

# InMed Pharmaceuticals

Financial update

## Progress across the business

With the recent closing of the BayMedica acquisition, InMed now has a substantially different profile than just a few months ago. The company is now in its commercial stage as BayMedica has been selling cannabichromene (CBC) in bulk. InMed has also advanced past the healthy volunteer stage in the INM-755 clinical program through the initiation of the INM-755 Phase II trial (755-201-EB) in up to 20 epidermolysis bullosa (EB) patients.

Year end	Revenue (US\$m)	PBT* (US\$m)	EPS* (US\$)	DPS (US\$)	P/E (x)	Yield (%)
06/20	0.0	(9.0)	(1.73)	0.00	N/A	N/A
06/21	0.0	(10.3)	(1.53)	0.00	N/A	N/A
06/22e	0.0	(13.7)	(1.00)	0.00	N/A	N/A
06/23e	0.0	(12.1)	(0.83)	0.00	N/A	N/A

Note: \*PBT and EPS are normalised, excluding amortisation of acquired intangibles, exceptional items and share-based payments.

## BayMedica acquisition closed

Following InMed's acquisition of BayMedica, the combined company has multiple manufacturing approaches to produce rare cannabinoids at meaningful yields and at attractive costs and has a growing commercial product pipeline. It is currently the global leader in large batch (currently 200kg but with the ability to scale up to metric tonnes) supply of CBC, a rare non-intoxicating cannabinoid. It is currently being marketed to consumer health and wellness companies for the nutraceuticals, cosmetics, functional food/beverages and animal health markets.

## 755-201-EB trial initiated

The company [announced in late September](#) it has initiated the 755-201-EB trial, which will test INM-755 in up to 20 EB patients with an anticipated treatment duration of 28 days. The study is currently expected to take place across 11 sites in seven countries, with patient screening underway at the first site.

## INM-088 regulatory filings expected H222

With regards to INM-088 for glaucoma, the company has continued to set up a larger-scale drug manufacturing process, and has completed dose-ranging studies and conducted topline clinical study design work. Regulatory applications to initiate human clinical testing are expected to be filed in the second half of CY22.

## Valuation: US\$290m or US\$20.53 per basic share

We have adjusted our valuation to US\$290m or US\$20.53 per basic share, from US\$293m or US\$24.24 per basic share. This is mainly due to a higher number of shares outstanding following the share issuance as a result of the closure of the BayMedica acquisition. In addition, there was a decline in net cash. InMed had US\$15.4m in cash and marketable securities at 30 September 2021. We currently model an additional US\$11m being raised in FY23, though the exact funding requirement will depend on the expense level for the combined companies. We will update our financial model once BayMedica financials are included in regulatory filings, which is likely to occur with the next quarterly report.

## Pharma & biotech

17 November 2021

**Price** **US\$1.4**  
**Market cap** **US\$20m**

Net cash (US\$m) at 30 September 2021	15.4
Shares in issue	14.1m
Free float	60.6%
Code	INM
Primary exchange	Nasdaq
Secondary exchange	N/A

## Share price performance



%	1m	3m	12m
Abs	(0.0)	(40.4)	(58.8)
Rel (local)	(4.9)	(43.2)	(68.2)
52-week high/low	US\$5.35	US\$1.34	

## Business description

InMed Pharmaceuticals is a Canada-based biopharmaceutical company focused on manufacturing and developing cannabinoids. Its biosynthesis platform may be able to produce cannabinoids for less cost and with improved purity compared to currently used methods. The company is also developing a proprietary pipeline, including INM-755 for epidermolysis bullosa, a serious, debilitating orphan indication.

## Next events

Commercialisation update	2022
CTA filings for INM-088	H222

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## Transforming InMed

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Following the [closure of the BayMedica acquisition](#), the combined company will have multiple approaches to produce rare cannabinoids at meaningful yields and at attractive margins. BayMedica provides expertise in the use of chemical synthesis and yeast biosynthesis to manufacture cannabinoids, while InMed provides expertise in using *E. coli* (bacteria) for cannabinoid manufacturing through its IntegraSyn platform. This acquisition puts InMed in an attractive position to take advantage of the health and wellness market. As mentioned in the recent Edison report on biosynthesis ([Biosynthesis: Taking the cannabinoid market to new heights](#)), the global market for consumer packaged goods (CPG) and pharma cannabinoid biosynthesis products is predicted to reach C\$10bn in 2025 (~US\$8bn) and C\$115bn (~US\$90bn) by 2040 according to Raymond James.

