CELLMID

Newsletter - October 2013

Message from the CEO

Dear Shareholder,

Since our May 2013 newsletter we have made ten material announcements to the market with strong positive impact on our diagnostic, therapeutic and consumer health businesses. We have also released our annual report for the 2013 financial year recently showing 300% increase in operational revenue and 20% reduction in loss, and our share price is up more than 100% this year.

In late May we settled the acquisition of Advangen Inc, Japan, taking control of the global rights to the FGF-5 inhibitor products for hair growth. Since then, we have increased sales in Australia and signed a major Japanese distribution agreement for 30,000 units of our products, representing over 40% of our expected annual revenue in that region. This momentum should continue as we pursue other markets and expect new territories signed up in 2014.

In our May newsletter we have given you an insight into the scientific excellence of the Advangen team and their work on FGF-5. Their most recent discoveries are expected to become the basis for new patents and new products adding further value to the portfolio and cementing our reputation as leaders in FGF-5 hair growth technology.

We have also reported before on our diagnostic licensee, Pacific Edge, launching their bladder cancer test (Cx*bladder*®) in the United States with midkine as one of the biomarkers. They have since started selling the test, which triggered a milestone payment to Cellmid. They have signed up a USA health insurer providing 40 million Americans access to the CxBladder test. In other diagnostic news Fujikura Kasei have exercised their option to license Cellmid's midkine reagents into their latex based platform and paid a $400,000 milestone payment to Cellmid.

The count-down has well and truly begun for our Third Midkine Symposium in Kyoto, with just over six months left until the event. We have already received confirmation of attendance from a number of key midkine research groups and the programme is expected to be outstanding.

Value of our therapeutic antibody assets has also been boosted with several recent patent grants. In October the European Patent Office granted our C-Domain antibody patent, which covers important claims on composition, method of use for inflammation and cancer, plus key biologically active epitopes.

Midkine antibodies for cancer

Testing of our anti-midkine antibody (MK antibody) portfolio yielded strong efficacy results in the treatment of diabetic nephropathy earlier this year. We have since completed several cancer studies with compelling results showing reduced tumour growth, angiogenesis and metastasis in animal models of the disease. The results of these studies have been important in our decision to proceed to clinical trials using our MK antibodies. More on these later in this Newsletter.

We thank you for your interest and support.

Maria Halasz, CEO
@mariahalasz

In this issue:

Midkine antibodies: why choose cancer as the first indication?

In our January newsletter Cellmid detailed compelling efficacy data for its anti-midkine antibodies (MK antibodies) in an animal model of diabetic nephropathy (DN). We also outlined the huge (and growing) unmet medical need that exists for effective treatments in DN.

Clearly, DN represents an attractive indication for Cellmid to pursue. Subsequently, our MK antibody studies delivered similarly strong results in cancer studies. Eventually, we have determined that the first human clinical studies for MK antibody therapy should be for cancer, rather than DN. The following section and Table 1 outline some of this decision making process.

Fundamentally, cancer offers Cellmid the fastest route to value uplift for its therapeutic antibody programme. For any new drug, the big value inflection point occurs once the treatment has been shown to be safe and to have some efficacy; usually after phase 2 clinical studies. Cancer will get Cellmid there faster than DN for a number of reasons.

Firstly, it is important to remember that midkine (MK) is a novel target, which means that the Company's MK antibodies are "first in class" therapeutics. Whilst this is great for value creation it also means regulators such as the FDA and TGA have no medical precedents on what to expect when MK is targeted in patients.

As such the regulators will be particularly risk-averse in their approval of clinical study designs for the first-in-human trials of anti-MK agents, demanding 'low and slow' dosing. However, this expectation is tempered if the patients are very ill with an acutely lethal disease, such as end-stage cancer.

In such circumstances, doses can be increased more quickly, possibly to levels at which efficacy might become evident, and safety readouts are only required over relatively short time periods. Therefore, if designed appropriately, the first phase 1/2 study in cancer may yield early signs of efficacy.

