



## Running hard in the lucrative medicinal cannabis space

ECS Botanics Holdings Ltd (ASX: ECS) is a fast-growing Australia-based provider of medicinal cannabis and hemp-based wellness products. With a focus on medicinal cannabis, it operates a specialised business model, with regenerative and organic medicinal cannabis cultivation/manufacturing facilities in Tasmania and Victoria. ECS has its own hemp food/wellness brand, and cultivation and white-label manufacturing medicinal cannabis products.

### Investment case

ECS is currently focussed on building its 'seed to medicine' model by expanding its medicinal cannabis facilities. With medicinal cannabis receiving acceptance from regulators and consumers across the globe, this market will rise rapidly providing multi-billion dollar growth opportunities. ECS takes a B2B approach in medicinal cannabis to capture greater volume and market share in Australia and overseas, while creating a local market as medicinal cannabis distributors shift to ECS for supply over Canadian imports.

The Murray Meds acquisition has been a game changer and has already resulted in a substantial boost to ECS's revenue in 2H FY21. Strategically, the deal enables ECS to fast-track its presence into the rapidly expanding premium dry flower market and unlock many synergistic benefits. Besides the addition of scale and cost benefits, ECS can operate large-scale low-cost Good Agricultural and Collection Practices (GACP) for medicinal plant cultivation and processing in Tasmania and send product material to the Murray Meds, which has a Good Manufacturing Practice (GMP)-compliant facility for further manufacturing. ECS is well positioned to disrupt the domestic cannabis market and capture a significant share. Its low cost, adherence to UN convention, and high-quality cultivation, manufacturing and product standards are already capturing significant interest overseas.

### Valuation range of A\$0.12 – 0.16 per share

Based on a three-stage FCF valuation model, we value ECS at A\$0.12 per share base case and A\$0.16 per share bull case. Key risks that we see are (1) execution risk in scaling up its facilities; (2) growing competition in the global medicinal cannabis market and (3) unfavourable M&A deals.

Share Price: A\$0.04

ASX: ECS

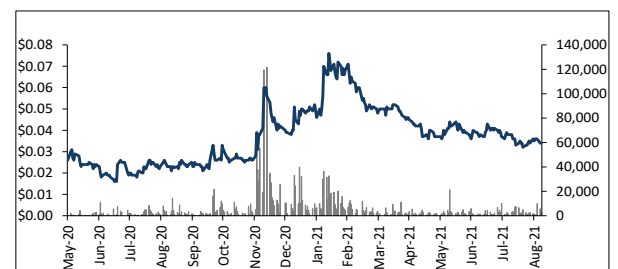
Sector: Healthcare

9 September 2021

Market Cap. (A\$ m)	31.1
# shares outstanding (m)	863.0
# shares fully diluted (m)	31.8
Market Cap Ful. Dil. (A\$ m)	883.7
Free Float	56.4%
52-week high/low (A\$)	0.08/0.02
Avg. 12M daily volume ('1000)	7,048.1
Website	ecs-botanics.com

Source: Company, Pitt Street Research

### Share price (A\$) and avg. daily volume (k, r.h.s.)



Source: Refinitiv Eikon, Pitt Street Research

<b>Valuation metrics</b>	
DCF fair valuation range (A\$)	0.12 - 0.16
Discount rate	12.0%
Assumed terminal growth rate	2.0%

Source: Pitt Street Research

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## Introducing ECS Botanics Holdings Ltd, ASX: ECS

*Global outlook operating in 2 complimentary segments – wellness and medicinal cannabis*

ECS Botanics Holdings Ltd (ASX: ECS) is a vertically integrated provider of medicinal cannabis and hemp products. Through its Hemp segment, ECS provides hemp-based, food and wellness products to wholesale and retail markets. The Medicinal Cannabis segment engages in cultivation and distribution of medicinal cannabis for wholesale extract, final dose form medicines and premium dry flower markets (inhalation). ECS owns farms and medicinal cannabis facilities in Victoria (Murray Meds) and Tasmania. It has already acquired all the necessary licences for this segment, which we believe provides it an early mover advantage in this nascent but rapidly growing end market. Operating in the wellness and medicinal category we see as advantageous as cannabinoids become deregulated, finding their way into food, as an example ECS' addressable market in Europe there is already overlap between medicinal cannabis and wellness (novel foods).

**ECS is a large-scale, low-cost producer**, while still commanding premium dry flower quality pricing. The company benefits from internally sourced raw materials, grown on its own farms, in addition to sourcing supplies from third parties. Further, the company adopts an asset-light approach and unlike many competitors, it is not investing in expensive greenhouse or hydroponic infrastructure. With Australian dry flower in short supply, few direct competitors and a large addressable market overseas for medicinal cannabis and wellness, ECS has a strong outlook with over **4,000 kilograms of forecast production this financial year**, we see potential for the company to continue with increasing production and driving significant revenue growth.

*Murray Meds is also a vertically integrated company for premium dry flower which will enhance ECS's low cost producer proposition*

**Murray Meds acquisition helps make inroads into rapidly growing medicinal cannabis market.** In March 2021, ECS completed the acquisition of Murray Meds, a medicinal cannabis cultivation and manufacturing facility based in Victoria. Murray Meds's vertically integrated business model is quite similar to that of ECS which allows cost of production to be low. Murray Meds has outdoor and protected cropping infrastructure and has seen production costs as low as A\$0.60 per gram. It has a Good Manufacturing Practice (GMP) licenced manufacturing plant and an experienced management team that have established a sustainable business. ECS is currently expanding the site infrastructure, installing additional protected cropping capacity which will triple the footprint of premium dry flower production. ECS has also invested in local and European business development managers. With the Australian medicinal cannabis market expected to reach A\$2.3bn by 2025<sup>1</sup>, we believe this acquisition provides a significant springboard to ECS and opportunity for its B2B model to take a large share of this market.

*ECS has a strong supply and distribution chain through its multiple strategic relationships*

**Strong relationships across the supply chain form the bedrock of the Hemp segment.** ECS has a portfolio of hemp-based products such as dehulled hemp seeds, soups and oils, capsules and tinctures targeting the food and wellness end markets. Its relationships and tie ups across the supply chain, starting from farmers who are the key to providing hemp seeds, and extending to leading supermarkets such as **Woolworths** and **Coles**, provide it a significant competitive advantage. ECS has strategically entered into multiple partnerships to enhance its manufacturing capacity, such as the agreements with Flavour Makers, a leading end to end food development and manufacturing company. They have Australia covered with recent distribution agreements with Complete Health Products (QLD), Renner Health Products (WA) and Global by Nature (East Coast Australia). Further, ECS holds

<sup>1</sup> The Future of Global Cannabis: Markets to Watch, *Euromonitor* (2020).



a strategic stake (28.4%) in TapAgrico for large-scale processing of hemp seeds and for high quality assurance.

**Quality provides a substantial competitive edge to ECS.** The company's cropping is regulated by the Australian government and it benefits from having a manufacturing facility which complies with EU GMP standards. Australian GMP is considered the 'gold standard' for pharmaceutical quality compliance and this provides a strategic advantage in terms of quality assurance to potential customers in both Australia and the rest of the world.

**Favourable regulatory changes provide substantial opportunities.** The Australian government has been very receptive in acknowledging the various scientific benefits of hemp and cannabis-based products. This has included a diverse range of measures, from allowing the sale of hemp seeds as food or food ingredient products in November 2017, to down-scheduling certain cannabidiol (CBD) preparations from 'prescription medicine' to 'pharmacist only medicine' in December 2020. In our view, these positive regulatory changes will act as tailwinds for companies such as ECS which target both the hemp-based food, wellness and medicinal cannabis segments. ECS has a medium-term strategic plan to produce CBD isolates for the 'pharmacy only' market in Australia, and for the export markets.

