

BBY Company Research		24 January 2014			
<b>Medical Developments International Limited</b>					
<b>MVP</b>	A\$1.17	<b>TARGET PRICE</b>	A\$1.76		<b>BUY</b>
Medical Developments International Limited is a leader in emergency pain relief and respiratory products. The Company manufactures Pentrox, a fast acting minor trauma & emergency pain relief product.				<b>Dr Dennis Hulme</b> +61 2 9226 0083 djh@bby.com.au	

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## Initiation of coverage

**Medical Developments International (MVP) is a specialised healthcare company with industry-leading products in the areas of pain management, asthma and resuscitation. MVP has established its Pentrox “green whistle” as a leader in fast-acting emergency pain relief in Australia, and is awaiting regulatory approval for Pentrox in the much larger European market. The launch of Pentrox in Europe would deliver substantial upside for the stock, while its Space Chamber asthma spacer also has significant overseas sales potential following recent FDA approval. We initiate coverage with a BUY recommendation and price target of A\$1.76/sh, in line with our risked DCF valuation.**

### Pentrox on track for approval in Europe

- MVP has completed a successful 300-patient Phase 3 trial of Pentrox in UK hospitals. The trial showed that Pentrox was safe and delivered rapid, statistically significant relief of acute pain in patients presenting to an emergency department with minor trauma.
- MVP applied for marketing approval for Pentrox in the UK, France, Belgium and Ireland in October 2013 based on the successful clinical trials. We estimate a 90% likelihood that approval will be granted around the end of CY14. MVP plans to file for additional European approvals once the initial applications are decided.
- Europe a large potential market for Pentrox.** We forecast that Pentrox sales in just 2 European markets, the UK and France, could reach A\$29M by FY20. We estimate that the potential sales of Pentrox across Europe are A\$160M if the uptake is similar to Australia, and over A\$400M if the strategy of marketing to hospital emergency departments in addition to ambulance services leads to higher unitisation rates.

### Recent FDA approval should lead to significant US sales of Space Chamber Plus device.

- MVP has demonstrated that the delivery of inhaled drugs through its patented asthma spacer is comparable to the leading products on the market. We forecast the Space Chamber plus to capture 10% of the US market by FY18, delivering an additional A\$14M of revenue.

### 1H14 weak on GSK contract termination.

- MVP has advised that market that it expect 1H13 NPAT to be approximately A\$0.5M, down 65% on pcp, due primarily to cancellation of a supply contract to GSK, who had been supplying Space Chambers free of charge to patients. MVP expects earnings to recover in 2H14 as patients resume purchasing spacers themselves.

### Company Data

Number of shares	58M
Market capitalisation	\$68M
Free Float (%)	41.4
12 month high/low	\$2.15/\$1.06
Average monthly turnover	\$1M
% S&P/ASX 200	n/a
% All Ordinaries	n/a
ESG Disclaimer Score (Ranking)	n/a
GICS Industry Group	Pharmaceuticals, Biotechnology & Life Sciences

### BBY vs Consensus

	BBY FY1	Consensus FY1	% Difference
EBITDA (\$m)	2.8		
NPAT (\$m)	1.7		
EPS (c/sh)	3.0		

### BBY Technical View – as at 23/01/2014

Short Term	Uptrend Resistance	\$1.34
Long Term	Downtrend Support	\$1.05

### Earnings summary (AUD)

Year end June	2013A	2014F	2015F	2016F
Revenue (\$M)	11.8	10.5	12.0	17.3
EBITDA (\$M)	3.4	2.8	3.4	5.1
Reported NPAT (\$M)	2.3	1.7	2.2	3.5
Adjusted NPAT (\$M)	2.3	1.7	2.2	3.5
Reported EPS (¢)	4.1	3.0	3.8	6.0
Adjusted EPS (¢ - FD)	4.1	3.0	3.8	6.0
Adjusted EPS growth (%)	(20.7)	(25.4)	25.4	58.9
Adjusted P/E (x)	31.3	38.7	30.9	19.4
Dividend (¢/sh)	0.0	2.4	3.0	4.8
Gross yield (%)	0.0	3.0	3.7	5.9
Net yield (%)	0.0	2.1	2.6	4.1
Franking (%)	100.0	100.0	100.0	100.0
ROIC (%)	15.1	11.0	13.7	20.5

