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28 June 2011

The Directors
HealthLinx Limited
576 Swan Street
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Dear Nick

RE: Valuation of Carried Intangible Assets at 30 June 2011

We have pleasure in presenting a current valuation of the intangible assets ("IA") owned by HealthLinx Limited ("HealthLinx" or the "Company") and acquired as part of the reverse acquisition of Theros Pty Ltd by Cryptome Pharmaceuticals Limited in February 2006. Following the acquisition, on 9 March 2006, Cryptome Pharmaceuticals Limited ("Cryptome") was renamed HealthLinx. The acquired IA relates to intellectual property ("IP") that underpins a novel ovarian cancer diagnostic product, OvPlex™.

The valuation of the OvPlex™ IP is required for HealthLinx's annual accounts as at 30 June 2011 to assess whether any impairment has occurred to the IA. An amount of \$2,581,835 was recognised in the 30 June 2010 accounts for IA, of which \$1,887,220 relates to goodwill and \$630,739 to capitalised development costs, total \$2,517,959, as a consequence of the Cryptome acquisition.

OvPlex™ as currently configured measures the levels of five proteins in a patient's blood, one of which is routine for cancer detection and monitoring, cancer antigen-125 or CA-125. When measured along with the four additional proteins a significant enhancement in diagnostic performance relative to CA-125 alone can be achieved. The multimarker test measurements are analysed using an algorithm to generate a single OvPlex™ value which represents the likelihood that a woman has ovarian cancer.

The product is the subject of patents and is currently undergoing a second Phase 2 trial. As such, the development program can be considered to be in-process research and development ("IPR&D") even though sales are being recorded in some regions.

Australian Accounting Standard AASB 3 *Business Combinations* requires an acquirer to recognise the acquiree's identifiable assets, liabilities and contingent liabilities that satisfy the relevant recognition criteria at their fair values at the acquisition date. An IA meets the identifiability criterion when it is separable, that is, is capable of being separated or divided from the entity and sold, transferred, licensed, rented or exchanged, either individually or together with a related contract, asset or liability. IPR&D and patent applications satisfy the identifiability criterion and may be distinguished from goodwill.

Accounting Standard AASB 136 *Impairment of Assets* requires that the recoverable amount of an IA with an indefinite useful life or an IA not yet available for use be determined annually at the same time each year and compared with the IA's carrying amount.

AASB 136 defines recoverable amount as the higher of fair value less costs to sell and value in use, and defines value in use as the present value of the future cash flows expected to be derived from an asset or cash-generating unit. It requires that, where the recoverable amount is less than the asset's carrying amount, the carrying amount be reduced to its recoverable amount and immediate recognition of this impairment loss as an expense in the profit or loss statement.

The purpose of the current assessment is to assist the Company's Directors and auditors in forming an opinion on the carried value of the OvPlex™ IP.

In determining a valuation of the IP, Acuity Technology Management Pty Ltd ("Acuity") conducted an assessment of the underlying technology, patent applications, licence agreements and R&D programs as well as an examination of the markets and competition for the proposed product.

1. Summary of Valuation

The IP that we have valued is comprised of patent applications, experimental and clinical trial results, distribution agreements, and the knowhow and expertise that will enable the IP's further commercial development.

Although a number of techniques suitable for valuing intangible assets were considered, the principle approach used is a probability adjusted net present value ("PANPV") method using revenue projections and expenses developed by Acuity. The financial models are based on cash flow projections that may result from further research with probability and discount rate adjustments based on published literature and our perception of the risks associated with successful product development and commercialisation.

Based on our PANPV analysis, we offer the opinion that a fair and reasonable after tax value for the OvPlex™ IP is approximately \$105 million.

Even though a number of the assumptions used in preparing the valuation are considered imprecise it is our recommendation that no impairment has occurred over the past 12 months and no write down of the carried IA is required..

The cash flow models used in the valuation make the assumption that HealthLinx has, or will have, sufficient funds to support further development of the technology, clinical trials and commercialisation and invest in IP protection. A lack of capital could undermine the value.

2. Background

2.1 *The OvPlex Technology*

HealthLinx is the owner of innovative technology for the early stage diagnosis of ovarian cancer. It relies on the detection of multiple serum markers that deviate in a patient's blood or serum when a tumour is present and, that when combined, increase the reliability of detection relative to the current standard, CA-125.

CA-125 is a well characterised biomarker for ovarian cancer but its serum level is not always modified when a cancer is present, particularly in early stage disease, and, conversely, may be elevated when tumours are not present. In other words its measurement is associated with high levels of false negative (ie. disease fails to be identified) and false positive (ie. indicates disease is present when in fact there is none) results. Serum concentrations of CA-125 are elevated (>35 U/ml) in more than 90% of patients with late stage disease but are elevated in only 50% of patients with Stage I disease. The CA-125 test has an 80% chance of returning true positive results from Stages II, III, and IV ovarian cancer patients. The other 20% of ovarian cancer patients do not show any increase in CA-125 concentrations.¹

Seventy percent of people with cirrhosis, 60% of people with pancreatic cancer, and 20%-25% of people with other malignancies have elevated levels of CA-125.

HealthLinx's product, OvPlex™, requires concurrent measurement of CA-125 along with four other biomarkers, C-reactive protein ("CRP"), serum amyloid A ("SAA"), interleukin-6 ("IL-6") and interleukin-8 ("IL-8"). The patented algorithm then intelligently analyses the results to provide a single parameter, the OvPlex™ Index, enabling a higher level of assurance that the patient has or does not have ovarian cancer than can be obtained from measuring CA-125 alone.

HealthLinx has completed a phase II retrospective, case-control study involving 362 plasma samples obtained from women with ovarian cancer ($n = 150$) and healthy controls ($n = 212$) where the performance of the model was evaluated using an independent validation cohort ($n = 183$) and compared with of CA-125 when used alone.² The Phase II trial was completed successfully and independently reviewed and published in an international peer-reviewed scientific journal.

Using a measure known as the receiver operator characteristic curve ("ROC") it was found that the biomarker panel was significantly greater than for CA-125 alone for a validation cohort ($p < 0.01$) and an early stage disease cohort (ie. Stages I and II; $p < 0.01$). At a threshold of 0.3, the sensitivity and specificity of the multianalyte panel were 94.1% and 91.3%, respectively, for the validation cohort and 92.3% and 91.3%, respectively for an early stage disease cohort.

OvPlex™ is available in Australia as an elective test currently not requiring a regulatory approval. European Certification, CE Mark, has been obtained in the UK, where it is sold by Intus Healthcare Ltd and Spire Healthcare Ltd; and in Ireland. The CE Mark is considered adequate for on-sale of product in the rest of Europe. In Singapore it is distributed by INEX Innovation Exchange Pte Ltd and sold through Quest Laboratories and in Israel by Medison Pharma Limited.

HealthLinx has finalised research agreements in South Korea to initiate a 220 patient study as a requirement for South Korean Food and Drug Administration ("KFDA" marketing approval). The trial is being undertaken at the Samsung Medical Centre, Sungkyunkwan University School of Medicine and the Asan Medical Centre and Seoul National University Hospital.

¹ John Hopkins pathology. Ovarian Cancer (<http://www.ovariancancer.jhmi.edu/ca125qa.cfm>) accessed 1 June 2011.

² TA Edgell, *et al.* Cancer Res Clin Oncology 136:1079, 2010.

Table 1: Typical OvPlex testing Scheme³

Test	Result	Comment
CA-125 OvPlex Index	<35 <0.45	Results are indicative of a lower risk of ovarian cancer
CA-125 OvPlex Index	>35 <0.45	Indicative of a higher than normal risk of ovarian cancer. Patient referred to oncologist
CA-125 OvPlex Index	<35 >0.45	Elevated OvPlex is indicative of a higher than normal risk of ovarian cancer. Patient referred to oncologist.
CA-125 OvPlex Index	>35 >0.45	High likelihood of ovarian cancer. Patient referred to oncologist.

A second larger, multi-site, multi-national study is being undertaken to fortify clinical validity of the product. This study will utilise 1150 samples where the sensitivity and specificity of OvPlex™ and CA-125 will be compared. The large number will allow robust comparisons of sensitivity and specificity. Collaborations have been secured with gynecological oncology centres in Australia, UK and Singapore for this important study.

The study will make use of existing biobank samples as well as new collections. It will be undertaken in two stages:

- Stage 1: ~450 case/controls from banked samples; and
- Stage 2: ~700 samples from oncology collections including benign, BL, malignant carcinoma and controls.

In addition, the study will aim to test whether the addition of two new biomarkers AGR-2 and HTX010 are capable of further improving the sensitivity and specificity beyond 97%. Preliminary findings show that AGR-2 clearly complements the use of CA-125 as a diagnostic.⁴

2.2 Intellectual Property

The OvPlex™ IP is supported by an international patent application, WO 2009/129569, *An assay to detect a gynaecological condition*. Filed on 21 April 2009 and taking priority from Australian provisional patent 2008902029, filed 23 April 2008, in the name of HealthLinx with DJ Autelitano, TA Edgell, N Gatsios and LL Ilag as inventors. The patent has been granted in the UK and Australia.

³ TA Edgell, *et al.* Phase II Biomarker Trial of a Multimarker Diagnostic for Ovarian Cancer.” *Journal of Cancer Research and Clinical Oncology* (<http://www.springerlink.com/content/h446261h56873k50>).

⁴ TA Edgell, *et al.* Increased plasma concentrations of anterior gradient 2 protein are positively associated with ovarian cancer. *Clin Sci* 118(12):717, 2010.

Patent '569 defines several unique combinations of blood-borne biomarkers and their application in multimarker panels as diagnostics for ovarian cancer, including the five marker panel that currently makes up the OvPlex™ test. Such biomarkers may represent uniquely or over-expressed tumour-derived products, products elaborated via aberrant neoplastic processing/modification of host proteins and/or host response proteins elicited by the presence of the tumour and which may display profiles that vary and/or are specific for different types of tumours.