**The company has a forward-thinking business plan which positions it well to benefit from regulatory changes in Australia's medicinal cannabis industry.** The November 2020 guidance by the Office of Drug Control (ODC), which can only be utilised by companies which have both the ODC medicinal cannabis licences and state industrial hemp licences (e.g. ECS), is a testimonial to the foresight of ECS's management and its gradual shift in focus to this high-potential vertical. This enables the company to grow crops in a fashion similar to the Tasmanian Poppy industry and requires lower security requirements for CBD. ECS's acquisition of Murray Meds ECS has propelled the company to be the largest lowest cost cultivator in Australia and is now opportunistically positioned take advantage of a growing market in Australia, a with very few commercial cultivators. This position has evolved as many early Australian cannabis companies cancelled their high cost construction projects favouring the importing of products and distribution models, furthermore international cannabis giants retreated from Australia following the bust in Canadian Cannabis stocks.

**ECS's management team comprises seasoned professionals that are expected to help the company realise its growth potential.** The company's Managing Director, Alex Keach, has a strong track record in the fields of financial services and agriculture. Moreover, following Murray Meds acquisition, which resulted in Nan-Marie Schoerie (founder of Murray Meds) joining ECS as an Executive Director, the company has been able to develop a bench strength in Europe and Australia which we believe is a testimonial to the company's solid business model and expansion plans.

*New hires to help establish ECS as a global cannabis-based pharmaceutical company*

## Ten reasons to look at ECS

- 1) ECS operates in **segments that are nascent but have exponential growth potential**. The global legal market for cannabis is expected to surpass US\$104bn<sup>2</sup> by 2024. As cannabis and its extracts find growing use in medicinal, nutritional, cosmetic, animal health and recreational applications, demand for these substances will rise in tandem. The

<sup>2</sup> As per estimates by Prohibition Partners.



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company is forecasting in excess of **4,000 kilograms of production this financial year** which translates to significant revenue

- 2) Through **the acquisition of Murray Meds**, a specialist cannabis cultivator and manufacturer based in Victoria, ECS has been able to **fast-track its growth in the medicinal cannabis market**. Murray Meds perfectly complements ECS's existing operations and has made the merged business highly competitive. Murray Meds follows a similar low-cost business model as ECS with a production cost below A\$0.60 per gram and is undergoing significant expansion at a relatively low cost to its competitors. Its B2B model is gathering pace and its low cost expansion in cultivation supports strong revenue growth and path to towards profitability
- 3) **The business is continuously signing new supply agreements - Australia, New Zealand and Europe** ~\$9m of supply agreements signed since January, ranging into Coles supermarkets for hemp seed oil, executed four distributor agreements for terpene range upon the products launch. In addition ECS also spot selling premium dry flower products and biomass to a number of Australian clients. Supply agreements and sales are expected to continue for all ECS range of products including but not limited to wholesale extracts and finished good products, both wholesale and under white label.
- 4) ECS has a **sizeable presence in Tasmania, which offers a favourable cannabis cultivating climate and resources for hemp and CBD**. Several partnerships have been formed to create a network for procuring raw materials (to supplement in-house production). It is in the process readying the Tasmanian facility for planting November 2021 with bold plans to further expand its outdoor medicinal cannabis project, similar to the Tasmanian poppy model (ex Johnson & Johnson (J&J) and Glaxo Smith Kline (GSK)). The expansion (subject to regulatory approvals) will take place in stages and according to demand, the area under cultivation may be increased exponentially to 325,000 square meters (vs. 2,000 square meters currently).. We expect the 100 times plus expansion potential will drive company's top line significantly. Tasmanian cannabis (CBD) can be transported to Victoria for GMP Manufacturing into higher value products.
- 5) **ECS has signed several recent agreements as it expands into the high-margin hemp wellness space**. For instance, while ECS has an existing distribution agreement with Woolworths and a recent supply deal with Coles, the new SLEEP, CALM, RELIEF terpene blend range was launched with a series of distribution deals with leading Australian health distributors including, Global by Nature, Renner Health Products and Complete Health Products.
- 6) **The business operates on a low-cost model and is creating a sustainable local industry and business case** internally sourcing cultivating medicinal cannabis flower from Victorian this year and Tasmania, enables ECS to have security over supply and meet high quality standards. Its low-cost model does not impact quality, and we believe ECS' expansion strategies will enable it to generate economies of scale and meet strict quality requirements. ECS embracing favourable climates for CBD (Tasmania) and THC (Victoria), embracing sunshine further supports the companies low cost high quality model, growing plants as nature intended versus high cost indoor and expensive glasshouses

This focus is **creating a local market for medicinal cannabis**, with customers turning to ECS over Canadian imports. Its B2B medicinal



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- cannabis model enables the company to “supply the industry” and as a result can build strong headline revenue growth in a short period of time
- 7) **Regulatory changes and Environmental and Social Governance (ESG) are expected to have a positive impact on its forward-thinking business model.** These changes include lower security requirements for CBD hemp cultivation, which would reduce infrastructure costs for ECS, enabling it to announce significant expansion plans. Australia’s Therapeutic Goods Administration (TGA) is also assessing a supply gap regulatory amendment which allowed non-GMP medicinal cannabis to enter Australia, which when removed, would significantly increase demand for ECS’ products.
  - 8) Several countries across the globe have recognised the medicinal value of cannabis and have deregulated its consumption. This **fundamental shift in the attitude of regulators towards cannabis** is likely to have a favourable impact on consumer adoption and should open up newer markets and opportunities. The company is an evolving **ESG story**, particularly due to its focus on **regenerative, organic** agricultural practices, cannabis sequestering large amounts of carbon and **low carbon foot-print** of sun grown cannabis, positioning the company and its products uniquely in the medicinal cannabis and pharmaceutical market.
  - 9) **The management team consists of experienced personnel** with a strong track record. Alexander Keach, ECS’s Managing Director, has led the company since 2018 and has a solid track record in growing businesses in many sectors including financial services and agriculture. Nan-Maree, founder of Murray Meds who has joined ECS as Executive Director, previously held leadership positions in the Australian businesses of large organisations such as GE, Thermo Fisher and Ventia. Jason Hine, Head of Food, Wellness and Commercial Operations, has 25 years of experience in senior management and within the hemp, medicinal cannabis, finance, franchising, manufacturing, distribution, and professional services sectors. Angela Macquire, General Manager of Medicinal Cannabis Operations, a formulations chemist with over 30 years pharmaceutical experience, most recently as COO of an Australian cannabis company.
  - 10) **We believe that ECS is undervalued at its current price.** Our intrinsic value for ECS stands at A\$0.12 per share in the base case and A\$0.16 per share in the bull case. We believe re-rating will be driven by benefits and synergies arising from the Murray Meds deal, positive investor sentiment w.r.t. the use of medicinal cannabis products, strong uptake in local demand particularly for dry flower, shift to Australian product over Canadian imports, possible restrictions on non-GMP imports and Australia becoming a medicinal cannabis gateway to Europe. Furthermore, ECS positioned itself early in “low cost large scale cultivation” an area few Australian companies have focussed on and international cannabis giants retreated from - consequently ECS now has a competitive advantage and becoming the go to for affordable product supply. ECS has the production base to quickly scale with demand and take market share from higher cost competitors.



## Operating in two different but synergistic segments

ECS operates through two different but complementary segments –Hemp and Medicinal Cannabis. The Hemp segment is established and evolving into the higher value wellness categories of the food market. The Medicinal Cannabis segment has quietly cleared regulatory hurdles, secured licenses and completed the Murray Meds acquisition, with medicinal cannabis revenue set to overtake revenue from industrial hemp food/wellness. The management is further expanding its cultivation in medicinal cannabis, with the announcement to expand premium dry flower production by 200% in Victoria where ECS is able to attain low production costs without sacrificing quality, making life tough for its competitors.

*ECS is low-cost producer due to its focus on scale and vertical integration*

ECS is able to operate as a low-cost producer owing to its focus on scale and vertical integration wherein it accesses primary raw materials internally. Its vertically integrated ‘seed to medicine’ business model is unique in that ECS contract manufactures and white labels for a growing list of Australian cannabis companies. The company now owns and extractor following a deal with MediPharm Labs which will see it lower cost further and have greater control of its supply chain. Further, ECS has adopted an asset-light approach avoiding investment in expensive greenhouses.