### MVP share price performance



## Financial Summary

**Medical Developments International Limited**

 Share Price (A\$) **\$1.17**

Mkt Cap (A\$M)

**68**

Year ending June 30

<b>Profit &amp; Loss (A\$M)</b>	<b>2013A</b>	<b>2014F</b>	<b>2015F</b>	<b>2016F</b>
Total Revenue	11.8	10.5	12.0	17.3
Growth (%)	2.4	(10.8)	13.9	44.6
EBITDA	3.4	2.8	3.4	5.1
Growth (%)	(12.7)	(17.4)	20.8	53.0
Dep'n and amort'n	(0.2)	(0.2)	(0.2)	(0.2)
EBIT	3.1	2.6	3.1	4.9
Net interest expense	0.0	(0.1)	0.0	0.0
PBT	3.2	2.5	3.1	4.9
Growth (%)	(16.7)	(22.0)	25.4	58.9
Tax	(0.9)	(0.7)	(0.9)	(1.5)
NPAT Underlying attrib.	2.3	1.7	2.2	3.5
Growth (%)	(16.0)	(24.4)	25.4	58.9
NPAT Reported	2.3	1.7	2.2	3.5
Normalised NPAT	2.3	1.7	2.2	3.5
Ord Shares	57.4	57.4	57.4	57.4
Options	0.0	0.0	0.0	0.0
Fully Diluted	56.6	57.4	57.4	57.4
FD Wgtd Av Shares	56.6	57.4	57.4	57.4
<b>Cashflow (A\$M)</b>	<b>2013A</b>	<b>2014F</b>	<b>2015F</b>	<b>2016F</b>
Customer receipts	11.4	10.5	12.0	17.3
Supplier Payments	(9.3)	(7.3)	(8.8)	(13.0)
Net interest paid	0.1	(0.1)	0.0	0.0
Taxes Paid	(1.1)	(0.7)	(0.9)	(1.5)
Net operating cash flow	1.1	2.4	2.2	2.8
Capex	(3.0)	(0.2)	(0.2)	(0.2)
Net investing cash flow	(3.0)	(0.2)	(0.2)	(0.2)
Dividends paid	(2.3)	(1.8)	(1.5)	(2.1)
Net financing cash flow	(0.7)	(1.8)	(1.5)	(2.1)
Net Change in cash	(2.7)	0.4	0.4	0.5
Net cash at end of period	0.8	1.2	1.6	2.1
Free cash flow	0.5	2.2	2.0	2.6
Change in working capital	2.8	0.0	(0.7)	(1.4)
<b>Balance sheet (A\$M)</b>	<b>2013A</b>	<b>2014F</b>	<b>2015F</b>	<b>2016F</b>
Cash	0.8	1.2	1.6	2.1
Receivables	2.3	2.1	2.3	3.4
Inventories	1.4	1.0	1.1	1.6
Current assets	4.9	4.7	5.5	7.5
Tangible Assets	1.0	1.0	1.0	0.9
Investments	0.0	0.0	0.0	0.0
Goodwill	7.4	7.4	7.4	7.4
Total assets	20.3	20.0	20.8	22.8
Payables	1.6	1.4	1.6	2.2
Current Term debt	1.4	1.4	1.4	1.4
Long term debt	0.1	0.1	0.1	0.1
Total liabilities	4.5	4.3	4.4	5.1
Total Shareholder Equity	15.7	15.7	16.3	17.7

<b>Investment summary</b>	<b>2013A</b>	<b>2014F</b>	<b>2015F</b>	<b>2016F</b>
NPAT reported	2.3	1.7	2.2	3.5
NPAT Underlying	2.3	1.7	2.2	3.5
EPS Reported	4.1	3.0	3.8	6.0
EPS Underlying	4.1	3.0	3.8	6.0
EPS Growth (%)	(20.7)	(25.4)	25.4	58.9
P/E Underlying (x)	31.3	38.7	30.9	19.4
Dividend (¢/sh)	0.0	2.4	3.0	4.8
Payout Ratio (%)	0.0	80.0	80.0	80.0
Gross Yield (%)		3.0	3.7	5.9
Net Yield (%)		2.1	2.6	4.1
Franking (%)	100.0	100.0	100.0	100.0