Specifically claimed in the patent is an assay for determining the presence of a gynecological condition in a subject comprising determining levels of biomarkers in a biological sample including CA-125 and at least one selected from AGR-2, midkine (also known as neurite growth-promoting factor 2, "NEGF2") and CRP, or modified or homolog forms. The assay may further include determination of biomarkers selected from two or more of CA-125, IL-6, IL-8, CRP, SAA and SAP; two or more of IL-6, IL-8, CRP, SAA and serum alkaline phosphatase ("SAP") and at least one of CA125, IL-6, IL-8, CRP, SAA and SAP and at least one of midkine or AGR-2.

All of the markers claimed by HealthLinx had been identified as modified in ovarian cancer patients previously. The novelty for the purpose of patenting is in the panel of markers selected and the method of analysis of results.

It is noted that the patent also includes the use of two additional biomarkers, designated AGR-2 and HTX010 or midkine, that have been shown to enhance performance of the panel in preliminary studies and provide an opportunity to further refine the diagnostic capabilities of the test.

One of the unique features of this patent is that, in addition to the biomarker combinations, the claims also cover the use of the multimarker test to generate a single diagnostic value via a modelling algorithm, the computer networking necessary to report from pathology laboratories to clinicians, and the reporting format for clinical diagnosis.

An International Search Report and International Search Opinion found prior art in that multiple antigens and the means for their assessment using multivariate analysis have been described by others. However, it did consider all claims were novel and that most, including the important ones, were inventive.

For example, US patent application 20090004687 (published as WO2009/006439, Correlogic Systems, Inc), proffered as prior art by the Searching Authority and with a priority date of 19 March 2008, before '569, claims the use of CRP, IL-6 and IL-8 along with CA-125 for predicting the presence, subtype and stage of ovarian cancer. The biomarker levels are subjected to multivariate analysis.

Thus, there remains a risk that not all claims will be granted in all jurisdictions.

BioRad Laboratories in October 2008 reported on a study which examined 37 markers available through five of its separate array panels.⁵ The analysis was carried out on a total solution Bio-Plex® Suspension Array System, which permits the simultaneous measurement of multiple serum proteins in a single well in just three hours, using as little as 12.5 µl of serum. In the study, sera were collected from ovarian cancer patients with Stages I-III disease.

⁵ V Gupta, *et al.* Multiplex Analysis of Serum Biomarkers in Ovarian Cancer Patients using Bio-Plex® Suspension Array System. http://www.bio-rad.com/webroot/web/pdf/lsr/literature/Bulletin_5818B.pdf.

Of the 37 serum proteins studied, serum concentration of eight (IL-6, CRP, IL-10, PCT, ferritin, haptoglobin, angiopoietin-2 and G-CSF) showed significant elevation in the diseased group as compared to the healthy controls ($p < 0.04$) while four serum markers (leptin, PAI-1, PECAM-1 and visfatin) showed significant decrease in the diseased group ($p < 0.05$). The levels of SAA, fibrinogen, GLP-1 and follistatin showed marked increase in the diseased group though not statistically significant.

The BioRad study did not observe changes to levels of IL-8, although other studies support its utility in ovarian cancer (including US 20090004687 referred to above), and SAP which are currently included in the OvPlex™ '569 claims.

Although BioRad may offer tests that are able to detect relevant biomarkers and compete with OvPlex™, there is still a requirement to conduct five panels of assays to obtain the results that the company considers relevant in a suitable diagnostic and four to obtain the panel required for OvPlex™. Without a data analysis tool the Bio-Plex® Suspension Array System would not satisfy US regulatory requirements for an *in vitro* diagnostic test and if it were to provide such a mechanism that encompassed any of the combinations proposed by HealthLinx it would require a licence from the Company.

What ultimately will be key to OvPlex™'s success are the two additional biomarkers as claimed in the patent.

AGR-2 is the subject of a separate patent application licensed from the University of Liverpool, WO 2008/025964. The patent relates to the use of a monoclonal antibody raised against a unique epitope of the cancer-related antigen. Preliminary studies using these antibodies demonstrated a favourable diagnostic profile using this biomarker on ovarian cancer patients and it was subsequently decided that large scale production of reagents would be initiated to develop a more refined assay to include in a larger biomarker trial. The patent covering the antibodies has been granted in Europe.

Patent application '964 is held in the name of University of Liverpool and names inventors as R Barraclough, DL Barraclough and P Rudland. It was filed on 28 August 2007.

The claims of the in-licensed patent cover the use of the monoclonal antibody in an assay to detect ovarian cancer. If ultimately incorporated into the OvPlex™ panel, it adds a further layer of protection to the IP. The terms of the agreement with the University of Liverpool, signed on 9 November 2007, include an upfront licence fee and royalties of 5% of net sales (reduced in proportion to the number of markers used in a combination product) or 15% of licence income where manufacture and distribution is sub-licensed (pro-rated) for the term of the granted patents.

Patent terms are generally for 20 years from the date of lodgement of the full specification.

2.1 Commercialisation Model

The target markets for OvPlex™ are:

- Specialist clinicians and GP's who manage the disease on a day to day basis;
- Women who have the disease or are at high risk of contracting the disease (*ie*, family history);
- Women who have symptoms of the disease; and
- Governments who wish to reduce the healthcare burden pertaining to the disease.

The Company's objective in commercialising OvPlex™ is to partner/license technology to major reference laboratories to distribute under Laboratory Developed Tests ("LTD") rules.⁶ This means that HealthLinx will allow laboratories to carry out the assays in return for a royalty on each test conducted.

Siemens Australia has provided HealthLinx with the clinical pathology platforms required to run the panel that are used by the Company's commercial partners in Australia and the UK. The reagents for the AGR-2 test will be manufactured in Victoria and formatted as a 96 well enzyme-linked immunoassay or ELISA.

The OvPlex™ panel is being sold for \$200 in Australia compared to CA-125 which has a post-reimbursement cost of \$40. The price difference is due to the five biomarkers used in the OvPlex™ panel that when combined, deliver a single index of disease indication and increased diagnostics efficiency. Despite the price difference, it is expected that the superior diagnostic performance of OvPlex™ in the earlier detection of the disease will provide real incentive for market uptake.

OvPlex™ is available in Australia as an elective test not requiring a regulatory approval. Regulatory approval will be required by the Therapeutic Goods Administration within the next two years due to impending legislative changes. The test is distributed through Healthscope Limited, which has in excess of 340 collection centres throughout Australia. OvPlex™ is made available through GP referral.

CE Mark has been obtained in the UK and Ireland and is considered adequate for on-sale of product in the rest of Europe. The diagnostic is sold in the UK by Intus and Spire Healthcare. Spire is the UK's second largest private hospital group providing pathology and outpatient services for OvPlex™ in 18 hospitals throughout the UK. We have been advised that royalties are averaging \$67.

CE Mark will also assist in obtaining regulatory approvals in South East Asia and Israel. The product has Health Sciences Authority approval for sale in Singapore. In South East Asia the Company collects A\$24 royalty for each unit sold.

⁶ The US Clinical Laboratory Improvement Amendments ("CLIA") federal regulatory standards require clinical laboratories to establish and document their own performance specifications for laboratory-developed tests to ensure accurate and precise results prior to implementation of the test. The performance characteristics that must be established include accuracy, precision, reportable range, reference interval, analytical sensitivity, and analytical specificity.

The official launch of OvPlex™ in Singapore took place in September 2010 where it is distributed by INEX and sold through Quest Laboratories. Quest Laboratories is the largest independent non-hospital based laboratory in Singapore. Singapore will serve as a platform for subsequent launch into India, Malaysia, Thailand, Indonesia and Vietnam where INEX also holds distribution rights. The product is being distributed for SGD\$180 per test with a royalty of A\$30 to HealthLinx Limited.

The Company has granted Medison Pharma an exclusive right for 10 years licence to market distribute and sell OvPlex™ in Israel. Medison Pharma distributes pharmaceuticals, medical devices and diagnostics. The Israeli population has a high rate of prevalence of ovarian cancer, more than double the incidence in Australia. HealthLinx will receive double digit royalties from sales by Medison Pharma.

HealthLinx has advised that dialogue continues with US-based parties to license the technology for use in the US and will include a trial of OvPlex™, which will meet FDA requirements and is mandatory to secure product approval by the FDA. The Company has appointed Colorado-based CPC Clinical Research as its contract research organisation (“CRO”) to assist with the FDA regulatory approval pathway. CPC will prepare a pre-IDE submission and coordinate meetings between the regulator and the Company with the goal of obtaining registration for OvPlex™.

HealthLinx has finalised research agreements in South Korea to initiate a 220 patient study as a requisite for South Korean Food and Drug Administration (“KFDA” marketing approval). The trial is being undertaken at the Samsung Medical Centre, Sungkyunkwan University School of Medicine and the Asan Medical Centre and Seoul National University Hospital.

3. Markets and Competition

3.1 Cancer Incidence and Prevalence

The International Agency for Research on Cancer (“IARC”) estimated the number of new cases of cancer worldwide for 2008 was approximately 12.7 million persons with 7.6 million deaths.⁷ The World Health Organisation (“WHO”) estimated that cancer rates could further increase by 50% to 15 million new cases in the year 2020, projections that, so far, seem to be on track.⁸ According to IARC there were an estimated 1.44 million new cases of cancer diagnosed in the US in 2008 (745,000 men and 692,000 women) with 565,000 deaths, representing approximately 188 deaths per 100,000.

In the adult male population, lung and prostate cancers are the most common forms. Breast cancer is the most common form of cancer in women with an incidence that is almost double that of any other cancer. The next most common forms of cancer afflicting women are cancers of the cervix and lung.

The IARC, in its Globocan 2008 data base, provides information on incidence and death rates for common cancers and Table 2 presents data for ovarian cancer, with prostate and breast cancers included for purposes of comparison. Although not as high in incidence, the prognosis is clearly worse for ovarian cancer sufferers.

⁷ Globocan Database. <http://www-dep.iarc.fr>.

⁸ World Cancer Report, International Agency for Research on Cancer (IARC), 2003.

Table 2: Incidence and Mortality Data on Ovarian Cancer

	Incidence (‘000)	Mortality (‘000)
Ovary⁹		
More Developed Regions	97	62
Less Developed regions	108	63
World	204	125
Prostate		
More Developed Regions	648	136
Less Developed regions	255	121
World	903	258
Breast		
More Developed Regions	692	189
Less Developed regions	691	268
World	1,383	458

The US National Institutes of Health estimates overall costs of cancer in 2010 at US\$263.8 billion: \$102.8 billion for direct medical costs (total of all health expenditures); \$20.9 billion for indirect morbidity costs (cost of lost productivity due to illness); and \$140.1 billion for indirect mortality costs (cost of lost productivity due to premature death).¹⁰ Over half of the direct medical costs are due to treatment of breast, lung and prostate cancers.