The need to find alternative methods to manufacture cannabinoids, especially rare cannabinoids, is clear. Plant-based extraction of cannabinoids is time consuming (it takes three to 10 months just to cultivate the plant), which also requires a high degree of purification as otherwise the product would likely have unwanted pesticides, molds, fungi or bacteria, residual solvents, and non-target cannabinoids. For example, it was noted during the FDA advisory committee meeting to discuss the potential approval of GW Pharmaceuticals' Epidiolex (CBD) for pediatric epilepsies that there was as much tetrahydrocannabinol (THC) in its pharmaceutical grade compound as some of the lower doses of dronabinol, an FDA-approved THC product. Additionally, only a few cannabinoids, such as THC and cannabidiol (CBD), are plentiful enough in the plant to be extracted in an economically viable fashion.

BayMedica has already demonstrated an ability to manufacture rare cannabinoids at scale. BayMedica is currently the global leader in large batch (currently 200kg but with the ability to scale up to metric tonnes) supply of CBC, a rare non-intoxicating cannabinoid. Preclinical studies have shown its ability to inhibit the growth of cancer cells,<sup>1</sup> block pain,<sup>2</sup> potentially promote brain health,<sup>3</sup> combat depression<sup>4</sup> and inhibit acne.<sup>5</sup> It is currently being marketed to consumer health and wellness companies focused on nutraceuticals, cosmetics, functional food/beverages and animal health. The company has indicated that cumulative revenue since the December 2019 launch was US\$2.5m. However, we do not have information on the burn rate or cash needs of BayMedica. We will update our financial model once more financial information on BayMedica is released.

In addition to CBC, which is already at commercial scale, BayMedica is currently scaling up on tetrahydrocannabivarin (THCV), cannabidivarin (CBDV) and cannabinol (CBN) at food grade and expects to launch additional products in the next six to 12 months. THCV has been shown in

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- 1 Ligresti et al., Antitumor Activity of Plant Cannabinoids with Emphasis on the Effect of Cannabidiol on Human Breast Carcinoma. *Journal of Pharmacology and Experimental Therapeutics*, 2006 318(3), 1375–1387.
  - 2 Maione et al., Non-psychoactive cannabinoids modulate the descending pathway of antinociception in anaesthetized rats through several mechanisms of action. *British Journal of Pharmacology*, 2011 Feb;162(3):584-96.
  - 3 Shinjyo et al., The effect of cannabichromene on adult neural stem/progenitor cells. *Neurochemistry International*. 2013 Nov;63(5):432-7.
  - 4 El-Alfy et al., Antidepressant-like effect of delta9-tetrahydrocannabinol and other cannabinoids isolated from *Cannabis sativa* L. *Pharmacology, Biochemistry and Behavior*. 2010 Jun;95(4):434-42.
  - 5 Olah et al., Differential effectiveness of selected non-psychoactive phytocannabinoids on human sebocyte functions implicates their introduction in dry/seborrheic skin and acne treatment. *Experimental Dermatology* 2016 Sep;25(9):701-7.

preclinical studies to have an impact on obesity,<sup>6</sup> epilepsy<sup>7</sup> and Parkinson's disease.<sup>8</sup> Additionally, human clinical data demonstrated the potential for THCV to improve glycemic control in Type 2 diabetics.<sup>9</sup> CBDV is being investigated by GW Pharmaceuticals (acquired by Jazz Pharmaceuticals in May 2021) in a number of indications. A Phase IIa study in adults with focal seizures did not meet its primary endpoint but trials are ongoing in [autism](#) and [Prader-Willi Syndrome](#). GW/Jazz has also indicated interest in the treatment of Rett syndrome.

With regards to CBN, it has been the focus of InMed's pharmaceutical pipeline with INM-755, which has entered Phase II for EB, and INM-088, which is in preclinical development for glaucoma. Broadly, there is evidence of efficacy across a plethora of indications. Key for the treatment of EB (a rare debilitating genetic dermatologic disorder characterized by skin fragility where just wearing normal clothing can lead to wound formation), CBN has been shown in a variety of published preclinical studies to have an effect on pain,<sup>10</sup> inflammation (due to the inhibition of the expression of cytokines)<sup>11</sup> and bacterial infection.<sup>12</sup> In addition, and presented at the 2020 EB World Congress in London, InMed has demonstrated in its own preclinical studies an effect on both pain and inflammation. In pain, InMed's research has demonstrated a positive impact in nerve growth factor (NGF) induced pain models in rats. With regards to inflammation, CBN was tested on IL-8 and MMP-9, markers of inflammation suspected of having links with blister formation in EB simplex (both IL-8 and MMP-9 are upregulated in blisters) and in chronic cutaneous inflammation. Depending on dose, IL-8 was reduced by 35–54% and MMP-9 was reduced by 22–40%.

