in hard-to-treat cancers such as glioblastoma or pancreatic cancer.

"We are talking to clinicians in Europe, UK and Australia to find which cancer we are going to target," Dr Aston says. "Once we have found which cancer we want to go for, we will do a major phase II study as we did for dogs."

Unlike mice, the standard lab guinea pigs, dogs are closely related to human physiology and most canine cancer drugs are reformulations of human cancer therapies.

Finances and performance

After years of important but unexciting development, Pharmaust has appeared on the radar of excitable investors with the stock soaring 255 percent since late June.

While it's hard to pin down an exact catalyst, Dr Aston says the market expects a "meaningful corporate event" if the trial succeeds. This could involve Elanco buying the drug - or, the cheaper option - Elanco buying Pharmaust outright.

Dr Aston notes that Elanco is not averse to some acquisitive va-va voom, having just agreed to buy Bayer's animal health unit for \$US7.6 billion of cash and scrip.

Elanco's also recently purchased the vet oncology company Aratana.

In the meantime, Pharmaust benefits from the steady-state Epichem business, which generated \$3.7 million of revenue in the 2017-'18 year and is poised to turn over \$4.2 million this year.

As of June 30, Pharmaust had cash of \$2.09 million, bolstered by a \$2 million two-for -one rights issue in February. Initially, the effort raised only \$1.3 million, but the shortfall offer gathered a further \$700,000.

With the offer struck at 2.5 cents, the true believers were bang on the money and now have a howling 440 percent gain.

Pharmaust has raised \$13.75 million since the 2013 reverse listing. The company also pocketed \$627,250 from a research and development incentive refund, applicable for the 2017-'18 year.

Pharmaust also has \$325,000 of borrowing through a facility with the export credit agency Export Finance Australia. This relates to a \$466,000 loan for Elanco to build a second lab facility in Perth.

A \$750,000 for an upgrade of its original lab in 2015 has been repaid.

Dr Boreham's diagnosis:

On the pet side, Pharmaust is riding the theme of ageing Western populations and the rise in single-person households, which elevates Molly and Ripley to two-legged status.

One in four dogs die of cancer, including half of dogs over 10 years old. As Dr Aston notes, even extending a beloved pet's life by six quality months makes for an attractive commercial market.

Americans spend \$US70 billion on pet care annually, including \$US17 billion on vets and \$US10.2 billion on drugs.

Naturally, the potential of a non-toxic cancer drug for the human market is compelling, but the company still has a long way to go.

In the meantime, Epichem ticks over decent revenue and keeps the lights burning at its Perth HQ.

Disclosure: Dr Boreham is not a qualified medical practitioner and does not possess a doctorate of any sort. While a polished individual, he can't recall imbibing floor cleaner – not knowingly, at least.

BUREAU OF AGRICULTURAL, RESOURCE, ECONOMICS AND SCIENCES

The Australian Bureau of Agricultural and Resource Economics and Sciences says the value of farm production will fall five percent to \$59 billion in the coming year. In its 'Agricultural commodities – Commodity forecast and outlook' September 2019 report, Abares said: "In 2019-'20 the volume of farm production and agricultural exports are expected to fall below long-term averages, mainly due to ongoing drought in large areas of south-eastern Australia".

"The decline ... is forecast to be driven by a fall in slaughterings, live animal exports, wool and summer crop production," Abares said. "Dry conditions across much of central and northern New South Wales and southern Queensland over consecutive years have reduced herds and flocks, which is beginning to have a noticeable effect on the productive capacity of the sector."

The report referred to "extremely low" soil moisture levels in New South Wales and southern Queensland, and said that "a number of regions had not harvested a grain or fodder crop since 2017-'18", but failed to mention or discuss "climate change". In its May 2017 'Farm performance and climate' report, Abares said that "climate change studies have consistently predicted changes in Australian rainfall, including lower rainfall in southern Australia and more severe droughts and floods".

The report said that in Western Australia, climate conditions between 2001 and 2015 lowered total farm production by an average 7.7 percent and in New South Wales climate conditions post 2001 "lowered productivity by an average of 6.5 percent".

Earlier this month, the Minister for Water Resources and Natural Disasters, David Littleproud told ABC Radio and The Guardian newspaper: "I don't know if climate change is man-made", but later told Federal Parliament that he accepted the science.