In the UK, the National Health Service spends £639m a year on cancer treatment (estimate for 2004).¹¹ Of this total, £230m is for specialist staff, £192m for drugs, £113m for new equipment and £103m for training, modernising services and palliative care.

3.2 Ovarian Cancer – Incidence & Treatment

Ovarian cancer is the second most common gynecological malignancy among women, which for many years was overlooked by most around the world. Among the seven major pharmaceutical markets (USA, UK, France, Germany, Italy, Spain and Japan), it affected 170,000 women in 2009 with Germany having the highest prevalence.¹²

Among women in the US, cancer of the ovary ranks fifth in incidence. Ovarian masses affected an estimated one million women in the US each year, and lead to as many as 300,000 surgeries.¹³ Approximately 21,880 new cases of ovarian cancer will be diagnosed in the US in 2010, and approximately 14,000 women will die of the disease.¹⁴

⁹ Globocan 2002.

¹⁰ American Cancer Society. Cancer Facts & Figures 2010 (<http://www.cancer.org/acs/groups/content/@nho/documents/document/acspc-024113.pdf>).

¹¹ The Sunday Times. 9 October 2005.

¹² The Cancer Market Outlook to 2015. Competitive landscape, market size, pipeline analysis, and growth opportunities. Business Insights Report BI00022-081, 26 August 2010.

¹³ Anon. Vermillion’s Blood Test Detects Ovarian Cancer Better; Stock Surges – Update. RTT News 12 May 2011 (<http://www.rttnews.com/Content/BreakingNews.aspx?Id=1623016>).

¹⁴ Ovarian Cancer. National Cancer Institute (<http://www.cancer.gov/cancertopics/types/ovarian>).

1 in 77 women in Australia will develop cancer before 85 years of age. Each year about 1,400 Australian women are diagnosed with ovarian cancer, and about 800 die from it.¹⁵

In Australia during 2000-01, total expenditure on ovarian cancer was \$25 million. Of this, \$19 million was spent on patients admitted to hospital, \$1 million on out-of-hospital costs and \$2 million on prescription pharmaceuticals. In 2000-01, ovarian cancer has an estimated lifetime treatment cost per case of \$19,677.¹⁶

In about 75% of cases, the cancer will be at an advanced stage when it's diagnosed; the cancer has spread and is very difficult to treat. There are no proven methods of prevention and it often is a rapidly fatal disease. The overall mortality rate for ovarian cancer is around 60% and the five year survival rate in advanced cases is only 21%.

Eighty percent recovery can be achieved if detected early. In the US it is estimated that in excess of 10 million women are at high risk of developing ovarian cancer based on a number of factors. Even so, regular screening of the population is not endorsed by professional societies in the US. Current screening tests include CA-125 marker, CT scans and transvaginal ultrasound.

The development of new cytotoxic agents, such as Taxol, have impacted on the treatment of ovarian cancer and, as generic forms of the drug become available in the next few years, it can be expected that more patients will be offered treatment.

To date, no targeted agents have been approved for ovarian cancer therapy. The first-line standard of care is surgery followed by carboplatin/paclitaxel chemotherapy. Surgery involves the removal of the affected ovary and the fallopian tube, followed by chemotherapy or radiotherapy. For relapsed disease, if the relapse is more than six months after first-line therapy, patients usually respond to carboplatin/paclitaxel again. However, if patients relapse within six months, these tumors are usually platinum-resistant and new agents must be used. Chemotherapy agents typically used in platinum-resistant patients are Gemzar, Topotecan and etoposide.

3.3 Molecular Diagnostics

The global market for molecular diagnostics, including cancer detection, exceeded US\$3.3 billion in 2010 with cancer representing US\$414 million or 12.5%.¹⁷ Based on Business Insight's projections, oncology, as shown in Table 3, will double before 2015.

¹⁵ National Breast and Ovarian Cancer Centre (<http://www.nbocc.org.au>).

¹⁶ AIHW (2006). Ovarian cancer in Australia: an overview, 2006, Australian Institute of Health and Welfare. <http://www.aihw.gov.au/publications/can/oca06/oca06.pdf>.

¹⁷ The Future Of Molecular Diagnostics: Innovative technologies driving market opportunities in personalized medicine. Business Insights report No: BI00021-012. 23 June 2010.

Table 3: World Market for Molecular Diagnostics, 2009-2015 (US\$m)

	2009	2010	2011	2012	2013	2014	2015
Blood screening	695	799	918	1,056	1,215	1,397	1,606
HIV/HCV testing	726	784	847	915	988	1,067	1,152
STD testing	435	487	546	611	685	767	859
Oncology testing	351	414	488	576	680	802	947
Genetic testing	357	414	480	557	647	750	870
HPV testing	267	307	353	406	467	537	617
Hospital acquired infections	86	99	116	136	159	186	217
Total	2,917	3,304	3,748	4,257	4,841	5,506	6,268

North America is clearly the dominant market (Table 4) for tests but Asia will show the greatest growth over the coming decade.

Table 4: World Market for Molecular Diagnostics by Geography, 2010 (US\$m)

Region	Market Share	Sales
North America	60%	1,982
Europe	20%	660
Japan	7%	231
ROW	13%	429

3.4 Ovarian Cancer Detection

Ovarian cancer commonly presents at a late clinical stage in more than 80% of patients, and is associated with a 5-year survival of 35% in this population.¹⁸ By contrast, the 5-year survival for patients with Stage I ovarian cancer exceeds 90%, and most of these patients are cured of their disease by surgery alone. Therefore, increasing the number of women diagnosed with early stage disease will have a direct effect on the mortality and economics of the cancer without the need to change surgical or chemotherapeutic approaches.

Detection of the condition relies on a woman being aware of the signs and symptoms and seeing her doctor if she develops them.

¹⁸ EF Petricoin, *et al.* Use of Proteomic patterns in Serum to Identify Ovarian cancer. The Lancet 359:572, Feb 16, 2002.

A recent study found that women screened annually for ovarian cancer, by CA-125 and transvaginal ultrasound, were just as likely to die from the disease as women who didn't have regular screening calling into question the effectiveness of current ovarian cancer screening techniques.¹⁹ The researchers also found that more of the women screened annually had surgery to remove their ovaries and suffered complications related to false-positive test results, meaning a screening test suggested they had ovarian cancer when they really didn't.

Cancer antigen 125 (CA-125) is the most widely used biomarker for ovarian cancer. Although concentrations of CA-125 are abnormal in about 80% of patients with advanced-stage disease, they are increased in only 50–60% of patients with Stage I ovarian cancer. The protein is also elevated in other common gynaecological conditions such as endometriosis or fibroids, so it's not suitable as a screening test.

CA-125 levels may be determined using the Australian MBS item number 66650 (fee \$24.50) which covers many tumour markers CA-125, CA-15.3, CA-19.9 antigen CA19, CEA, MSA, TGL, etc. A total of 292,500 such tests were undertaken on women during 2009/10.

Ultrasound examination alone has neither sufficient specificity nor sufficient predictive value to justify its use in community screening, and it is expensive.²⁰ Screening by measuring CA-125 level and performing transvaginal ultrasound appears to provide the highest specificity and positive predictive value for the detection of ovarian cancer.

There are no FDA-approved biomarkers for the initial diagnosis of ovarian cancer. CA-125 is only approved for monitoring recurrence or response to treatment. Business Insights comments that:²¹ *“In the future, tests are likely to be based upon a panel of biomarkers, rather than a single molecule.”* HealthLinx and at least three other companies are developing such tests.

The current global market for CA-125 is approximately US\$270 million. There are over 38 commercial assays reported in published literature that measure CA-125 and these assays fall into five major categories: ELISA, IRMA, CLEIA, MEIA, and LIA, in two generations.²² The US accounts for 50% of the current target market for ovarian cancer, consequently the success of OvPlex™ will largely be linked to successful FDA approval.

HealthLinx provides the following estimates (Table 5) of the sizes of markets for ovarian cancer testing. Table 5 also presents the royalty receipts per test where agreements have been entered or as estimated by the Company.

¹⁹ SS Buys, et al. Effect of screening on ovarian cancer mortality: the Prostate, Lung, Colorectal and Ovarian (PLCO) Cancer Screening Randomized Controlled Trial. JAMA 8;305(22):2295, 2011.

²⁰ C Anderiesz & MA Quinn. Screening for Ovarian Cancer. MJA 178(12):655, 2003.

²¹ Innovations in Oncology Diagnostics: Technological advances, growth opportunities and future market outlook. Business Insights Report No: BI00021-006. 19 October 2009.

²² M McLemore. Serial Tumor Marker Measurement in Ovarian Cancer Patients: A Case for Assay Consistency. July 14, 2005 (http://stti.confex.com/stti/inrc16/techprogram/paper_21396.htm).

Table 5: Estimated Market Sizes, Selling Price and OvPlex™ Royalty Amount

Country	Number of Tests	OvPlex™ Selling Price	OvPlex™ Royalty (AUD)
Australia	90,000	\$200 (plus GST)	\$35
UK	750,000	£275 (inc. VAT)	\$62
USA	8,000,000	US\$350	\$42
South Korea	250,000	KWN\$250	\$35
South East Asia	1,500,000	SG\$180 (plus GST)	\$30
Israel	250,000	US\$250	\$30

One estimate of the global market for CA-125 testing in 2002 comes from LPL Technologies, Inc. The company reports that about one half of the test's worldwide sales of 15 million were requested by women seeking to use CA-125 as a screening test.²³ The company is developing a test for a single marker, LPA, and estimates an annual US market size of US\$400 million for its test.

In a report prepared for the California Legislature in 2004²⁴ (in relation to Bill 547, a bill to require every individual or group health care service plan contract to provide coverage for the screening and diagnosis of ovarian cancer, including, but not limited to, the appropriate blood tests, a transvaginal sonogram, and a rectovaginal pelvic examination, when medically necessary and consistent with good professional practice) it was estimated that up to 6% of women aged 18 to 64 years currently receive screening for ovarian cancer in the state and an estimated 20% of women aged 18 to 49 years and 30% of women aged 50 to 64 years would be screened annually after the mandate. An estimated 5,890,000 women aged 18 to 64 years with private insurance would be eligible for the mandated benefit in California.

