

**ASX ANNOUNCEMENT**

**VALIDATED CANCER MARKER PRESENTATION**

**Sydney, 19 March 2010:**

Darren Jones head of product development of Cellmid Limited presented at the Pharma R&D Partnering World Asia conference. A full copy of his presentation is attached.

*For further information visit [www.cellmid.com.au](http://www.cellmid.com.au) or contact:*

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**About Cellmid Limited (ASX: CDY)**

Cellmid Limited is a biotechnology company listed on the Australian Stock Exchange. The Company is the owner of the most comprehensive intellectual property portfolio around midkine globally. Midkine is a significant novel therapeutic and diagnostic target. It is a native protein expressed during early cancer formation as well as at the onset of a number of inflammatory processes. Cellmid is committed to the commercialisation of its portfolio of therapeutic and diagnostic products. In addition to its product development programs Cellmid is actively seeking partners for some of its non-core assets.

**Investment in biotechnology companies**

There are a number of inherent risks associated with the research, development and commercialisation of pharmaceutical products. Investment in companies specialising in these activities carry specific risks which are different to those associated with trading and manufacturing businesses. As such, these companies should be regarded as highly speculative. Medical Therapies recommends that investors seek professional advice before making an investment in its shares.

# Midkine

A validated marker for the early diagnosis and  
disease management of cancer

March 2010

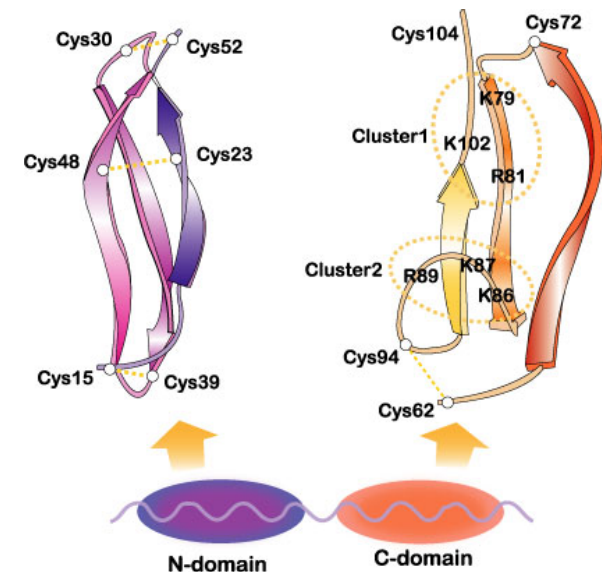
**BioPharma**  
ASIA CONVENTION 2010

# Cellmid (ASX:CDY)

- Cellmid business strategy: “own the target” (midkine)
- Cellmid owns the most comprehensive global patent portfolio around midkine (MK)
  - 19 patent families, ~70 patents
  - MK to detecting early cancers, use of anti-MK agents to treat autoimmune & inflammatory diseases and cancers, use of MK to treat heart & brain ischemias
  - Production of MK and anti-MK antibodies
- Cellmid holds a vast knowledge base and inventory around MK
  - Over 250 papers on MK published by Cellmid inventors
  - Scientific discoverers of MK retained as advisors to Cellmid
  - >130 monoclonal antibodies, 7g of purified MK protein, MK knock-out mouse model
- Targeting multiple partnerships with global leaders to advance diagnostic and therapeutic portfolio
- Additional opportunities actively pursued through partnering significant non-core diagnostic, antibody and nucleotide assets

# Midkine

- ⦿ Small protein (13kD, 121 aas) with two domains
- ⦿ Growth factor prominent in embryogenesis but largely undetectable in adults
- ⦿ Actions: inhibits apoptosis, modulates angiogenesis, promotes cell growth and drives inflammatory cell migration
- ⦿ Has an important role in cancer progression, onset of inflammatory diseases and preservation and repair of injured tissue

