

15<sup>th</sup> October 2012

**ASX Code: CDY**
**Speculative Buy**

Target Price A\$0.039

# INITIATING COVERAGE

## Cellmid Limited

**An Attractive Valuation for a Small Biotech with Near Term Cash Flow and Diversified Pipeline – Speculative Buy, TP is A\$0.039**

### FY2013 Could be a Transforming Year for the Company

A recent pullback in the share price of Cellmid (ASX: CDY) has created an attractive opportunity for investors looking to de-risk their small cap portfolio with Biotechnology / Healthcare stocks. Recent weakness in CDY share price is characteristic of early stage biotechnology stocks on the ASX, as investors were trying to avoid speculative stories with product pipelines in pre-clinical stage that have some way to go before commercialization (likewise Cellmid's therapeutic program).

However, we believe the market significantly undervalues Cellmid's diagnostics pipeline and hair loss business. Our conservative revenue model shows that *Lung Cancer Dx* (test that will be launched in 2H13 by Quest Diagnostics, NYSE: DGX) and *Cxbladder* (test that will be launched in 2H13 by Pacific Edge, NZE: PEB) worth A\$0.021/sh and A\$0.006/sh respectively. In addition, we value Advangen International (Cellmid's wholly owned subsidiary) at A\$0.012/sh using conservative revenue scenario for the hair loss products.

We currently do not attribute any value to Midkine therapeutic program that has two products in pre-clinical development.

### Our Price Target of A\$0.039 is Based on a DCF Analysis of Three Programs with Near Term Cash Flow

In 2009 and 2010 Cellmid licensed midkine as a biomarker for diagnosis of lung cancer and bladder cancer to Quest Diagnostics (NYSE: DGX) and Pacific Edge (NZE: PEB) respectively. Both tests are non-invasive and easy to use. In clinical studies both tests demonstrated superior specificity for detection of cancer comparing to current diagnostic options that often invasive (i.e. biopsies). Both tests are on schedule to be launched in 2H2013 in US as a Laboratory Developed Tests (LTD) that will be regulated under Clinical Laboratories Improvement Amendment and thus do not require FDA approval. Under both license agreements, Cellmid will receive milestone payments in addition to single digit royalties.

Using conservative market penetration for the tests, low single digit royalties to Cellmid and 15% discount rate we value cash flows to Cellmid at A\$0.021/sh and A\$0.006/sh from the lung and bladder cancer tests respectively. Both tests are in the hands of experienced and reputable partners and we see very low downside risk to our estimates.

Advangen launched their hair loss products this summer and already have distribution agreements with 700 Australian pharmacies in addition to direct sales to hair salons and internet sales. Our market penetration estimates for Advangen hair loss products range from 0.2% in Year 1 to 2% in Year 10. Our conservative model values Advangen at A\$0.012/sh. We believe that profits from scientifically validated hair loss products could surprise Cellmid's investors on the upside.

### Upside to Our Valuation from Therapeutic and Molecular Diagnostics Programs

We like the science behind Cellmid's CAB101 preclinical program for inflammatory diseases with diabetic nephropathy as a potential indication (market valued at \$1.65B in 2010). We view this program and future partnerships in molecular diagnostics as an upside to our current target price, with strong IP around Midkine at the core of the business.

#### Capital Structure

Sector	Healthcare
Share Price (A\$)	0.015
Fully Paid Ordinary Shares (m)	545.1
Opt (ex \$0.03-\$0.062, exp 4/13-8/17) (m)	38.4
Market Cap (undil) (A\$m)	8.2
Share Price Year H-L (A\$)	0.011-0.029
Approx. Cash (A\$m)	1.4

#### Directors & Management

David King	Non-Exec Chairman
Maria Halasz	Managing Director
Graeme Kaufman	Non-Exec Director
Martin Rogers	Non-Exec Director
Darren Jones	Head of Product Devt
Nicholas Falzon	Financial Controller
Andrew Bald	Company Secretary

#### Major Shareholders

Cell Signals Inc	5.3%
Seistend Pty Ltd	4.1%
Hera Investments Pty Ltd	3.9%
Worth S/F A/C	3.5%
Tuite Super 1 A/C	3.4%

#### Analyst

Anton Uvarov PhD +61 8 9488 0800

#### Share Price Performance



## Investor's Summary

Cellmid is an Australian biotechnology company that is engaged in developing a range of therapeutic and molecular diagnostic products focused around heparin-binding growth factor midkine. Company recently licensed out midkine to be used in lung cancer and bladder cancer tests that are scheduled for a US launch in 2013. Cellmid is also engaged in internal CK3000 and CS5000 diagnostic projects for the testing of healthy and cancer samples. These projects will be vital for future regulatory submissions and diagnostic partnership.

The Company holds almost exclusive intellectual property portfolio around midkine and midkine antagonists that is essential for present and future midkine licensing deals. Midkine is a prominent cancer biomarker readily detected in serum/plasma and urine and has a potential to be a vital component of future diagnostic tests for 26 different cancers.

Cellmid's therapeutic programs currently include CAB101 for developing a treatment for inflammatory and autoimmune diseases and CAMI103 for developing a treatment for acute myocardial infarction (AMI). There are series of strong peer-reviewed medical publications on midkine involvement in pathogenesis of Diabetic Nephropathy (DNP) and Cellmid's "first-in-class" hu91 anti-midkine monoclonal antibody could be a potential treatment for that highly debilitating condition that is the leading cause of premature death in young diabetic patients.

The Company's wholly owned subsidiary, Advangen International, is commercialising and developing hair loss products using scientifically validated concepts of FGF-5 and midkine involvement in hair growth cycle. Advangen's branded évolis® hair loss products utilising FGF-5 inhibitors at a commercial stage and is currently stocked in 700 Australian pharmacies.

**Table 1. Cellmid Pipeline Valuation.**

Source: RM Research

	peak market penetration	peak revenues, \$M/year	profits / royalties to Cellmid, \$M	NPV, \$M	NPV/share
<b>Molecular Diagnostics</b>					
Lung cancer Dx	7%	\$228.83	\$4.58	\$11.47	\$0.02
Cxbladder	5%	\$85.40	\$1.28	\$3.29	\$0.01
<b>Hair Loss Products</b>					
Advangen	2%	\$3.88	\$2.46	\$6.73	\$0.01
<b>Therapeutic</b>					
Hu91 Antibody for DNP	market valued at \$2.35B in Y2017 with 5.2% CAGR			\$0.00	\$0.00

We use a valuation based on a 10-year DCF analysis of cash flows from diagnostics and hair loss products and 15% WACC. We believe that P/E based valuation is not appropriate here as we lack visibility on costs associated with the development of midkine therapeutics.

## Future Molecular Diagnostic Partnership Could Add A\$0.02 or More Per Share Per Test

According to PwC, M&A and partnership deal values in the diagnostic space jumped to exceptional levels during CY2011. Interestingly, partners were not only existing players in the diagnostics sector, but also private equity, life sciences research groups, clinical laboratories, and medical technology players. New entrants also included pharmaceutical companies in search of companion diagnostic products. According to EvaluatePharma consulting group, *in-vitro* diagnostics will be the industry's top segment by 2018, pulling in sales of \$54.5B and outstripping old standbys like cardiac devices and imaging technologies.

The surge and diversity of these deals encourages our belief in the growth prospects of Cellmid's highly validated diagnostic pipeline and more future out licensing deals. We believe Cellmid will be eligible for similar economics in each new deal, adding A\$0.02 per current share price per deal or more. That could include both *in-vitro* diagnostics and companion diagnostics applications.

## Part I. Molecular Diagnostics – Valued at A\$0.027/share

### Midkine is a Part of Highly Expected Lung Cancer Diagnostic Test

With the exception of the prostate specific antigen (PSA) test for prostate cancer, screening technology for early detection of other major cancers has not been within reach of the Diagnostics sector until recently. For lung cancer a non-invasive IVD-based test that would allow detection with high accuracy and at an early stage, would be very attractive, considering the many issues with current, mainly *in vivo*-based (invasive) procedures (i.e. lung biopsy).