<b>Key Ratios</b>	<b>2013A</b>	<b>2014F</b>	<b>2015F</b>	<b>2016F</b>
<b>Profitability (%)</b>				
EBITDA	3.4	2.8	3.4	5.1
EBITDA/Rev (%)	28.6	26.5	28.1	29.8
EBIT	3.1	2.6	3.1	4.9
EBIT/Rev (%)	26.7	24.3	26.2	28.4
NPAT	2.3	1.7	2.2	3.5
NPAT/Rev (%)	19.5	16.5	18.2	20.0
ROE (%)	14.4	11.0	13.6	20.3
ROA (%)	15.9	12.7	15.4	22.6
ROIC (%)	15.1	11.0	13.7	20.5
<b>Financial Strength</b>				
Debt to equity (%)	9.2	9.2	8.8	8.2
Net debt (\$M)	0.7	0.2	(0.2)	(0.7)
Net debt to equity (%)	4.3	1.5	(1.2)	(3.9)
Net Debt to EBITDA (%)	0.2	0.1	(0.1)	(0.1)
Interest Cover EBIT (x)	241.4	36.5	149.7	181.2
Current Ratio (x)	1.5	1.6	1.8	2.0
Quick Ratio (x)	1.1	1.2	1.4	1.6
<b>Valuation</b>				
Operating cash flow	1.1	2.4	2.2	2.8
CFPS (¢ - FD)	1.9	4.2	3.8	4.9
Price/CF	68.2	27.7	30.9	23.7
BV per share (\$)	0.3	0.3	0.3	0.3
Price/Book Value (x)	4.6	4.3	4.1	3.8
NTA (\$)	1.4	1.4	2.0	3.4
NTA per share (\$)	0.0	0.0	0.0	0.1
Price/NTA (x)	50.9	48.3	33.0	20.0
EV/Sales (x)	6.2	6.5	5.6	3.9
EV/EBITDA (x)	21.6	24.3	20.0	13.0
EV/EBIT (x)	23.2	26.6	21.5	13.6

Source: BBY, Company Reports. BBY contributes all company estimates to Bloomberg, Thomson Reuters, FactSet and Capital IQ.

Note: Numbers displayed are a sub-set

The ESG (Environmental, Social, Governance) score is a measure of the sustainability and ethical impact of an investment in this company or product. ESG scores range from 0.1 (min) to 100 (max). ESG scores are provided to BBY by Bloomberg and are only available for those companies that disclose ESG data to Bloomberg.

## Investment Summary

We initiate on Medical Developments International Limited (MVP) with a BUY recommendation and a 12 month target price of A\$1.76/sh. Our price target is underpinned by our risk-adjusted DCF valuation which assumes a 90% likelihood that Pentrox is successfully launched in the UK and France, which are expected to be amongst the first European countries where approval is granted. A successful Pentrox launch in the top 5 EU markets would increase our valuation to A\$2.82/sh, while a Europe-wide launch would lift the valuation to A\$4.58/sh.

We believe that MVP is likely to receive marketing approval for Pentrox in Europe around the end of 2014, which will give it access to the much larger European market. In light of the unique capability of Pentrox to deliver rapid, needle free pain relief we expect the market uptake of Pentrox in Europe to be similar to that in Australia. On this basis, we estimate that Pentrox sales could reach A\$29M if it is launched in the UK and France, A\$68M across the top 5 EU pharmaceutical markets, and A\$160M if it is launched Europe wide. MVP believes that by focusing on hospital emergency departments in addition to ambulance services, it can lift the Europe-wide sales potential of Pentrox to A\$422M.

Total revenue for MVP in FY13 was A\$11.7M, so a successful European launch of Pentrox would transform the company.

In addition, MVP recently obtained FDA approval in November 2013 to sell its Space Chamber Plus range of inhalation spacers in the USA, giving access to the world's largest market. MVP has demonstrated that the performance of its Space Chamber Plus devices is equivalent to the current market leader, the Aerochamber Plus Antistatic. MVP estimates that more than 20M space chambers are sold each year in the USA. Given the demonstrated equivalence to the market leader, we forecast MVP to capture 10% of the market by FY18, generating A\$14M of revenue from US sales.

## Investment Highlights

- ◆ Profitable existing business
- ◆ Long history of safe and effective use of the Pentrox green whistle in Australia
- ◆ A successful launch of Pentrox across Europe could increase company revenue more than 10 fold based on BBY estimates, or 25-fold based on the company's market research.
- ◆ MVP is also investigating the requirements for US approval of Pentrox.
- ◆ Manufacturing technology development project with CSIRO on track to substantially reduce Pentrox COGS.
- ◆ Recent US FDA approval of the Space Chamber Plus asthma inhaler expected to lead to significant sales.