Based on the Californian estimate for numbers of women currently receiving screening (6% of 18 to 64 year olds) and extrapolating to the whole of USA, we estimate that about 5.6 million women are being screened. Adding Canada, a figure of around 6.0 million would be a reasonable estimate for North America. The Californian estimate was for 2004 and an estimate of 8.0 million today may not be unreasonable given that awareness of ovarian cancer has improved and the availability of a cost effective high reliability test will improve screening rates. If the other states sought to mandate screening, the national market would approach 46 million.

In the US, the CA-125 test currently costs about US\$60 and if transvaginal ultrasound is included the patient may add a further US\$250.²⁵ The greater accuracy of OvPlex™ justifies its price.

Potential competition to OvPlex™ will come from Vermillion, Inc (OTC:VRML) and Correlogic Systems, Inc (private).

²³ <http://www.frantzgroup.com/fmv/portfolio/lpl.html>

²⁴ Analysis of Assembly Bill 547. Ovarian Cancer Screening. A Report to the 2003-2004 California Legislature. February 9, 2004, rev. November 19, 2004. (<http://www.chbrp.org/documents/ovarian547final.pdf>)

²⁵ D Johnson, et al. CA-125 and TVU Tests for Ovarian Cancer. July 8, 2009. About.com Women's Health (<http://womenshealth.about.com/od/ovariancance1/a/testsovariancan.htm>).

Vermillion's product, OVA1[®] Blood Test has been approved in the US and India where it is marketed by Quest Diagnostics Inc. OVA1[®] was approved on the basis of a 510(K), substantial equivalence, Application. It appears more targeted towards later stage disease which, when performed prior to surgery, can help physicians determine if a woman is at risk for a malignant pelvic mass. It is indicated for women who meet the following criteria: over age 18, ovarian adnexal mass present for which surgery is planned, and not yet referred to an oncologist. The test utilizes five established biomarkers - transthyretin ("TT" or prealbumin), apolipoprotein A-1 ("Apo A-1"), beta2-microglobulin ("Beta2M"), transferrin ("Tfr") and CA-125, and a proprietary algorithm.

OVA1[®] is the first FDA-cleared laboratory test that can indicate the likelihood of ovarian cancer with high sensitivity prior to biopsy or exploratory surgery, even if radiological test results fail to indicate malignancy. Quest Diagnostics, which is a long-time investor in the R&D of the OVA1[®] technology, has exclusive rights to offer the test to the clinical reference laboratory market in the US for three years.

In a study to be published by American College of Obstetrics and Gynecology in June 2011 a comparison of CA-125 test and the OVA1[®] test in 516 women scheduled for surgery for an ovarian mass found that 94% of malignancies were accurately detected by OVA1 compared with 77% with CA-125. In premenopausal women, the detection rate was 91% versus 58% with CA-125. Another aspect of the study was the high "false positive" rate, the incorrect identification of women as high risk for ovarian cancer, where the rate was two times that for the CA-125 test.

Vermillion performed an estimated 3,080 OVA1[®] tests during the first quarter of 2011, representing volume growth of 5% over the fourth quarter of 2010. For the second quarter, the company expects 3,200 to 3,500 OVA1 tests to be performed.

OvaCheck[®] is Correllogic's blood test for the early detection of epithelial ovarian cancer and, as such, is a direct competitor to OvPlex[®]. OvaCheck[®] uses a patented pattern recognition technology to detect ovarian cancer at all stages — including its earliest stages. The product is also licensed to Quest Diagnostics and LabCorp.

OvaCheck[®] is a multiplex immunoassay that measures eleven biomarkers in serum (CA-125, CA-19-9, CRP, epidermal growth factor receptor, myoglobin, macrophage inflammatory protein 1 α , IL-6, IL-18, tenascin C, apolipoproteins A1 and CIII). Using a recognition algorithm, the levels of each protein are compared against reference values obtained from women known to have ovarian cancer and the likelihood of the presence of ovarian cancer calculated.

The product is covered under patent application WO2009/006439 filed prior to the HealthLinx '569 patent and claiming a multiplexed assay which includes, in common with the '569 patent, CA-125, CRP, IL-6 and IL-8.

Initial research underlying OvaCheck[®] was conducted as part of a Cooperative Research Agreement ("CRADA"), with the FDA/NCI. In connection with this collaboration, Correllogic and government scientists published nine studies in peer-reviewed journals, two on ovarian cancer specifically, establishing the multiplex technology's validity. Correllogic conducted extensive clinical trials on OvaCheck in collaboration with twelve research institutions throughout the US. Those trials are now complete and the company has filed for FDA regulatory approval of the test.

On 9 June 2010, Correlologic announced that OvaCheck had fulfilled European Union regulatory requirements (CE Mark) for distribution and sale of the test.²⁶

A product called OvaSure[®] test was developed by Laboratory Corporation of America, Inc. (“LabCorp”) based on the paper by Visintin and colleagues²⁷ and used the following biomarkers: leptin, prolactin, osteopontin, insulin-growth factor II and macrophage inhibitory factor. The product was removed from the market in 2008 following criticism from the FDA that the published data were inadequate to establish the test’s reliability.²⁸ However, LabCorp are confident that the test will be reintroduced.

3.5 Other

HealthLinx has signed a commercial agreement with Millipore Corporation, one of the world’s largest research reagent companies, to license the AGR2 monoclonal antibody. The worldwide non-exclusive licence agreement allows Millipore to market and sell the monoclonal antibody for research purposes only, with upfront fees and royalties to flow back to HealthLinx.

The valuation does not include income that may derive from this source.

4. Risks

HealthLinx competes to varying degrees with numerous companies in the cancer diagnostics field. Some of these companies are better resourced and financed with greater capabilities in manufacturing, regulatory affairs, and marketing and distribution. They are capable of rapid market entry. Where a small company creates a new market, they can grab market share through price cutting and aggressive promotional campaigns, and they can fund expensive patent disputes.

The multiplex system has not had its patent granted in the key market of US and, although novelty and inventiveness have been acknowledged in the ISR, there remains some degree of conjecture about whether all claims will be granted in the USA. Prior art citations are not uncommon and are usually resolved in favour of the applicant. Although abandonment prior to examination in the US is not high, it is estimated that roughly 10% of EPO and 65% of JPO applications do not proceed with examination.²⁹

Failure to be granted in the US will leave HealthLinx exposed to competition. In any event, the panels of tests that competitor companies have chosen to incorporate in their assays may be, or may prove to be, superior in detecting or monitoring ovarian cancer.

²⁶ Correlologic Systems, Inc. Press Release June 9, 2010. <http://www.correlologic.com/newsandevents/press-releases/20100609-ovacheck-ce-mark.php>

²⁷ I Visintin, *et al.* Clin Cancer Res 14(4):1065, 2008.

²⁸ SI Guttman. OvaSure[™] Manufacturer Letter. August 7, 2008. <http://www.fda.gov/MedicalDevices/DeviceRegulationandGuidance/IVDRegulatoryAssistance/ucm125130.htm>

²⁹ R A Clark. US Continuity Law and its Impact on the Comparative Patenting Rates of the US, Japan and the European Patent Office. J Pat & Trademark Off Soc 85(4):335, 2003.

Although there are various estimates of the likelihood of a patent application proceeding to grant it would appear that a reasonably reliable figure for the US is around 75% based on patent families (a higher success rate is obtainable if continuations, divisional and continuances in part are considered as independent events, which they clearly are not³⁰). Clarke also presents data for Europe and Japan which determined likelihoods of granting of 83% and 86% respectively for filings lodged between 1994 and 1998. In contrast to the US, which showed no obvious trend in fractions granted over the period in question, both Europe and Japan data show a declining likelihood.

Once granted there remains the possibility that the validity of the patent will be challenged or that it will be infringed. Our analysis of the prior art patents suggest that this is a remote possibility. On the likelihood of opposition in the EPO, Harhoff and Reitzig³¹ found that in the biotechnology and pharmaceutical fields between 1978 and 1996, 8.6% of patents were subject to opposition. In cases for which they had details of final outcomes, the patent was revoked in 30.5% of cases and amended in 40.6%.

In examining data from the USPTO and US courts, Lanjouw and Schankerman report that the average litigation rate is about one percent, however for the most “valuable” drugs and health patents the estimated probability of litigation during the lifetime of a patent may be more than 25%.³² Infringements, as compared to challenges of validity, account for the bulk of litigation.

Where there is litigation (in the US) Moore³³ determined the probability that a patent will be found to be enforceable is 73%.

While OvPlex[™] has previously received regulatory approval in certain jurisdictions, there are no assurances that FDA approval will be granted. By both the Company’s reckoning and data supporting molecular diagnostics sales, failure to obtain US approval will severely impact on revenues and the valuation. On the positive side, approval will only depend on demonstration of substantial equivalence and then it becomes an issue with reimbursement.

The high cost of conducting the panel of assays and performing the analysis compared to a single biomarker test may be prohibitive. A party that can provide all markers in a single analysis, such as one panel of the BioRad Bio-Plex[®] Suspension Array System (to achieve a suitable outcome, however, requires multiple panels with many irrelevant tests) may achieve a more cost effective outcome.

We also point out that confirmatory trials on a larger scale may not bear promising results as that of the recent Phase II trials.

The medical diagnostics industry is highly competitive and subject to rapid technological change. If competitors are better able to develop and market products that are more convenient and/or more reliable than OvPlex[™], the commercial opportunity may be diminished or eliminated.

³⁰ L B Ebert. Patent Grant Rates at the United States Patent and Trademark Office. Chicago-Kent J Intell Prop, p 108, 2004

³¹ D Harhoff & M Reitzig. Determinants of Opposition against EPO Patent Grants – the Case of Biotechnology and Pharmaceuticals. Int J Ind Org 22:443, 2004.

³² J O Lanjouw & M Schankerman. Characteristics of Patent Litigation: a window on Competition. RAND J Econ. 32(1):129, 2001.