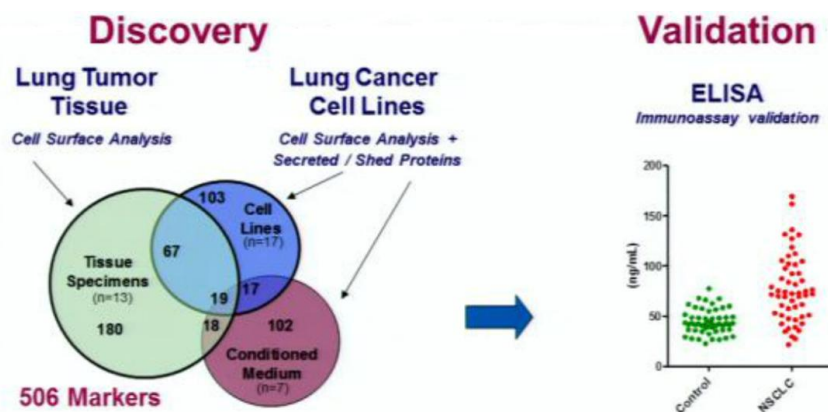
In 2009 Cellmid licensed midkine as a biomarker for the early diagnosis, prognosis and disease monitoring of lung cancer to be used in Celera's proprietary biomarker panel. The terms of the license are not publically disclosed but involve upfront and milestone payments and royalties on product sales. Celera Corporation is now a part of Quest Diagnostics (NYSE: DGX). The test is scheduled to hit the market in 2H2013 as a Laboratory Developed Tests (LTD) that will be regulated under Clinical Laboratories Improvement Amendment and thus do not require FDA approval. Under the license agreement Cellmid will receive milestone payments in addition to single digit royalties. We estimate 2% royalty to Cellmid from future sales of the test.

### Strong Science Encourages Our Belief in Commercial Opportunity of the Test; Test Shows Higher Specificity Than Computer Tomography

To develop the biomarker panel, Celera drew on data from an earlier biomarker study in which they had used proteomic analyses with mass spectrometry to identify candidate biomarkers differentially expressed in lung tumor tissues and lung cancer cell lines, focusing on the cell surface and secreted proteins. 506 markers were identified originally. Based on expression, redundancy, and biological profile nine biomarkers were selected for an initial lung cancer panel for validation using immunoassays on more than 600 serum samples collected from individuals with smoking history (Figure 1).

**Figure 1.** Development of Celera's Lung Cancer Test.

Source: AACR 2011

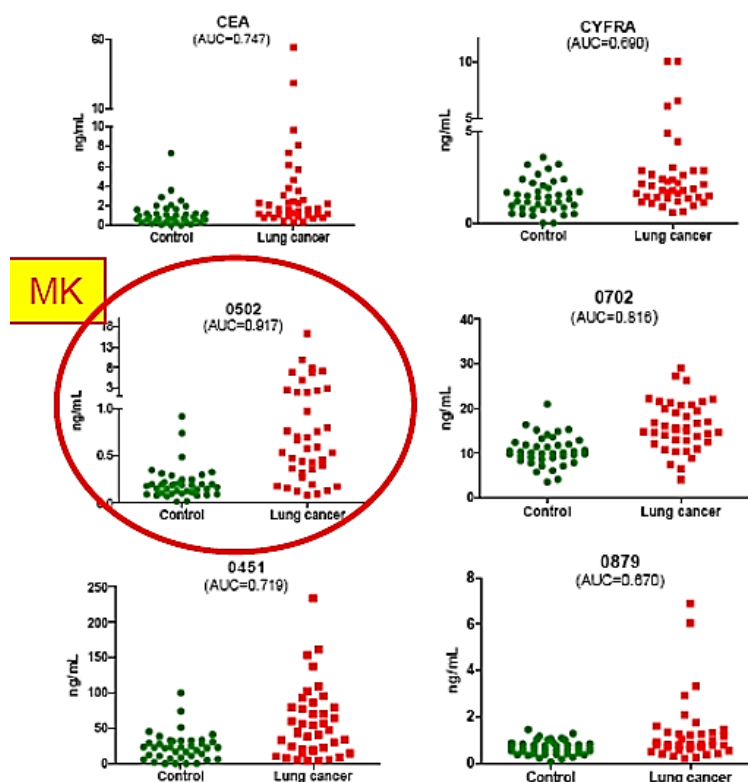


Ultimately, a global six-biomarker regression model was developed. This six-marker regression model was effective at identifying smoking-associated cancer cases. All stages of cancer and all of the major histological cell types were distinguished.

When the six-marker model was applied in an independent validation study to a never smoker group of 40 subjects with lung cancer (50% with adenocarcinomas) and 40 age- and gender-matched controls, it again showed strong sensitivity and specificity in discriminating the malignant cases demonstrating 85% sensitivity and 83% specificity.

**Figure 2.** Results of a validation study on Celera's six-marker test.

Source: Cellmid Presentation, 2012



In a six-marker panel test midkine (marker 0502) was the best performing of the six markers, including established benchmark tumor markers CEA and CYFRA. That confirms other comparative data available on midkine's accuracy. (Figure 2).

**Table 2.** Midkine was shown to be the best performing marker in lung cancer test.

Source: AACR 2011

	Never Smoker		Smoker	
	AUC	P value	AUC	P value
CEA	0.747	0.0001	0.664	<0.0001
CYFRA	0.690	0.0035	0.767	<0.0001
0502	0.917	<0.0001	0.669	<0.0001
0702	0.816	<0.0001	0.711	<0.0001
0451	0.719	0.0008	0.623	0.0002
0879	0.670	0.0090	0.730	<0.0001

**Keyword:** Specificity - measures the proportion of negatives which are correctly identified (e.g. the percentage of healthy people who are correctly identified as not having the lung cancer).

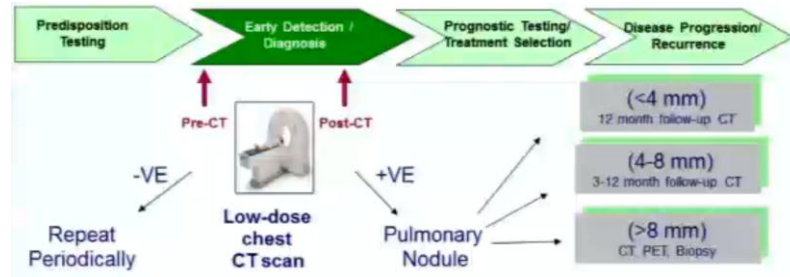
The test showed 85% sensitivity and 83% specificity at its best performance, and compared well with CT (computer tomography) scanning. CT is the current gold standard screening method and has a much lower specificity (see definition). According to Celera the specificity rate for CT is about 75%.

Considering the associated risks of CT scans and morbidity associated with invasive follow-up diagnostics, it is expected that Celera's test will be at least an adjunct screening method and will assist in further clarifying the diagnosis in patients who have tested positive during their CT screening (Figure 3, Post-CT). This patient population is estimated to be 1.7 million. In addition the test could be used in pre-CT serving as a filter to identify high risk individuals whose malignant state could be checked through test. That would provide an upside to our sales estimates.

In order to commercialize the lung cancer panel the assay is currently being transferred to a multiplex format. With Quest Diagnostics' extensive distribution capabilities it is expected to be launched as a Lab Developed Test (LDT).

**Figure 3. Lung Cancer Diagnostic Paradigm.** Celera's test could be used in Pre-CT or Post-CT settings.

Source: AACR 2011



## Market Size (US only) and Our Revenue Model for Celera's Test

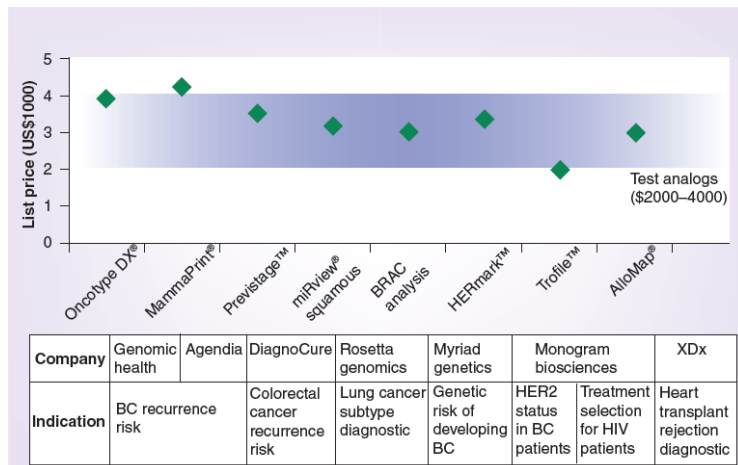
The high risk group (for developing lung cancer) consists of current and past cigarette smokers. Current cigarette smokers make up 24% of adults in the US (or 47.5 million people) and past smokers comprise another 24.1 million adults. This group is greater than twenty times more likely to develop lung cancer than non-smokers. However, there are currently about only 7 million people in the US who would meet the eligibility criteria for the National Lung Screening Trial (NLST) and thus would be eligible for regular CT screening.

Furthermore, the rate of positive screening tests in NLST was determined at 24.2% with low-dose CT. We thus estimate that there is about 1.75 million people who could test positive upon CT imaging (in clinical settings there could be up to 96% of false-positives after first scan). We use this number as a target population for Celera's lung cancer diagnostic product.

We currently do not have information on the pricing of Celera's lung cancer test and thus using a conservative estimate of \$1200 per test given the \$1000 - \$4000 range for LDT test in the US with some high complexity tests fetching in excess of \$4000 per test (Figure 4).