## Investment Risks

- ◆ The Company's success will depend on the commercialisation of its current products and the development and commercialisation of pipeline products. There is no certainty that MVP will be successful in these efforts.
- ◆ We estimate that half of the current share price reflects the market's valuation of the overseas growth opportunities. If none of the growth opportunities come to fruition the share price is likely to fall.
- ◆ Key risks to the growth opportunities are:
  - Pentrox might not receive regulatory approval in Europe or other markets
  - Pentrox might face delays getting reimbursed in Europe
  - The Space Chamber Plus range might not capture significant market share in the US or elsewhere
- ◆ Competitors could develop and market alternative versions of the Pentrox green whistle because patents on the product have expired.

## Valuation and target price setting

Our 12-month price target price of A\$1.76/sh is in line with our base-case risked DCF valuation. We have assumed a WACC of 12% and a terminal growth rate of 3%.

In our Base-case forecasts for MVP we assume:

- ◆ A 90% likelihood that Pentrox will be approved in the UK and France, and achieves sales in those countries of A\$29M in FY20, generating EBITDA margins of 35%.
- ◆ No other European approvals are included in our base case valuation.
- ◆ Sales of the Space Chamber plus range of asthma inhalers in the USA reach A\$14M in FY18.

**Table 1. Base case DCF valuation summary**

	2014 F	2015 F	2016 F	2017 F	2018 F	2019 F	2020 F	2021 F	2022 F	2023 F
	30-Jun-14	30-Jun-15	30-Jun-16	30-Jun-17	30-Jun-18	30-Jun-19	30-Jun-20	30-Jun-21	30-Jun-22	30-Jun-23
Europe Pentrox sales (A\$M)	0.0	0.4	2.7	7.5	12.0	17.6	25.8	29.3	30.8	32.4
Other Pentrox sales (A\$M)	5.9	6.1	6.3	6.6	6.9	7.1	7.4	7.7	8.0	8.4
Medical Equipment sales (A\$M)	4.3	5.1	7.9	13.6	19.4	20.1	21.1	22.2	23.3	24.4
Veterinary sales (A\$M)	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4
Total Revenue (A\$M)	10.5	12.0	17.3	28.1	38.7	45.3	54.8	59.6	62.5	65.6
EBIT (A\$M)	2.6	3.1	4.9	8.5	12.4	15.1	18.9	21.1	22.2	23.4
Tax (A\$M)	0.8	0.9	1.5	2.6	3.7	4.5	5.7	6.3	6.7	7.0
Depreciation & Amortisation (A\$M)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Capital expenditure (A\$M)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1
Incremental working capital (A\$M)	-0.5	0.2	0.9	1.7	1.7	1.1	1.6	0.8	0.5	0.5
Free cash flow (A\$M)	2.3	2.0	2.6	4.3	7.0	9.5	11.7	14.0	15.2	16.0
Growth (%)	69.8%	-12.6%	32.1%	63.1%	63.6%	36.6%	23.0%	19.6%	8.2%	5.5%
EBITA (A\$M)	2.6	3.1	4.9	8.5	12.4	15.1	18.9	21.1	22.2	23.4
Free cash flow (A\$M)	2.3	2.0	2.6	4.3	7.0	9.5	11.7	14.0	15.2	16.0
Discount factor	0.945	0.844	0.753	0.673	0.601	0.536	0.479	0.428	0.382	0.341
Discounted value (A\$M)	2.1	1.7	2.0	2.9	4.2	5.1	5.6	6.0	5.8	5.5
Sum of PV (A\$M)	38.7									
Terminal value (A\$M)	183.4									
Discount factor	0.341									
PV of terminal value (A\$M)	62.5									
PV of enterprise (A\$M)	101.2									
Net Debt (A\$M)	0.2									
Net value for shareholders (A\$M)	100.9									
Number shares on issue (M)	57.4									
<b>Valuation per share (A\$)</b>	<b>\$1.76</b>		<b>Rolled forward (A\$)</b>	<b>\$1.97</b>						

Source: BBY research

## Scenario analysis

Our risked DCF valuation is most sensitive to the number of European countries where MVP achieves market approval and successfully launches Pentrox.