³³ K A Moore. Judges, Juries, and Patent Cases – an Empirical Peek Inside the Black Box. Michigan Law Rev 99(2):365, 2000.

If the third parties on whom the Company relies to conduct clinical trials and to assist with regulatory approvals do not perform as contractually required or expected, market opportunities may be lost and cash flow severely compromised. Similarly, the Company is dependent on distributors to maximise sales and these partners may also underperform.

These risks have been considered in conducting the valuation and brought to bear in the manner in which the cash flow projects have been utilized.

5. Valuation

5.1 Valuation Methods

Techniques used for valuing intangible assets, of which IP is one form, generally fall into three main categories³⁴:

1. Cost Based;
2. Market Based; and
3. Revenue Based.

Early stage technology companies, because their main assets are often IP, have values that are invariably determined by their intangible assets.

The valuation of a mature company tends to follow a methodology that draws heavily on its historical income, either by performing a DCF of future earnings, the confidence in which derives from past activity, or capitalisation of maintainable earnings. Another technique considers the orderly realisation of assets. As most biotechnology companies seldom have historical revenues and the tangible assets are not representative of an early stage business's real value, these methods are seldom applicable.

5.1.1 Cost Based Methods

There are several cost approach valuation methods, the most common being the reproduction cost method and the replacement cost method. Regardless of the type of cost being estimated (eg. reproduction, replacement or other) five components of cost are generally included in the analysis being: Materials; Labour; Overhead; Developer's Profit; and Entrepreneurial Incentive. The last factor is often difficult to estimate.

In considering historical costs as a basis for replacement or reproduction it must be assumed that all expenditure on the product's development, has been targeted and cost effective (not always a valid assumption in R&D), and that another party wishing to recreate the IP does not have the benefit of the current owner's acquired knowledge nor is he precluded by patents in exploiting his "reproduction". These constraints often negate the use of historical costs, although it is fair to assume that a licensor may be seeking a return on his investment and will often base his negotiating position on past expenditure. Others argue strongly that historical expenditures are irrelevant for IP simply because the value to an acquirer cannot be correlated with the developer's costs³⁵.

³⁴ Reilly RF, Schweih RP, Valuing Intangible Assets, McGraw Hill (NY) 1998.

³⁵ Razgaitis R. Early-Stage Technologies. Valuation & Pricing. Wiley (NY) 1999.

Evidence suggests that the value of promising IPR&D far exceeds past expenditure and that the premium is likely to correlate more with market potential than a simple rule-of-thumb multiplier would suggest.

HealthLinx has not provided details on expenditure that may be directly attributable to OvPlex™ although it did state in 2010 that it had invested over \$7.5million to develop OvPlex™ to that point in time.³⁶ The 2010 Annual Report includes accumulated losses in excess of \$8.5 million. However, this does not reflect the amounts put into OvPlex™ as it may include previous expenditure by Cryptome on now defunct projects and support for other projects within the Company. Furthermore some of the research has been funded by grants.

Cost based methods were therefore not applicable.

5.1.2 Market Based Methods

Techniques based on analysis of transactions between companies, equity valuations or capitalisations of comparable companies have considerable merit in the biotechnology sector. There are thousands of transactions taking place in the industry every year where one company licenses IP from another or enters into a collaborative venture. There are also many fund raisings, both private placements and IPOs, which may be used as analogies.

Comparison is possible only where a transaction relates to an identifiable unit of IP or platform technology that is reasonably analogous or, in the case of the value placed on a company, where that company is virtually single purpose and technically equivalent to the subject company or IP. Such criteria are often difficult to meet and comparable analyses are usually used only to support the values derived with other methodologies or to provide a “ball park” estimate.

We consider such methods as valid and have conducted appropriate searches.

5.1.3 Revenue Based Methods

The technique most commonly employed is based on a DCF analysis. To assume any level of credibility, the DCF must be based on sound cash flow predictions, with justifiable assumptions regarding sales estimates, expenses and revenue timings. These are then net present valued using a discount rate, often following probability adjustment, that recognises the time value of money and risks involved in achieving the forecast cash flows.

The “Beta Factor” of a particular investment is a reflection of its risk expressed as a percentage of the volatility to that of a market portfolio, ie. a portfolio of stocks sufficiently diversified so as to reflect average market movements. The rate of return on the market portfolio will, by definition, fluctuate identically with the market and therefore its Beta Factor is one. Investments with Beta Factors lower than unity are less volatile than the market and thus would be expected to have a risk premium lower than the overall market premium.

³⁶ HealthLinx Limited, VSA Business Plan. Stage 3 Application. Early Stage Ovarian Cancer Diagnostic. July 2010.

The “Risk Premium” represents the premium over the Risk Free Rate that an investor requires to invest in the market portfolio. Typically, the risk premium associated with the equity market, as determined by the Centre for Research in Finance at the Australian Graduate School of Management, over the longer term is around 6-7%.

Using the 30 year US bond yield of 4.6%, and applying a Beta range of 1.2 to 1.5 as determined by Loh and Brooks³⁷ for DNA and biochemistry companies a discount rate of approximately 13% to 15% nominal is derived.

Discount rate adjustments have been used in the past to account for risk associated with realising projected cash flows. For example, a high risk project may be discounted at 45% which could be three or four times the weighted average cost of capital for the venture. Such practices seldom apply to the valuation of IP and IPR&D as they fail to recognise the fact that once the research has been completed the risk has been resolved with major implications for projects with long development times. However, where there may be compounding risk such as an anticipated increase in competition or a changing economic environment, modest discount rate premiums may have relevance.

Our preferred methodology for IPR&D is generally not to apply discount rate premiums over and above the CAPM but to use a risk analysis and probability adjust cash flows.^{38, 39} The procedure explicitly recognises the time profile of the risk by probability adjusting the cash flow using literature- or experience-based probabilities and applying these at the time points at which the risk is apparent.

The American Institute of Certified Public Accountants (“AICPA”) has issued a Practice Aid stipulating the approach to be adopted when valuing IPR&D in pharmaceutical and other high technology sectors.⁴⁰ The Practice Aid states that, whilst valuations of IPR&D may still be carried out using traditional discounted cash flow techniques; the preferred approach is to use expected cash flows arrived at using decision analysis techniques and probability analysis. The resulting cash flows may then be discounted at a rate close to the cost of capital as the risks are deemed to have been dealt with in the probability analysis. In the AICPA’s opinion, the explicit assessment of the probabilities associated with the possible cash flow outcomes provides computational transparency compared with selecting a discount rate purportedly commensurate with the risks.

5.2 Sources of Information

We have prepared our valuation on the basis of technical and other information provided by HealthLinx, and information from other publicly available sources regarding markets and competition.

³⁷ Loh J & Brooks P. Valuing Biotechnology Companies: Does Classification by Technology Type Help? *J Comm Biotechnology* 14(2):118, 2008.

³⁸ Boer FP. *The Valuation of Technology: Business & Financial Issues in R&D*. Wiley (New York), 1999.

³⁹ Bogdan B & Villager R. *Valuation in Life Sciences: A Practical Guide*. Springer Verlag (Berlin), 2007.

⁴⁰ “Assets Acquired in a Business Combination to be used in Research and Development Activities: A Focus on Software, Electronic Devices, and Pharmaceutical Industries.” AICPA, New Jersey. 2002.

We held discussions with the following HealthLinx senior management:

- **Nick Gatsios**, Chief Executive Officer;
- **Jennifer Edwards**, Financial Manager;
- **Dr John Hughes**, Patent Attorney, Davies Collison Cave.

We were provided with the following documents to assist with our review:

- **HealthLinx Limited. Powerpoint presentation, February 2011** (*HTX Presentation-Roadshow Feb 2011.pdf*);
- **Analysis of Performance of a Novel Diagnostic for Ovarian Cancer**. Version 4.0 (Final). Emphron Informatics Pty Ltd, December 23, 2008;
- **Intellectual Property Licence Agreement between University of Liverpool and HealthLinx Limited**. Signed and dated 9 November 2007;
- **HealthLinx Limited, VSA Business Plan. Stage 3 Application. Early Stage Ovarian Cancer Diagnostic**. July 2010;
- **VSA Budget** (*VSA Expenditure Q3_1011_040411.xls*);
- **HealthLinx Ltd Patent Application Status** (*Patent Status-Assay to Detect a Gyn Cond.doc*).

To independently assess the markets and competition we conducted literature and patent searches through Dialog™, Business Insights and the Internet.

Findings and the valuation opinion are based on our knowledge and experience in technology development and its assessment, as well as the financial analysis of research projects and intellectual property valuation. A brief summary of Acuity's experience in intellectual property valuation is presented in Attachment II.

6. Valuation Opinion

6.1 Comparables Analysis

There are, not surprisingly, very few listed companies with a single and/or most advanced candidate a pre-clinical or recently approved cancer diagnostic test.

We have identified one Australian publicly listed company which has developed a diagnostic product, essentially as a one product company and that is Cellestis Limited. Cellestis listed on the ASX in early 2001 with a novel blood test for tuberculosis (“TB”) that, at the time of listing, required up to three years of development and testing before it could be registered for marketing. The potential for TB testing was estimated at about 40 million at peak with the Cellestis test capturing 15% of the market which may be higher than ovarian cancer testing (not if mandatory screening were introduced).⁴¹ On the other hand, competition, essentially the Mantoux skin test, was less evident.

The company held granted patents but these had fewer than 6 years to expiry in Europe and 10 years in the US.

Cellestis issued \$9.0 million in new shares for a market capitalisation of \$20.5 million post capital raising. Thus, its IP was worth, at that stage in the product’s development, \$11.5 million.

Two years after listing, and with at least another 12 months required before product launch the share price and market capitalisation had risen six-fold to more than \$120 million.

Based on this, somewhat limited, example we would argue a valuation at considerably more than the IPO valuation of \$11.5 million and potentially as high as \$120 million due to the facts that OvPlex is already being marketed in a number of countries and has considerably more life remaining on its patents, albeit these are yet to grant in the US.

Vermillion, which now has its ovarian cancer diagnostic approved in the USA, and recorded revenues of US\$430,000 for the 3 months to 31 March 2011 and a balance sheet NTA of US\$21.8 million (with no carried intangible assets), has a current market capitalisation of US\$59.0 million. Without FDA approval, we would not expect OvPlex™’s valuation to exceed Vermillion’s IP valuation of US\$37.2 million or A\$35.1.