Mr Littleproud told Ag & Vet Weekly: "I accept the science on man-made impact on climate and always have. I'm not a scientist but I accept the science and I accept the scientists know more than me. I have a track record with respect to climate change." "The \$5 billion Drought Future Fund, the \$100 million dividend that will be paid part of that

has a response around climate adaptation," Mr Littleproud said.

The Abares September 2019 report predicted sharp falls in livestock, livestock products

and summer crops, with winter crop production expected to remain low but to increase, with farm production to be lowest since the 1996-2010 Millennium Drought.

The report said the wheat price would fall six percent, coarse grain prices would fall 13 percent due to increased global production, and the oilseed price would fall seven percent due to lower Chinese demand and high North American stocks.

Abares said it expected the cotton price to drop 16 percent due to increased global production and high stock levels and the wool price would fall 26 percent "due to uncertain global demand and increased superfine wool production".

The report said sugar would "remain low due to record carry-over stocks" increasing one percent, with beef and veal prices to rise eight percent "due to higher global demand for beef and reduced supply of cattle", lamb prices to rise 12 percent to historical highs and the dairy price to rise five percent "supported by [a] falling dollar and competition for milk". "The China-US trade dispute is affecting exports and business investment in East Asia ... [and] of concern to Australia is the deceleration in consumption growth in year-on-year terms in some of its largest agricultural export markets".

"The recent escalation in the China-US trade dispute has increased the uncertainty of Chinese clothing sales to the United States," the report said. "This is likely contributing to the decline in prices received for Australian wool and cotton.

"The trade war is also dampening global economic growth and economic growth in East Asia, Australia's largest export market for agricultural goods," Abares said.

BEGA CHEESE

Bega says 38 percent of its water is reused, 100 percent of its palm oil is certified, it has a four-year energy plan and 46 percent of professional staff are women.

Bega's '2019 Sustainability Report' said it addressed "our performance and improvement plans on relation to the material sustainability impacts of Bega Cheese" for the year to June 30, 2019.

The company said its vision was to be "the great Australian food company [with] great food, great people, great aspirations, [and] greater good".

A preface from chairman Max Roberts and chief executive officer Paul van Heerwaarden said that sustainability was "essential to our business strategy and earning the trust and confidence of our customers, suppliers, shareholders, staff and the community".

"By adopting a mindset of continuous improvement we aim to make a positive difference economically, socially and environmentally," the company said.

"As a food manufacturer, our most material sustainability issues are food safety, water, environmental compliance, energy, animal welfare and sustainable sourcing," Bega said. "We own and operate eight manufacturing sites across three states and have developed significant capacity and capability in our supply chain and operations," the preface said. "We carefully manage the direct impact of our operations and work closely with our dairy and peanut farmer suppliers to support a focus on resource management and sustainability," the company said.

The report said that 82 percent of its new dairy suppliers had practices that included checklists for animal health and welfare, chemical use and effluent management. Bega said it had a total of 99 audits across 134 audit days with no serious identified food safety concerns, with a 15 percent decrease in injury rates.

The company said its professional staff base was 46 percent female, up by 36 percent from the previous corresponding period

Mr Roberts said the company's energy plan aimed to reduce energy usage by 20 percent "over the next four years".

The company said it aimed to continue to implement its energy plan "by developing sites and [exploring] sustainable energy options [and implementing] a company-wide energy and greenhouse gas policy".

The Report said that the company's energy intensity target of 6.10 gigajoules/tonne (Gj/t) was exceeded by 1.39 Gj/t and commented that there was "more to do".

The company said that Bega's energy policy had been delayed for integration with a water, energy and greenhouse gas policy for the year to June 30, 2020.

The Report said that energy use was being mapped, sub-metering systems designed and 38 concept proposals were approved for energy saving projects, and it had established "a long-term target to reduce [carbon dioxide] emissions [but there was] more to do".

The Report said that water intensity was on-track, but waste diversion from landfill was 10 percent below the target of 62 percent.

Bega said it had explored sustainable packaging options, including the use of flexible packaging in place of metal cans and changing clamshell packaging from polyvinyl chloride plastic to recyclable polyethylene terephthalate plastic.