**Figure 4. Illustrative US pricing of leading molecular diagnostic tests.**

Source: FSG 2011



Using conservative market penetration rates of 0.2% - 7% in Year1 – Year10, we estimate revenues from the test of \$4.2M - \$229M in Year1 – Year 10 respectively. Using a royalty rate of 2% (Midkine is only 1 out of 6 biomarkers in the test) we forecast \$84K - \$4.6M in royalties to Cellmid in Year1 – Year 10 respectively. Higher penetration and royalty rates, as well as price per test will provide an upside to our current estimates and CDY valuation.

**Figure 5. Estimating Market Size and Potential for Celera's Test**

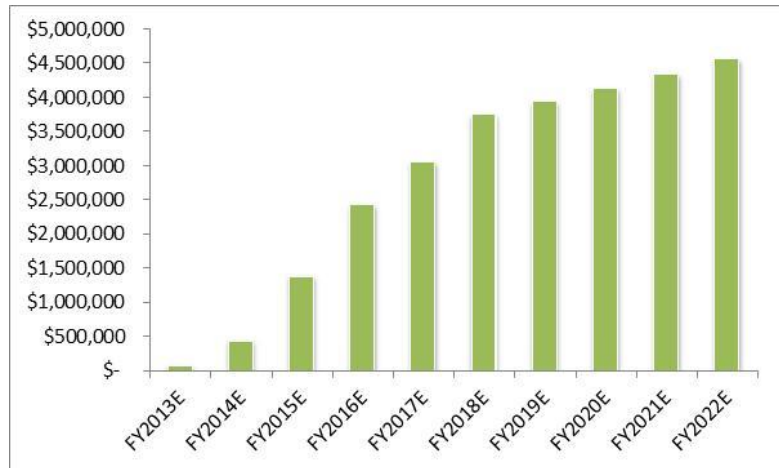
Source: RM Research

	FY2013E	FY2014E	FY2015E	FY2016E	FY2017E	FY2018E
<b>Lung Cancer Dx</b>						
Patients Eligible for CT	7,000,000	7,070,000	7,140,700	7,212,107	7,284,228	7,357,070
Patients CT positive	1,750,000	1,767,500	1,785,175	1,803,027	1,821,057	1,839,268
Total annual US test market	1,750,000	1,767,500	1,785,175	1,803,027	1,821,057	1,839,268
Potential Market Penetration	0.2%	1%	3%	5%	6%	7%
Number of Tests Performed	3,500	17,675	53,555	90,151	109,263	128,749
Price per test	\$ 1,200	\$ 1,248	\$ 1,298	\$ 1,350	\$ 1,404	\$ 1,460
Revenue to Quest Diagnostics	\$ 4,200,000	\$ 22,058,400	\$ 69,510,430	\$ 121,689,593	\$ 153,387,298	\$ 187,971,021
<b>Royalties to CDY</b>	<b>\$ 84,000</b>	<b>\$ 441,168</b>	<b>\$ 1,390,209</b>	<b>\$ 2,433,792</b>	<b>\$ 3,067,746</b>	<b>\$ 3,759,420</b>
PV@15%	\$75,641	\$345,448	\$946,588	\$1,441,008	\$1,579,446	\$1,683,094



**Figure 6.** *Estimates of Royalties to Cellmid from lung cancer test, FY13-FY22.*

Source: RM Research



## Midkine is a Part of *Cxbladder* – a Bladder Cancer Test That is Scheduled for Commercial Launch in 2H2013

In 2010 Cellmid have entered into a non-exclusive license agreement with Pacific Edge Biotechnology Limited (PEB) for the use of Cellmid's midkine technology in PEB's bladder cancer test. Cellmid is eligible to receive milestone payments in addition to royalties on product sales. We estimate a 1.5% royalty rate.

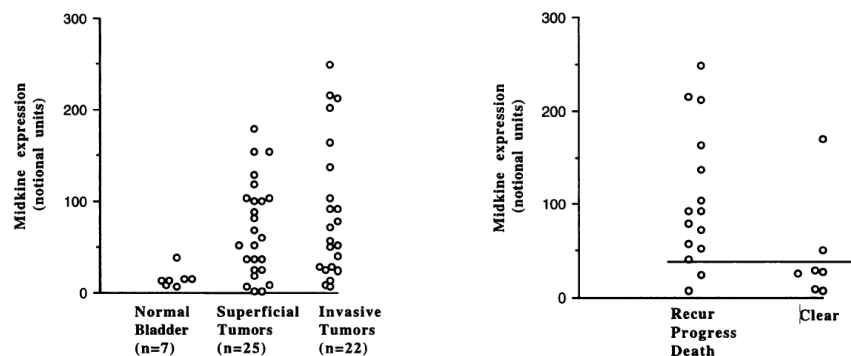
The test provides general practitioners and urologists with a quick, cost effective and accurate measure of the presence of a bladder cancer, and provides urologists with the opportunity to reduce their reliance on the need for invasive tests such as cystoscopy. A non-invasive nature of *Cxbladder* should be more compelling for the patient and will likely lead to overall higher compliance to the monitoring regimen comparing to cystoscopy alone.

## Clinical Evidence Suggests *Cxbladder* Will Have Market Leading Performance

Previous clinical studies showed that overexpression of midkine is associated with the development of bladder cancer and for invasive cancers predicts a poor clinical outcome in the short term (Figure 7).

**Figure 7.** *Midkine expression correlates with poor outcome in patients with invasive cancers.*

Source: O'Brien et.al., 1996



The *Cxbladder* clinical study met its primary clinical end point of identifying bladder cancer significantly more accurately than other commercially available tests benchmarked in the trial. *Cxbladder* demonstrated 82% sensitivity at 85% specificity. Impressively, *Cxbladder* showed 100% sensitivity in detecting late stage bladder cancer (all stages other than Ta).

Refer to Table 3 for study results.

**Table 3.** *Relative sensitivity and specificity of urine tests. Midkine outperforms.*

Source: O'Sullivan et.al., 2012

	% Overall Sensitivity (95% CI)	% Overall Specificity (95% CI)
uRNA-D	62.1 (49.3, 73.8)	85.2 (fixed)
NMP22 ELISA	50.0 (37.4, 62.6)	88.0 (84.6, 91.0)
NMP22 BladderChek	37.9 (26.2, 50.7)	96.4 (94.2, 98.0)
Cytology*	56.1 (43.3, 68.3)	94.5 (91.9, 96.5)
Cxbladder-Dt	81.8	85.1 (fixed)
Cxbladder-D (90% specificity)†	72.7	89.9 (fixed)

In our view, *Cxbladder* has sufficient performance to challenge urine cytology as the routine adjunct to cystoscopy. In addition, based on its ability to distinguish between high and low risk tumors *Cxbladder* could potentially be used to prioritize primary care patients for urgent cystoscopic evaluation.

### Current Diagnostic Options

Cytology is the most common test used by general practitioners to triage patients with haematuria. If cytology indicates the possibility of cancer, the patient is referred to a urologist for cystoscopy (invasive and expensive) to confirm the diagnosis. Cytoscopy cost is in the region of \$600 - \$1000.

*Cxbladder* is designed to potentially replace cytology and to also be used as an adjunct to cystoscopy.

### Market Size (US only) and Our Revenue Model for *Cxbladder*

The US is the largest market opportunity for the *Cxbladder* and PEB is building a laboratory for the provision of the *Cxbladder* test to urologists and physicians across the US. The laboratory will be regulated under the Clinical Laboratories Improvement Amendment Act (CLIA) which will enable PEB to offer *Cxbladder* as a Laboratory Developed Test meaning it would not require FDA approval.

Pacific Edge estimates that the annual potential US market for bladder cancer tests is approximately 1.8M tests. PEB uses the following assumptions to estimate the market:

- In the United States 1,000,000 patients per year present to their GP with haematuria;
- 68,800 patients are diagnosed each year with bladder cancer<sup>1</sup>;
- NCCN Clinical Practice Guidelines in Oncology specify that patients receive 12 monitoring cystoscopies in the five year monitoring period – 4 in the year of diagnosis and 2 in each following year.

**Figure 8.** *Annual Market for Bladder Cancer Assays in the US estimated at 1.8M procedures.*

Source: PEB presentation

Total US Assay Market (Haematuria & Bladder Cancer)	Year 1	Year 2	Year 3	Year 4	Year 5
New patients presenting with Haematuria	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
New patients diagnosed with bladder cancer	68,800	68,800	68,800	68,800	68,800
receive 4 follow up cystoscopies in the first year following diagnosis	68,800	68,800	68,800	68,800	68,800
	68,800	68,800	68,800	68,800	68,800
Two cystoscopies per annum In year 2	68,800	68,800	68,800	68,800	68,800
	68,800	68,800	68,800	68,800	68,800
Two cystoscopies per annum In year 3	68,800	68,800	68,800	68,800	68,800
	68,800	68,800	68,800	68,800	68,800
Two cystoscopies per annum In year 4	68,800	68,800	68,800	68,800	68,800
	68,800	68,800	68,800	68,800	68,800
Two cystoscopies per annum In year 5	68,800	68,800	68,800	68,800	68,800
	68,800	68,800	68,800	68,800	68,800
<b>Total Assays Required</b>	<b>1,825,600</b>	<b>1,825,600</b>	<b>1,825,600</b>	<b>1,825,600</b>	<b>1,825,600</b>

PEB also expects smooth reimbursement process in US. A third party market survey of Medical and Benefits Review Committees for Health Insurers in the US that covered a wide spectrum of private plans showed a very high level of acceptance and concordance with the payers systems.