## Medicinal Cannabis: ECS’s rapid rise and significant growth

A global shift in perception towards cannabis, particularly for medical use, has led to a major structural change in the industry and opened up highly lucrative opportunities. Although medicinal cannabis is a lucrative opportunity, it is highly regulated and requires multiple licences and approvals. To its advantage, ECS was granted manufacturing and cultivation licence for its Tasmanian medicinal cannabis facility in 2019 and plans are underway to expand these operations with the aim of becoming a high-quality, low-cost cannabis producer. Moreover, the acquisition of Murray Meds which has already begun to deliver revenue, and outperformed hemp food sales in its first quarter of revenue contribution, has helped fast-track growth in this segment. The medicinal cannabis vertical is increasingly becoming the management’s focus area, particularly in terms of resource and investment allocation.

*Medicinal cannabis offers a lucrative opportunity but faces stricter regulations*

In April 2021, ECS announced its plans to expand cultivation at its Tasmanian operation over 120 times to 320,000 square meters. The expansion intends to position ECS as the ‘lowest-cost producer’ by significantly reducing the price per gram. The company is currently cultivating at a cost of A\$0.60 per gram and management is aiming to bring it down to as low as A\$0.20 per gram. The expansion requires minimal additional capex

*Management’s focus is shifting towards growing the Medicinal Cannabis segment via organic and inorganic means*

The company is also planning to expand its cultivation in medicinal cannabis at the Murray Meds facility (Figure 1). In June 2021, ECS announced the construction for tripling its premium dry flower production in Victoria, adding a further 2,000 square metres of protected cropping enclosures. The new capacity will also provide flexibility to cultivate specific strains demanded by its customers.



**Figure 1: Murray Meds facility**



*Source: Company*

**Figure 2: Cultivation process**



*Source: Company*





## Murray Meds acquisition: A game changer

Besides the cultivation expansion plans outlined by the management, another major growth driver for the Medicinal Cannabis segment will be the Murray Meds deal. ECS acquired Murray Meds, a Victoria-based medicinal cannabis cultivator, in March 2021. Murray Meds has a vertically-integrated business model and has seen production cost as low as A\$0.60 per gram. Murray Meds has been able to keep its costs low and be environmentally sustainable through the use of solar power and regenerative agriculture practices. It has assets in north-western Victoria which offers a hot-dry climate with low humidity which is perfect for cultivating high tetrahydrocannabinol (THC) medicinal cannabis. Further, it has a GMP-compliant manufacturing capacity and an experienced and lean leadership team. We view the price paid for Murray Meds as low and the acquisition will have several positive implications for ECS's business model:

- Banking of revenue for ECS over a year earlier. Murray Meds was purchased on the verge of significant revenue generation which is now beginning to flow through to the company.
- ECS diverted the CO<sub>2</sub> extractor from Tasmania to the Murray Meds location to add value to Murray Meds manufactured extracts via the existing Murray Meds GMP license.
- It enables ECS's Tasmanian operations to process under low-cost GACP and transfer cannabis material into GMP products at Murray Meds. This creates major savings in infrastructure and drives efficiencies in every part of the supply chain.
- The acquisition puts ECS amongst an elite number of cannabis companies globally that have the ability to cultivate cannabis at scale, manufacture to EU GMP pharmaceutical standards and white label a variety of finished products. We believe this positions ECS uniquely in the market and sets it up to be a global leader in regulated cropping and manufacturing.

The Murray Meds deal is showing results within the first year of the acquisition. Murray Meds has forecast A\$2m revenue by calendar year end as the company has signed several sales agreements in Q1 CY2021 itself. A few notable contracts aside from other contracts and spot buying include:

- Four-year supply agreement with MW Pharma Limited, one of New Zealand's largest cannabis companies for the supply of \$1.75M worth of ECS's medicinal cannabis products. Minimum order value will be \$250,000 for the first year, with a minimum \$500,000 over the following three years.
- Three-year supply agreement with UK-based pharmaceutical distribution company, the Armour Group, which will allow Murray Meds to export its medicinal cannabis oils to the UK and German markets. The contract has minimum order volumes and assuming that these are met, revenue contribution of at least A\$500,000 can be expected in the first year.
- Three-year supply agreement with an Australian medicinal cannabis company, under which medicinal cannabis dried flower and concentrates will be supplied to the company. The minimum spend across the life of the agreement is A\$750,000 with a forecast spend of ~A\$500,000 in the first year.

*Murray Meds acquisition supports ECS's position as a 'low-cost producer' in Australia*

*Murray Meds estimates A\$2m revenue in CY2021.*

*Spot Buying (rather than contracts) also driving revenue*



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- Supply agreement with Melbourne-based Releaf Dispensaries Pty Ltd for dried cannabis flower products. The agreement will generate ~A\$590,000 revenue for ECS during its 18-month term.
- Supply Agreement with Polish Company Alivio Spolka to supply medicinal cannabis products. The agreement is expected to generate \$4.5m over a 5 year period.
- ECS B2B business model allows for spot buying by new customers, a recent theme due to the current shortage of dry flower (for inhalation) in Australia. Supplying and supporting smaller customers is a key advantage ECS has over competitors and enable the company to build volume organically, be innovative and de-risk its customer base.

### **With the acquisition of Murray Meds, ECS is now positioned as a pharmaceutical company**

ECS now has two cultivation facilities – in Tasmania and Victoria – which complement each other and provide flexibility to ECS to target various end markets. While the legacy business in Tasmania is focused on hemp seed farming, which now also includes a large CBD cultivation and processing facility coming online, the Victorian facility (formerly Murray Meds) is focussed on high THC medicinal cannabis. The Victorian facility recently completed its first commercial harvest and is currently expanding the cultivation area under this facility to cater to the growing demand for premium dried flower. Moreover, to meet this demand, ECS has extended its GMP licence and upgraded the facility to include pharmaceutical grade cleanrooms for the packaging of dried flower. Further, ECS's long-term plan is to expand the Victorian facility to enter the CBD isolates market, which is expected to be supported by the GMP-compliant status of the facility. Demand for extracts and isolates from the Victorian manufacturing facility will be supported by cultivating the low cost biomass from Tasmania, enabling the company to grow top-line revenue from within.

### **Industrial Hemp: The established business segment**

The hemp segment, ECS's legacy business, serves both wholesale and retail markets. While wholesale deals in bulk orders, retail sells the produce as a more standardised and packaged food and wellness products. ECS entered the hemp food market in 2019 by launching a range of hemp food products. In the same year, it signed a three-year distribution agreement with Just Foods Australia Pty Ltd, which provided it with national distribution for its soups and oils. The company was also able to ink a deal providing its products access to the 850 stores of Woolworths, Australia's largest supermarket chain. Additionally, the company sells its products via its online stores. These products include hemp hearts, protein, soups and hemp seed oil capsules (Figure 3). ECS recently launched its terpene range under its wellness brand, along with several distribution agreements around Australia. Notably, this product range commands a higher margin than food products. The company also earns revenue from white label manufacturing of these products for other companies.



Figure 3: ECS's hemp products portfolio



Source: Company



## Competitive landscape

Although the legalisation of cannabis products has only gained traction in the past few years, there are a number of publicly-listed players targeting various end markets, particularly in Australia. We have shortlisted the following comparable companies for ECS in the **domestic market** based on market capitalisation below US\$500m. Please note ECS' forward thinking business model is differentiated in the market and very few companies on this list cultivate medicinal cannabis, and if so not to the scale or cost advantage of ECS (Figure 4):

Figure 4: ASX-listed cannabis and hemp companies, data as of 6 September 2021

Company	Location	Code	Market Cap (US\$m)	Fully Diluted Market Cap (US\$m)	Key Segments	Website
Incannex Healthcare Ltd	Melbourne, Australia	ASX: IHL	453	590	Medical	www.incannex.com.au
Little Green Pharma Ltd	West Perth, Australia	ASX: LGP	179	185	Medical	www.littlegreenpharma.com
Ecofibre Ltd	Sydney, Australia	ASX: EOF	245	251	Nutraceutical and Skincare	www.ecofibre.com
Creso Pharma	Nedlands, Australia	ASX: CPH	156	187	Medical, Nutraceutical, Pet Food and Skincare	www.cresopharma.com
Cann Group Ltd	Bundoora, Australia	ASX: CAN	93	99	Medical	www.canngrouplimited.com
Althea Group Holdings	Melbourne, Australia	ASX: AGH	83	84	Medical	www.althea.life.com
Botanix Pharmaceuticals	North Perth, Australia	ASX: BOT	78	82	Medical	www.botanixpharma.com
AusCann Group Holdings	West Perth, Australia	ASX: AC8	40	42	Medical and Nutraceutical	www.auscann.com.au
Medlab Clinical Ltd	Botany, Australia	ASX: MDC	65	67	Medical and Nutraceutical	www.medlab.co
Emyria Ltd	Leederville, Australia	ASX: EMD	61	76	Medical	www.emyria.com
Elixinol Global Ltd	Sydney, Australia	ASX: EXL	35	35	Nutraceutical and Skincare	www.elixinolglobal.com
Bod Australia Ltd	Double Bay, Australia	ASX: BDA	31	33	Medical and Skincare	www.bodaustralia.com
ECS Botanics	Launceston, Australia	ASX: ECS	26	27	Food and Medical	www.ecsbotanicsholdings.com.au

Source: S&P Capital IQ, Pitt Street Research estimates

At its current market capitalisation, we believe that the market is under-rating ECS. In our view, investors have not priced in the significant growth opportunities available to the company, particularly in the medicinal cannabis segment.