Table 2 shows our DCF valuation of MVP under 4 different European launch scenarios.

- ◆ Our base case valuation of A\$1.76 assumes a 90% likelihood that Pentrox will be launched in the UK and France
- ◆ If Pentrox is not launched anywhere in Europe our valuation falls to A\$0.99/sh (scenario 2)
- ◆ Successful launch of Pentrox in the 5 largest EU markets (Germany, UK, France, Italy and Spain) lifts our valuation to A\$2.82/sh (scenario 3)
- ◆ Successful launch of Pentrox across Europe lifts our valuation to A\$4.58/sh (scenario 4)

**Table 2. DCF valuation under various Pentrox European launch scenarios**

Scenario	Peak European sales (A\$M)	Valuation (A\$/sh)
1. Base case - 90% chance launch UK and France	26	1.76
2. No European approvals	0	0.99
3. Launch EU top 5	68	2.82
4. Launch Europe-wide	159	4.58

Source: BBY research

## Pharmaceuticals Division – the Pentrox green whistle

Pharmaceuticals is MVP's biggest division by both revenue and earnings. The division manufactures and distributes Pentrox, which is often referred to as the "green whistle", due to the appearance of the delivery device. It is used to provide rapid relief of pain due to acute trauma, as well as for brief painful procedures such as changing of wound dressings or during patient transport. It is used extensively within the emergency acute care sector by ambulance and St Johns front line officers along with first aid organisations, Life Saving Australia, GPs, hospitals, dentistry, podiatry etc.

The main alternatives to Pentrox for pain relief for acute trauma include:

- ◆ morphine injections;
- ◆ intranasal or oromucosal fentanyl;
- ◆ nitrous oxide gas; and
- ◆ oral analgesics such as Panadol and Panadeine

As Chart 1 shows, the Pentrox inhaler consists of:

- ◆ a cylindrical whistle-like tube with a hole near the mouthpiece
- ◆ An attached scavenger unit that absorbs exhaled vapour.

The active ingredient, methoxyflurane, is supplied separately in a 3 mL bottle. Each 3ml dose lasts up to 60 minutes. Pain relief begins after 6–8 breaths and continues for several minutes after stopping inhalation.

Pentrox is reimbursed on the PBS at A\$44.99 per single pack, which we estimate would return A\$31.60 to MVP after pharmacy and wholesaler fees are deducted. We assume that high volume purchasers such as the ambulance services pay a lower price per unit.

Pentrox was approved for reimbursement in New Zealand in 2013.

### Chart 1. Pentrox "green whistle"



Source: Company data

## MVP has applied to market Pentrox in Europe

In October 2013 MVP submitted marketing applications to sell Pentrox in Europe. The application has been accepted for review by the Medicines and Healthcare Products Regulatory Agency (MHRA) in the United Kingdom. Once approved, Pentrox will be available for sale in the UK, France, Belgium and Ireland. We expect a decision on the marketing application around the end of 2014.

The marketing application was supported by a range of clinical studies designed to improve the clinical and safety data for the use of Pentrox, including:

- (i) Phase III Pivotal Study in the United Kingdom;
- (ii) Phase III Bone Marrow Biopsy Clinical Study;
- (iii) 'Thorough QT/QTc' Clinical Study in Australia;
- (iv) A Clinical Study to evaluate the cardiovascular and respiratory effects of inhaled methoxyflurane;

(v) Colonoscopy Study at Royal Adelaide Hospital;

The most important of these studies was a Phase 3 pivotal trial in 300 patients conducted in the accident and emergency department of six hospitals in the UK. The trial showed that Pentrox was safe and delivered rapid, statistically significant relief of acute pain in patients presenting to an emergency department with minor trauma. Key finding in the trial included:

- ◆ There was a highly significant difference between the methoxyflurane and placebo group ( $p < 0.0001$ ) in the analysis of the change of VAS pain score from baseline
- ◆ The median time to first pain relief for the methoxyflurane group was 4 minutes. This compares with the median time to onset of meaningful pain relief for intranasal fentanyl of 11 minutes and 16 minutes for oromucosal fentanyl.
- ◆ 85% of patients in the methoxyflurane group experienced their first pain relief with 1-10 inhalations.