According to PEB, total supported price for Cxbladder using composite CPT coding for CMS patients is expected to be approximately US\$786 per test. Reimbursement by insurers in the US generally occurs at 70% to 80% of the composite CPT code, meaning it will be in the range of US\$550 - US\$630 per test.

Using conservative market penetration rates of 0.2% - 5% in Year1 – Year10 and using PEB's market size model we estimate revenues of \$2M - \$85M in Year1 – Year 10 respectively.

**Figure 9. Estimating Market Size and Potential for PEB's Cxbladder, FY13-FY18.**

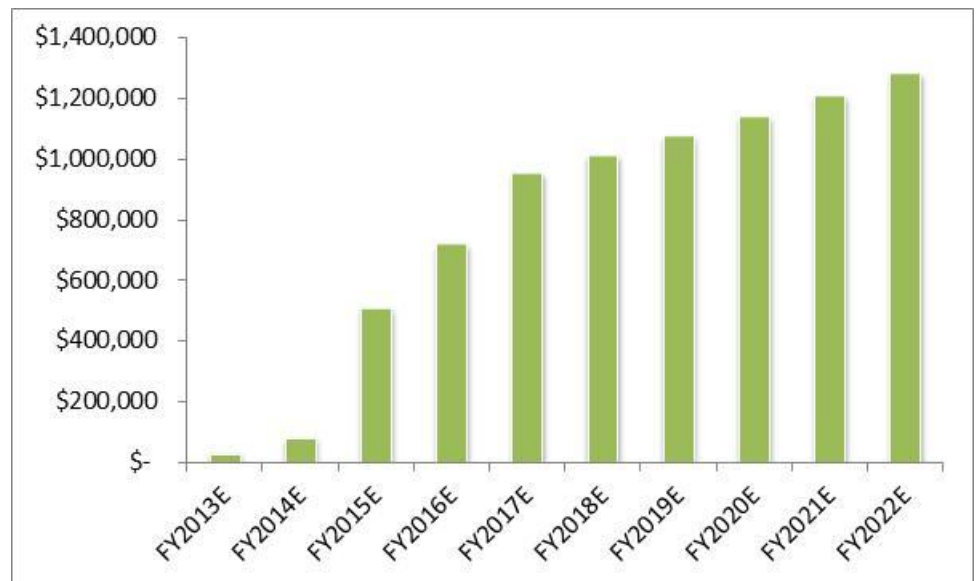
Source: RM Research

	FY2013E	FY2014E	FY2015E	FY2016E	FY2017E	FY2018E
<b>Cxbladder</b>						
Total annual US assay market, prevalence	1,825,600	1,862,112	1,899,354	1,937,341	1,976,088	2,015,610
Potential market penetration	0.2%	1%	3%	4%	5%	5%
Number of test carried out	3651	9311	56981	77494	98804	100780
Price per test	\$ 550.00	\$ 572.00	\$ 594.88	\$ 618.68	\$ 643.42	\$ 669.16
Revenue to Pacific Edge	\$ 2,008,160	\$ 5,325,640	\$ 33,896,636	\$ 47,943,401	\$ 63,572,950	\$ 67,438,185
<b>Royalties to CDY</b>	<b>\$ 30,122</b>	<b>\$ 79,885</b>	<b>\$ 508,450</b>	<b>\$ 719,151</b>	<b>\$ 953,594</b>	<b>\$ 1,011,573</b>
PV@15%	\$27,125	\$62,552	\$346,201	\$425,798	\$490,963	\$452,881

Using a royalty rate of 1.5% we forecast \$30K - \$1.3M in royalties to Cellmid in Year1 – Year 10 respectively. We use a price of \$550 per test which is on the lower side of the range provided by PEB. Higher penetration and royalty rates will provide an upside to our current estimates and CDY valuation.

**Figure 10. Estimates of Royalties to Cellmid from Cxbladder, FY13-FY22.**

Source: RM Research



Cxbladder is also available in New Zealand through Pacific Edge and in Australia through Pacific Edge or Healthscope. The test is also available in Spain and Portugal through PEB's partner, Oryzon. Australia, NZ, Spain and Portugal have significantly smaller market opportunities comparing to US. In addition, ex-US test will be priced at \$250 and €200 respectively vs \$768 in US.

We currently do not include ex-US opportunity for Cxbladder in our revenue model and valuation.



## Midkine as a Biomarker in Other Cancers Could Bring More Royalty Stream; We Expect Similar Economics For Future Deals

Midkine is a prominent cancer biomarker readily detected in serum/plasma and urine and has a potential to be a vital component of future diagnostic tests for 26 different cancers.

**Figure 11.** *Clinical and Scientific Evidence Suggest that midkine Could be Used as a Biomarker in 26 Cancer Types.*

Source: Cellmid Presentation, 2012

MK is over-expressed in tissue, blood and/or urine for at least 26 different cancers  
 [Blank space: not tested]

	Breast	Prostate	Ovarian	Cervical	Uterine	Lung (NSC)	Lung (SC)	Lung (brain mets)	Neuroblastoma	Glioblastoma	Medulloblastoma	Primitive neuroectodermal	Meningioma	Neurofibromatosis type I	Gastric	GI stromal	Bladder	Colorectal	Duodenal	Oral SCC	Oesophageal SCC	Hepatocellular	Bile Duct	Pancreatic	Thyroid	Osteosarcoma	Renal	CLL
Blood	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Tissue	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Urine															✓		✓	✓			✓	✓	✓	✓	✓	✓	✓	✓

According to PwC M&A and partnership deal values in diagnostic space jumped to exceptional levels during CY2011. Interestingly among partners were not only existing players in the diagnostics sector, but also private equity, life sciences research groups, clinical laboratories, and medical technology players. New entrants also included pharmaceutical companies in search of companion diagnostic products. According to EvaluatePharma consulting group in vitro diagnostics will be the industry's top segment by 2018, pulling in sales of \$54.5B and outstripping old standbys like cardiac devices and imaging technologies. Molecular Diagnostics is forecasted to grow globally at CAGR of 11%.

The surge and diversity encourages our belief in the growth prospects of Cellmid's highly validated diagnostic pipeline with CK3000 and GS5000 in-house programs and CE marked ELISA serving as a vital platform for future out-licensing deals. We believe Cellmid will be eligible for similar economics in each new deal, adding A\$0.02 per current share price per deal or more. That could include both in vitro diagnostics and companion diagnostics applications.

## Part II. Advangen's Hair Loss Portfolio Provides Near Term Cash Flows and Could Surprise Investors on the Upside

Advangen International Pty Ltd is a controlled entity of Cellmid Limited. Advangen owns exclusive international manufacturing, marketing and distribution rights for a range of scientifically validated products that prevent hair loss with the exception of China, Japan, South Korea, Malaysia, Singapore and Taiwan. These products contain FGF-5 inhibitor. FGF-5 was shown to shorten hair growth cycle in numerous animal studies and its inhibition provides therapeutic benefits. According to management the Company has a comprehensive licensing and distribution plan and is actively pursuing opportunities outside of Australia.

### Key Milestones Achieved

Key milestone was achieved in February 2012 when Cellmid received a TGA listing for the évolis® hair growth tonics. TGA certification provides a validation of the clinical performance and safety of the product by the regulatory body of Australia. We view TGA listing as a great marketing tool as it supports évolis®' therapeutic claims. Advangen's hair loss prevention products will not require a prescription and will be sold as over the counter medicines in pharmacies. Recommended retail price for évolis® is \$89 for each 50 ml bottle. The évolis® shampoo is expected to be available for sale in February 2013; however it will not be listed with the TGA.

Advangen already reached an agreement with almost 700 Australian pharmacies to stock évolis® hair loss prevention product range. The list of pharmacies includes some of the largest pharmacy chains such as Priceline, Terry White and National Pharmacies. Cellmid has also recently completed a four hour campaign on Foxtel's television shopping network.

### Frostbland is Taking Care of Distribution in Australia and New Zealand

Advangen has recently appointed Frostbland Pty Ltd as an exclusive distributor for the pharmacy and drug store market in Australia and New Zealand for évolis®.

Under the agreement Frostbland will take over all distribution responsibilities that include initiating sales, merchandising, product warehousing and dispatch. Frostbland will also assist with below the line advertising. The Frostbland network includes more than 3500 pharmacies and provides a superior market reach for the évolis® products.

