16 January 2015

ANATARA LIFESCIENCES LTD (ANR)

Wilson HTM INVESTMENT GROUP | *A Leading Wealth Manager and Adviser to Emerging Companies*

BUY HOLD SELL

ACTION & RECOMMENDATION

Anatara is seeking to re-launch a non-antibiotic product to control diarrhoea in piglets. Diarrhoea is an expensive complication of pork production, whose incidence is likely to increase as antibiotic usage is restricted or withdrawn from herds worldwide. A previous version of Anatara's product achieved 40% market penetration in Australia before being withdrawn for benign reasons. New field trials commenced in December and results are expected this quarter. The product's major selling point to producers will be as a non-antibiotic growth promoter. We initiate at a Speculative BUY rating and a price target of 60 cps. Bull case valuations can push north of $2.50 per share if project success and international marketing partners are delivered over the next few years.

12m Target Price (AUD)	**$0.60**
Share Price @ 15-Jan-15 (AUD)	$0.31
Fcst 12m Capital Return	94.2%
Fcst 12m Dividend Yield	0.0%
12m Total S'holder Return	**94.2%**

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A potential growth promoter

Initiating Coverage

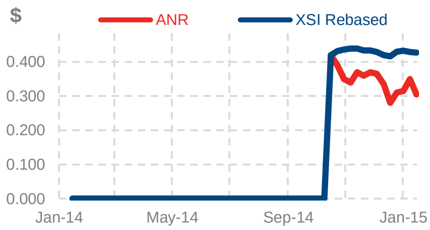
What's Changed

- **Addressing the scourge of scour:** there is clearly demand for 'something to be done' about the prevention of diarrhoea outbreaks ('scour') in piglets, which is a frequent cause of economic loss for producers. A non-antibiotic agent is attractive because it would neatly avoid the development of bacterial resistance. Anatara's Detach is a natural product possessing such properties. It is also inexpensive to manufacture and distribute.
- **Previous market exposure and data** – channel checks reveal potential support for the product, which has been on the Australian market before (achieving 40% penetration into the NSW/VIC pork herds). Funds raised by Anatara's 2014 IPO will be applied to conducting new field trials, re-launching the product in Australia and securing international marketing clearances and commercialisation partners. We assess a ~$40m revenue opportunity for Anatara having considered the Australian, US and EU pork markets.
- **Target price set at 60 cps (risked).** Key valuation sensitivities relate to forecast sales uptake rate from 2016 and ongoing access to non-dilutive funding during the next 2-3 years of product development. Should the Detach project be de-risked by technical success and solid partnering outcomes, valuations as high as $2.65 could be achieved over a 2-3 year period.

Risks & Catalysts

- **Catalysts** – a) technical progress on field trials; b) regulatory changes restricting or banning antibiotics from animal protein production; c) USA & EU commercialisation progress.
- **Risks** – a) technical and execution risks; b) pace of market adoption once launched; c) industry responses preserving a role for antibiotics in animal protein production.

12m Share Price Performance



	1m	6m	12m
Abs. Return (%)	1.7		
Rel. Return (%)	-1.1		

WHTM Return Re-Investment Matrix

Return		Low Re-Investment	High Re-Investment
	High	Cash Generator	Champion
	Low	Challenged	**Potential**

WHTM Risk Assessment

Year-End June (AUD)	FY13A	FY14A	FY15E	FY16E	FY17E
NPAT Rep ($m)	-0.2	-0.9	-2.3	-2.1	-1.1
NPAT Norm ($m)	-0.2	-0.9	-2.3	-2.1	-1.1
Consensus NPAT ($m)					
EPS Norm (cps)	-12919.4	-189.4	-11.6	-10.3	-3.6
EPS Growth (%)	-122	99	94	11	65
P/E Norm (x)	0.0	-0.2	-2.7	-3.0	-8.6
EV/EBITDA (x)	-27.7	-6.0	-2.2	-2.5	-4.7
FCF Yield (%)	-2.9	-10.3	-44.2	-38.7	-26.6
DPS (cps)	0.0	0.0	0.0	0.0	0.0
Dividend Yield (%)	0.0	0.0	0.0	0.0	0.0
Franking (%)	0	0	0	0	0

Source: Company data, WHTM estimates, S&P Capital IQ

Key Changes		Before	After	Var %
NPAT:	**FY15**		-2.3	
Norm	**FY16**		-2.1	
($m)	**FY17**		-1.1	
EPS:	**FY15**		-11.6	
Norm	**FY16**		-10.3	
(cps)	**FY17**		-3.6	
DPS:	**FY15**		0.0	
(cps)	**FY16**		0.0	
	FY17		0.0	
Price Target:			**0.60**	
Rec:			**BUY**	

Mkt Cap: $6m | **Enterprise Value:** $5m | **Shares:** 20m | **Sold Short:** | **ASX 300 Wgt:** n/a | **Median T'over/Day:** $0.0m

PRICE TARGET

	Valuation	PT ($/shr)
Discount rate (%)	20	
PV FFCFs ($M)	12	
PV Terminal ($M)	7	
Equity value ($M)	19	
TOTAL ($ / Share)		**0.60**

INTERIMS ($m)

Half-yr (AUD)	Dec 13	Jun 14	Dec 14	Jun 15
	1HA	2HA	1HE	2HE
Sales	0.0	0.0	0.0	0.0
EBITDA	-0.4	-0.4	-1.4	-1.0
EBIT	-0.4	-0.4	-1.4	-1.0
Net Profit	**-0.4**	**-0.4**	**-1.4**	**-1.0**
Norm. EPS	**-94.7**	**-94.7**	**-6.8**	**-4.8**
EBIT/Sales				
Dividend (c)	0.0	0.0	0.0	0.0
Franking (%)	0.0	0.0	0.0	0.0

FINANCIAL STABILITY

Year-end June (AUD)	FY14A	FY15E	FY16E
Net Debt	-1.1	-5.3	-2.9
Net Debt / Equity (%)	<0	<0	<0
Net Debt / EV (%)	**<0**	**<0**	**<0**
Current Ratio (x)	4.6	�	18.2
Interest Cover (x)	>99	62.8	46.1
Adj. Cash Int. Cover (x)	**>99**	**74.1**	**53.8**
Debt / CashFlow (x)	<0	0.0	0.0
Net Debt (cash) / share	<0	<0	<0
NTA / share ($)	1.8	0.3	0.2
Book Value / share ($)	1.8	0.3	0.2
Payout Ratio (%)	0	0	0
Adj. Payout Ratio (%)	0	0	0