MVP has estimated the potential sales of Pentrox in Europe, based on attendance at hospital emergency departments. About 30% of patients attending emergency departments require analgesia. If Pentrox is used by 30% of these patients, MVP estimates that sales in Europe could reach A\$422M, as shown in Table 1.

We estimate that 90% of the A\$6.3M Pentrox revenue in FY13 came from Australia, giving A\$5.7M of Australian sales. Based on the relative population sizes we estimate that if the uptake of Pentrox is the same in the UK as in Australia, then the UK sales potential would be A\$15M, equivalent of use by 12% of applicable cases. We have used this 12% uptake in our estimate of potential European sales, as shown in Table 1.

MVP has focused its marketing in Australia on ambulance services. However only around 30% of trauma patients are transported to hospital by ambulance in first world countries. The company believes that by focusing on hospital emergency departments in addition to ambulance services in Europe it can reach its target of use by 30% of applicable cases.

**Table 3. Pentrox potential sales in Europe based on MVP market research and BBY estimates (A\$M)**

	MVP estimate: 30% applicable cases	BBY estimate: 12% applicable cases
UK	\$40	\$15
France	\$37	\$14
Germany	\$38	\$14
Italy	\$36	\$14
Spain	\$28	\$11
Sub total EU5	\$179	\$68
Rest of Europe	\$243	\$92
Europe total	\$422	\$160

Source: Company data, BBY research

## USA

MVP has appointed regulatory experts to advise on getting Pentrox approved for sale in the USA.

## CSIRO collaboration on track to significantly reduce Pentrox COGS

In August 2012 MVP announced it had entered into a research and development program with the CSIRO designed to introduce a new, more efficient, significantly lower manufacturing cost process for the pharmaceutical compound used in Pentrox. In May 2013, MVP announced that the project had delivered on the first milestone, which is to manufacture commercial grade methoxyflurane in much larger quantities than at present. Should the program conclude successfully, MVP will have a world first, proprietary manufacturing process for methoxyflurane, which will increase manufacturing capacity while significantly reducing the cost of goods sold. We expect MVP to keep this process a trade secret to protect its competitive position, rather than submitting a patent application.

## Medical Devices

MVP design, assembles and tests a portfolio of over 30 medical devices, with the two main areas of focus:

- ◆ Respiratory devices for asthma management; and
- ◆ Oxygen delivery.

## Respiratory devices

MVP's range of Respiratory medical devices is well known and accepted as market leaders in domestic and international markets. The main products are:

- ◆ Asthma Space Chambers
- ◆ Masks
- ◆ Peak Flow Meters

The range of asthma products have delivered consistent sales through established partners in various countries around the world.

The most important product in the portfolio of respiratory devices is the Space Chamber Plus range of asthma inhalers which contain MVP's patented cross valve technology (Chart 2). During 2013 MVP:

- ◆ Won tender to exclusively supply GSK Australia with Asthma devices. However GSK has subsequently cancelled this contract when two generic competitors to its Seretide drug were launched in the Australian marketplace.
- ◆ Achieved reimbursement approval for the cost of Space Chambers in the UK.
- ◆ Won a tender to supply Canadian hospitals with the Space Chamber range.

## Chart 2. The Space Chamber Plus



Source: Company data

Space chambers are used to improve the efficiency of drug delivery from metered dose inhalers (commonly called asthma puffers). Table 2 below shows that MVP's Space Chamber Plus device delivers a greater proportion of the drug dose to the patients than two competing devices sold in the Australian marketplace.

Chart 3 below shows that the performance of the Space Chamber Plus is equivalent to the market leader in the US, the Aerochamber Plus Flow Vu Antistatic.

MVP achieved a major milestone in November 2013 when it received FDA approval to market the range of Space Chamber Plus devices in the USA, based on its demonstrated equivalent performance to the Aerochamber Plus Antistatic. MVP estimates that more than 20M space chambers are sold each year in the USA. Given the demonstrated equivalence to the market leader, we expect MVP to capture 10% of the market by FY18, generating A\$14M of revenue from US sales.