évolis® is manufactured in Australia by GMP certified manufacturer Orielson Laboratories Pty Ltd. Their contract includes responsibility to formulate, pack and fill the évolis® products.

### Direct Sales to Hair Salons – Product Range

Company recently commenced direct sales to hair salons in New South Wales. Advangen is aiming to target approx. 200 salons in Sydney for the start. There are more than 20000 hair salons in Australia.



The Jo-Ju® and Lexilis® product ranges have been developed for direct distribution by the Company's in-house sales team to boutique hair salons across Australia.



**The Company's first Australian manufactured évolis® product range is included under the TGA's "listed medicine" regime and has been sold through pharmacies.**



**Figure 12. Jo-Ju and Lexilis Product Range Developed for Direct Sales.**

Source: Advangen

The range has four products at this stage all containing active ingredients inhibiting FGF-5. The products could be used together or separately, as well as with other treatment available on the market. These products are not listed with the TGA and currently being manufactured in Japan.

The product range includes:

- Jo-Ju Shampoo, unisex shampoo suitable for all hair types;
- Jo-Ju Lotion, scalp treatment for women;
- L  xilis lotion, scalp treatment for men;
- Jo-Ju Conditioner, conditioning treatment for men and women.

## Hair Loss cine Should be Taken Seriously – There is a Market for the Product

*Androgenetic alopecia* (androgen – dependent) is the most common cause of hair loss and affects both men and women. In men it produces male pattern hair loss with bi-temporal recession (M shape progression of a receding hairline where the frontal hairline above the nose is still intact, but the frontal hairline above the eyes is beginning to recede) and vertex (upper surface of the head) baldness. In women it produces female pattern hair loss (FPHL) with diffuse alopecia over the mid-frontal scalp (see Figure below). FPHL occurs as a result of non-uniform hair follicle miniaturization within follicular units.

An Australian epidemiological study indicated that in Caucasian adult females over the age of 20 years, the prevalence of FPHL (as defined by Sinclair stage 2 or greater hair loss) is 32.2% of whom 10.5% have moderate to severe hair loss (Sinclair stage 3 or greater).

**Figure 13.** Sinclair Stages for Female Pattern Hair Loss.

Source: Sinclair et.al., 2011

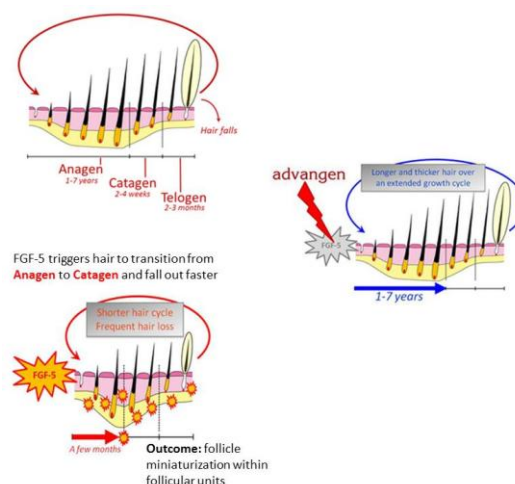


FHPL is a medical condition should be taken seriously as it is associated with psychological morbidity. Thus, a study exploring the psychological impact of FPHL in Australian females revealed that women with hair loss experience poorer health-related quality of life than women without hair loss.

## The Cause and The Cure – How Do Advangen Products Work?

**Figure 14.** Mechanism of Action for Advangen Hair Loss Prevention Products.

Source: Advangen, 2012



**Figure 15. FGF5 Inhibitor Applied via Sanguisorba Officinalis Root Extract Prevents Hair Loss.**

Source: Maeda et.al., 2007

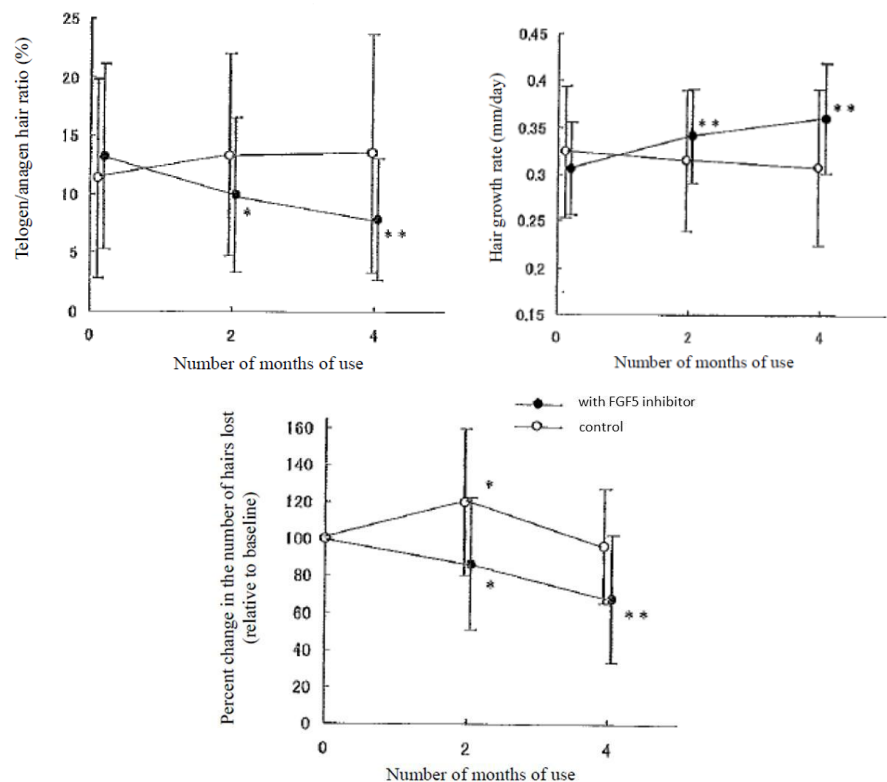
The hair follicle remodels itself during cyclical periods of growth (anagen), regression (catagen), rest (telogen) and shedding (exogen). During catagen, much of the follicle undergoes programmed cell death (apoptosis), reducing its size as it enters telogen.

Follicular regeneration happens at the onset of the next anagen phase. The size and length of the hair shaft correspond to the size of the hair follicle and to the duration of anagen, respectively.

It was shown that Fibroblast Growth Factor-5 inhibited hair growth during anagen and promoted the transition from anagen to catagen. Thus, FGF-5 inhibitors with FGF-5-antagonizing activity should prevent hair loss, as these inhibitors suppress the transition of hair follicles from the anagen to catagen phase and extend the growth phase. That statement was clinically validated and we view it as a great marketing tool for Advangen. However, these products will not help regrow hair that is lost permanently.

## Therapeutic Claims of Advangen Products are Based on Clinical Studies

Scientific foundation for Advangen hair loss prevention products were based on studies with *Sanguisorba Officinalis* root extract (SO) which was shown to be a reliable source of FGF-5 inhibitor.



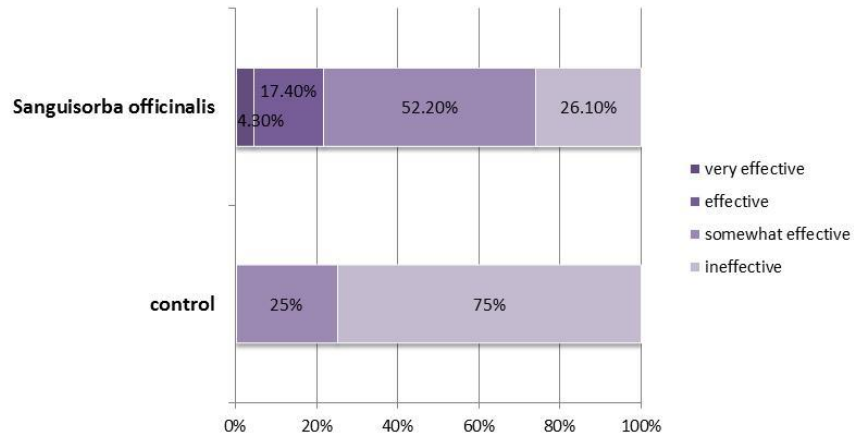
In a double-blind placebo controlled clinical study using 39 volunteers with hair loss, the SO extract significantly decreased the telogen/anagen hair ratio, the number of shed hairs and increased hair growth rates.

The clinical results were further validated in vitro and in animal models and were recently published in peer-reviewed journals.

**Figure 16.** Human-use test results assessing the effectiveness of *Sanguisorba officinalis* extract after 4 months of use.

Source: Maeda et.al., 2007

The extract showed a high degree of clinical usefulness as 22% of subjects in the study considered it as effective or very effective therapy (Figure 16).



These findings suggest that FGF-5-antagonizing activity of SO extract observed in vitro and in vivo is closely related to its clinical effects.

## Competition – Strong Sales Imply Medical Need

Outside of hair transplant treatments (\$5000 and up), the only two products approved by the FDA as a result of controlled clinical trials include minoxidil and finasteride, selling annually over US\$300 million and \$1.1 billion respectively.