EPS RECONCILIATION ($m)

	FY14A		FY15E	
	Rep.	Norm	Rep.	Norm
Sales Revenue	0	0	0	0
EBIT	-0.9	-0.9	-2.4	-2.4
Net Profit	**-0.9**	**-0.9**	**-2.3**	**-2.3**
Notional Earn.	0.0	0.0	0.0	0.0
Pref./Conv. Div.	0.0	0.0	0.0	0.0
Profit for EPS	**-0.9**	**-0.9**	**-2.3**	**-2.3**
Diluted Shrs(m)	0	0	20	20
Diluted EPS (c)	**-189.4**	**-189.4**	**-11.6**	**-11.6**

RETURNS

	FY14A	FY15E	FY16E	FY17E
ROE (%)	-316.0	-73.2	-45.8	-16.6
ROIC (%)	537.4	15,381.8	-388.5	-90.0
Incremental ROE	-146.9	-50.3	20.2	50.8
Incremental ROIC	409.2	-1,026.0	46.4	150.7

KEY ASSUMPTIONS

Year-end June (AUD)	FY13A	FY14A	FY15E	FY16E	FY17E	FY18E	FY19E	FY20E
Revenue Growth (%)		-100.0			255.0	175.2	108.1	52.1
EBIT Growth (%)	132.1	363.6	172.7	-10.9	-48.1	-275.3	233.3	84.9
NPAT Growth (%)	133.4	365.4	168.7	-11.5	-48.0	-286.5	225.4	84.7
EPS Growth (%)	**122.0**	**-98.5**	**-93.9**	**-11.4**	**-64.7**	**-241.2**	**225.4**	**84.7**
EBIT / Sales (%)	-414.1			-353.2	-51.6	32.9	52.7	64.0
Tax Rate (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ROA (%)	**-257.7**	**-81.9**	**-42.8**	**-57.4**	**-5.8**	**8.6**	**23.4**	**34.8**
ROE (%)	**66.1**	**-104.4**	**-42.1**	**-59.4**	**-6.4**	**10.2**	**27.2**	**40.1**

PROFIT & LOSS ($m)

Year-end June (AUD)	FY13A	FY14A	FY15E	FY16E	FY17E	FY18E	FY19E	FY20E
Sales Revenue	0.0	0.0	0.0	0.6	2.1	5.8	12.1	18.4
EBITDA	-0.2	-0.9	-2.4	-2.1	-1.1	1.9	6.4	11.8
Depn & Amort	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBIT	**-0.2**	**-0.9**	**-2.4**	**-2.1**	**-1.1**	**1.9**	**6.4**	**11.8**
Net Interest Expense	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.2
Tax	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Minorities / pref divs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Equity accounted NPAT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net Profit pre Sig. Items	**-0.2**	**-0.9**	**-2.3**	**-2.1**	**-1.1**	**2.0**	**6.5**	**12.0**
Abn's / Ext's / Signif.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reported Net Profit	**-0.2**	**-0.9**	**-2.3**	**-2.1**	**-1.1**	**2.0**	**6.5**	**12.0**

CASH FLOW ($m)

Year-end June (AUD)	FY13A	FY14A	FY15E	FY16E	FY17E	FY18E	FY19E	FY20E
EBITDA	-0.2	-0.9	-2.4	-2.1	-1.1	1.9	6.4	11.8
Interest & Tax	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2
Working Cap / Other	0.0	0.2	-0.4	-0.4	-0.6	-0.6	-0.3	-0.3
Operating Cash Flow	**-0.2**	**-0.6**	**-2.7**	**-2.4**	**-1.7**	**1.4**	**6.2**	**11.6**
Maintenance Capex	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Free Cash Flow	**-0.2**	**-0.6**	**-2.7**	**-2.4**	**-1.7**	**1.4**	**6.2**	**11.6**
Dividends Paid	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Growth Capex	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Invest. / Disposals	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Inv. Flows	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cash Flow Pre Financing	**-0.2**	**-0.6**	**-2.7**	**-2.4**	**-1.7**	**1.4**	**6.2**	**11.6**
Funded by Equity	0.0	1.8	7.0	0.0	7.0	0.0	0.0	0.0
Funded by Debt	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Funded by Cash	0.0	-1.1	-4.3	2.4	-5.3	-1.4	-6.2	-11.6

BALANCE SHEET SUMMARY ($m)

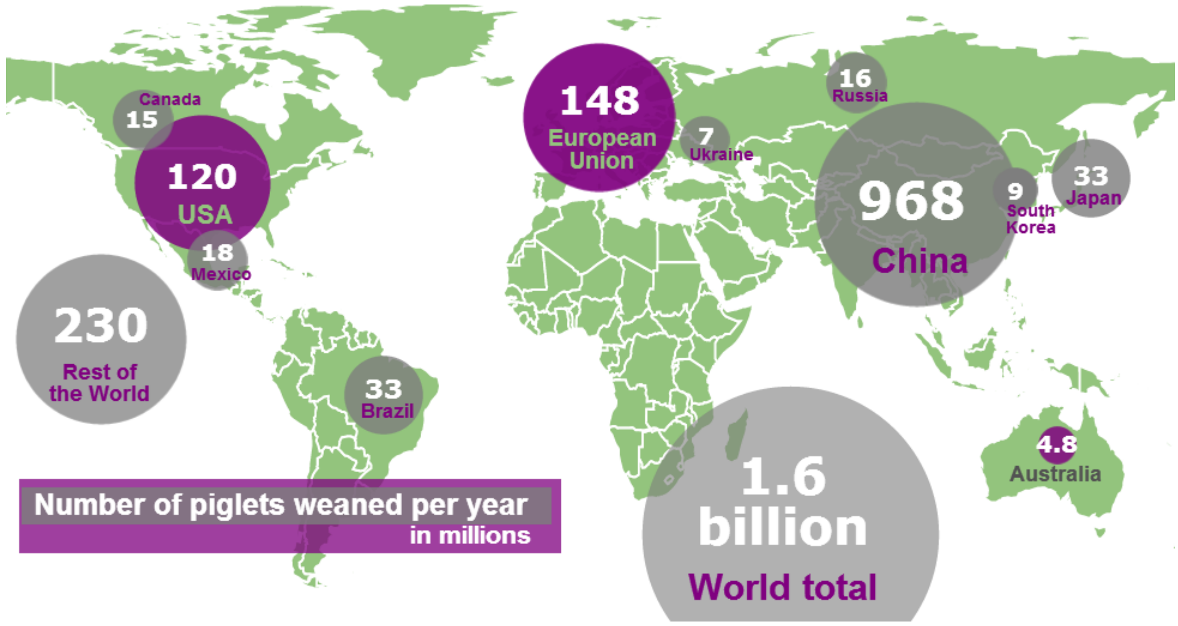
Year-end June (AUD)	FY13A	FY14A	FY15E	FY16E	FY17E	FY18E	FY19E	FY20E
Cash	0.1	1.1	5.3	2.9	8.2	9.7	15.9	27.5
Current Receivables	0.0	0.0	0.2	0.5	1.0	1.3	1.3	1.3
Current Inventories	0.0	0.0	0.0	0.3	0.7	2.0	3.4	5.0
Net PPE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Investments	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Intangibles / Capitalised	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Assets	**0.1**	**1.1**	**5.5**	**3.7**	**9.9**	**12.9**	**20.6**	**33.8**
Current Payables	0.0	0.2	0.0	0.2	0.6	1.6	2.8	4.0
Total Debt	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Liabilities	**0.4**	**0.2**	**0.0**	**0.2**	**0.6**	**1.6**	**2.8**	**4.0**
Minorities / Convertibles	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Shareholder Equity	**-0.3**	**0.8**	**5.5**	**3.5**	**9.4**	**11.4**	**17.9**	**29.8**
Total Funds Employed	**0.1**	**0.8**	**5.5**	**3.5**	**9.4**	**11.4**	**17.9**	**29.8**