The company said was investigating the Australasian recycling label program, which was an evidence-based system, which provided "clear and consistent on-packaging recycling information to inform consumers of the correct disposal method".

Bega said that it had year-on-year increased revenue from 2014-'15 to 2018-'19, up 27.6 percent to \$1,420 million, with an overall increased on production volume up 24.7 percent to 280,405 tonnes, in the same period.

Bega was up four cents or 0.9 percent to \$4.62 with 1.3 million shares traded.

CLOVER CORP

Clover says that revenue for the 12 months to July 31, 2019 rose 21.8 percent to \$76,682,000 with net profit after tax up 33.1 percent to \$10,101,000.

Clover said revenue came from sales of its tuna oil and encapsulated products for human health in Australia, New Zealand, China, and the Americas, with more than 90 percent of revenue from the export market.

The company said net tangible asset backing per share was up 21.4 percent to 27.21 cents, with diluted earnings per share improved 32.2 percent to 6.07 cents.

Clover said it had cash and cash equivalents of \$8,271,000 at July 31, 2019, compared to \$7,894,000 at July 31, 2018.

Clover climbed 29 cents or 12.8 percent to \$2.55 with 1.8 million shares traded.

TASSAL GROUP

Tassel says it has raised \$17.4 million of a hoped for \$25 million in a share plan selling shares at \$4.16 each, taking the total raised to \$125.4 million.

Last month, Tassel said it had raised \$108 million in a placement at \$4.40 a share and hoped to raise a further \$25 million in a share plan at \$4.31 a share to fund its prawn growth strategy, which included the expansion of its Proserpine, Queensland site and the acquisition of Exmoor Station in North Queensland (AVW: Aug 23, 2019).

Today, the company said 4.18 million new shares would be issued by September 24, 2019.

Tassal fell two cents or 0.5 percent to \$4.23 with 1.3 million shares traded.

ROOTS SUSTAINABLE AGRICULTURE TECHNOLOGIES

Roots says its root zone temperature cooling technology increases basil plants harvest yields by 30 percent in climates with temperatures exceeding 40 degrees Celsius. Roots said that it compared the yield and mortality rates of basil grown with its cooling technology to a control crop of un-cooled basil in Israel's Arava desert.

The company said that by using its root zone temperature optimization (RTZO), the cooled crops had a 30 percent greater yield than the control crops, with a 60 percent lower mortality rate.

Roots said that the results followed previous tests in winter near the Mediterranean Coast which used its root zone temperature optimization technology to heat the roots of basil, which had yields of up to 66 percent more than control crops and an average plant size of 35 percent larger than controlled crops.

Roots chief executive officer Dr Sharon Devir said that the basil test results validated the value the company could offer producers year-round.

"Our RTZO cooling technology significantly improves yield on a range of crops, including basil, when compared to uncontrolled crops and saves on plant replacement costs due to reduced risk of mortality rates from volatile weather condition," Dr Devir said.

"RZTO offers options for producers' with increased planting cycles during traditional offseasons and provides significant savings on energy costs when compared to commonly used air heating and cooling systems," Dr Devir said.

The company said the Israel Ministry of Agriculture and Ministry of Finance provided a 30 percent subsidy to basil growers under the Precision Ag Program and invested \$17.6 million into innovative agriculture technology and machinery.

Roots was unchanged at 4.7 cents.

ALCHEMIA

Alchemia says its annual general meeting has voted for the company to become Australian Primary Hemp and reduce the shares on offer by 20-to-one.

In 2014, Alchemia's share price fell as much as 86.1 percent to 8.6 cents on news that its 415-patient, phase III trial of HA-irinotecan for metastatic colorectal cancer failed to meet its phase III primary endpoint (BD: Oct 27, 2014).

In 2015, the company's share price fell a further 51.8 percent to four cents on lower than expected revenue for its generic fondaparinux and a dispute with distribution partner Dr Reddy's (BD: May 29, 2015).

In June, Alchemia said it would acquire the Geelong-based Australian Primary Hemp to become a marijuana-growing company (BD: Jun 21, 2019).