*Minoxidil* mode of action is not fully understood but it is thought to act mainly by increasing anagen duration, with the added effect of increasing hair diameter. Minoxidil also stimulates regrowth by inducing early anagen in follicles that are in the latent part of telogen. Topical Minoxidil is available as 2% and 5% strength but only the 2% formulation is currently approved by FDA for the treatment of pattern hair loss in women.

Minoxidil (generic) 5% lotion sells at \$90 per 6 months of therapy, while 1 month Regaine (branded) foam (5% minoxidil) sells for \$63.

*Finasteride* (marketed as Propecia) is a specific inhibitor of 2,5 $\alpha$ -reductase which functions to catalyse the peripheral conversion of testosterone to a more active steroid dihydrotestosterone. Thus, finsteride works by minimizing androgen effects. It is an oral treatment. Finasteride could cause side effects such as reduced libido and in rare cases impotence. Finasteride may also cause abnormalities in the male foetus and therefore is contraindicated in pregnant women. A 1-year, double-blind, placebo-controlled, randomized study investigating treatment of FPHL with Finasteride 1 mg daily in 137 postmenopausal women did not show any benefit in slowing disease progression and/or in hair regrowth. Despite this Propecia sales exceed \$1B, probably due to convenience of administration and psychological effect.

Generic finasteride costs \$45.50 per 90 x 1 mg tablets, and branded Propecia sells for \$226.19 for 84 x 1 mg tablets.

## Advangen Revenue and Profit Estimates

Currently we only estimate sales from the Australian operations. While US and Europe represent larger opportunities, we do not include sales from these regions into our model until we get more clarity from the company on the path forward and more information on regulatory requirements.



**Figure 17. Market Size and Revenue Estimates for Advangen Hair Loss Prevention Products, FY13-FY18.**

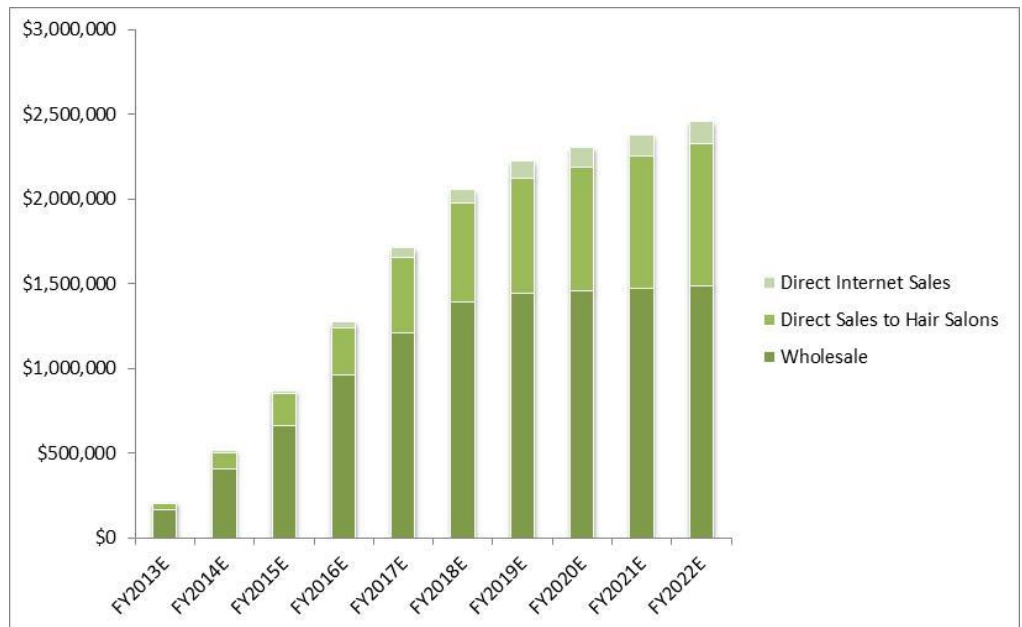
Source: RM Research

	FY2013E	FY2014E	FY2015E	FY2016E	FY2017E	FY2018E
<b>Hair Loss</b>						
<b>Wholesale</b>						
Number of Pharmacies Stocking, ave	1100	1300	1400	1500	1600	1700
Evolis (for women) per pharmacy / per year	4	8	12	16	20	22
Evolis (for men) per pharmacy / per year	2	4	6	8	8	8
Evolis (both) per pharmacy / per year	6	12	18	24	28	30
Retail Price	\$80	\$80.80	\$81.61	\$82.42	\$83.25	\$84.08
Wholesale discount	50%	50%	50%	50%	50%	50%
Wholesale price	\$40	\$40	\$41	\$41	\$42	\$42
COGS	\$14	\$14	\$14	\$14	\$15	\$15
Gross Margin	\$26	\$26	\$27	\$27	\$27	\$27
Profits to CDY	\$171,600	\$409,656	\$668,370	\$964,362	\$1,212,096	\$1,393,639
<b>Direct Sales to Hair Salons</b>						
Number of Hairsalons Buying, ave	200	350	450	550	650	750
Jo-Ju and Lexilis sole per salon / per year	4	7	10	12	16	18
Average Sale Price	\$70	\$70.70	\$71.41	\$72.12	\$72.84	\$73.57
COGS	\$31.50	\$31.82	\$32.13	\$32.45	\$32.78	\$33.11
Gross Margin	\$40	\$41	\$41	\$42	\$43	\$44
Profits to CDY	\$32,000	\$99,715	\$186,332	\$277,999	\$445,560	\$588,204
<b>Direct Internet Sales</b>						
Evolis bottles shipped per year	50	150	300	600	960	1296
Annual growth		300%	200%	100%	60%	35%
Average Sale Price	\$90	\$90.90	\$91.81	\$92.73	\$93.65	\$94.59
COGS	\$31.50	\$31.82	\$32.13	\$32.45	\$32.78	\$33.11
Gross Margin	\$58.50	\$59.09	\$59.68	\$60.27	\$60.88	\$61.48
Profits to CDY	\$2,925	\$8,863	\$17,903	\$36,164	\$58,440	\$79,683
<b>Total Profits to CDY (from Advangen)</b>	<b>\$206,525</b>	<b>\$518,234</b>	<b>\$872,604</b>	<b>\$1,278,524</b>	<b>\$1,716,096</b>	<b>\$2,061,527</b>
PV@15%	\$185,973	\$405,793	\$594,153	\$756,993	\$883,541	\$922,946
Number of people using per year	2,483	6,067	10,000	14,400	18,720	21,932
Potential number of customers, eligible	1,270,497	1,270,497	1,270,497	1,270,497	1,270,497	1,270,497
% of addressable customer populaion using	0.195%	0.478%	0.787%	1.133%	1.473%	1.726%

Our assumptions include wholesale price of \$40 to pharmacy chains and gross margin of 65%. For direct sales we estimate ASP of \$70 and \$90 for sales to salons and internet sales respectively and COGS of \$31.50. Our model results in conservative market penetration ranging from 0.2% in Year1 to 1.9% in Year10.

**Figure 18. Profit Estimates from Sale of Advangen Hair Loss Prevention Products, FY13-FY22.**

Source: RM Research



## Part III. Early Stage Therapeutic Pipeline Will Provide Significant Upside to our Target Price Once Ready to Go into Clinical Stage

### CAB101 Preclinical Program - midkine and Inflammation

Cellmid's CAB101 program is aimed at developing anti-midkine antibodies for the treatment of a range of inflammatory and autoimmune diseases. The program hit a milestone event last October with the humanization of "first in class" anti-midkine antibody hu91 (former CDY91 mouse monoclonal antibody). Hu91 was tested in a range of *in vitro* assays for affinity and biological activity. *In vivo* studies involving animal models of kidney and lung inflammatory diseases as well as surgical adhesions are ongoing with the goal to identify the key therapeutic indication for clinical trials.

The program is in collaboration with Antitope Ltd whose technology has the extra advantage of avoiding immunogenic motifs in the antibody and thus mitigating potential side effects (i.e. adverse immune responses) in human patients.

### How hu91 works?

Midkine is a potent promoter of inflammatory cell migration. Therefore, hu91's main mechanism of action is based on blocking the cell migration from occurring by sequestering midkine in the blood and tissues. This mechanism should effectively reduce inflammatory damage. An Anti-midkine antibody could potentially be effective in a range of inflammatory diseases.