Anatara Lifesciences (ANR)

Anatara is planning to market a product to control diarrhoea in piglets, to assist the pork industry.

Anatara is an emerging animal health company with plans to enter the market with a product for preventing diarrhoea in piglets. If regulatory changes in the pork industry press towards the withdrawal of antibiotics from pig production, then the demand for alternative diarrhoea control and growth promotion strategies should increase. This Australian company is developing a product called Detach, which is a natural product extracted from pineapple stems. An earlier formulation of this product was launched and marketed by Ciba-Geigy (now Novartis) and used to prevent diarrhoea in pig herds back in the 1990s. Anatara plans to register a new formulation of Detach for the Australian market in mid-2016, before exploring international commercialisation opportunities.

FIGURE 1: THE GLOBAL SCALE OF COMMERCIAL PORK PRODUCTION SUGGESTS A LARGE MARKET OPPORTUNITY FOR ANATARA'S DETACH PRODUCT



Source: Anatara

KEY POINTS

- **Growing need for sustainable pork production** – pork is one the world's principal sources of animal protein. Traditionally, pork has been a relatively cheap protein source because its production efficiency is relatively high compared to lamb and beef. Most developed world pork markets still show capacity to absorb price increases, as production input costs (particularly feed) have also risen. We expect developed world pork markets to have relatively low volume growth but higher levels of domestic differentiation on quality, where Detach can play a role. We expect developing world pork demand to grow robustly with population and rising wealth.

Expanding global population continues to drive demand for pork and other sources of animal protein.

- **Drug resistance risks pushing antibiotics out of food production** – large scale meat operations have added antimicrobial drugs to animal feed to promote growth rates. The US Centres for Disease Control (CDC) have described this as 'unnecessary' and the Food and Drug Administration (FDA) have introduced guidance to phase this practice out of US meat production. Consumer attitudes are also likely to create pressure for reducing or eliminating this practice.

Clear desire to minimize antibiotic use; although this is taking decades to achieve.

- **Previous formulations of Detach demonstrated a benefit** – field trials conducted 1988 – 1991 showed that Detach was safe and effective, reduced deaths, improved weight gains and reduced antibiotic use. The reformulated product achieved similar results in 2012, and improved feed conversion ratios significantly. The biology of Detach is well characterised. As it is not bactericidal at all, we expect no bacterial resistance to develop towards it. Bacterial resistance is a key reason why antibiotic use in animal production has continued to increase and now exceeds human therapeutic use.

Detach presents relatively low technical risks given previous usage in commercial pork production.

- **Uncomplicated path to market** – additional field trials are required before the Australian Pesticides and Veterinary Medicines Authority (APVMA) can consider re-registering Detach. Two trials are planned treating ~800 piglets including both suckers (unweaned piglets) and weaners. The trials commenced in December 2014. The earliest Australian market entry point is mid-late 2016 (calendar). Anatara intends to facilitate direct distribution to producers in the Australian market and seek international distribution partners. Separate trials are required for USA and EU commercialisation.

Anatara has a series of well designed studies planned to validate efficacy and support new marketing approvals.

- **High gross margins probable** – the active ingredients in Detach are extracted from waste material from pineapple production (stems). Raw material is in plentiful supply. Anatara's current contract manufacturing arrangements are of adequate scale to treat the global commercial piglet population.

We would expect to see gross margins of 90% or better given the inexpensive raw materials and pricing expectations.

RISKS

- **Technical risks** – delays or lack of clear success in the planned campaign of field trials may preclude Detach from becoming a registered product in any market.

Regulatory risks are lower in veterinary applications (cf human therapeutics); but are not trivial.

- **Regulatory risks** – Anatara needs to obtain regulatory approvals for every market in which it hopes to sell Detach and the requirements will differ by country. There can be no guarantees that the various regulatory bodies will approve Detach after completion of the field trials, even if the data appears to be positive.

- **Capital adequacy** – funds raised via IPO appear adequate to achieve an Australian product launch and first revenues. Given that delays can occur and that immediate sales traction is uncertain at this time, we cannot rule out the need for additional capital. The timing, pricing and likelihood of future funding events are difficult to forecast and may have a material adverse impact on the company's valuation. Anatara may be eligible for R&D tax incentives or other sources of grant funding to manage its dependency on equity capital. Anatara has set out to attract commercial R&D funding from potential marketing partners.

Ongoing access to development capital.

- **Commercialisation risk and competitive dynamics** – future market acceptance of any new product is always speculative. Following discussions with producers and veterinarians in the Australian pork industry, we feel comfortable that Detach can find an initial audience from which to grow. Detach may also face other barriers, driven by incumbent, vested interests. In some jurisdictions veterinarians benefit financially from prescribing antibiotics so they may resist the introduction of Detach.

Without clear market precedents, the forecast uptake of Detach is speculative.

- **Manufacturing and quality supply** – Anatara relies on contract manufacturing organisations (CMOs) for its field trial material and future commercial supply. Should those CMOs encounter regulatory problems, financial failure etc this would have a material adverse effect on Anatara's business until it could seek alternative arrangements.