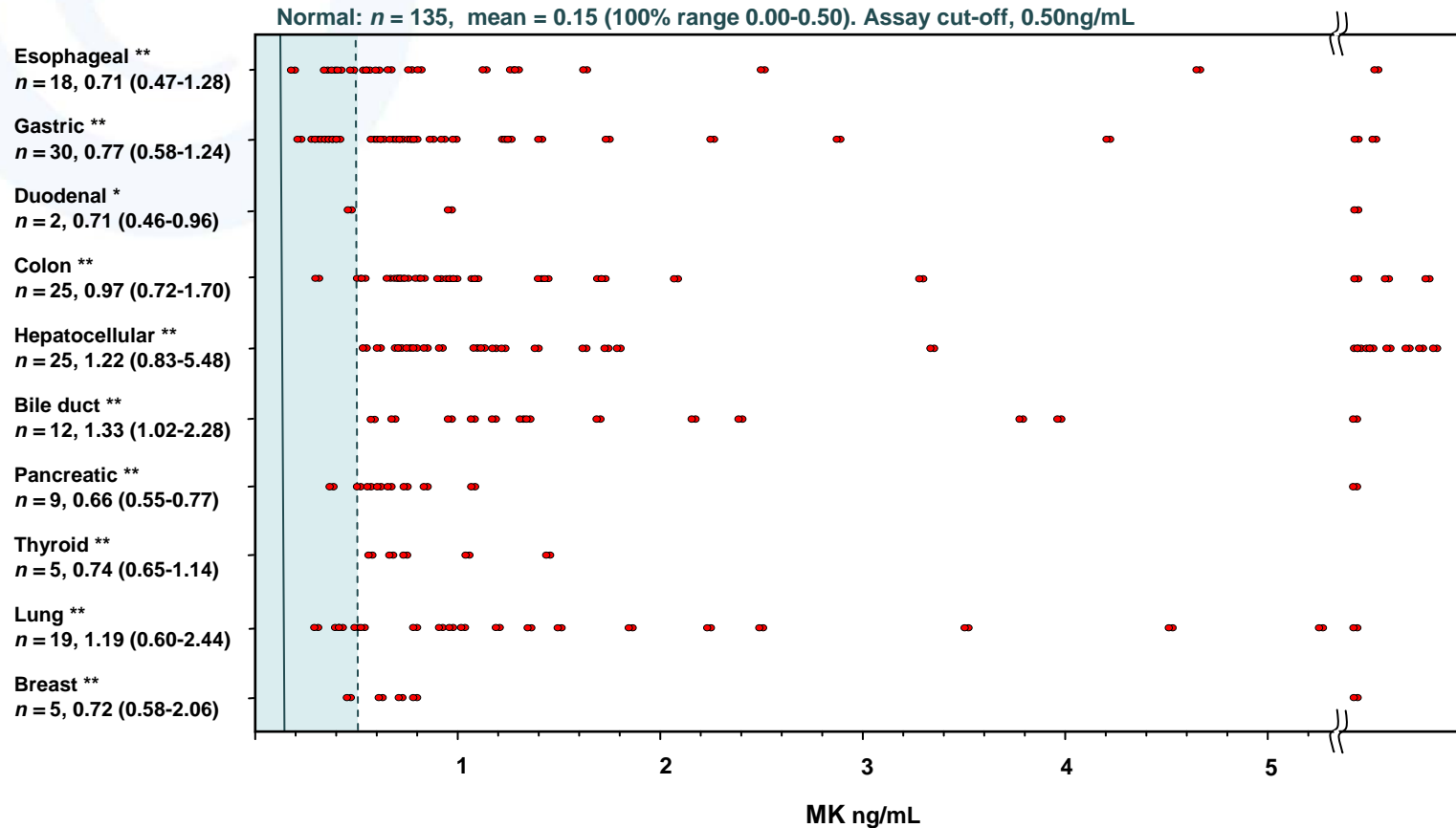


# Midkine Product Development

Diagnostic Programs	Proof of concept	Clinical Validation	Regulatory approval	Launch
MK ELISA	→	→		
CAN104 (canine cancer diagnosis)	→	→		
CS5000 and CK3000 (cancer screening)	→	→		
CPEB105 (Gastric cancer diagnosis)	→	→		
Therapeutic Programs	Research	Preclinical	Clinical	Registration
CAMI103 (heart attack)	→	→		
CMS101 (Multiple sclerosis)	→	→		
CRA102 (Rheumatoid arthritis)	→	→		