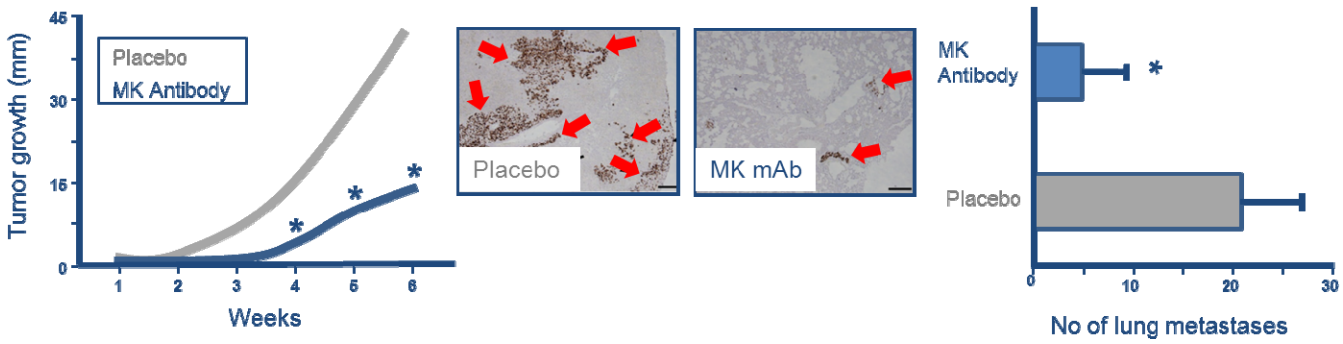
Secondly, cancer is the most extensively validated area of MK biology, with over 200 scientific papers published by many different research groups around the world on MK's role in oncology. The nexus between elevated MK and cancer is overwhelming, with data from thousands of patients published in the MK literature.

This extensive validation offers a compelling rationale to target MK with a therapy; this is important for gaining buy-in to Cellmid's trials from clinicians and potential licensors. In contrast, patient data for MK expression in DN is not as extensive.

Thirdly, Cellmid's validated MK ELISA is ready to become the companion diagnostic. Having an appropriate companion biomarker test has become vital for any therapeutic, but especially so for oncology drugs. Regulators and clinicians now demand that only patients who are likely to respond are treated, and the treatment needs to be appropriately monitored for response and relapse. The MK ELISA can perform all of these roles as it is not only validated but extensively tested.

FIG 1 Midkine antibody treatment slows tumour growth and reduces metastasis

Human osteosarcoma cells were engrafted into the calf muscle of mice and treated by injections with either an anti-MK antibody or a placebo. MK antibody treatment significantly reduced tumor growth (left graph). Antibody treatment also significantly reduced the number of lung metastases (middle picture). Photographs show lung tissue stained for cancer, with red arrows indicating metastases. Right graph shows metastasis counts. * denotes statistical significance ($p<0.05$). Published by Sueyoshi et al, *Cancer Letters,* 2011.



Midkine antibodies: why choose cancer as the first indication? Continued.

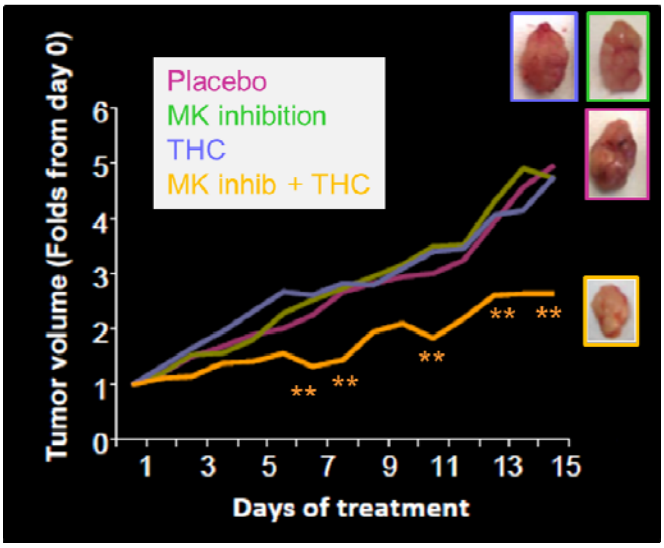
Fourthly, targeting MK with a variety of therapeutic interventions, including one of Cellmid's lead antibodies (see Figure 1), has proven effective in numerous animal models of cancer.

Importantly, MK promotes cancer via several different mechanisms: it increases cell growth, it induces blood vessel formation (angiogenesis), and it promotes cancer spread to other organs (metastasis). Inhibiting MK has been shown to impact on all of these mechanisms. Targeting MK can also restore efficacy to drugs in cancers which are resistant to treatment. For example, inhibiting MK in a mouse model of the fastest growing and deadliest human cancer, the brain tumour glioblastoma, restores sensitivity to the drug THC (Figure 2).