Anatara depends on other service providers for its product.

- **Intellectual property risks** – Detach is protected by patent rights and other forms of intellectual property. The scope, validity and freedom to operate relating to those rights is untested at this time.

Anatara filed a new provisional patent in 2014 seeking to protect its new formulation of Detach. Patent term is usually 20 years from filing date.

Valuation Summary

We value ANR stock at $0.60 per share based on our risk-adjusted discounted cash flow framework. Key assumptions in our valuation include:

- **Earnings forecasts** – we have prepared Detach sales forecasts to FY30 based on product launches in Australia (FY17), Europe (FY18) and USA (FY19). We have modelled an average selling price (ASP) of A$0.60 per dose in Australia, with no price inflation (net of distributor/partner margin). We understand that the previous version of the product sold for ~A$0.80 per dose in the late Australian market in the late 1990s. In overseas markets, we have assumed that Anatara receives a transfer price of 50% of the end-market ASPs.
- **DCF inputs** - we have assigned a discount rate of 20%, which we see as appropriate given the high-risk nature of an investment in a development stage company facing both clinical and product introduction risks. We have assigned a terminal growth rate of 3% to reflect long term demand for animal protein.
- **Market size** – we have modelled a terminal penetration of ~60% for the Australian market; 35% for USA and 25% for the EU. Collectively, these markets could support c.A$35-40m revenue for Anatara. Extrapolating to 20% of the global piglet population (c.1.6 billion) would imply c.A$120m in revenue opportunity to Anatara. At this stage we have not included any revenues (or development costs) relating to the development of other applications of the product (poultry, veal, etc). Importantly, the pork markets outside USA/EU/ANZ, other veterinary and human-use markets for Detach are not included in this analysis but may be developed by Anatara in the future. These other markets may be materially larger than what we have valued here explicitly. In the short-medium term, shareholder value will be driven by the projects at hand.

Free option on adjacent product opportunities in other animals and countries.

- **Capital** – we have modelled an additional $7m in equity capital raised in FY17. Our price target of 60 cps is presented on a fully diluted basis. Ignoring the impact of future dilution, our price target would be 94 cps. Accordingly, there is potent upside to our valuation if Anatara can attract non-dilutive project financing via R&D tax incentive schemes, grants or partnering income. Alternatively, if sales progress proves to be faster than we have forecast, this should also protect shareholders from excessive forward dilution.

Non-dilutive funding would significantly enhance valuation.

- **Planned R&D expense** – Anatara has indicated that trials supporting EU and US product registration will cost approximately $1m over three years. The company has also set aside ~$400K for work preparing a Detach variant for human use.

TABLE 1: VALUATION SUMMARY

DCF Parameters			
Discount rate	20%	Tax rate	30%
Terminal growth rate	3%	Forecast horizon	FY30
Risk discount	50%	Maiden tax-year	FY28
DCF Valuation			
PV of future cash flows ($M)	12	Share count	20.0
PV of terminal value ($M)	7		
Value of operating assets ($M)	19.1	Future issues	11.7
Less net debt (cash)	-	Diluted share base	31.7
Equity value ($M)	**19.1**	**Value/share ($)**	**0.60**

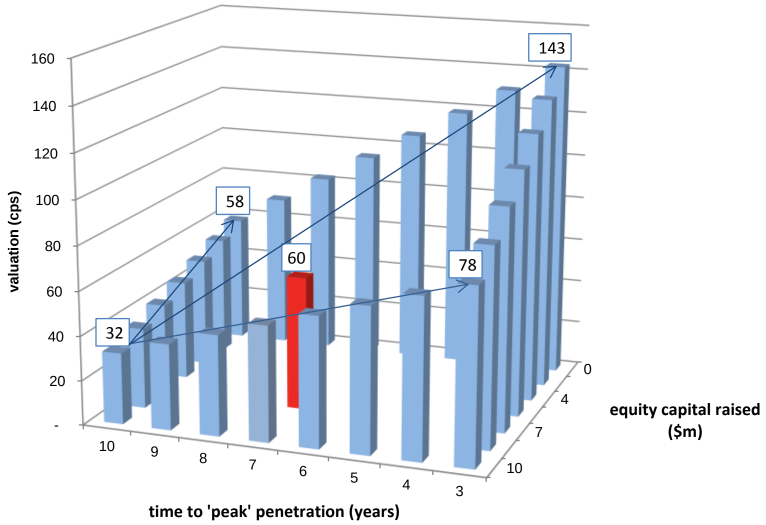
Source: WHTM Research

IPO pricing of 50 cps was a fair reflection of the project timing and risks, in our view.

- **IPO pricing was fair but the upside comes from earlier delivery on sales** – back-solving our model suggests that the IPO transaction pricing (50cps) implied long-dated (10 yrs) market penetration for offshore markets. Our valuation is based on 'peak' penetration being achieved at ~7 years post-launch, which may be too conservative.
- **Every $1m in non-dilutive funding to Anatara is worth ~7cps in valuation to shareholders.** Figure two illustrates how the combination of these factors (sales progress and non-dilutive financing) might drive Anatara valuations higher. Anatara's preferred commercial strategy is to convince international partners to share (or assume) the development costs in respective jurisdictions.

Substantial upside available from earlier project delivery and non-dilutive capital inflows.

FIGURE 2: VALUATION POTENTIALS ALONG TWO DIMENSIONS – CAPITAL REQUIREMENTS AND PROJECT DELIVERY



Source: WHTM Research

Current share price unnecessarily bearish – implies a decade or more to build offshore demand.

WHTM valuation (red bar at left) assumes 7 years to build peak sales in US/EU markets.

See risked valuations between $1.00 and $1.40 if Anatara can attract enough alternative funding to avoid future equity raisings.

Un-risked 'bull case' valuation can $2.65 per share. Our DCF applies a 50% discount to future cash flows.

- **Speculative BUY rating** Anatara faced a difficult market at its time of listing and is currently trading below its IPO price, which is unreasonably bearish, in our view. There are sufficiently important catalysts falling due over the next 12-18 months to substantially 'de-risk' the Detach project and re-rate the stock, which is why we initiate at Speculative Buy.