# Midkine for cancer diagnosis

Serum midkine is elevated in many different types of carcinoma



Ikematsu et al Br J Cancer 2000

# Midkine for breast cancer detection

Midkine plasma concentration in combination with conventional markers greatly enhances disease detection over conventional markers alone

Combination of tumor markers	No. of cases (%)
1. CA15-3/CEA/NCCST-439 positive	44 (29.9%)
2. <b>Midkine</b> /CA15-3/CEA positive	66 ( <b>44.9%</b> )
3. <b>Midkine</b> /CA15-3/NCCST-439 positive	61 ( <b>41.5%</b> )
4. <b>Midkine</b> /CEA/NCCST-439 positive	66 ( <b>44.9%</b> )

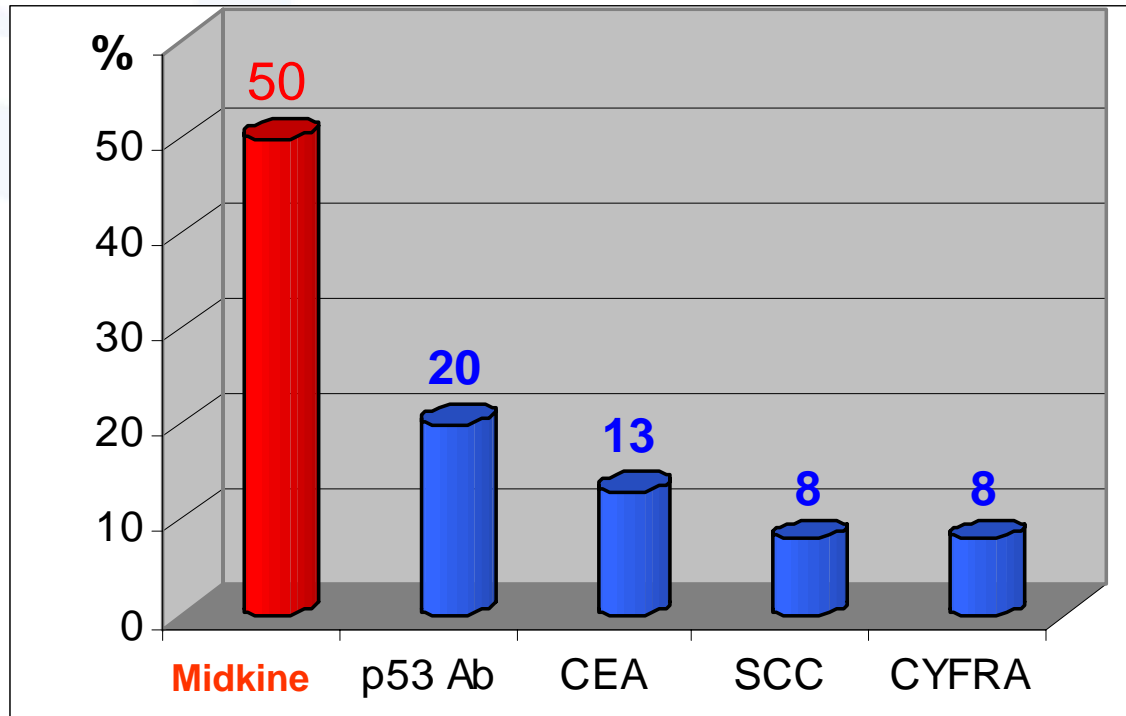
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1 vs 2,  $P < 0.0001$ ; 1 vs 3,  $P = 0.0031$ ; 1 vs 4,  $P < 0.0001$  (McNeman test)