Finally, a positive safety outcome of a first clinical study in cancer patients will greatly de-risk MK as a target in other diseases, including DN. Data gleaned about the antibody half-life, bio-distribution and adverse events in a cancer trial can also be leveraged to design initial clinical studies in DN which have a greater chance of seeing efficacy and are less likely to have safety issues.

In summary, we expect to monetise the value of our MK antibody portfolio earlier with a cancer programme, than with a programme in a chronic inflammatory disease such as DN. However, we have only been able to make that decision after getting solid data with our own MK antibodies in the recently completed studies.

FIG 2 Inhibiting midkine reduces drug resistance



Inhibiting MK makes tumors susceptible to drug treatment and slows tumor growth. Human glioblastoma tumor cells were engrafted into mice and treated with a MK gene inhibitor, cannabinoid drug THC, or both. Neither MK inhibition nor THC alone slowed tumor growth, but the combination therapy significantly reduced tumor volume. ** denotes statistical significance ($p<0.01$). Published by Lorente et al, *Cell Death & Differentiation,* 2011.

TABLE 1 Clinical development rationale with compelling data in cancer and diabetic nephropathy

End-stage cancer	Late-stage diabetic nephropathy
Lethal in the short term: allows for faster dose escalation to levels where efficacy might be seen	Chronic, long-term disease, with dialysis as a safe alternative treatment: regulator emphasis on 'low and slow' dosing
No effective treatments remain: ethically acceptable to dose aggressively	Safe proven alternative treatment (dialysis) available: ethical difficulties in early high dosing of novel unproven drug
Threshold of acceptable side-effects relatively high	Low threshold of acceptable side-effects
Safety read-outs are short term: fast time from start to end of first clinical trial	Long-term safety read-outs required: long first clinical study
Combination with current treatments (chemo) likely to enhance effectiveness	Combination with current best treatment (dialysis) of unknown value

Cellmid licensee Pacific Edge strides ahead with Cx*bladder*®

Cellmid signed a license agreement with Pacific Edge in 2010 for the use of midkine as one of the biomarkers in their bladder cancer test (Cx*bladder*®). The license between Cellmid and Pacific Edge provides for upfront and milestone fees and royalties on sales. The upfront and milestone fees were payable in Pacific Edge shares, and were due at signing and the time Cx*bladder*® sales commenced in the USA.

Pacific Edge has achieved solid progress since the license was signed and has received CLIA* registration of its Pennsylvania labs in March 2013 clearing the way for the launch of Cx*bladder*® in the United States.

In July 2013 Pacific Edge advised Cellmid that they had commenced sales of Cx*bladder*® in the USA triggering the issuing of 1,084,622 PEB milestone shares to Cellmid. With the issuing of these shares Pacific Edge completed its milestone fee obligations under the license.

Even more importantly, and in addition to the milestone fees, royalties will also be paid to Cellmid on *Cxbladder*® revenues. For this reason it was exciting to see that Pacific Edge signed an agreement with FedMed in October, a national preferred provider network in the United States, to make *Cxbladder*® available to an additional 40 million Americans.

This is a significant milestone as it opens up access to FedMed's contracted insurance carriers, third party administrators, health and welfare funds, and self-insured health plans, representing more than 40 million Americans. Over 550,000 physicians, 4,000 hospitals and 60,000 ancillary care facilities nationwide belong to this provider network.

About Cx*bladder*®

Bladder cancer is one of the most common forms of malignancies. In the United States around one million patients present with haematuria (blood in the urine) annually; of those 68,000 are diagnosed with bladder cancer. Once treated, patients will have regular cystoscopies.

Cystoscopy is a painful endoscopy of the urethra to monitor reoccurrence. Pacific Edge's Cx*bladder*® has the potential to replace cystoscopy over time as a preferred tool for patient monitoring.

Cx*bladder*® has shown outstanding performance in clinical studies to date, with 100% sensitivity and 85% specificity in late stage bladder cancer. This specificity is expected to increase when used to monitor rather than diagnose bladder cancer.

The test can also be used to differentiate between high and low grade cancers. Cx*bladder*® was the subject of a comparative study of 485 patients and it significantly outperformed other commercially available bladder cancer tests.