TABLE 2: KEY VALUATION CATALYSTS OVER 2015 AND 2016

Event	Timing (approx)	Significance	Impact
AU field trial results	Q1 2015	Confirmation of clinical and grow th benefits in Detach-treated pigs Forms a basis for APVMA submission	**
USA and EU partnering deals	Q2-Q4 2015	Market validation Possibly provides non-dilutive funding support for trials Improves prospects for trial execution in other jurisdictions	*****
APVMA submission	Q2 2015	Starts ~12 month countdow n to AU approval outcome	*
EU field trials commence	Q3 2015	Clinical progress + identification of initial customers	**
USA field trials commence	Q4 2015	Clinical progress + identification of initial customers	**
APVMA approval and first sales	Q2-Q4 2016	Key indicator of commercial validation	*****
EU licence application	Q3 2016	Countdow n to approval and launch	***
USA licence application	Q3 2016	Countdow n to approval and launch	***

* -- important milestone but unlikely to materially influence share price
***** -- pivotal milestone w hich w e expect to re-rate the stock

Source: WHTM Research

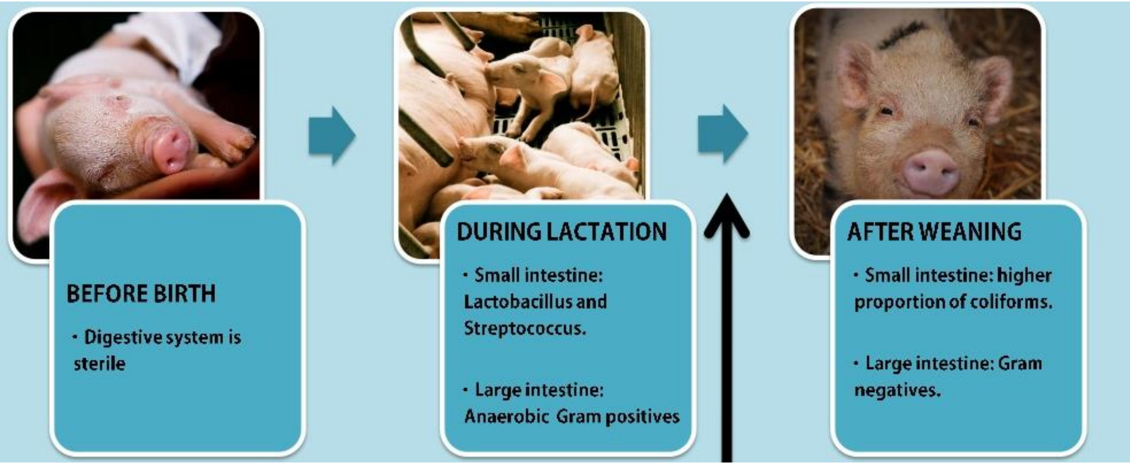
Business Description – Anatara Lifesciences Limited

THE SCOURGE OF SCOUR

'Scour' can severely impact the economics of pork production.

Diarrhoea is the cause of serious economic losses in pig herds. When piglets are weaned from their mothers, it imposes tremendous stress on the animals and provokes changes in their gut physiology. The piglet must cope with the sudden withdrawal of sow milk and adapt to less digestible, plant-based, dry, solid diets. Usually antibiotics and minerals (zinc oxide and/or copper sulphate) are added to the feed to prevent post-weaning diarrhoea (PWD) and to optimise growth performance. Diarrhoea is usually associated with enterotoxigenic *E. coli* (ETEC), a bacterium that proliferates in the piglet's small intestine. At its most basic level, affected animals suffer frequent discharge of watery faeces for up to two weeks post weaning. The animal can die from this. If it lives, its growth rate and prospects of reaching market weight is severely impaired. As very large numbers of pathogenic bacteria are shed in the faeces, 'scour' can spread through the litter or even cause dysentery (diarrhoea and inflammation of the large intestine) and fatal oedemas (fluid retention in the body) among the broader herd.

FIGURE 3: THE GUT MICROFLORA OF THE PIGLET CHANGES DRAMATICALLY FROM NEONATAL TO POST-WEANING, INCREASING SUSCEPTIBILITY TO POST-WEANING DIARRHOEA.



Source: WHTM Research

PWD is unpredictable, and has tended to be managed reactively.

PWD is an episodic problem that can flare up in a pork production facility in an unpredictable way. Contributing factors are the intensity of the production system, living conditions, litter size, weaning age and herd size. Peak incidence often occurs in the winter months. It can manifest even in facilities which observe excellent hygiene practices. There is a lack of quality research describing its incidence, but a Danish study, conducted prior to that country's bans on antibiotics, estimated that 6% of litters were affected by PWD[1]. Denmark is at the low end of incidence because producers typically wean piglets late. In most other countries, piglets are weaned earlier (days 21-28), so incidence rates should be higher.

[1] Svensmark, B. *et al.* Epidemiological studies of piglet diarrhoea in intensively managed Danish sow herds. II. Post-weaning diarrhoea Acta Vet Scand 30: 55 – 62.

ETEC is also a major cause of scour in newborn and un-weaned piglets. In general, infections in newborn piglets can be prevented by passive immunity, conferred by the colostrum[2] and the milk of sows vaccinated against ETEC during pregnancy. Several maternal ETEC vaccines are on the market, administered by intramuscular injection. At weaning, the milk-mediated protection from that strategy disappears. Traditionally, the industry has then managed PWD risk in those animals by the use of antibiotics and other additives to inhibit bacterial growth and/or function.

PWD has defied vaccination attempts.