$n = 147$  breast cancer patients

# Midkine for early detection of esophageal cancer

Midkine serum concentration in 60 Stage I superficial esophageal squamous cell carcinoma patients greatly enhances disease detection over conventional markers



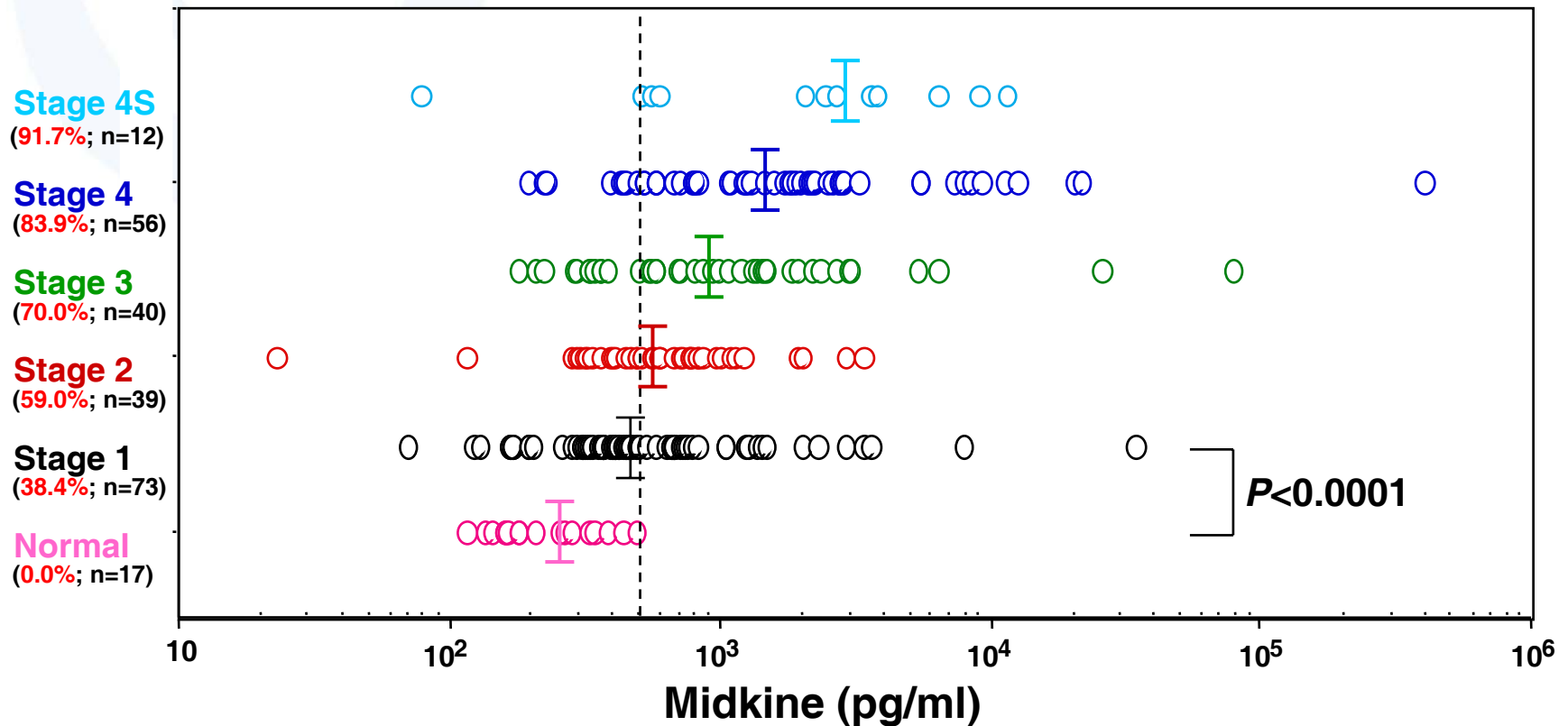
Using serum MK cut-off of >300pg/mL (mean normal serum MK conc + 2 std.devs)