A brief summary on the role of midkine in inflammation disease known to date is shown in the table below

Organ	Disease	Model/specimen	Publication
Kidney	Diabetic nephropathy	Streptozotocin-induced diabetic nephropathy	Kosugi et al. 2006 [28], Kosugi et al. 2007 [10]
	Tubulointerstitial injury	Ischemia/reperfusion	Sato et al. 2001 [29], Sato et al. 2005 [30]
	Drug side effects	Cisplatin-induced renal damage	Kawai et al. 2004 [31]
Joints	Rheumatoid arthritis	Human synovial fluid, human synovial tissue	Takada et al. 1997 [32]
		Antitype II collagen antibody-induced arthritis	Maruyama et al. 2004 [11]
Vascular System	Atherosclerosis	Intimal hyperplasia in vein grafts	Banno et al. 2006 [33]
		In-stent restenosis	Narita et al. 2008 [34]
		Neointima formation in restenosis	Horiba et al. 2000 [35]
Colon	Crohn's disease	Human blood	Krzystek-Korpaczka et al. 2010 [12]
	Ulcerative colitis	Dextran-sulfate-sodium- (DSS-) induced colitis	Yuki et al. 2006 [36]
Central nervous system	Multiple sclerosis	Experimental autoimmune encephalomyelitis (EAE)	Liu et al. 1998 [37], Wang et al. 2008 [13]

**Table 4. Role of midkine in the range of inflammation disease: scientific evidence.**

Source: Weckbach et.al., 2011

### Market for Anti-inflammatory Drugs is Expected to Grow

Current therapeutic options include immunosuppressive drugs, corticosteroids, cytostatics, and biological drugs specifically targeting proteins involved in the inflammatory response. As of 2011, 5 TNF-alpha inhibitors (monoclonal antibodies against TNF-alpha) are approved for use by the FDA: infliximab, etanercept, adalimumab, golimumab, and certolizumab pegol. Other FDA-approved biologic agents for treating inflammatory conditions such as a Rheumatoid Arthritis include abatacept, rituximab, and tocilizumab.

All biologic agents carry an increased risk of infections since these drugs effectively shut down immune system and thus all patients being considered for biologic agents should be screened annually for tuberculosis and should receive pneumococcal, influenza, and hepatitis B vaccinations.

Never the less, the market for biological anti-inflammatory agents is enormous and continues to grow. According to Decision Resources consulting group, the Rheumatoid Arthritis (only one indication from inflammatory disease list) drug market will experience revenues growth from \$11.1 billion in 2011 to \$15.2 billion in 2021.

## Where midkine fits?

Different studies have shown that midkine plays a role in inflammation by induction of leukocyte infiltration and chemokine expression, as well as by suppression of T<sub>reg</sub> expansion. Thus, inhibition of midkine should profoundly reduce inflammation.

As midkine shows highly restrictive expression patterns in healthy tissues of the adult organism, targeting midkine may represent a promising new approach for treatment of chronic inflammation including autoimmune diseases as this should warrant significantly less side effects.

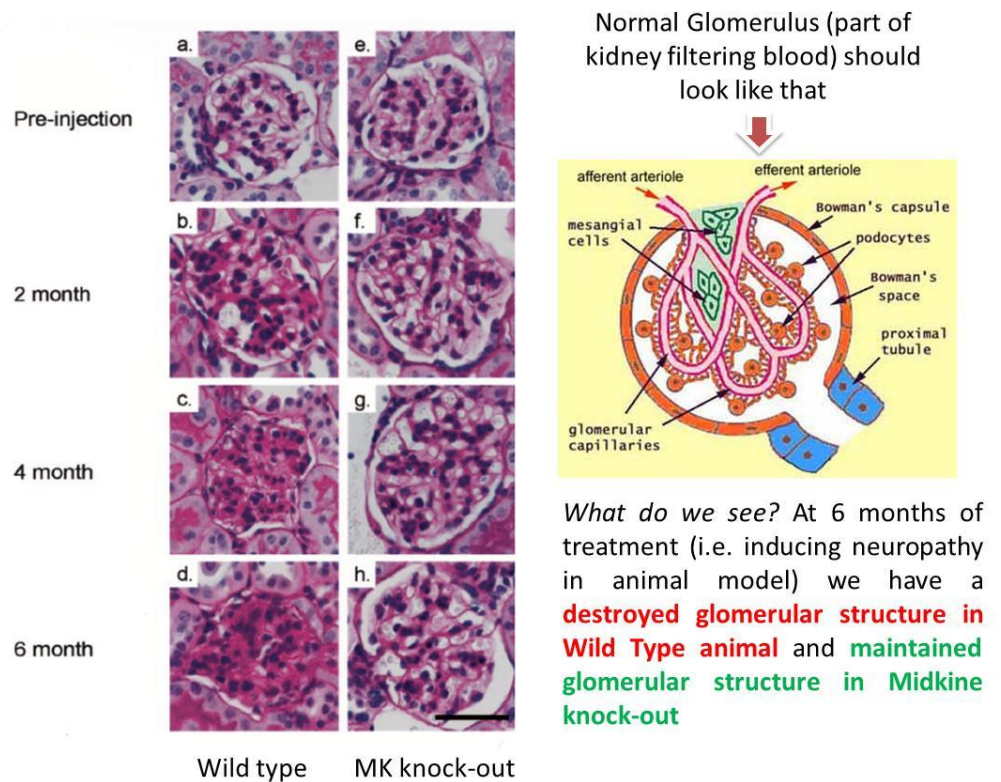
## Potential Indication for Anti-midkine Antibody – Diabetic Nephropathy

We believe that Diabetic Nephropathy could be the first indication where hu91 could be successfully tested in clinical settings. Diabetic nephropathy is a major complication of diabetes mellitus, which is the most common cause of end-stage renal failure in many countries. According to a recent market research study the diabetic nephropathy therapeutics market is expected to record a CAGR of 5.2%, to reach \$2.35 billion by 2017 (global diabetic nephropathy (DN) therapeutics market valued \$1.65 billion in 2010).

Cellmid has good preclinical data showing that midkine is involved in the pathogenesis of diabetic nephropathy (Figure 19).

**Figure 19.** Midkine is involved in the pathogenesis of diabetic nephropathy. Anti-midkine antibody could be an effective treatment for DN.

Source: Kosugi et.al., 2006



The data above is indicative that an anti-midkine antibody could be an efficacious treatment for Diabetic Nephropathy.

## CAMI103 Preclinical Program – Acute Myocardial Infarction

Under this program Cellmid is developing the midkine protein for the treatment of heart muscle damage following Acute Myocardial Infarction (AMI). This program is currently partnered with Pharmahungary for the pre-clinical and early clinical validation.

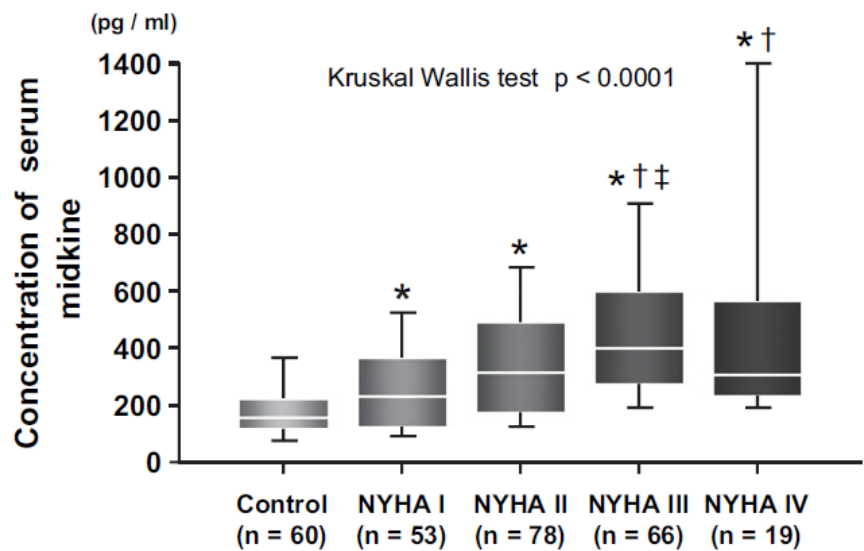
### Scientific and Pre-clinical Validation for AMI Program

A recent animal study from Nagoya University, Japan showed that midkine prevents the cardiac remodelling after myocardial infarction and improves the survival most likely through an enhancement of angiogenesis and anti-apoptotic events, suggesting a therapeutical application for midkine in heart failure (HF) patients (Takenaka et.al., 2009).

Another study from Yamagata University School of Medicine, Japan showed that serum midkine levels are increased in HF patients, and midkine is a novel marker for risk stratifying HF patients.

**Figure 20.** Association between serum midkine levels and New York Heart Association (NYHA) functional class. Data shows statistical correlation.

Source: Kitahara et.al., 2010



This provides evidence that midkine is expressed as part of the body's repair mechanism and the more the damage the more midkine is produced by the body to heal. Midkine levels statistically correlate with NYHA functional classification which is widely used in clinical practice and could be prognostic post heart attack.

AMI therapeutic program is currently ongoing further validation before moving closer towards clinical studies.