DETACH – PRODUCT SPECIFICATION

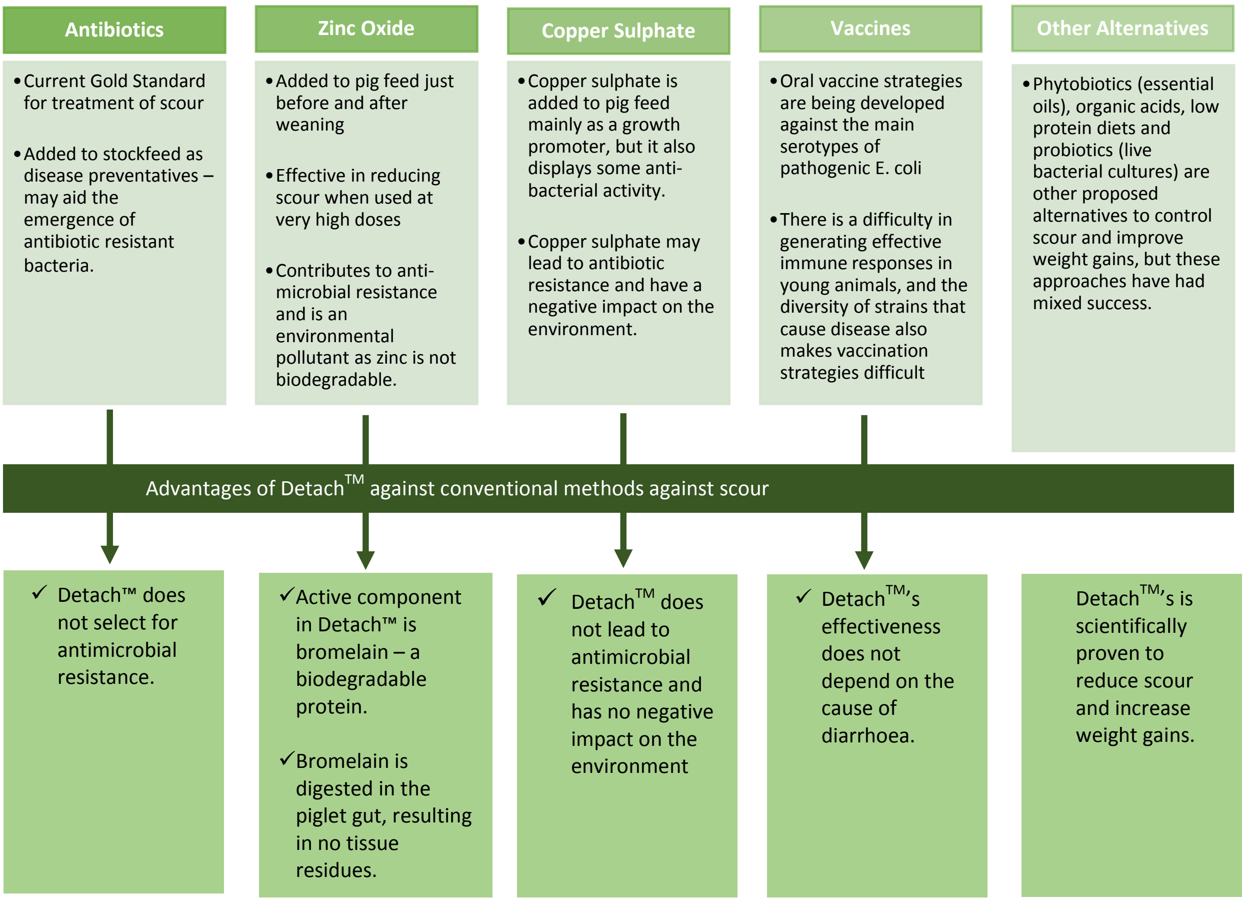
The active component of Detach is an extract called bromelain, a mixture of natural proteases. Specific proteases within bromelain have anti-attachment, anti-secretory and anti-inflammatory activity. Collectively, these proteases contribute to the broad spectrum activity of Detach as they not only prevent the diarrhoea-causing organism from attaching to the small intestine in the first place, but they also block inflammation and the secretory action of toxins, the underlying cause of diarrhoea.

Detach degrades structures on the gut wall, denying bacteria their attachment points.

Detach has already demonstrated efficacy against the most common cause of PWD, a bacterium described as enterotoxigenic *E. coli* (ETEC). Although PWD or "scour" may be caused by many other different bacteria, viruses and protozoan parasites, *E. coli* is far and away the most significant infectious agent threatening commercial pork production.

Detach is a broad spectrum agent which works at multiple points.

FIGURE 4: CURRENT MANAGEMENT OPTIONS AND PROPOSED COMPETITIVE ADVANTAGES OF DETACH.



Source: Anatara

[2] Colostrum is a form of milk produced by the mammary glands of mammals (including humans) in late pregnancy. Colostrum contains maternal antibodies to protect the newborn against disease.

Formulated as an oral product to be reconstituted on site – the Detach formulation is dried bromelain, formulated with emulsifiers and gelling agents. Bromelain has limited stability in water, so the product is designed to be reconstituted just before use and administered orally using a metered dose applicator. It is intended that operators administer Detach before the expected onset of scour. For un-weaned piglets, this is usually 2-3 days after birth. For protection against PWD, Detach is administered at the time of weaning.

Twenty years off the market …. Why??

Detach was launched by Ciba-Geigy in 1991, and quickly secured a meaningful market share (40%) with major pig producers in New South Wales and Victoria. At the time, Ciba-Geigy was a global leader in crop protection, livestock and veterinary products. Detach was removed from the market and the rights returned when Ciba-Geigy re-structured to focus on their plant protection business and higher margin pet care products. In 1996 Ciba-Geigy and Sandoz merged to form Novartis.

We do not see the 1990s product withdrawal as a negative.

DATA

In 2012 Anatara conducted field trials to assess the latest reformulation of Detach in Europe. The trials assessed Detach against two relatively common alternatives – zinc oxide[3] and the antibiotic Colistin. The zinc oxide comparator study was conducted in Spain over a 42-day period, in 216 piglets. When compared to untreated animals, Detach reduced the incidence and severity of early PWD (day 0 to 7 post-weaning) by 50%, improved average daily weight gains by 22% and reduced antibiotic use by 55%. A single dose of Detach was as effective as a 2-week course of zinc oxide in reducing scour, but Detach was more effective in improving feed conversion ratio (FCR) (days 15-42). Overall (day 0 to day 42), the FCR still appeared favourable in the Detach treated pigs, compared to the zinc oxide and untreated groups. In a separate French trial of 267 weaner pigs, Detach improved the FCR by 33% when compared with piglets treated with Colistin.

Positive field trial outcomes in Europe in 2012.

DEVELOPMENT PLANS

The level of evidence required for registration as a veterinary product is to conduct well designed, randomised, placebo controlled trials in two parallel groups of piglets. The studies also should occur at different production sites and have the operators blinded to treatment – not knowing whether the piglets are administered Detach or the placebo. Field trial permit applications have been lodged with the APVMA and Anatara is currently working with the Pig Specialist Unit at the Department of Environment and Primary Industries (DEPI), and is in discussions with Pork CRC, to identify suitable commercial pig farms in Australia as trial sites.

Anatara planning randomized controlled trials to secure marketing approval for Detach.

Trials measuring the impact on incidence and severity – ideally, the trials should show that there is a statistically significant reduction in the number of pre-weaning and PWD cases in piglets treated with Detach. Up to six trials are planned comprising a total of 2,400 piglets (suckers and weaners). The number and type of antibiotics or other medications administered throughout the study will also be recorded. The weights of piglets will also be recorded at agreed intervals during the study period.

Trials also collecting commercially valuable data on growth rates, economics.

Further trials are also required in the EU and USA before Detach is able to be registered in these jurisdictions. We note that c$1m has been set aside in the Anatara budget to sponsor this R&D.