CBN has previously been shown to have efficacy in glaucoma. In cats, CBN has previously been shown to significantly reduce intraocular pressure (IOP) by around 27% after nine days.<sup>13</sup> Also, InMed recently disclosed in vivo animal data for INM-088 at the [H.C. Wainwright Ophthalmology Virtual Conference](#), which indicated a significant lowering of IOP at days 7 and 17 compared to the vehicle treated group.

BayMedica also has an extensive suite of new naturally occurring rare cannabinoids and cannabinoid analogs that can be developed as pharmaceutical products. These analogs are patentable as new chemical entities. This may potentially strengthen InMed's pipeline.

## INM-755 Phase II initiation

InMed has initiated its Phase II for INM-755 in EB patients. The trial will enroll up to 20 EB patients and have a treatment duration of 28 days. Patients with all four subtypes of inherited EB, EB Simplex, Dystrophic EB, Junctional EB and Kindler syndrome, will be eligible for the trial. The study will use a within-patient, double-blind design whereby matched index areas will be randomized to

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- 6 Riedel et al., Synthetic and plant-derived cannabinoid receptor antagonists show hypophagic properties in fasted and non-fasted mice. *British Journal of Pharmacology* (2009), 156, 1154–1166
  - 7 Dos Santos et al., Phytocannabinoids and epilepsy. *Journal of Clinical Pharmacy and Therapeutics* 2015, 40, 135–143
  - 8 Garcia et al., Symptom-relieving and neuroprotective effects of the phytocannabinoid  $\Delta^9$ -THCV in animal models of Parkinson's disease. *British Journal of Pharmacology* 2011 Aug;163(7):1495-506.
  - 9 Jadoon et al., Efficacy and Safety of Cannabidiol and Tetrahydrocannabivarin on Glycemic and Lipid Parameters in Patients With Type 2 Diabetes: A Randomized, Double-Blind, Placebo-Controlled, Parallel Group Pilot Study. *Diabetes Care* 2016 Oct;39(10):1777-86.
  - 10 Zygmunt et al.,  $\Delta_9$ -Tetrahydrocannabinol and Cannabinol Activate Capsaicin-Sensitive Sensory Nerves via a CB1 and CB2 Cannabinoid Receptor-Independent Mechanism. *Journal of Neuroscience*. 1 June 2002, 22 (11) 4720-4727
  - 11 Jan et al., Attenuation of the ovalbumin-induced allergic airway response by cannabinoid treatment in A/J mice. *Toxicology and Applied Pharmacology*, 188 (2003), 24–35.
  - 12 Appendino et al., Antibacterial Cannabinoids from Cannabis sativa: A Structure–Activity Study. *Journal of Natural Products*, 2008 71(8), 1427–1430.
  - 13 Colasanti et al., Intraocular pressure, ocular toxicity and neurotoxicity after administration of cannabinol or cannabigerol. *Experimental Eye Research*, 1984 39(3), 251–259.

be treated with either INM-755 or a vehicle cream. Current expectations are for the trial to complete enrollment in approximately a year. The study is expected to take place at 11 sites across seven countries, including Austria, Germany, Greece, France, Italy, Israel and Serbia. Clinical Trial Agreements are fully executed with five sites and patient screening is underway at the first site. The company is seeking to expand the study into Spain, which would add an eighth country and two more sites to the list.

## Valuation

We have adjusted our valuation to US\$290m or US\$20.53 per basic share, from US\$293m or US\$24.24 per basic share. This is mainly due to a higher number of shares outstanding following the share issuance as a result of the closure of the BayMedica acquisition. Also, there was a decline in net cash. We expect to add BayMedica's commercial product, CBC, to the valuation once we have additional clarity of the economics of that business, which will likely occur at the next earnings release.