6.2 PANPV Modelling Procedure

Financial models are presented in Attachment I with assumptions outlined on the first page of the spreadsheet. A number of parameters that go into the model are reasonably well defined, such as selling costs, further development expenses and timings, and royalty rates; while others, particularly market size and penetration estimates, are speculative. Hence, a sensitivity analysis is provided.

The valuation date is 30 June 2011. We have developed financial projections based on the available information for the term of the ‘569 patent, filed in the first quarter of 2009. Thus the valuation term is to December 2028. We have ignored the potential for sales beyond that date on the assumption that a licence or licences will be granted only to assured expiry of the patent.

It should be noted that the valuation is for a single unit of IP owned by HealthLinx, the OvPlex™ IP, and not of HealthLinx as a sustainable entity. A valuation of the Company may make the assumption of life to perpetuity, achievable through greater R&D investment and new product introductions, and include a residual value beyond 2028.

⁴¹ Independent Expert Report. Acuity technology Management Pty Ltd. 21 February 2001. In Cellestis Limited Prospectus.

The modelling methodology for OvPlex™ is based on a PANPV. The analysis starts with 2011 estimates of market size or potential test numbers which are assumed to grow at a specified annual rate (a combination of population growth and growth in demand). The product is launched after completing the required development and its level of penetration assumed to grow linearly over a reasonable term to reach peak market penetration. It is assumed that peak sales are maintained (increasing with market growth) with no price erosion. Sales continue to the expiry of the patent, however, a product life of 10 years is applied after which sales decline. The IP is assumed to have a finite life cycle because new diagnostic techniques, or more extensive multiplex assays, will become available.

Time frames for finalisation of clinical trials, approvals and market launch are based on realistic schedules as prepared by HealthLinx.

The model assumes income from royalties as estimated by the Company. Product is currently being sold in Australia and the UK, and will commence in South East Asia during the current year. Sales in Western Europe, South Korea and Israel will commence in 2012/13, and in North America in 2013/14. The current analysis does not include sales in other parts of the world.

For the current analysis we have utilised the following:

Table 6: Estimates of OvPlex™ Usage by Region (based on 2010 Population Data)

Region	Launch Year	Est. No. Tests 2011/12	Growth in Testing	Price per Test	Royalty Rate	Market Penetration
Australia	2010	90,000	2.0%	\$200	\$35	
North America	2013	8,000,000	2.0%	\$330	\$42	20%
United Kingdom	2010	750,000	2.0%	\$425	\$62	10%
Western Europe	2012	3,000,000	2.0%	\$425	\$62	10%
South East Asia	2011	2,000,000	4.0%	\$140	\$30	10%
South Korea	2012	250,000	3.0%	\$220	\$35	10%
Israel	2012	250,000	3.0%	\$236	\$30	10%
		14,340,000				

Based on MBS reimbursements for cancer antigen testing in Australia and State of California estimates for ovarian cancer screening, we consider the numbers presented in Table 4 are reasonable.

Thus, we are basing our valuation on 14.3 million ovarian cancer tests being undertaken annually. We have assumed that OvPlex™ gains 10% market share in all regions and 20% in Australia, figures that we consider conservative.

Generally, it is assumed that usage growth is around 2% per annum, which is about twice the population growth rate in the developed countries, with 3% and 4% in Israel and Asia.

It is assumed that the product has a 10 year life, from launch in the US, and will be superseded by newer technology or strong competition. From 2023, sales decline at 20% per year.

The royalty figures presented in Table 5 are in accordance with agreements that HealthLinx has already entered, while the US amount has been conservatively set below the UK figure.

In terms of total sales, OvPlex™ will achieve sales of US\$600 million in 2023 of which 56% will be in North America. Royalties in that year will amount to \$85 million

Company expenses have been estimated by Acuity to be \$2.0 million, \$1.5 million and \$1.0 million in 2011/12, 2012/13 and 2013/14 respectively. These amounts are for clinical trials, registrations and an apportionment of HealthLinx's overhead and are assumed to be committed, ie. they are not subject to probability adjustment. We have assumed an ongoing expenditure of 5% of revenues.

HealthLinx will pay a royalty of 5% of net product sales factored down in proportion to the number of analytes included in the OvPlex™ assay, assumed to be six including AGR-2.

The cash flows are probability adjusted at 70% for clinical trial success which impacts across all markets. The North American cash flow is further impacted by a likelihood of 75% for patent grant and 80% for FDA approval. Probabilities are cumulative providing an overall likelihood of 42% of achieving estimated cash flow in North America.

The probability adjusted revenues to HealthLinx are \$47.4 million in 2023 and the probability adjusted cash flow after tax, \$29.6 million.

It is assumed that the company holds no depreciable assets and that any laboratory testing costs or cost of goods ("COGS") is cash flow neutral for the Company. In other words, HealthLinx incurs no expenses and gains no margin from conducting tests for licensees and distributors.

The profit is taxed at the Australian rate of 30% with losses, where they occur, carried forward. There is no consideration of existing tax losses.

The analysis is in constant 2011 dollars and no consideration has been allowed for inflation. The discount rate is therefore real.

Applying a discount rate of 15% to the probability adjusted after tax cash flows for HealthLinx yields a valuation of approximately \$105 million.

6.3 Sensitivity Analysis

As a number of input parameters to the models are, at best, estimates and may change over time and as development advances, we subjected these to a perturbation analysis. Various inputs were adjusted by plus or minus 10%. These are summarised in Table 7. The sensitivity analysis should be read in conjunction with the risks outlined in Section 4 of this report.

It is clear that the important variables in determining cash flows and valuation are discount rate, probability of successfully completing trials (affecting all markets), the size and penetration of markets, exchange rate of the Australian dollar and the royalty rate.

Table 7: Sensitivity Analysis on Key Variables

Variable	Impact		Comment
	Valuation \$'mil	Variance %	
Base Valuation	105.2		
Discount Rate:			Use of 15% rate includes premium for market uncertainty. Coupled with probability adjustment, a lower rate may be justified.
+10%	95.0	-9.66	
-10%	116.9	+11.1	
Clinical Trial Probability			High likelihood of granting.
+10%	116.0	+10.2	
-10%	94.4	-10.2	
US Patent Grant Probability			Past trials suggest that a higher likelihood would not be unreasonable.
+10%	108.7	+3.4	
-10%	101.7	-3.4	
Market sizes, Penetration or Royalty Rates			Could reasonably exceed 10% error either way.
+10%	116.7	-10.9	
-10%	93.7	-10.9	
Product Life			
+10%	107.3	+1.1	
-10%	102.6	-2.5	
Rate of Decline Post Peak			
+10%	104.8	-0.4	
-10%	105.7	+0.4	
Development Expenses			
+10%	105.0	-0.2	
-10%	105.5	+0.2	
Ongoing Expenses			
+10%	104.6	-0.6	
-10%	105.8	+0.6	
Tax Rate			It is likely that Australian company tax rate will drop.
+10%	100.7	-4.3	
-10%	109.7	+4.3	
Currency Exchange			Analysts predict further rises in the Australian dollar.
+10%	93.9	+10.7	
-10%	116.5	-10.7	
Development Time Delay 12 months	91.5	-13.0	Delays more likely than advancement.

The royalty rate has been decided for all markets used in the valuation other than the USA and Western Europe (excluding the UK). We have assumed that the same value will apply in major European markets as for the UK and this may be high. The US royalty of \$42, on the other hand, may be on the low side of what is achievable.

At this stage it is difficult to accurately determine the how many tests will actually be done in any one year. The estimates of market sizes are based on actual cancer marker tests in Australia and extrapolation of Californian data. We consider that the figures used in the analysis are reasonable and that a 10% market penetration is conservative.

The discount rate of 15% is reasonable for an Australian start-up biotechnology company but high for an established, globally operating diagnostics firm where one could expect a figure of 10% to 12%. Coupled with probability adjustments for technical success, a discount rate with a slight premium to incorporate the market uncertainty is reasonable.

Our estimates of probability are likely to prove conservative. The test has proven higher specificity and sensitivity in clinical trials and extension of trials, and inclusion of additional markers, should confirm the result. Likewise, the patent has been granted in a number of jurisdictions and we see no reason that it should fail in the US. Approval on the basis of substantial equivalence has been obtained for a competitive test and OvPlex™ should achieve the same outcome.

As contracts are being written in national currency or US dollars, growing strength in the Australian dollar could adversely affect the valuation.

Delays in any R&D program are highly significant. In this case, the only foreseeable delay will be in completing the clinical trial and obtaining US FDA approval.

7. Conclusions

Our analysis of the commercial opportunity for OvPlex™ presents an after tax valuation of approximately \$105 million. We consider that the science and patents underpinning the test are sound and the product is unlikely to fail on technical grounds. The major unknown for the analysis is how many tests are likely to be performed. It is clear that CA-125 is an inadequate marker and, in the absence of a single, definitive identifier of ovarian cancer, a multiplexed approach will prove to be the better alternative. Diagnosis of early disease is imperative and OvPlex™ offers that advantage. If regular screening became the norm, HealthLinx's and our estimates will prove to be conservative.

There is likely to be competition from other multiplex assays but it is too earlier to determine which combination of markers will prove most effective. There is every reason to believe that those intended to be incorporated into the final OvPlex™ format will achieve a high level of detection accuracy to the extent that it will be difficult for a competitor to state definitively that its product is superior.

We offer the opinion that, including consideration that certain assumptions may not be highly reliable, the valuation still exceeds the carried value for OvPlex™ and no impairment needs to be recorded for 2011.

8. Disclaimer

The valuation makes certain assumptions in relation to the revenue prospects. The projections used derive from information which we have obtained from HealthLinx, a number of publicly available sources and our own view in relation to projections based on this information.

In applying these figures to the determination of the value of the OvPlex IP, we are making no representation that further technology development will be successful, or that market growth and penetration will be realised. The valuation utilises financial projections which are based on hypothetical assumptions for which there is no certainty that future events or management actions will occur.

Neither Acuity Technology Management nor its principals have any pecuniary interest in HealthLinx that could be regarded as affecting the ability to provide an unbiased opinion of the matters contained in this report. Acuity will receive a professional fee for the preparation of this Independent Valuation Report.