Importantly, Cx*bladder*® has identified 20 cases of bladder cancer that were not identified by cystoscopy during clinical work-up.

For more information on *CxBladder*® please visit www.cxbladder.com.

*Clinical Laboratory Improvement Amendment, CLIA, sets standards and issues certificates for clinical laboratory testing in the United States. It is administered by the US Centre for Medicare and Medical Devices, CMS

Cellmid collected approx. $2M since May 2013

Since our last newsletter we have collected $400K in licensing revenue from Fujikura, $600K worth of shares from Pacific Edge, $300K in product sales and $711K in R&D tax refund. This is more than what we annually spend on overheads, including protecting our valuable patent portfolio.

Our diagnostic portfolio is heating up

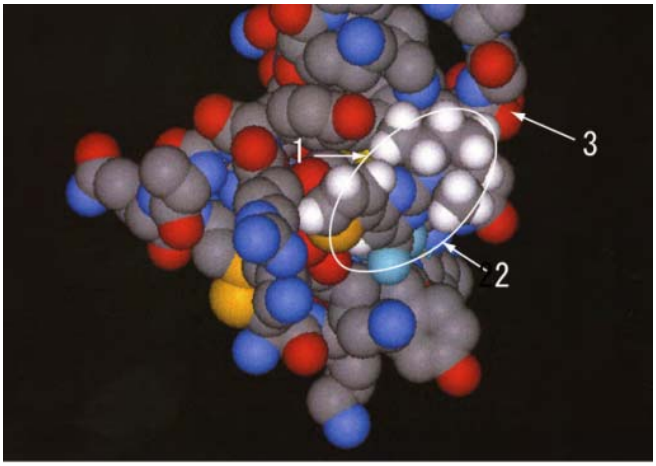
In our May newsletter we described the importance of cancer markers in personalised medicine. Since then Fujikura Kasei exercised their option to license midkine for their pathology-lab friendly latex test and we expect license terms finalised by the end of the 2014 financial year.

We have also signed a collaboration agreement with Abcodia for using midkine for the early diagnosis of colorectal cancer.

The number of Cellmid's diagnostic collaborations now stand at nine, not including our two licenses, with Pacific Edge and Quest, or our healthy volunteer study at Kumamoto University (Table 2).

Our Kumamoto University study has recently been completed with results expected to be announced after data analysis is finalised.

Table 2 below provides a summary of the key collaborations, primary objectives and goals and, where appropriate, collaborators.



Midkine 3D image: A model of binding of Compound I to midkine as deduced by Presto X-2 program. White circle shows Compound I, and 1, 2 and 3 represent Arg81, Lys65 and Phe66, respectively. Published by Matsui et al., *Int Arch Med*, 2010.

Table 2: Midkine diagnostic collaborations

Indication	Project	Collaborators	Goals
General	Latex bead assay clinical validation	Fujikura Kasei	1.Develop validated latex bead MK assay using CDY mAbs 2. Clinical validation of MK
Metastatic colorectal cancer	Disease recurrence	Not disclosed	1.Assess MK vs CEA for disease re-occurrence 2. Serum vs plasma analysis
Hepatocellular carcinoma (HCC)	Early detection	Not disclosed	1. Evaluate MK for detecting early clinical HCC in at-risk patients (HEP C positive) 2. MK vs AFP, AFP-L3, DCP in HCC diagnosis
Prostate cancer	Urine cancer detection	Not disclosed	1.Assess uMK in PC detection (+ MK RNA) 2.Determine if MK differentiates aggressive PC
Prostate cancer	Androgen independent	Dr. Anna Nordin	1.Assess MK as a marker of androgen independent PC
Bladder cancer	Urine cancer detection	Not disclosed	1.Assess MK protein as urinary marker of bladder cancer 2.Assess MK ELISA for urine MK determinations
Glioblastoma (GBM)	THC resistance in GBM	Not disclosed	1. Evaluate MK as a biomarker for THC resistant GBM
Colon cancer	Early detection/ screening	Abcodia Inc.	1. Evaluate MK as biomarker for pre-symptomatic detection of CRC
General	To assess midkine levels in kidney disease (KD)	Not disclosed	1.MK assessment in all KD admissions, including acute and chronic

Advangen - Building a global consumer health business

With the acquisition of Advangen Inc in May this year we have taken control of global rights to the FGF-5 inhibitor hair growth technology and several established Japanese brands. An independent valuation of Advangen Inc was prepared by SLM Corporate Pty Ltd which confirmed that our acquisition price was well within the expert's valuation.