**Incannex Healthcare.** This company is a medicinal CBD-based product manufacturer. Currently, several of its products are under clinical trial. It aims to develop therapeutics for obstructive sleep apnea, traumatic brain injury, acute respiratory distress syndrome and temporomandibular joint dysfunction.

**Ecofibre.** This company is engaged in manufacturing and processing of hemp-derived products in the US and Australian markets. Its range of products includes protein powders, dehulled seeds, hemp seed oil and creams. It manufactures products that are fit for pet consumption as well.



**Creso Pharma.** This company is engaged in the commercialisation of various therapeutic products that involve pharmaceutical grade cannabis. It offers various CBD based products for human as well as pet consumption. Its range of products includes animal feed, hemp oil extract, muscle relaxers and skin care gels. In June 2021, Creso merged with Red Light Holland to form The Hybrid Lab which aims to focus on psychedelics and cannabis.

**Little Green Pharma.** This company manufactures and exports medicinal cannabis products for therapeutic applications. The first locally grown medicinal cannabis product to be sold nationally was manufactured by Little Green Pharma. It sells formulations for medicinal cannabis which contain varying ratios of THC and CBD under its LGP Classic brand. In June 2021, the company reported that it acquired a production and manufacturing facility in Denmark so to allow it to accelerate its growth strategy. Also, Gina Rinehart recently invested \$15M in the company to assist with its European expansion.

**Cann Group.** This company is a vertically integrated medicinal cannabis manufacturer. It has established research and development, and cultivation facilities in Australia. It was the first company to be issued Australia's Medicinal Cannabis Cultivation license for medicinal purpose.

**Althea Group.** This company supplies medicinal grade cannabis to Australia, UK and Canada. It also provides education and consultation services through its online platform to eligible patients and healthcare professionals on various cannabis treatment options.

**Botanix Pharmaceuticals.** This company manufactures CBD-based dermatology and antimicrobial products. It has several products in its pipeline and some of them are in clinical trial stage.

**AusCann Group.** This company develops and manufactures CBD therapeutic products for both human and animal applications. Currently, it is developing THC/CBD capsules based on the proprietary Neuvix platform, which will be used for the treatment of pain and related indications in humans. It is also developing innovative THC/CBD solutions for veterinary medicine and nutraceuticals for pets.

**Medlab Clinical.** This company is involved in the development of pharmaceutical solutions for various treatments including obesity, chronic kidney disease, depression, skeletal health and non-opioid pain management. It has developed multiple cannabis-based medicines including NanaBis (cannabis oil extract) and NanoCBD (hemp oil extract).

**Emyria.** This company is a healthcare technology and service provider which offers cannabis-based treatments through its clinics. It has partnered with Mind Medicine Australia to develop data-driven clinical model for safe administration of psychedelic therapy.

**Elixinol Global.** This company carries out research and development, and markets its branded hemp-derived CBD products. Apart from Australia, it has operations in the US, Europe, Latin America, South Africa and Japan.

**Bod Australia.** This company is positioning itself as a cannabis-based healthcare provider. It operates in multiple markets including Australia and UK. It has three segments: Medical, OTC CBD/Hemp and OTC Herbals. It plans to develop branded products for skin care, baby care, brain health, antioxidants and immune system support.

Given that ECS is already an established player in the hemp-based food market and is rapidly building its medicinal cannabis presence, we have also looked at the **international markets (developed economies)** and highlighted market leaders in the medicinal cannabis and food space (Figure 5):

**Figure 5: Global cannabis and hemp players serving food and medical segments, data as of 6 September 2021**

Company	Location	Code	Market Cap (US\$m)	Fully Diluted Market Cap (US\$m)	Key Segments	Website
Canopy Growth Corporation	Smiths Falls, Canada	TSX: WEED	8,969	9,366	Global cannabis and hemp based products	www.canopygrowth.com
Tilray, Inc	Leamington, Canada	NasdaqGS: TLRY	8,211	8,274	Food and Medical	www.tilray.com
Verano Holdings Corp	Chicago, IL	CNSX:VRNO	6,617	6,617	Medical and Recreational	www.verano.com
Cronos Group Inc	Toronto, Canada	TSX:CRON	3,250	3,323	Medical and Recreational	www.thecronosgroup.com
Aurora Cannabis Inc	Edmonton, Canada	TSX:ACB	1,971	2,012	Medical	www.auroramj.com
OrganiGram Holdings Inc	Moncton, Canada	TSX:OGI	1,064	1,091	Medical and Recreational	www.organigram.ca
The Valens Company Inc	Toronto, Canada	TSX: VLNS	576	595	Medical and Food	www.thevalenscompany.com
Charlotte's Web Holdings, Inc	Boulder, CO	TSX:CWEB	453	466	Medical	www.charlottesweb.com
Hempfusion Wellness Inc	Denver, CO	TSX: CBD.U	48	50	Food and Medical	www.hempfusion.com
BellRock Brands Inc	Denver, CO	CNSX:BRCK.U	48	48	Food and Skincare	www.bellrockbrands.com
Nutritional High International Inc	Toronto, Canada	CNSX: EAT	10	13	Food and Recreational	www.nutritionalhigh.com
New You Inc	Carlsbad, CA	OTCPK: NWYU	6	6	Food and Nutraceutical	www.newyoupro.com
Bespoke Extracts Inc	Sunny Isles Beach, FL	OTCPK: BSPK	5	5	Food, Nutraceutical and Skincare	www.bespokeextracts.com
Gridiron BioNutrients	Scottsdale, AZ	OTCPK: GMVP	1	1	Food and Nutraceutical	www.gridironmvp.com
Digital Development Partners	Flower Mound, TX	-	na	na	Medical, Skincare and Pet Food	www.digitaldevelopmentpartners.com

Source: S&P Capital IQ, Pitt Street Research

**Tilray Inc.** The company offers cannabis-based food and lifestyle products. It engages in research, cultivation, production and distribution of medicinal cannabis. It markets its own branded products as well as dry flower extracts to patients, physicians, pharmacies and researchers. In May 2021, Tilray and Aphria closed their merger, creating the world's biggest cannabis company by revenue.

**Verano Holdings.** It is a vertically-integrated cannabis cultivator and operates retail outlet facilities. It offers a range of cannabis products such as concentrates, edibles, extracts, flowers and topicals for medicinal therapies.

**Cronos Group Inc.** It is a global CBD manufacturer, operating through e-commerce, retail and hospitality partners. It operates brands such as PEACE NATURALS (wellness platform), COVE and Spinach (adult use brands) and Lord Jones and PEACE+ (hemp-derived CBD brands).

**Aurora Cannabis Inc.** The company is a vertically-integrated cannabis producer and distributor globally. It produces cannabis in oil, dried, capsule and topical forms through its network of cannabis outreach and counselling



centres. The management's focus is on both medicinal and recreational use markets.

**OrganiGram Holdings Inc.** It produces and sells cannabis and cannabis-derived products in the form of flowers, extracts, edibles, oils and beverages for recreational and medicinal customers. It distributes these products through online platforms as well as telephone channels.