This valuation has been prepared solely for HealthLinx to assist management with decisions in relation to a impairment of the OvPlex IP. As such, neither Acuity nor any employee undertakes responsibility in any way whatsoever to any person or organisation (other than HealthLinx) in respect of information set out in this report, including any errors or omissions here-in, arising through negligence or otherwise, however caused.

This report makes no recommendations in respect of taxation or statutory reporting. HealthLinx should obtain expert advice on these matters.

If you have any questions concerning this valuation, please don't hesitate to contact me.

Yours sincerely

David H Randerson, BE, PhD
Managing Director

Attachment I
Attachment II

Valuation Spreadsheet
Acuity Technology Management

ATTACHMENTS I

Valuation Spreadsheet

ASSUMPTIONS

Enter data in yellow boxes only.

Exchange rate	<input type="text" value="1.05"/>	US\$/A\$		New	Base
				1.1	\$105,203
Company Tax Rate	<input type="text" value="30%"/>			0.9	105203
					0.00%
Discount Rate	<input type="text" value="15%"/>				
OvPlex Expenses - Committed	A\$	2011	<input type="text" value="\$2,000,000"/>		
		2012	<input type="text" value="\$1,500,000"/>		
		2013	<input type="text" value="\$1,000,000"/>		
		2014	<input type="text" value="\$0"/>		
Royalties to U Liverpool			<input type="text" value="0.83%"/>		
OvPlex Expense - Ongoing			<input type="text" value="5.00%"/>		of Royalties

Sales Estimates	Launch Year	Est. No. Tests 2011	Growth in Testing	Price per Test	Royalty Rate	Market Penetration
Region:						
Australia	2010	90,000	2.0%	\$200	\$35	20%
North America	2013	8,000,000	2.0%	\$330	\$42	10%
United Kingdom	2010	750,000	2.0%	\$425	\$62	10%
Western Europe	2012	3,000,000	2.0%	\$425	\$62	10%
South East Asia	2011	2,000,000	4.0%	\$140	\$30	10%
South Korea	2012	250,000	3.0%	\$220	\$35	10%
Israel	2012	250,000	3.0%	\$236	\$30	10%
Rest of World	2013	0				
		14,340,000				

Licence Fees (US\$)	Amount	When
North America	<input type="text" value="\$0"/>	<input type="text" value="2015"/>
Europe	<input type="text"/>	<input type="text"/>
RoW	<input type="text"/>	<input type="text"/>

Patent Expiry

Product Life	<input type="text" value="10"/>	Years from First Launch	Rate of Decline from Peak	<input type="text" value="20%"/>
Peak North American Sales	<input type="text" value="2023"/>			

Probabilities of Success	When
Patent Grant	<input type="text" value="75%"/> <input type="text" value="2012"/>
Clinical Trial Success	<input type="text" value="70%"/> <input type="text" value="2011"/>
USA Approval	<input type="text" value="80%"/> <input type="text" value="2012"/>

CASHFLOW & VALUATION

Year Commencing 1 July		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Sales ('000)																			
Australia	Sales Potential	90,000	91,800	93,636	95,509	97,419	99,367	101,355	103,382	105,449	107,558	109,709	111,904	114,142	116,425	118,753	121,128	123,551	126,022
	Fraction	10%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
	Sales Value (\$'000)	\$1,800	\$3,672	\$3,745	\$3,820	\$3,897	\$3,975	\$4,054	\$4,135	\$4,218	\$4,302	\$4,388	\$4,476	\$4,566	\$4,657	\$4,750	\$4,845	\$4,942	\$5,041
	Royalty Rate	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35
	Royalties (\$'000)	\$315	\$643	\$655	\$669	\$682	\$696	\$709	\$724	\$738	\$753	\$768	\$783	\$799	\$815	\$831	\$848	\$865	\$882
Σ 18 year		13,175	% Global			1.1%													
USA & Canada	Sales Potential	8,000,000	8,160,000	8,323,200	8,489,664	8,659,457	8,832,646	9,009,299	9,189,485	9,373,275	9,560,741	9,751,955	9,946,994	10,145,934	10,348,853	10,555,830	10,766,947	10,982,286	11,201,931
	Fraction	0%	0%	2%	5%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
	Sales Value (\$'000)	\$0	\$0	\$54,933	\$140,079	\$285,762	\$291,477	\$297,307	\$303,253	\$309,318	\$315,504	\$321,815	\$328,251	\$334,816	\$341,512	\$348,342	\$355,309	\$362,415	\$369,664
	Royalty Rate	\$42	\$42	\$42	\$42	\$42	\$42	\$42	\$42	\$42	\$42	\$42	\$42	\$42	\$42	\$42	\$42	\$42	\$42
	Royalties (\$'000)	\$0	\$0	\$6,991	\$17,828	\$36,370	\$37,097	\$37,839	\$38,596	\$39,368	\$40,155	\$40,958	\$41,777	\$42,613	\$43,465	\$44,334	\$45,221	\$46,126	\$47,048
Σ 18 year		605,787	% Global			48.4%													
United Kingdom	Sales Potential	750,000	765,000	780,300	795,906	811,824	828,061	844,622	861,514	878,745	896,319	914,246	932,531	951,181	970,205	989,609	1,009,401	1,029,589	1,050,181
	Fraction	5%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	
	Sales Value (\$'000)	\$15,938	\$32,513	\$33,163	\$33,826	\$34,503	\$35,193	\$35,896	\$36,614	\$37,347	\$38,094	\$38,855	\$39,633	\$40,425	\$41,234	\$42,058	\$42,900	\$43,758	\$44,633
	Royalty Rate	\$62	\$62	\$62	\$62	\$62	\$62	\$62	\$62	\$62	\$62	\$62	\$62	\$62	\$62	\$62	\$62	\$62	\$62
	Royalties (\$'000)	\$2,325	\$4,743	\$4,838	\$4,935	\$5,033	\$5,134	\$5,237	\$5,341	\$5,448	\$5,557	\$5,668	\$5,782	\$5,897	\$6,015	\$6,136	\$6,258	\$6,383	\$6,511
Σ 18 year		97,242	% Global			7.8%													
Western Europe	Sales Potential	3,000,000	3,060,000	3,121,200	3,183,624	3,247,296	3,312,242	3,378,487	3,446,057	3,514,978	3,585,278	3,656,983	3,730,123	3,804,725	3,880,820	3,958,436	4,037,605	4,118,357	4,200,724
	Fraction	0%	2%	5%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	
	Sales Value (\$'000)	\$0	\$26,010	\$66,326	\$135,304	\$138,010	\$140,770	\$143,586	\$146,457	\$149,387	\$152,374	\$155,422	\$158,530	\$161,701	\$164,935	\$168,234	\$171,598	\$175,030	\$178,531
	Royalty Rate	\$62	\$62	\$62	\$62	\$62	\$62	\$62	\$62	\$62	\$62	\$62	\$62	\$62	\$62	\$62	\$62	\$62	
	Royalties (\$'000)	\$0	\$3,794	\$9,676	\$19,738	\$20,133	\$20,536	\$20,947	\$21,366	\$21,793	\$22,229	\$22,673	\$23,127	\$23,589	\$24,061	\$24,542	\$25,033	\$25,534	\$26,044
Σ 18 year		354,816	% Global			28.4%													
South East Asia	Sales Potential	2,000,000	2,080,000	2,163,200	2,249,728	2,339,717	2,433,306	2,530,638	2,631,864	2,737,138	2,846,624	2,960,489	3,078,908	3,202,064	3,330,147	3,463,353	3,601,887	3,745,962	3,895,801
	Fraction	2%	5%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	
	Sales Value (\$'000)	\$5,600	\$14,560	\$30,285	\$31,496	\$32,756	\$34,066	\$35,429	\$36,846	\$38,320	\$39,853	\$41,447	\$43,105	\$44,829	\$46,622	\$48,487	\$50,426	\$52,443	\$54,541
	Royalty Rate	\$30	\$30	\$30	\$30	\$30	\$30	\$30	\$30	\$30	\$30	\$30	\$30	\$30	\$30	\$30	\$30	\$30	
	Royalties (\$'000)	\$1,200	\$3,120	\$6,490	\$6,749	\$7,019	\$7,300	\$7,592	\$7,896	\$8,211	\$8,540	\$8,881	\$9,237	\$9,606	\$9,990	\$10,390	\$10,806	\$11,238	\$11,687
Σ 18 year		145,952	% Global			11.7%													
South Korea	Sales Potential	250,000	257,500	265,225	273,182	281,377	289,819	298,513	307,468	316,693	326,193	335,979	346,058	356,440	367,133	378,147	389,492	401,177	413,212
	Fraction	0%	2%	5%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	
	Sales Value (\$'000)	\$0	\$1,133	\$2,917	\$6,010	\$6,190	\$6,376	\$6,567	\$6,764	\$6,967	\$7,176	\$7,392	\$7,613	\$7,842	\$8,077	\$8,319	\$8,569	\$8,826	\$9,091
	Royalty Rate	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35	
	Royalties (\$'000)	\$0	\$180	\$464	\$956	\$985	\$1,014	\$1,045	\$1,076	\$1,108	\$1,142	\$1,176	\$1,211	\$1,248	\$1,285	\$1,324	\$1,363	\$1,404	\$1,446
Σ 18 year		18,427	% Global			1.5%													
Israel	Sales Potential	250,000	257,500	265,225	273,182	281,377	289,819	298,513	307,468	316,693	326,193	335,979	346,058	356,440	367,133	378,147	389,492	401,177	413,212
	Fraction	0%	2%	5%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	
	Sales Value (\$'000)	\$0	\$1,215	\$3,130	\$6,447	\$6,641	\$6,840	\$7,045	\$7,256	\$7,474	\$7,698	\$7,929	\$8,167	\$8,412	\$8,664	\$8,924	\$9,192	\$9,468	\$9,752
	Royalty Rate	\$30	\$30	\$30	\$30	\$30	\$30	\$30	\$30	\$30	\$30	\$30	\$30	\$30	\$30	\$30	\$30	\$30	
	Royalties (\$'000)	\$0	\$155	\$398	\$820	\$844	\$869	\$896	\$922	\$950	\$979	\$1,008	\$1,038	\$1,069	\$1,101	\$1,134	\$1,168	\$1,204	\$1,240
Σ 18 year		15,795	% Global			1.3%													
Rest of World	Sales Potential	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Fraction	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Sales Value (\$'000)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
	Royalty Rate	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
	Royalties (\$'000)	\$0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Σ 18 year		0	% Global			0.0%													
Σ 18 global		1,251,195	% Global			100.0%													