Trials are rapid supporting registrations from 2016-2017 – Anatara has planned for the trials to complete in calendar 2015, enabling regulatory submissions in Q4/2015 for Australia, Q1/2016 for Europe and Q3/2016 for USA. Typically we would allow a 12 month review period for dossiers of this type.

Development campaign supports potential launches in 2016/2017.

[3] Zinc oxide (ZnO) is a heavy metal added to pig feed just before and after weaning and is a first choice replacement for in-feed antibiotics in some countries. ZnO is effective in reducing scour when used at very high doses, but is widely criticised because increased zinc excretion in effluent can cause accumulation of Zn in the soil and runoff water.

MARKETING FACTORS TO CONSIDER

Channel checks in the Australian market are positive, balanced by some scepticism on logistics.

A clear sense that the Australian industry is looking for diarrhoea answers.

- **Clear need established** – the producers we have discussed Detach with so far all tend to confirm that there is a need for a product to protect or treat diarrhoea. No producer is entirely satisfied with existing products/alternatives such as zinc oxide. We understand that some of the larger producers have invested in projects assessing other alternatives over the last 5-10 years, although the results of this work are not clear.
- **Diarrhoea can be a problem for 'other farms'** – commercial producers are typically reticent in discussing their own facilities, which can make it difficult to assess the level of need for the product. There is an active scientific literature and commercial debate following the topic, which indicates the level of interest.

Some potential pushback on manual administration.

- **Manual administration could be considered problematic in some very large facilities** – although weaners are routinely handled manually, large producers commented that adding 'another job' to this stressful step was not attractive. Most expressed a preference for a product that could be added to the feed because this would fit better with work flow. Most acknowledged that a clinical benefit over current practice could be worth the additional handling.

Protecting growth rates the most important issue.

- **All producers sensitive to growth rate retardation** – most participants we spoke to were positive about the prospect of Detach providing a diarrhoea benefit without a time penalty to reach 'market weight'. Some had tried alternatives that cost "days or even weeks' in growth phase.

Label should promote prevention.

- **Prevention or therapy?** – no clear consensus emerged on how Detach would most often be used for diarrhoea. The Detach label from the 1990s clearly promoted prevention (far more lucrative). Detach was recommended 24 hours prior to the usual onset of diarrhoea in suckers; and at the time of weaning. Some facilities may instead see the product as a recovery product for 'cleaning up' sporadic episodes of diarrhoea.

Growth effect potentially more important than the direct diarrhoea benefits.

- **Growth promotion the ultimate driver, although the label likely will be silent on that** – achieving a diarrhoea benefit without a growth rate penalty would be an ideal outcome for Anatara. If antibiotics continue to be withdrawn as growth promoters, then a non-antibiotic alternative should prove attractive with producers. The growth benefit may be even more important than the diarrhoea benefit in some producers' eyes.

A further word on competitive ideas …

The outlook for vaccination strategies against diarrhoea appears weak.

- **Vaccines** – two vaccination strategies have been employed to protect against diarrhoea. Maternal vaccines hope to elicit an immune response in the sow, who can then pass antibodies to the piglet via the milk. Several such products have made it to market, but immune protection disappears at weaning[4]. More direct, oral vaccinations for weaner piglets are in development, targeting common types of PWD-causing bacterium. Developers often encounter difficulties eliciting a robust immune response in young animals.

Low protein diets have the potential advantage of being feed-based – but large scale efficacy is unclear.

- **Low protein diets** – an alternative feed-based strategy is to lower the protein content of the feed for a short time post-weaning. This approach has been adopted to a limited extent in Australia and Europe. The literature suggests it can be implemented without compromising production – but there is no validation data available from large-scale commercial facilities[5].

[4] Melkebeek, V. *et al.* (2013) ETEC vaccination in pigs Vet Immunol Immunopathol 15: 37 – 42.
[5] Heo, J. M. *et al.* (2008) Effects of feeding low protein diets to piglets on plasma urea nitrogen, faecal ammonia nitrogen, the incidence of diarrhoea and performance after weaning. Arch. Anim. Nutr. 62: 343 – 358.

Forecasts

REVENUE MODEL

We have limited our initial forecasting to the Australian, US and European markets, guided by Anatara's immediate regulatory and development schedule. The revenue model is sales based, and assumes one dose per piglet. Commercial practice may evolve to support multiple dose regimes.

Forecasts based on US, EU and ANZ markets.

TABLE 3: BASIC ASSUMPTIONS DRIVING OUR REVENUE FORECASTS

	Australia	EU	USA
Annual piglet numbers, million	5	148	120
ASP to Anatara (net A$/dose)	0.60	0.40	0.40
100% market sales value, A$m	2.9	59.2	48.0
Peak penetration (approx)	60%	25%	35%
DETACH peak sales	**1.7**	**14.8**	**16.8**
Launch	mid-2016	2017/18	2018/19
Years to peak share	4	7	7

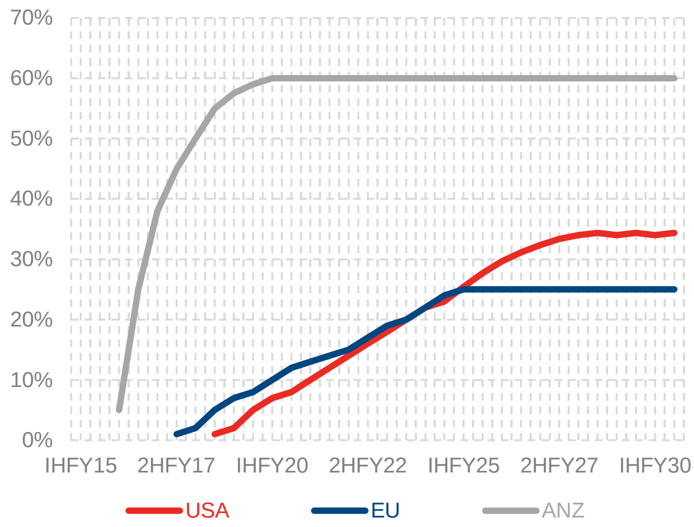
* ASP - average selling price (net to Anatara)

Source: WHTM Research

Market penetration for new products is difficult to forecast, so caution is the rule – most new products take years to infiltrate commercial practice and we expect this may be true of Detach. We have modelled a higher rate of penetration in Australia, because channel checks suggest that the product is remembered by producers who used it in the 1990s.

We expect good early uptake in Australia but model more conservatively in offshore markets.