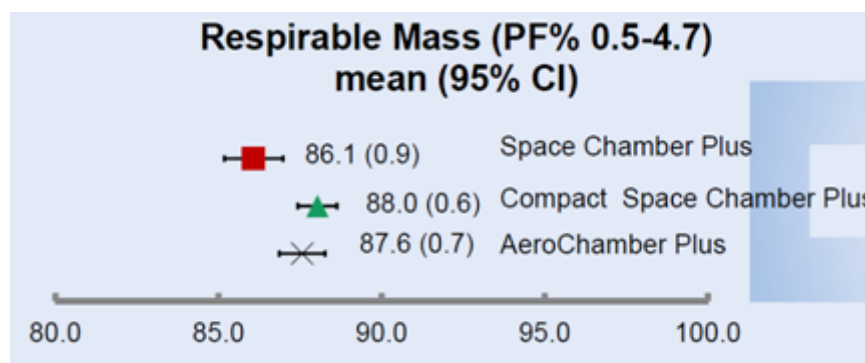
**Table 4. The Space Chamber Plus is world’s best practice for delivering Asthma medications**

**Flixotide, 125 µg/actuation; Canister Batch numbers: AN9158 (Exp APR/13)**

Device		Weight of drug per actuation (µg)		% drug per actuation	
		Exiting Spacer	Particles < 3.99 µm	Exiting Spacer	Particles < 3.99 µm
SpaceChamber plus (n=6)	Mean	58.7	47.6	52.6	42.7
	SD	4.9	4.5	3.0	3.1
	CV	8.3	9.6	5.7	7.4
AeroChamber plus (n=6)	Mean	46.6	39.5	41.3	35.0
	SD	6.4	4.7	4.9	3.9
	CV	13.7	12.0	11.9	11.0
Breath-A-Tec (n=6)	Mean	43.3	37.7	38.3	33.4
	SD	7.5	6.6	6.7	6.1
	CV	17.2	17.4	17.5	18.4

Source: Company data

**Chart 3. The Space Chamber Plus performance is equivalent to the US market leader, the Aerochamber Plus Flow Vu Antistatic**



Source: Company data

**Oxygen and other medical equipment**

MVP manufactures a range of oxygen therapy and resuscitation equipment, providing healthcare professionals and trained personnel with the ability to administer oxygen to patients in an emergency situation. These devices range from basic through to advanced systems of delivering oxygen therapy or resuscitation. These devices range from basic through to advanced systems of delivering oxygen therapy or resuscitation



## Veterinary

MVP offers a range of open and closed circuit anaesthetic machines to the veterinary market, which are popularly known as Komesaroff anaesthetic machines. The Company has developed a unique market position regarding the design, manufacture and supply of closed circuit anaesthetic machines to this particular niche market in Europe. Whilst the majority of the company's veterinary products continue to be sold in Europe, MVP continues to develop new products to improve sales in local and international markets.

**Chart 4. MVP's veterinary anaesthetic machine**



Source: Company data

## Intellectual Property

MVP relies extensively on trademarks and trade secrets rather than patents to protect its competitive position. It is the sole manufacturer of methoxyflurane (Pentrox) globally, and expects to have a much more efficient and cheaper manufacturing process at the completion of the CSIRO project.

MVP has patents protecting its unique cross valve technology in its Space Chamber plus devices, which provide protection worldwide beyond 2030.

## Overview of Medical Developments International

Medical Developments commenced operations in 1972 and listed on the ASX (ASX:MVP) in December 2003. It is located in Melbourne, Australia

MVP manufactures products that are the first choice of professionals in the hospital, pre-hospital, first aid environments, universities and veterinary institutions. Its products are used in 11 countries with the list of new country registrations increasing.

MVP has a widely recognised portfolio of brands such as Pentrox, Space Chamber, Space Chamber Plus, OXI-Port, OXI-Sok, KAB Absorber and OXI-Life.

## Board and Management

MVP has a team of experienced management specialists. The company is overseen by its Board of Directors who offer an extensive knowledge base across business, finance and the health industry.

### Table 5. Management Team

John Sharman	Chief Executive Officer
Andrew Manhire	Group Financial Controller/Company Secretary
Allan Eagle	Director of Operations
Keith Jeffs	General Manager – Sales & Marketing

Source: Company data

### Table 6. Board of Directors

David Williams	Non-executive Chairman
Allan McCallum	Non-executive Director
Dr Harry Oxer	Non-executive Director
Maurice Van Ryn	Non-executive Director
Max Johnston	Non-executive Director
Leon Hoare	Non-executive Director

Source: Company data

## Major Shareholders

Chairman Mr David Williams controls 52.6% of the stock in MVP.

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Contact with MVP has been made during the preparation of this report for assistance with verification of facts.

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