**Charlotte's Web Holdings Inc.** It is a vertically-integrated hemp manufacturer which offers a range of hemp-based tinctures, capsules, gummies, topicals and pet products. It markets these products through its e-commerce websites, health practitioners and retailers.

**The Valens Company Inc.** The company develops and manufactures CBD-based products. It operates through two segments – Cannabis Operations and Analytical Testing. The extraction, processing and manufacturing of white-label goods is carried out by the Cannabis Operation segment. Analytical Testing segment provides testing services for third-party producers in the cannabis industry.

**Hempfusion Wellness Inc.** It provides broad-spectrum CBD hemp extract products made from its proprietary Whole Food Hemp Complex. Hempfusion offers products for stress, sleep, and energy, as well as for acne and eczema.

**BellRock Brands Inc.** The company produces and sells ~200 cannabis-based products targeting cosmetics, therapeutics, nutraceuticals and animal health segments. BellRock was formed as a result of the merger between BR Brands and Dixie Brands on 31 October 2020.

## Key competitive advantages

In our view, ECS's business model provides it several inherent advantages that will act as stiff barriers for new entrants. Following are some of these advantages:

- 1) **Vertical integration and unique business model:** ECS has strategic farm assets in Tasmania and Victoria. The company's 'farm to pharma' model helps improve the quality of its final products as well as provides it with a cost advantage. Only a few Australian players are cultivating their own supply for local and export markets and this makes ECS stand out in terms of high-quality, low-cost products. ECS manufactures premium dry flower and oils for a list of cannabis companies, increasing its supply reach and revenue potential. The B2B model enables ECS to supply a growing list of companies selling Medicinal cannabis products under their own label in Australia and overseas
- 2) **Scale and cost competitiveness:** ECS is focussing on scale and low-cost inputs to maintain its cost competitiveness. The company is already operating at a low cost of A\$0.60 per gram and the management believes that this can come down further to A\$0.20 per gram post its recently announced significant expansion plans in Tasmania. ECS's management is trying to replicate the model for poppy production in Tasmania which has helped the region to account for ~50% of the global poppy production. We believe that building such a scale for cannabis production for any new entrant will not only be time consuming but also capital intensive.
- 3) **Leveraging climates:** The company has significant production exposure in Tasmania which has a history of growing plant-based pharmaceuticals and the climate in Tasmania is well suited to CBD hemp. The Victorian facility (Murray Meds) has a hot and dry climate which is suited to THC



production. Humid climates are not suited to cannabis production as humidity encourages mould and other diseases. Leveraging the branding potential of Tasmanian-grown produce will lend a competitive edge to ECS.

- 4) **Regulatory approvals:** ECS has all the relevant licenses and approvals in place for manufacturing hemp and cannabis-based products. The Murray Meds acquisition has also added a GMP licenced facility that can be leveraged for European export orders. This places ECS amongst an elite number of global companies globally and we expect this to offer a significant competitive advantage in the future.
- 5) **Strategic collaborations and agreements:** ECS has entered into several agreements with various companies for securing its overall supply chain. It has partnerships with reputed players for sourcing, quality control, research and development, and distribution. ECS's distribution for foods/wellness are with reputable Australian companies while customers for medicinal cannabis are many and well known in Australia. These agreements along with its B2B business model provide it a distinct advantage to reach a large base of customers in Australia and Europe.
- 6) **Innovative and high-quality product range:** The novelty factor of hemp-based food products presents a unique opportunity. To expand the reach of hemp-based products, an environment must be created in which hemp is viewed in a positive light. ECS has been tracking trends and consumer preferences to successfully develop multiple innovative hemp-based products. Its latest foray into the hemp wellness sector (hemp seed oil capsules and terpene blends) provides it access to a new and higher-margin customer segment.

## Potential takeover target

Larger cannabis companies flush with cash have engaged in an acquisition spree in the past. The phenomenon began in 2018 when California opened the largest adult-use market which was followed by Canada legalising the use of cannabis. Investors took note of this novel market and there was huge optimism which was reflected in the extravagant valuations. Consequently, capital was widely available and this was used by companies for either acquisitions or to go public. Although the 'Green Rush' has somewhat slowed the latest rounds of acquisitions have become more strategic. Share prices appear suppressed while the sector still has significant untapped growth potential.

We believe that ECS presents a unique opportunity for US and Canadian cannabis operators to gain access to not only the Oceania region but also the lucrative European market. While American and Canadian firms have enjoyed a head start due to the early relaxation of regulations in the respective countries, there is one critical area where they have lagged –pharmaceutical quality production standards and compliance with the United Nations (UN's) central drug making policies commonly referred to as the "Single Convention on Narcotic Drugs 1961". Although marijuana producers in the US must currently meet the recommended guidelines set out by the Food and Drug Administration (FDA), they do not need to adhere to the same GMP requirements that Australian cannabis companies face. Australian GMP is considered the 'gold standard' and is an essential requirement for exporting cannabis to the European market. Besides licencing and regulatory approvals, overseas companies can significantly benefit from ECS's large scale and low cost GMP position if they enter into a partnership or merger deal.

*ECS can provide ready access to the European market for US and Canadian cannabis players*





## ECS Botanics Holdings Ltd

We have seen several North American (primarily Canadian) firms acquiring stakes in European companies to gain access to this geography. An alternative route could be to acquire Australian companies and leverage them as a large scale production base for exports. A few of the deals involving European firms are mentioned below:

- Irish pharmaceutical giant Jazz Pharmaceuticals agreed to buy cannabis company GW Pharmaceuticals for US\$7.2B.
- Aphria and Tilray, two of the biggest marijuana companies in Canada, announced a merger in 2020 with an implied equity valuation of c.US\$5B.
- In June 2021, Creso Pharma (Australian medicinal cannabis firm) and Red Light Holland (psychedelics-based firm) merged into a new entity named HighBrid Lab which has an equity value of A\$371m and will be listed on the Canadian Securities Exchange.
- Beckley Canopy Therapeutics Ltd is a UK firm which develops cannabis-based pain treatment solutions. A majority stake was acquired in Beckley by Canadian firm Canopy Growth Corp for GBP34.7m in August 2019.<sup>2</sup>
- Holigen Ltd, a Malta-based cannabis manufacturer and distributor, was acquired by Flowr Corp (Canada) for ~EUR160m in June 2019.
- Canamo y Fibra Naturales is a Spanish R&D hub for cannabis and hemp products. It was acquired by Canopy Growth Corp for US\$32.9m in April 2019.

Not only international companies but even Australian firms are engaging in partnership and M&A deals. Some of these transactions are listed below:

- Cann Group is an Australian cannabis R&D and manufacturer for medicinal application. It was acquired by Aurora Cannabis for US\$5m in October 2020.
- MediCaNL, an Israeli research and development lab for medicinal cannabis, was acquired by Australian firm MGC Pharmaceuticals for US\$4.15m in April 2021.
- Little Green Pharma Ltd is an Australian cultivator, manufacturer and distributor of cannabis and related products. It was acquired by another Australian firm, Meta Growth Corp, for US\$4m in May 2019. In June 2021, the company reported that it acquired a production and manufacturing facility in Denmark so to allow it to accelerate its growth strategy.
- Tetra Pty Ltd is an Australian clinic network that treats patients through medicinal cannabis prescriptions. The company was acquired by another Australian firm, THC Global Group for US\$2.1m in May 2020.

### The growing opportunity for industrial hemp and medicinal cannabis

The hemp industry has been undergoing major reforms, driven by positive changes in the regulatory environment and consumers' perception of the plant. Industrial hemp comes from the plant species *Cannabis Sativa L.*, and is used across the world in the production of various industrial and consumer products.