FIGURE 5: WE FORECAST RELATIVELY RAPID UPTAKE IN THE AUSTRALIAN MARKET PENETRATION BUT MORE CONSERVATIVE RATES OFFSHORE



Source: WHTM Research

Our forecast penetration in overseas markets will remain modest until we see the rate of take-up in the Australian market next year. Australian market sales traction is the key to stock performance over the next 2-3 years. We have modelled peak usage of 35% in the USA market and 25% in Europe.

Pricing similar to that supported in the 1990s – we understand that Detach sold for approximately 80c per dose when previously on the market. We have assumed that the new product will price at this level, although that assumption has not been tested. The product may achieve similar pricing elsewhere, although US pricing tends to be higher for veterinary products, compared to Europe. We have assumed that Anatara accesses offshore markets via distributors and collects a transfer price of ~50% of the wholesale price.

Pricing untested but we see 80c/piglet as a reasonable assumption.

Revenue momentum could take time to build scale – our penetration rate functions are arbitrarily drawn and may well be too conservative. Market uptake is a key sensitivity and source of potential upside. Whilst the Australian market is small it will be a leading indicator of demand elsewhere. The quality of marketing partner(s) announced for distribution in USA and European countries will also have a major bearing on whether we decide to bring offshore Detach sales forecasts forward. Halving the time allowed for the product to reach 'peak' penetration rates would more than double our valuation.

Australian market a leading indicator of demand – has powerful valuation effect.

Other potential revenue sources – Anatara may be eligible for commercialisation grants, R&D tax concessions or other forms of non-dilutive financial assistance during its developmental phase. Separately, the company could seek and receive income from commercial partners.

EARNINGS FORECASTS

- **Modest cost base primarily focused on R&D –** Anatara's prospectus claimed that $7m raised would fully fund the program for three years. We have worked some time contingencies and additional operating expenses into our modelling. Anatara is operating a 'virtual' model, so expenses may prove lower than we have forecast.

TABLE 4: LONGTERM FORECASTING IS CHALLENGING BUT WE SEE POTENTIAL FOR REVENUE GROWTH ON A MODEST COST BASE IF THE DETACH OPPORTUNITY IS SUCCESSFULLY EXPLOITED

A$m		FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
Revenue		**-**	**0.6**	**2.1**	**5.8**	**12.1**	**18.4**	**23.1**	**28.0**	**34.2**	**40.1**	**44.7**
	USA	-	-	-	0.3	1.8	4.0	5.9	8.1	10.5	12.6	15.0
	Europe	-	-	0.5	3.5	7.9	12.0	14.8	17.5	21.3	25.2	27.4
	Australia, NZ	-	0.6	1.6	2.1	2.3	2.4	2.4	2.4	2.4	2.4	2.4
	COGS	-	-	0.1	0.5	1.1	1.7	2.2	2.7	3.3	3.9	4.4
Gross profit		**-**	**0.6**	**2.0**	**5.3**	**11.0**	**16.7**	**20.9**	**25.3**	**30.9**	**36.2**	**40.4**
	- gross margin		*93%*	*94%*	*92%*	*91%*	*91%*	*91%*	*90%*	*90%*	*90%*	*90%*
EBITDA		**(2.4)**	**(2.1)**	**(1.1)**	**1.9**	**6.4**	**11.8**	**15.5**	**19.4**	**26.2**	**29.9**	**33.9**
	- operating margin						*64%*	*67%*	*69%*	*77%*	*75%*	*76%*

Source: WHTM Research

RETURN RE-INVESTMENT MATRIX

Return \ Re-investment	Low	High
High	Cash Generator	Champion
Low	Challenged	Potential

Anatara's Detach product should yield high gross margins. The business model should also be capable of relatively high (60%) mature operating margins. The technology has potential for other veterinary markets and for human use.

RISK MEASURES

	Low	Med	High	Spec
Share Price Risk				
Business Risk				

We see an investment in Anatara as speculative, given that the company is likely to be some years away from profitability and is yet to demonstrate clear demand for its product.

BUSINESS DESCRIPTION

Anatara is an emerging animal health company with plans to enter the market with a product for preventing diarrhoea in piglets. If regulatory changes in the pork industry press towards the withdrawal of antibiotics from pig production, then the demand for alternative diarrhoea control and growth promotion strategies should increase. This Australian company is developing a product called Detach, which is a natural product extracted from pineapple stems. An earlier formulation of this product was launched and marketed by Ciba-Geigy (now Novartis) and used to prevent diarrhoea in pig herds back in the 1990s. Anatara plans to register a new formulation of Detach for the Australian market in mid-2016, before exploring international commercialisation opportunities.

INVESTMENT THESIS

Our research suggests that a non-antibiotic product for diarrhoea management is of interest to the pork industry. We think the product will find support in the Australian market if Anatara's field trials are successful and the product is approved by the APVMA. We viewed the recent IPO pricing as fair, seeing potential upside in two dimensions. Firstly, accelerated take-up in the Australian market during 2016-17 could be a leading indicator of robust demand elsewhere. Second, the capacity to attract non-dilutive funding would dramatically lift our valuation.

REVENUE DRIVERS

- Market penetration
- Pricing
- Access to new markets and applications

BALANCE SHEET

- Anatara recently completed a $7m IPO and has no debt.

MARGIN DRIVERS

- Modest R&D expense
- Virtual model based primarily on product licensing or partnering.

BOARD

- Mel Bridges (Non-executive Chairman)
- David Venables (Managing Director)
- Iain Ross (Non-executive Director)
- Tracie Ramsdale (Non-executive Director)
- Jay Hetzel (None-executive Director)
- Stephen Denaro (Company Secretary)

KEY ISSUES/CATALYSTS

- Successful completion of field trials with favourable results on both clinical efficacy and production characteristics
- Regulatory approvals
- Regulatory changes discouraging or banning the use of antibiotics in animal production
- Corporate arrangements for US and European product.
- Sales progress.
- Non-dilutive funding inflows.

MANAGEMENT

- David Venables (CEO)
- Tracey Mynott (CSO)
- Alan Dowling (Group Accountant)
- Hayley van der Meer (Commercial Manager)

RISK TO VIEW

- Lack of demand for product, once approved and launched.
- Adverse regulatory settings (approvals, industry settings).
- Access to equity capital may be required.

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Return Reinvestment Matrix and Risk Measures

Definitions at http://www.wilsonhtm.com.au/Disclosures

Recommendation Structure and Other Definitions

Definitions at http://www.wilsonhtm.com.au/Disclosures

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