In August, the company said shareholders would vote to change the company's name to Australian Primary Hemp, to change the nature and scale of activities, replace its constitution, hold a 20-for-one consolidation, along with a range of resolutions relating to the proposed changes and required funding measures (BD: Aug 12, 2019).

Today, Alchemia said that all resolutions were passed overwhelmingly.

The company said the greatest dissent was on the issue of shares to a corporate advisor, which passed with 99,107,483 votes (92.6%) in favor and 7,972,439 votes (7.4%).

The company's most recent Appendix 3B new issue announcement said that Alchemia had 324,723,671 shares on issue meaning that the votes against the corporate advisor shares amounted to 2.5 percent of the company, which was not sufficient to requisition extraordinary general meetings.

Alchemia said the consolidation would reduce the number of shares on offer from 324,723,621 shares to 16,236,181 shares, effective on September 18, 2019. Alchemia was in a suspension and last traded at 1.1 cents or a consolidated 22 cents.

ALTHEA GROUP HOLDINGS

Althea says a meeting has been called to approve the acquisition of Canada marijuana extraction and contract manufacturing business Peak Processing Solutions.

Althea said it would vote to acquire 100 percent of shares in 2613035 Ontario Limited or Peak Processing Holdco, from 2707813 Ontario Inc, a company controlled by former director Gregg Battersby.

The company said it would acquire 46 percent of shares in 2682130 Ontario Limited or Peak Processing Operationsco, from nine employees and independent contractors, with 54 percent retained by Peak Processing Holdco.

Althea said it would vote to issue up to 15,707,518 shares to 2707813 Ontario Inc, controlled by Mr Battersby.

The company said it would vote to issue up to, in aggregate, 10,146,126 shares to employee shareholders of Peak Processing Operationsco.

Althea said it would vote to issue 180,000 shares to Panrich as trustee for the Newbold Family Super Fund, controlled by chairman Andrew Newbold.

Althea said it would vote to issue 30,000 shares to Taylor Dobson Perpetual, jointly controlled by Penelope Dobson and her husband.

The meeting will be held at DLA Piper Australia, Level 21, 140 William Street, Melbourne on October 14, 2019 at 10am (AEDT).

Althea fell two cents or 2.6 percent to 75.5 cents.

CRESO PHARMA

Creso has requested a voluntary suspension to follow the trading halt requested "pending an announcement regarding the proposed acquisition of the company by Pharmacielo" (BD: Sep 16, 2019).

Creso last traded at 38.25 cents.

CRESO PHARMA

Creso says its Halifax, Nova Scotia-based Mernova facility has a processing licence to extract, produce and distribute its marijuana-based products.

Creso said the licence expanded its operations beyond the cultivation and sale of dried flower and to include marijuana-based oils, concentrates and other cannabis derived products in Canada and abroad.

The company said the facility could produce up to 4.0 tonnes of dry marijuana flowers and 1.5 tonnes of "trim" for oil and extracts.

COSTA GROUP HOLDINGS

Sydney's Lazard Asset Management Pacific Co says it has increased its holding in Costa from 17,132,006 shares (5.34%) to 20,722,724 shares (6.46%).

Lazard said between September 6 and 12, 2019 it bought 3,590,718 shares for \$12,920,064 or \$3.60 each.

Costa fell seven cents or 1.9 percent to \$3.62 with 3.7 million shares traded.

WATTLE HEALTH AUSTRALIA

Melbourne's Industry Super says it has ceased it substantial holding in Wattle Health. In a substantial shareholder notice, Industry Super said that in 50 transactions between April 4 and September 12, 2019 it bought and disposed of shares, with the largest sale on September 12 of 2,181,034 shares for \$886,644 or 40.65 cents each.

Wattle Health was up 9.5 cents or 21.1 percent to 54.5 cents with 2.4 million shares traded.

FONTERRA CO-OPERATIVE GROUP

Fonterra says that six-year independent director Simon Israel will resign at the annual general meeting.

Fonterra chairman John Monaghan said thanked Mr Israel "for his significant contribution to the board and our co-operative".

The company said that a replacement for Mr Israel would be appointed "at an appropriate time and farmer-owners would have the opportunity to ratify that appointment at the 2020 annual meeting".

Fonterra said that Mr Monaghan was due to retire at the 2020 annual meeting. Fonterra was unchanged at \$2.94.