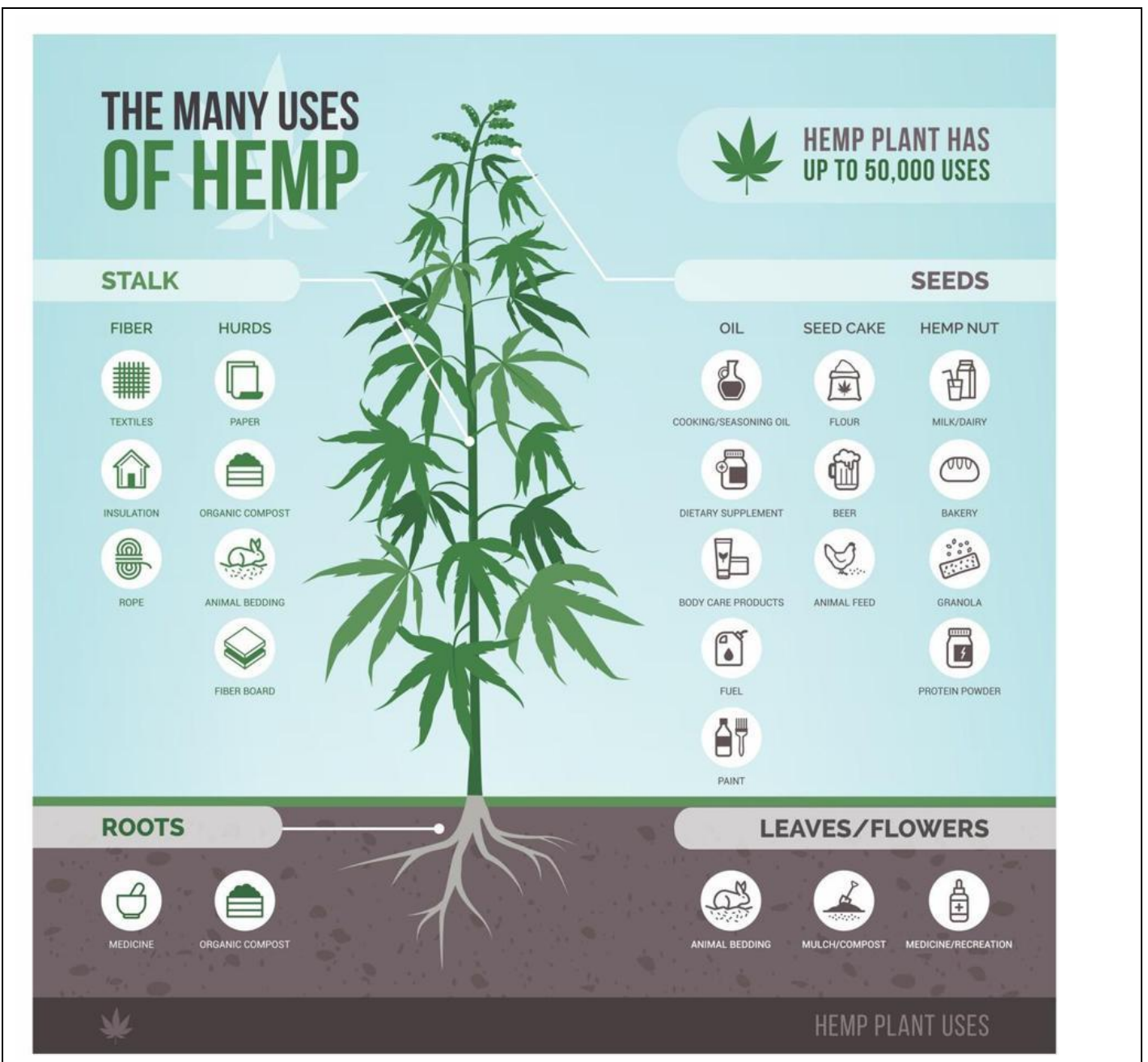
Industrial hemp, unlike its infamous kin marijuana, contains only trace amounts of delta-9-THC, which is responsible for the psychoactive properties. Scientific research reveals that industrial hemp has numerous beneficial properties, such as a high content of vitamins, minerals, calcium and other nutrients.



**Hemp has numerous industrial and consumer applications**

Further, all the by-products of the industrial hemp plant, such as seeds and stalk, are used in the production of food, building products, textile and other products (Figure 6). Hence, industrial hemp finds application in various end markets such as food, beverages, personal care products, textiles and pharmaceuticals (Figure 7). ECS currently targets the hemp-based food/wellness and medicinal cannabis segments – both of which are highly lucrative markets. According to Grand View Research<sup>3</sup>, the global market for industrial hemp was worth US\$4.7bn in 2019 and is estimated to post a CAGR of 15.8% from 2020 to 2027.

Figure 6: Hemp plant has various uses

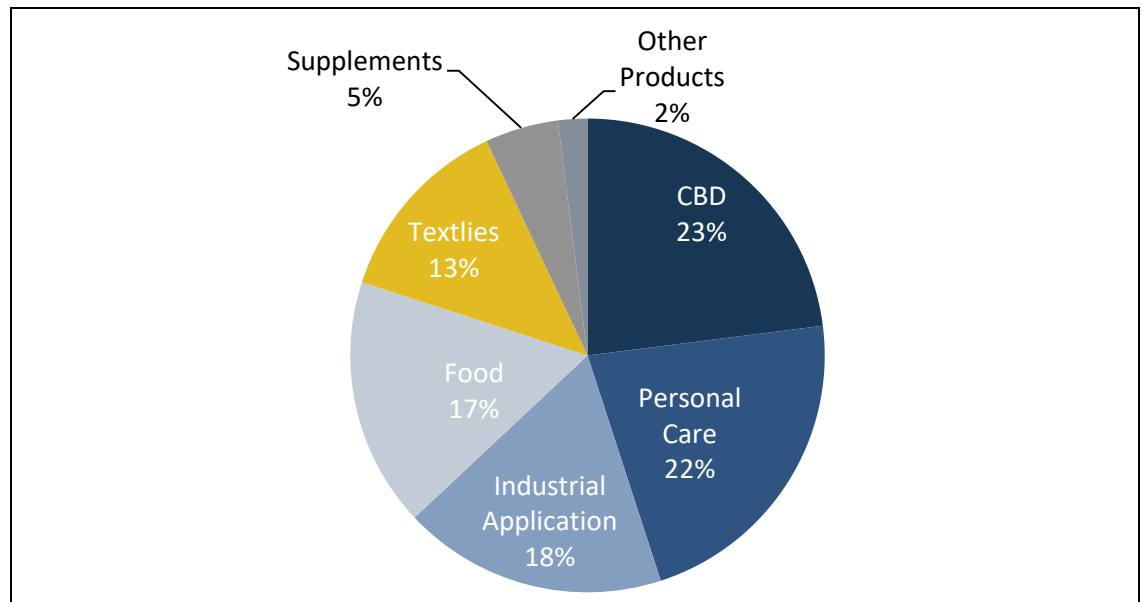


Source: Forbes (2019)

<sup>3</sup> Industrial Hemp Market Size, Share & Trends Analysis Report, Grand View Research (February 2020).



Figure 7: Hemp product sales breakdown



Source: American Farm Bureau (2019)

**Hemp is a rich source of protein, omega acids, vitamins and minerals**

### Hemp-based food to continue be a high-growth vertical

Hemp seeds are known to be a source of protein and omega acids, and have low saturated fats. These seeds are also rich sources of fibre, vitamins and minerals, including magnesium, phosphorus, potassium, vitamin A, B, C and E, zinc and iron. As a result, these are used in the food and beverages industry as an alternative source of food and feed protein.

Further, hemp seeds have the capacity to act as a crucial source of protein in a vegan diet. With the undergoing shift in consumer preference towards plant-based proteins, underpinned by rising concerns regarding climate change, demand for hemp-based products is bound to rise.

Moreover, the instances of celiac disease, an immune reaction to eating gluten, are also rising globally. As a result, demand for alternative sources of food, such as hemp, is increasing. According to Data Bridge Market Research, the global market for hemp-based food is expected to reach US\$7.1bn by 2027, recording a CAGR of 6.9% over 2020–2027.

We believe that with its variety of hemp-based food products, including hemp hearts, hemp seed oil, capsules, curry sauces, soups and protein mixes, ECS is well-positioned to benefit from this market growth. The company has showcased market acceptability through its distribution agreements with Woolworths stores and Eden Foods in Australia.