## *Intellectual Property*

We view Cellmid's almost exclusive midkine patent portfolio as a core asset to the company's present and future business. Strong IP rights on midkine as a biomarker or therapeutic agent are crucial for future partnerships. Midkine's current patent portfolio includes 20 patent families and 77 patents of which 51 granted (see list below)

- 1 Patent Family Entitled: Method for treating retinal diseases (1 patent granted Exp 2015)
- 2 Patent Family Entitled: Composition comprising midkine or pleiotrophin protein and method of increasing hematopoietic cells (2 patents granted Exp 2017/2018)
- 3 Patent Family Entitled: Drugs containing as the active ingredient midkine or inhibitors thereof (9 patents granted Exp 2018/2020)
- 4 Patent Family Entitled: Preventives or remedies for ischemic disease (7 patents granted Exp 2018)
- 5 Patent Family Entitled: Mass secretion/expression system of true MK family protein (1 patent granted Exp 2019)
- 6 Patent Family Entitled: Preventives/remedies for arteriosclerosis and post-PTCA reangiostenosis (11 patents granted Exp 2019)
- 7 Patent Family Entitled: Early cancer tumor marker (11 patents granted Exp 2020)
- 8 Patent Family Entitled: Monoclonal antibody against human MK (1 patent granted Exp 2020)
- 9 Patent Family Entitled: New method for preparing antisense oligonucleotide (1 patent granted Exp 2022)
- 10 Patent Family Entitled: Method for diagnosing rheumatism (1 patent granted Exp 2022)
- 11 Patent Family Entitled: Preventive for adhesion following abdominal surgery (2 patents granted Exp 2024)
- 12 Patent Family Entitled: Arthritis-associated gene and use thereof in examining arthritis (1 patent granted Exp 2024)
- 13 Patent Family Entitled: Method for treatment or prevention of disease associated with functional disorder of regulatory T cell (1 patent granted Exp 2026)
- 14 Patent Family Entitled: Antibody recognizing C-domain of midkine (under examination Exp 2027)
- 15 Patent Family Entitled: Composition for treating or preventing myocardial disorder or heart failure (1 patent granted Exp 2025)
- 16 Patent Family Entitled: Nitric oxide synthase activator (under examination Exp 2027)
- 17 Patent Family Entitled: Pharmaceutical composition for vascular occlusive disease (under examination Exp 2026)
- 18 Patent Family Entitled: Therapeutic agent for occlusive peripheral vascular disease, and use thereof (Filed Exp 2027)
- 19 Patent Family Entitled: Method of treatment or prevention of hair loss or for the enhancement of hair growth (awaiting filing Exp 2031)
- 20 Patent Family Entitled (PCT application): Undisclosed (Filed Exp 2032)



## ***Risk Analysis***

We believe there are several risks to Cellmid's share price and our price target. Our price target is largely built of future royalty streams from lung and bladder cancer diagnostic products (A\$0.027). Our valuation relies on timely market entry (we expect 2H2013), commercial success of these tests, and their reimbursement levels in US. In addition, Advangen is commercializing hair loss prevention products that contribute A\$0.012/sh in our price target. As a result there are upside and downside risks associated with that product line. Risks include:

### **Downside**

*Commercial Risk:* The majority of CDY's forecasted revenues come from royalties on lung cancer and bladder cancer tests paid by Quest Diagnostics and Pacific Edge. If the sales numbers for these tests materially differ from our forecast, our price target could be negatively impacted as well as the stock price. Same argument is valid for the Advangen business unit. In addition, future therapeutics and diagnostics developed by the company may require development partners and the company may be delayed or unsuccessful in seeking out such partners. The company has multiple product development programs to ensure that this risk is mitigated.

*Reimbursement Risks (on Partnered Tests):* Medicare reimbursement could decline. We do believe that Medicare reimbursement for the clinical lab fee schedule is likely to decline in the future, given recent chatter regarding co-payments and additional market basket reductions. Conversely, material inflation in the annual market basket adds upside to our forward estimates.

*Intellectual Property Risks:* The patent positions of biotechnology companies can be highly uncertain, and the company could face the risk in obtaining and defending its key product patents. Failure to protect midkine patents could negatively impact the stock price.

*Technical Risks:* associated with the development of the company's products which may cause a delay in development or failure to complete development programs. To mitigate this risk, the company has a diverse portfolio of assets at various stages of development and with multiple revenue opportunities.

*Competition Risks:* therapeutics or diagnostics competing with the company's products may be developed by others reducing the potential market. The company can do little to prevent competition. However, it operates in the pharmaceutical development sector where competitive products are often successfully marketed together.

### **Upside**

*Better-Than-Expected Sales:* If molecular diagnostics or hair loss prevention products sales are better than we forecast, it could positively impact the share price.

## *Directors and Management*

### **Dr David King, Chairman**

Dr David King brings a depth of corporate governance, capital markets and listed company board experience to Cellmid. He has previously held positions as Executive Director, Chief Executive Officer and Managing Director in a number of private and listed companies.

An expert in high growth companies Dr King has a track record in starting business ventures and developing them into attractive investment and/or take-over targets. His experience in successful start-up businesses has been instrumental in CDY's recent acquisition of the Midkine intellectual property portfolio.

Dr King is a Fellow of the Australian Institute of Company Directors, a Fellow of the Australian Institute of Geoscientists and the Australian Institute of Mining & Metallurgy (Chartered Professional, Management) and holds degrees in physics and geophysics and a PhD in Seismology from the Australian National University.

### **Maria Halasz, Managing Director and CEO**

Maria Halasz has been involved with biotechnology companies for 19 years; initially working in executive positions in biotechnology firms, then managing investment funds and later holding senior positions in corporate finance specialising in life sciences.

Prior to joining Cellmid Ms Halasz had been an adviser to an independent sector based research firm in life sciences and managed Direct Capital Group Pty Ltd, a specialist biotechnology fund. She has also been a venture partner at the Emerging Technology Fund of venture capital firm Allen & Buckeridge.

Since taking over as Chief Executive and Managing Director of Cellmid Ms Halasz has led the restructure of the business, the acquisition of the Midkine intellectual property portfolio and the recapitalisation of the company.

Ms Halasz is a Member of the Australian Institute of Company Directors and holds a science degree in Microbiology and an MBA

### **Graeme Kaufman, Non-Executive Director**

Graeme brings over 45 years' experience in biotechnology spanning technical, commercial and financial areas. Having worked for 34 years at CSL Limited, Australia's largest biopharmaceutical company, he held senior positions including Production Director, General Manager Finance and General Manager Biosciences. Graeme holds BSc & MBA with Melbourne University

### **Martin Rogers, Non-Executive Director**

Mr Rogers has a strong science background, which includes degrees in science and chemical engineering and is currently a member of the management committee of the National Breast Cancer Foundation. Mr Rogers also has strong expertise in the corporate sector, with a focus on the incubation and development of new business ideas. He has previously been involved in the origination of a number of new business concepts and the establishment of internal ventures and external partnerships, including finance concept origination in the corporate banking sector for institutions such as Macquarie Bank.

### **Darren Jones, Head of Product Development**

Darren Jones has worked in the Australian biotechnology industry for over 10 years, with particular responsibilities for developing promising therapeutic antibody candidates from discovery, screening, preclinical testing and humanising through to clinical trials. In addition to his considerable technical expertise in all aspects of the development of antibody therapeutics, he has extensive expertise in intellectual property management and strategic business planning. Prior to working in the biotechnology sector Mr Jones worked as a research scientist at the University of Technology and at St Vincent's Hospital, Sydney in the fields of immunology, cancer and HIV. Darren has a BSc from the University of Sydney and a MSc degree from the University of Technology, Sydney.

**Nicholas Falzon, Company Secretary and Financial Controller**

Nicholas Falzon has been working with Cellmid for over four years and was appointed as Financial Controller and Company Secretary on the 6th October 2010. As a partner at Lawler Partners, Nicholas works with a number of listed and unlisted companies advising them on all aspects of their financial management. His special area is R & D Tax Concessions and he has been successful in applying for substantial tax offsets for Cellmid in the past.

**Andrew Bald, Company Secretary**

Andrew Bald has 25 years of experience in banking and corporate finance, having advised private and ASX listed companies in a number of industries. Prior to his role as a corporate advisor, he was an investment banker managing balance sheet and trading risks as well as advising on a number of significant project financing transactions.

## Registered Offices

### Perth

Level 2, 6 Kings Park Rd  
West Perth WA 6005

PO Box 154  
West Perth WA 6872

### Email / Website

info@rmresearch.com.au  
www.rmresearch.com.au

**Phone:** +61 8 9488 0800

**Fax:** +61 8 9488 0899

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<b>Speculative Buy</b>	We forecast strong earnings growth or value creation that may achieve a return well above that of the broader market. These companies also carry a higher than normal level of risk.
<b>Hold</b>	A sound well managed company that may achieve market performance or less, perhaps due to an overvalued share price, broader sector issues, or internal challenges.
<b>Sell</b>	Risk is high and upside low or very difficult to determine. We expect a strong underperformance relative to the market and see better opportunities elsewhere.

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