Year Commencing 1 July	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Net Sales Global non-US	23,338	79,103	139,566	216,904	221,996	227,220	232,577	238,074	243,712	249,497	255,433	261,524	267,774	274,189	280,773	287,530	294,467	301,588
Net Sales US/Canada	0	0	54,933	140,079	285,762	291,477	297,307	303,253	309,318	315,504	321,815	328,251	334,816	341,512	348,342	355,309	362,415	369,664
Total OvPlex Royalties non-USA (\$'000)	\$3,840	\$12,635	\$22,521	\$33,867	\$34,697	\$35,549	\$36,425	\$37,325	\$38,249	\$39,199	\$40,175	\$41,178	\$42,209	\$43,268	\$44,357	\$45,477	\$46,628	\$47,811
OvPlex Royalties USA	\$0	\$0	\$6,991	\$17,828	\$36,370	\$37,097	\$37,839	\$38,596	\$39,368	\$40,155	\$40,958	\$41,777	\$42,613	\$43,465	\$44,334	\$45,221	\$46,126	\$47,048
Ramp Down	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	83%	69%	58%	48%	40%
Net Sales with Ramp Down	\$23,338	\$79,103	\$194,499	\$356,983	\$507,758	\$518,697	\$529,884	\$541,327	\$553,030	\$565,002	\$577,248	\$589,775	\$602,590	\$513,084	\$436,885	\$372,014	\$316,784	\$269,761
Total Royalties Global ('000)	\$3,840	\$12,635	\$29,512	\$51,695	\$71,066	\$72,646	\$74,264	\$75,921	\$77,617	\$79,354	\$81,133	\$82,955	\$84,822	\$72,278	\$61,591	\$52,487	\$44,731	\$38,122

OvPlex Cash Flow**Revenues**

OvPlex Royalties non-USA (\$'000)	\$3,840	\$12,635	\$22,521	\$33,867	\$34,697	\$35,549	\$36,425	\$37,325	\$38,249	\$39,199	\$40,175	\$41,178	\$42,209	\$36,057	\$30,804	\$26,318	\$22,486	\$19,214
OvPlex Royalties USA (\$'000)	\$0	\$0	\$6,991	\$17,828	\$36,370	\$37,097	\$37,839	\$38,596	\$39,368	\$40,155	\$40,958	\$41,777	\$42,613	\$36,221	\$30,788	\$26,170	\$22,244	\$18,908
Licence Payments (\$'000)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Probabilities

US Patent	1	0.75	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Clinical Trials	0.7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
US Approval	1	0.8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Cumulative non-US market	0.7	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Cumulative for USA	0.7	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42

Probability Adjusted Revenues

	\$2,688	\$8,844	\$18,701	\$31,194	\$39,563	\$40,465	\$41,390	\$42,338	\$43,309	\$44,304	\$45,325	\$46,371	\$47,443	\$40,453	\$34,493	\$29,414	\$25,083	\$21,391
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Expenses

Committed Expenses (\$'000):	\$2,000	\$1,500	\$1,000	\$0														
Non-committed (Prob. Adj.)	\$134	\$442	\$935	\$1,560	\$1,978	\$2,023	\$2,069	\$2,117	\$2,165	\$2,215	\$2,266	\$2,319	\$2,372	\$2,023	\$1,725	\$1,471	\$1,254	\$1,070
Royalties Payable	\$136	\$461	\$1,006	\$1,756	\$2,295	\$2,346	\$2,397	\$2,450	\$2,504	\$2,560	\$2,616	\$2,674	\$2,734	\$2,329	\$1,984	\$1,690	\$1,440	\$1,227

Probability Adjusted Expenses

	\$2,271	\$2,404	\$2,941	\$3,315	\$4,273	\$4,369	\$4,467	\$4,567	\$4,670	\$4,775	\$4,883	\$4,993	\$5,106	\$4,352	\$3,709	\$3,161	\$2,694	\$2,297
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Cash Flow

	30%	\$417	\$6,441	\$15,759	\$27,879	\$35,290	\$36,923	\$37,771	\$38,639	\$39,530	\$40,442	\$41,378	\$42,337	\$36,101	\$30,785	\$26,253	\$22,389	\$19,095
Cumulative		\$417	\$6,858	\$22,618	\$50,497	\$85,786	\$121,883	\$158,806	\$196,576	\$235,215	\$274,745	\$315,187	\$356,565	\$398,903	\$435,004	\$465,788	\$492,041	\$514,430
Tax on EBIT		\$125	\$1,932	\$4,728	\$8,364	\$10,587	\$10,829	\$11,077	\$11,331	\$11,592	\$11,859	\$12,133	\$12,413	\$12,701	\$10,830	\$9,235	\$7,876	\$6,717
After Tax Cash Flow		\$292	\$4,508	\$11,032	\$19,515	\$24,703	\$25,267	\$25,846	\$26,439	\$27,047	\$28,310	\$28,965	\$29,636	\$25,271	\$21,549	\$18,377	\$15,672	\$13,366

Net Present Value15% **\$105,203**

ATTACHMENT II

ACUITY Technology Management provides management consulting to technology based companies. The company is skilled in the development of business plans and the technical, commercial and financial analyses of engineering and science based projects.

An area of special interest is the provision of advice to investors and financial institutions on the funding of high technology R&D and the exploitation of outcomes.

The valuation was undertaken by Acuity's Managing Director, David Randerson. Dr Randerson specializes in the valuation of intangible assets, and business entities whose main assets are intangibles, with particular expertise in IP. Valuations have been performed for purposes of licensing, capital raising and investment, sale, depreciation and amortisation, impairment, purchase price allocation, consolidation, mergers, acquisitions, stock options and goodwill.

Dr Randerson has experience with valuing software, internet, electronics, telecommunications, mining and petrochemical projects, process engineering, production engineering and automotive technologies. In the area of biotechnology, he has valued pharmaceuticals, medical devices, diagnostics, agriculture and environmental products and projects. Research-in-process is of particular interest to Dr Randerson.

Dr Randerson considers his engineering and biomedical expertise as essential prerequisites for the types of analyses he performs. An understanding of pharmaceutical development practices and regulations, research and development, project management, probability and statistics, discounted cash flow methodologies, real options analysis, life cycle forecasting, engineering depreciation and functional obsolescence analysis, are amongst the important tools in which Dr Randerson has competence.

Dr Randerson has a Bachelor of Chemical Engineering (Monash University), Master of Science in Applied Science (UNSW) and a Doctorate of Philosophy in Biomedical Engineering (UNSW). He is a fellow of the Australian Institute of Company Directors and a member of the Institution of Chemical Engineers.

As principal of Acuity for 21 years, Dr Randerson has undertaken in excess of 200 valuations in biomedical sciences and 100 in applied sciences.

Significant clients of Acuity have included Deloitte Corporate Finance, Bankers Trust, Macquarie Bank, Westpac Bank, Deutsche Bank and many high technology companies, research institutes and university technology transfer organisations. Some of these assignments are listed below:

- *AGENiX Ltd – thromboview, blood clot imaging agent for proposed merger with Peptech Ltd*
- *Axon, Inc – biomedical instrumentation*
- *Cavidi Tech AB (Sweden) - HIV viral load and drug susceptibility tests as acquired by Narhex Ltd*
- *Cochlear Limited – patents for hearing implants and licence to implantable microphone IP*
- *Evogenix Limited – antibody and protein optimisation technology*
- *QRx Pharma Limited - pain management drugs for investment by Westpac*
- *Cotton Seed Distributors Ltd - value of licence to CSIRO cotton breeding program*
- *Zenyth Therapeutics Limited - IER in relation to acquisition by CSL Limited acquisition*
- *Angioblast, Inc (USA) - IER in relation to share acquisition by Mesoblast Ltd*
- *Marshall Edwards, Inc - licence from Novogen Ltd to a novel prostate cancer drug*
- *Biosol Pty Ltd - formulations for the elimination of biofilms from sewerage for odour control and corrosion prevention for proposed investment by CSR Ltd*
- *ACRUX Ltd - drug delivery systems for prospectus and acquisition of patents from Monash Uni*
- *Ventracor Ltd - left ventricular assist device for acquisition of patents from Uni of Technology Sydney*
- *CSL Ltd - Epstein Barr virus vaccine for treatment of infectious mononucleosis (glandular fever) & recombinant antibody technology available through CSIRO and its application to anti-asthma and eye disease for purposes of licensing.*

We have assisted with or independently undertaken purchase price allocation (“PPA”) and the subsequent impairment of indefinite lived assets arising from business combinations, including the valuation of IPR&D under IFRS.

Examples of tax consolidation and PPA include:

- *Vital Health Pty Ltd acquired by Phosphogenics Limited (with Deloitte)*
- *Cavidi SA (Sweden) acquired by Narhex Limited*
- *HealthLinx Limited acquired by Cryptome Limited*
- *C-Vac P/L, Arthron P/L, OncoMab P/L & Ilexus P/L for Prima Biomed Limited*
- *Soltech Pty Ltd acquired by Connetics Australia Pty Ltd*
- *Hamilex White Pty Ltd and Lusti Pty Ltd acquired by MaxiTRANS Limited*
- *Richardson Pacific P/L, Melwire P/L and Screenex P/L acq.d by Locker Group Pty Ltd*
- *Cytopia Limited acquired by YM Biosciences Inc.*

Valuations for impairment of goodwill and intangibles have been undertaken for:

- *BluGlass Limited – five consecutive years*
- *Calzada Limited*
- *Connetics Australia P/L (now Stiefel, Inc, a division of GlaxoSmithKline) – two consecutive years*
- *ChemGenex Pharmaceuticals Limited – three consecutive years*
- *BQT Limited – four consecutive years*
- *Medic Vision Limited*
- *MediVac Limited*
- *Phosphogenics Limited – over four years*
- *Progen Limited – two consecutive years.*