### Medicinal uses of cannabis to unlock significant opportunities

Research on cannabis has revealed its potential to treat various medical conditions, including psychological disorders, Type 2 diabetes, inflammatory bowel disease, various cancers and drug dependency. The CBD component of the cannabis plant indirectly stimulates the body's endocannabinoid system, responsible for regulating many processes, including immune response, communication between cells, appetite and metabolism, and memory. As a result, CBD has significant therapeutic potential in several areas, such as mental health and chronic pain.



*CBD and THC components of cannabis provide solutions for various medical conditions*

*Murray Meds provides the opportunity to make inroads in the highly lucrative medicinal cannabis market*

*CBD-based animal products are witnessing substantial growth in demand*

*Landmark ruling by the UN to lead the path for medical use of cannabis*

**The THC content in cannabis is used to treat ailments** such as neural disorders, as well as muscle and joint pain. It is also useful in treating nausea and pain associated with chemotherapy. Medicinal cannabis is particularly effective in treating patients suffering from Alzheimer's and Parkinson's disease.

As the incidence of these diseases continues to rise, coupled with an increase in public awareness of the medicinal benefits of cannabis, demand for cannabis-based medical solutions is expected to grow. According to Market Data Forecast, the global market for medicinal cannabis is expected to grow quite rapidly, from US\$13.4bn in 2020 to US\$44.4 in 2025, at a CAGR of 22.9%. We believe that ECS's acquisition of Murray Meds positions it well to benefit from this growth opportunity. In Q1 CY2021 itself, Murray Meds signed four key supply agreements, which we believe is a testament to its growth potential and market acceptability.

### **Animal health provides another growth opportunity**

In addition to being beneficial to human beings, CBD has proven to exhibit significant benefits in animals, underpinned by the similarities in our endocannabinoid systems. Moreover, given that there is a rising global trend of humanising pets, CBD medicine consumers are also increasingly opting for CBD-based animal health products for their pets. According to Brightfield Group<sup>4</sup>, the pet CBD market is expected to reach US\$1bn by 2025.

Moreover, as per data by Nielsen and Headset<sup>5</sup>, CBD-based pet products enjoy higher prices compared with their traditional counterparts. Nielsen notes that the average price per pound for CBD dog treats is twice that of the average dog treat. Given that ECS is a vertically integrated company, with its own cultivation and white-label manufacturing capabilities, we believe that it is well-positioned to venture into this market in the medium term.

### **Tailwinds from regulations and increasing consumer awareness**

Recent research has showcased the various benefits of using hemp in health and wellness products. While hemp seeds have been found to be a highly nutritious source of protein, hemp seed oil is known to provide fatty oils essential to the human body. This paved the way for the Australia New Zealand Food Standards Code (ANZFS Code) to allow the sale of hemp seeds as food or food ingredient products in November 2017. This positive development presented a significant market opportunity for Australian companies in the hemp-based food products market.

**Globally, regulations governing the use of hemp and cannabis are becoming less stringent**, as governments realise the importance of the therapeutic benefits associated with these products. In December 2020, the UN made a landmark ruling by accepting the WHO recommendation of removing cannabis from Schedule IV of the 1961 Single Convention on Narcotic Drugs, where it was listed beside highly addictive opioids such as heroin. This resulted in the reclassification of cannabis and cannabis resins, with THC content of <2%, to less strict international laws, leading the way to conduct further medical research on the plant.

<sup>4</sup> 'How Big is the Pet CBD Market?', Brightfield Group (May 2021).

<sup>5</sup> '2020 Pet Industry Green Paper', Nielsen and Headset (February 2020).



## **In Australia, there have been a number of positive developments regarding the medical use of cannabis:**

- On 16 December 2020, TGA allowed the down-scheduling of certain CBD preparations from Schedule 4 (prescription medicine) to Schedule 3 (pharmacist only medicine). This decision followed the interim decision announced in November 2020, which allowed over-the-counter sales of CBD products, i.e., without a prescription. Moreover, the TGA increased the maximum limit for the daily dose of CBD from 60 mg per day to 150 mg per day (a 2.5x increase). This is a significant development for ECS as it builds its Tasmanian facility for medicinal cannabis.
- On 23 November 2020, the ODC issued a new guidance that indicated a downgrading of the framework for low-THC medicinal cannabis. The ODC said that it will be referring to state-issued hemp licences for its cultivation security requirements. This is a positive structural development and lends a competitive edge to ECS, as it is one of the few companies to hold both the ODC medicinal cannabis licence and state industrial hemp licence.
- On 30 April 2021, in a first such move by the Australian government, medicinal cannabis drug Epidyolex was allowed to be listed on Australia's Pharmaceutical Benefits Scheme (PBS)<sup>6</sup>. This drug targets a rare form of epilepsy – the Dravet syndrome – which gives rise to seizures that do not respond well to standard medicines. By adding Epidyolex to the PBS list, the qualifying patients (expected to be around 116 per year) will be able to save A\$24,000 per year in their treatments.

***Australia is positioned to become an export powerhouse for cannabis***

Notably, even though Australia has made positive regulatory changes for the medical use of cannabis, it continues to have high standards for the production of these products. All Australian companies are required to adhere to GMP standards, which are considered to be the global gold standard of quality for the production of pharmaceutical products. This places Australian players ahead of US-based producers, which only need to comply with the rules set by FDA. As a result, Australian manufacturers, such as ECS, will be better-positioned to leverage the cannabis export markets targeting Europe.

## **Rising public awareness to drive adoption rates**

In addition to positive regulatory changes, the public perception of hemp and cannabis-based products is undergoing a shift. This is driven in part by continued advancements in scientific research, as well as success stories of people benefitting from the use of hemp products.

Hemp-based food products are also gaining traction as public awareness of their benefits grows. For climate change conscious consumers looking for plant-based alternatives, hemp offers a viable solution for meeting their protein requirements as it contains all nine essential amino acids needed by the human body. According to a USDA study<sup>7</sup>, the amino acid profile of hemp protein is similar to that of egg whites and soy. In our view, as public awareness and education of the benefits of using these substances increases, the demand for ECS's products will rise in tandem.

<sup>6</sup> Historic PBS listing for Australians with a rare epilepsy condition, *Department of Health*, (April 2021); <https://www.health.gov.au/ministers/the-hon-greg-hunt-mp/media/historic-pbs-listing-for-australians-with-a-rare-epilepsy-condition>.

<sup>7</sup> Hempseed as a nutritional resource: An overview, *Callaway, J.C., USDA* (2004).



## Valuing ECS

Based on a DCF analysis of its two operating verticals, we value ECS at A\$0.12 per share base case and A\$0.16 per share bull case (Figure 8).

See below our key assumptions:

- We deploy a three-stage FCFF (Free Cash Flow to the Firm) as our valuation model framework as ECS is a young business operating in rapidly-growth but complimentary industry verticals, being hemp and medicinal cannabis. We think a 5-year high-growth stage is reasonable given the strong regulatory tailwinds in this space and the differential advantages of ECS as outlined earlier. We also think the existence of high and sustainable barriers of entry could potentially extend the high-growth period longer than our forecast, the occurrence of which can bring upside to our projected revenues and cashflows. Post high-growth stage, we expect revenue growth to moderate over FY27 to FY31. Beyond FY31, we factor in a 2% terminal growth rate.
- Our group revenues are driven by the future sales growth in its two key operating verticals. For instance, for the medicinal cannabis vertical, we apply accelerated growth rates during FY22-26 to reflect our view that ECS's acquisition of Murray Meds will help the merged group to unlock significant opportunities in this fast-growing medicinal cannabis space. ECS is in a unique position to scale up and grab significant market share in the high priced premium dry flower segment under its low cost B2B model. As ECS continues to open up sales channels, it can cross sell wellness products where in some countries the lines are blurred and require significant volumes, particularly CBD.
- Long-term EBITDA margins of 40-45% enhanced by ECS's scale, low-cost advantage as well as high operating leverage. Further optimisation in cultivation and manufacturing methodologies should also drive margin upside. Moreover, by being a vertically integrated firm, ECS has more control over its supply chain which could lead to efficiency gains.
- At end of FY21, ECS had c\$4.2M in cash, which based on our modelling is sufficient to self-fund its operations on a forward basis.
- A 12% cost of equity<sup>8</sup> has been used to discount our expected FCFF.
- A 30% corporate tax rate has been used. We expect ECS to pay its first cash tax in FY25 due to the carry forward of its accumulated tax losses.