Since settlement of the transaction we have embarked on a systemic restructure of the distribution in Japan. Some of the existing brands require more marketing support and our new brands, particularly that of Jo-Ju® and Lexilis® Black, have received enthusiastic support from both existing and new distribution networks.

The agreement with Natural Garden Co Ltd for the supply of 30,000 units of the Andeprong S brand is an exciting start to this process (announced on 20 September 2013). The agreement is for a period of 12 months and represents more than 40% of our sales target for Japan, which in turn makes it a significant contract for our revenue growth.

Our most immediate opportunity for growing our distribution outside of Japan and Australia is China; through the Advangen Inc. acquisition we have also taken over potentially lucrative Chinese import permits to the Lexilis® and Jo-Ju® brands.

The Chinese market is fragmented which means it is also yet to mature and has the potential for substantial growth. Imported products appear to carry a premium over locally produced herbal treatments, and this is particularly so for Japanese and Australian products.

The distribution and marketing is underpinned by the credibility of the science behind Advangen's products. In our May newsletter we have written extensively about the world class technology that drives our product development.

Since then, our scientists led by Dr Masakuni Yamamoto have found novel, proprietary FGF-5 inhibitors, which will be subject to new patent applications reinforcing our position as the global leaders in FGF-5 hair growth technology.

The Herceptin Story

If you are interested in an antibody story for a novel target, you can read about Herceptin "**Her-2: The Making of Herceptin, a Revolutionary Treatment for Breast Cancer"** by Robert Bazell. It is a great story of the scientific investigation, money, politics, corporate decisions, and luck that was involved in taking Herceptin from the lab to the clinic. Alternatively you could rent the 2008 movie, **Living Proof**, with Harry Connick Jnr playing Dr Dennis Slamon, the oncologist behind the drive to take Herceptin to patients.

British Journal of Pharmacology Review Edition on Midkine coming soon

With the sponsorship of eminent clinician, and midkine enthusiast, Professor Peter Ferdinandy a Review on midkine is currently in preparation by the British Journal of Pharmacology (BJP). The BJP is a high profile journal with a global audience and is expected to bring midkine into further mainstream academic and clinical focus. Up to 15 peer reviewed publications are expected to be included in the Review from the global scientific community.

Count-down begins to the 3rd Midkine Symposium in Kyoto in April 2014

We are well advanced in organising the Third Midkine Symposium, an invitation only international scientific meeting of midkine researchers. We expect to receive presentation abstracts by the end of October and will advise on the scientific programme in due course in our newsletter.

The Symposium will be held in Kyoto, Japan in April 2014 and will be co-hosted by the discoverers of midkine, Emeritus Professor Takashi Muramatsu and Professor Kenji Kadomatsu. We expect an exciting programme with many new participants and record attendance from scientists around the world.

Interview with Professor Péter Ferdinandy (BJP Editorial Board)

Péter Ferdinandy (MD, PhD, DSc, MBA) is the CEO of Pharmahungary (http://www.pharmahungary.com/), as well as Professor of Pharmacology and Clinical Pharmacology at the Semmelweis University, Budapest, Hungary. He was previously Head of Cardiovascular Projects at Biorex Co (a partner of Abbott), a US-Hungarian biotech company, and has consulted on preclinical and clinical pharmacological projects worldwide over the last 20 years. Professor Ferdinandy has published more than 120 highly cited papers in top-ranked international peer-reviewed journals. He is member of the editorial boards of *Br J Pharmacol (BJP)*, *J Mol Cell Cardiol*, and *J Pharmacol Toxicol Methods*, and is a member of the European Council, International Society for Heart Research.

Prof Péter Ferdinandy

How did the idea of the BJP's MK Review Edition come to you?

Scientifically, it is very clear that midkine is an interesting growth factor and a promising drug target. Many very strong publications in diverse areas of midkine biology are in the peer-reviewed literature. However, historically, because midkine was initially discovered and investigated by Japanese scientists, much of the knowledge around midkine has remained in Japan. Midkine's clinical and diagnostic potential has been somewhat under-appreciated elsewhere as result. The British Journal of Pharmacology (BJP) is a high-profile, high impact factor journal with a global audience, and it occurred to me that a BJP issue focussed entirely on midkine would be a very effective way of raising midkine's profile worldwide.