Shimada et al Oncol Rep 2003



# Midkine for disease staging

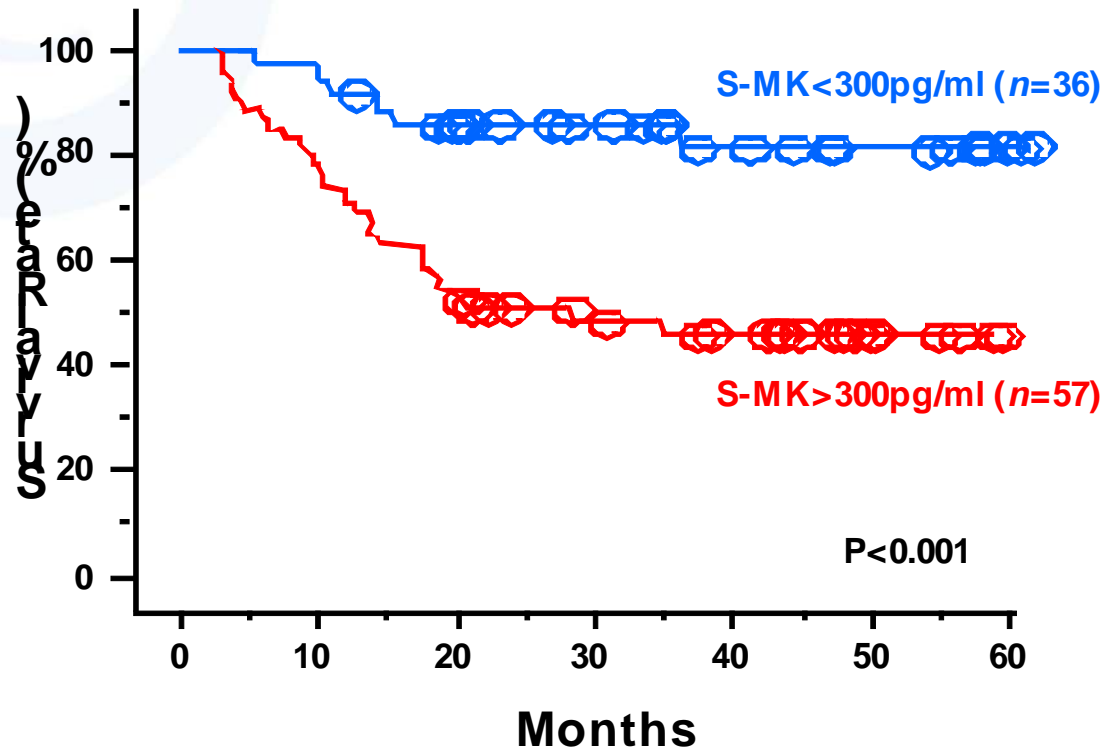
Midkine serum concentration in 220 patients with staged neuroblastoma



Ikematsu et al Brit J Cancer 2003

# Midkine as prognostic

Five year survival curves of 93 patients with esophageal squamous cell carcinoma



Shimada et al Cancer Sci 2003

# Current and future work

- ◎ Fully validated ELISA for detecting MK nearing completion
- ◎ Large comparative studies of blood MK with conventional markers
- ◎ Strategy: license diagnostic use of MK for cancer by indication
  - Exclusive and non-exclusive license opportunities are available in several cancer indications
  - Actively looking for licensees
- ◎ Lung cancer: licensed to Celera Corporation October 2009
  - Risk assessment, early detection, prognosis, disease progression & reoccurrence

# Thank you

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