### Exhibit 1: InMed valuation

Program	Stage	Probability of success	Launch year	Peak sales (US\$m)	rNPV (US\$m)
Biosynthesis (manufacturing)	Development	23%	2022	1,243	\$224
INM-755	Phase II	20%	2026	313	\$51
Total					\$274.9
Net cash and equivalents (As of 30 September) (US\$m)					\$15.4
<b>Total firm value (US\$m)</b>					<b>\$290.29</b>
Total basic shares (m)					14.14
<b>Value per basic share (US\$)</b>					<b>\$20.53</b>
Options and warrants (m)					7.7
Total diluted shares (m)					21.9
Value per diluted share (US\$)					\$13.28

Source: Edison Investment Research

## Financials

InMed reported a net loss of US\$3.0m in Q1 of FY22 (the period ending 30 September 2021), up from US\$1.6m in the same period a year ago due to higher SG&A and R&D spending. We have kept our R&D estimates the same but have increased SG&A forecasts by US\$0.9m and US\$1.0m in FY22 and FY23, respectively. Note that these estimates do not include BayMedica. We will update our model once we have a better understanding of the details of the BayMedica business.

InMed had US\$15.4m in cash and marketable securities at 30 September 2021. We continue to forecast US\$11m being raised (modelled as illustrative debt) in FY23, though the exact funding requirement will depend on the overall expense level for the combined company.

**Exhibit 2: Financial summary**

	US\$'000s	2020	2021	2022e	2023e
Year end 30 June		US GAAP	US GAAP	US GAAP	US GAAP
<b>PROFIT &amp; LOSS</b>					
Revenue		0	0	0	0
Cost of Sales		0	0	0	0
Gross Profit		0	0	0	0
Research and development		(5,811)	(5,338)	(8,007)	(5,285)
Selling, general & administrative		(3,227)	(4,479)	(5,574)	(5,797)
EBITDA		(9,038)	(9,817)	(13,582)	(11,082)
Operating Profit (before amort. and except.)		(9,151)	(9,938)	(13,696)	(11,196)
Intangible Amortisation		0	0	0	0
Exceptionals/Other		82	(163)	(84)	(87)
Operating Profit		(9,069)	(10,101)	(13,780)	(11,284)
Net Interest and financial expense		130	(344)	5	(939)
Other (change in fair value of warrants)		0	243	0	0
Profit Before Tax (norm)		(9,021)	(10,283)	(13,690)	(12,136)
Profit Before Tax (IFRS)		(8,939)	(10,203)	(13,775)	(12,223)
Tax		0	0	0	0
Deferred tax		0	0	0	0
Profit After Tax (norm)		(9,021)	(10,283)	(13,690)	(12,136)
Profit After Tax (IFRS)		(8,939)	(10,203)	(13,775)	(12,223)
Average Number of Shares Outstanding (m)		5.2	6.7	13.7	14.5
EPS - normalised (c)		(172.80)	(153.02)	(99.78)	(83.44)
EPS - GAAP (US\$)		(1.71)	(1.52)	(1.00)	(0.84)
Dividend per share (c)		0.0	0.0	0.0	0.0
Gross Margin (%)		N/A	N/A	N/A	N/A
EBITDA Margin (%)		N/A	N/A	N/A	N/A
Operating Margin (before GW and except.) (%)		N/A	N/A	N/A	N/A
<b>BALANCE SHEET</b>					
Fixed Assets		1,490	1,403	1,267	1,163
Intangible Assets		1,087	1,062	1,037	1,037
Tangible Assets		403	327	221	117
Other		0	15	9	9
Current Assets		6,312	8,378	5,597	4,948
Stocks		0	0	0	0
Debtors		45	12	15	15
Cash		5,848	7,410	5,010	4,360
Other		419	957	572	572
Current Liabilities		(1,676)	(2,215)	(1,927)	(1,927)
Creditors		(1,676)	(2,215)	(1,927)	(1,927)
Short term borrowings		0	0	0	0
Long Term Liabilities		(248)	(189)	(179)	(11,179)
Long term borrowings		0	0	0	(11,000)
Other long term liabilities		(248)	(189)	(179)	(179)
Net Assets		5,878	7,377	4,759	(6,995)
<b>CASH FLOW</b>					
Operating Cash Flow		(7,375)	(10,151)	(13,031)	(11,640)
Net Interest		0	360	0	0
Tax		0	0	0	0
Capex		(43)	(2)	(2)	(10)
Acquisitions/disposals		0	0	0	0
Financing		(31)	10,855	10,885	0
Dividends		0	0	0	0
Other		1	0	(250)	0
Net Cash Flow		(7,448)	1,062	(2,398)	(11,650)
Opening net debt/(cash)		(13,784)	(5,848)	(7,409)	(5,010)
HP finance leases initiated		0	0	0	0
Exchange rate movements		416	(495)	0	0
Other		(905)	994	(1)	0
Closing net debt/(cash)		(5,848)	(7,409)	(5,010)	6,640

Source: company reports, Edison Investment Research

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