Did you find it hard to get contribution from researchers?

No, people were enthusiastic, especially due to the fact that BJP is one of the most prestigious international journals of pharmacology. Like me, I think many of the contributors share a sense that the importance of midkine has been under-appreciated, both as a biological factor and as a potential target molecule for drug development.

As you know Cellmid is planning to take their first in class MK antibodies to the clinic for the treatment of solid tumors. What do you think of the scientific rationale behind this strategy?

Solid, according to current knowledge. Firstly, there is a strong nexus between cancer and midkine, with something like 200 published papers on the topic. Although midkine is implicated in other diseases (particularly inflammation and autoimmunity), cancer is clearly the most established and best understood. Secondly, the demand for new cancer treatments (especially for many solid tumors) remains very strong from both pharma companies and medical practitioners. Thirdly, cancer studies offer the fastest and least risky path to first-in-man clinical studies: regulators such as the FDA will more readily allow novel treatments to reach patients in oncology than in inflammation or autoimmunity. Finally, antibodies are a proven class of blockbuster drugs in cancer; this means Cellmid have good precedents to follow in their product development journey, and the know-how to produce and manufacture antibodies is now well-established, reducing technical risks to the programme. Right now is a great time to have a novel antibody target in oncology!

Do you think Cellmid's MK antibodies will face the same challenges as Genentec's HER-2 antibody (Herceptin) faced for the treatment of breast cancer?

Herceptin was a pioneer- it was the first monoclonal approved for solid tumors (in the USA in 1998), and only the fifth monoclonal to be approved in humans. Since then many of the technical and regulatory challenges involved in antibody drug development have reduced, so from that perspective, Cellmid's path to the clinic is more clearly defined. However each and every drug development programme is unique, and success ultimately depends on the nature of both the target and the therapy. There is always a risk when any well prepared preclinical programme comes to clinical translation. One thing that stands Cellmid in good stead is the very large knowledge base around the link between high midkine expression and poor prognosis in many solid tumors. Cellmid should be able to use this knowledge, along with their MK ELISA test, to recruit patients into their clinical studies who are more likely to respond positively to anti-midkine treatment.

CELLMID

CHRISTMAS SPECIAL

free shampoo with any 3 évolis® tonics

for men and women at a special shareholder discount

$198.00*

25% OFF lotion PLUS get a FREE shampoo (save $128.00)

*Offer valid until 15 December 2013

Available at

www.evolisproducts.com.au

Call 1300 424 747

to get your online discount code

Cellmid - Fast Facts

Listings
Australian Securities Exchange, ASX

ASX Code: CDY

Issued Capital - Ordinary Shares
650,470,078

(Listed) Options
290,542,770 (exercise price $0.034 exp. 23 October 2016)

Market Capitalisation
A$22M (@ 21 October 2013)

Cash Position
A$1.65M (last reported @ 30 September 2013)

Board

Dr David King	Chairman
Ms Maria Halasz	Chief Executive Officer and Managing Director
Mr Graeme Kaufman	Director
Mr Martin Rogers	Director

Senior Management

Mr Darren Jones	Head of Product Development
Mr Nicholas Falzon	Financial Controller and Company Secretary
Ms Emma Chen	Advangen General Manager

For further information please contact:

Maria Halasz
Chief Executive Officer and Managing Director
Cellmid Limited

Phone: +61 (0) 2 9221 6830
Email: halasz@cellmid.com.au
Web: www.cellmid.com.au

Forward looking statements

This publication contains forward-looking statements that are subject to risks and uncertainties. Such statements involve known and unknown risks that may cause the actual results, performance or achievements of Cellmid to be materially different from the statements in this newsletter. Actual results could differ materially depending on factors such as the availability of resources, the results of clinical studies, the timing and effects of regulatory actions, the strength of competition and the effectiveness of the Company's patent protection.
None of Cellmid Limited, or any of its affiliates or associated companies (or any of their officers, employees, contractors or agents) makes any representation or warranty as to the accuracy, completeness or reliability of the information in this newsletter, or the likelihood of fulfilment of any forward looking statement or any outcomes expressed or implied in any forward looking statements.