**Figure 8: DCF Summary**

Base Case		Bull Case	
Valuation (AUD)		Valuation (AUD)	
Present value of FCF	33.5	Present value of FCF	46.5
Present value of Terminal FCF	67.2	Present value of Terminal FCF	89.1
<b>Enterprise Value (m)</b>	<b>100.7</b>	<b>Enterprise Value (m)</b>	<b>135.6</b>
Net debt (cash)	(4.0)	Net debt (cash)	(4.0)
<b>Equity value (m)</b>	<b>104.7</b>	<b>Equity value (m)</b>	<b>139.6</b>
Share outstanding	863.0	Share outstanding	863.0
<b>Implied price (A\$)</b>	<b>0.12</b>	<b>Implied price (A\$)</b>	<b>0.16</b>
Current price (A\$)	0.04	Current price (A\$)	0.04
Upside (%)	237.0%	Upside (%)	349.2%

Source: Pitt Street Research

<sup>8</sup> 2% Rf, 4.7% Ep, 1.5 beta and a 3% company specific risk premium to account for risks specific to the firm such as M&A integration risk in which the merged group may not perform to management expectations.



## Strong and diverse leadership

*ECS is attracting industry experts to its leadership team*

The maiden production batch from the Victorian facility was delivered in June 2021, valued at C\$240,000. As company moves towards revenue generation, the management is gearing up for an aggressive expansion strategy. The management has buffed up the strength of its leadership team with new hires including Nikita Soukhov (leading agronomist in Australia), Angela Macquire (extensive pharmaceutical experience), Michael Clark and Blaise Bratter (medicinal cannabis sales Australia and Europe). Inclusion of such industry leaders into ECS's growth story emphasises the potential of its business model and positions the firm strongly to achieve its growth plans.

ECS has a diverse and well-connected management team and board composition, the details of which are mentioned below (Figure 9).

Figure 9: ECS management team and board members

Management Team		
	Name and Designation	Profile
	<b>Alexander Keach</b> Managing Director	<ul style="list-style-type: none"> <li>– He possesses over 14 years of diverse experience in financial markets.</li> <li>– He also has practical experience working in agriculture in several properties, including the cultivation of poppies.</li> <li>– Has been involved in founding, expanding and financing several agriculture, financial services and mining businesses.</li> <li>– Holds a degree in Rural Business Management and is a Graduate of the Australia Institute of Company Directors.</li> </ul>
	<b>Nan-Maree Schoerie</b> Executive General Manager (Victoria and Tasmania)	<ul style="list-style-type: none"> <li>– Founded Murray Meds and was closely involved in the GMP compliance process.</li> <li>– Has held leadership positions in global organisations including GE, Thermo Fisher and Ventia.</li> <li>– Has been able to deliver great customer retention while securing large annuity contracts over A\$200m.</li> </ul>
	<b>Michael Clark</b> Head of European Operations	<ul style="list-style-type: none"> <li>– Has held leadership positions in global companies such as GSK in Europe. He will support ECS's business expansion in Europe where he has significant hands-on experience.</li> </ul>



## ECS Botanics Holdings Ltd

	<p><b>Jason Hine</b> General Manager</p>	<ul style="list-style-type: none"><li>– Brings over 25 years of management experience focussing on growth and improving business models for multiple companies globally.</li><li>– He will be a key asset in business development, distribution, and corporate and product development for ECS.</li></ul>
	<p><b>Angela Macquire</b> General Manager</p>	<ul style="list-style-type: none"><li>– Has over 30 years of pharmaceutical experience in the UK and Australia.</li><li>– Brings a wealth of knowledge in GMP manufacturing and compliance.</li></ul>
	<p><b>Paul Hanrahan</b> Site and Farm Manager (Tasmania)</p>	<ul style="list-style-type: none"><li>– Has over 30 years of experience in agriculture and commercialisation.</li><li>– He was the key to successful cultivation and harvesting processing activities at Little Green Pharma.</li></ul>
	<p><b>Nikita Soukhov</b> Farm Manager (Victoria)</p>	<ul style="list-style-type: none"><li>– Well-known agronomist who has diverse geographic experience across Israel, Canada and Australia.</li><li>– Has deep knowledge in regenerative farming, cannabis and plant genetics.</li></ul>





## ECS Botanics Holdings Ltd

	<b>Nicola Cranley</b> Financial Manager	<ul style="list-style-type: none"><li>– Has 18 years of work experience as a Chartered Accountant in various leading roles in financial institutions and small and medium enterprises.</li><li>– Has a Bachelor’s degree in Commerce and Post Graduate Diploma in Accounting.</li></ul>
	<b>Blaise Bratter</b> BDM, Oceania	<ul style="list-style-type: none"><li>– A medicinal cannabis sales leader with large network of industry contacts</li><li>– Depth of knowledge and experience across the supply chain ensuring customers receive high levels of guidance, service and support</li><li>–</li></ul>
	<b>Jason Stephens</b> Business Development and Special Projects	<ul style="list-style-type: none"><li>– Possesses expertise in supply chain management and solution development.</li><li>– Highly resourceful in new product development, branding deployment and cross-vertical marketing strategies.</li></ul>
	<b>Sally Allport</b> Marketing Manager	<ul style="list-style-type: none"><li>– Has knowledge in corporate investment and consultancy, corporate administration, and digital marketing.</li><li>– Has a Bachelor’s degree in Communication with Major in Marketing and Advertising.</li></ul>

Source: Company



Board of Directors		
	Name and Designation	Profile
	<b>David McCredie</b> Chairman	<ul style="list-style-type: none"> <li>– He has strong relations and connections in the industry and government organisations in Australia and the UK.</li> <li>– Is highly regarded in the industry due to his tenure as CEO of Australia British Chamber of Commerce, which he has held since 2010.</li> <li>– Holds a Master of Business Administration degree and a Bachelors of Arts.</li> </ul>
	<b>Jeremy King</b> Non-executive Director	<ul style="list-style-type: none"> <li>– Has over 20 years’ experience as a corporate lawyer in domestic and international legal, financial and corporate matters.</li> <li>– Has extensive experience in cross-border private equity deals, and capital raising for banks, financial institutions and corporate issuers.</li> <li>– Serves as Director of a boutique corporate advisory firm and regularly advises ASX-listed companies on corporate and legal matters.</li> </ul>
	<b>Michael Nitsche</b> Non-executive Director	<ul style="list-style-type: none"> <li>– Has extensive experience in equity capital markets, capital raising, and mergers and acquisitions.</li> <li>– Served as Institutional Advisor and Associate Director at two stockbroking firms, and held the position of director in several public and private company boards.</li> <li>– Holds a Post Graduate Diploma in Applied Finance with a major in Wealth Management.</li> </ul>
	<b>Mauro Piccini</b> Company Secretary	<ul style="list-style-type: none"> <li>– Has over seven years’ experience as Company Secretary for multiple ASX-listed as well as private firms.</li> <li>– A Chartered Accountant and member of the Governance Institute of Australia.</li> </ul>

Source: Company



## Appendix I – Glossary

**Cannabidiol (CBD)** – CBD is the second-most prominent compound found in the Cannabis Sativa plant, and is non-psychoactive. It can help with anxiety and pain relief among other benefits.

**Good Agricultural and Collection Practices (GACP)** – These guidelines, developed by the World Health Organization in 2003, are aimed at advising medicinal plant producers on how to improve the safety, efficacy and quality standards of their produce. These guidelines work in tandem with GMP guidelines.

**Good Manufacturing Practice (GMP)** – It is a system for ensuring that products are consistently produced and controlled according to quality standards. It is designed to minimise the risks involved in any pharmaceutical production that cannot be eliminated through testing the final product.

**Industrial Hemp** – It is an extract of the Cannabis Sativa plant and is used to produce various industrial and consumer products. Hemp is often confused with cannabis but has lower THC levels. Canada and Europe maintain that industrial hemp contains less than 0.3% THC content.

**Medicinal Cannabis** – Refers to the cannabis or cannabinoids that are prescribed by physicians for various illnesses such as anorexia, arthritis, glaucoma and migraine. Cannabis has a higher concentration of THC that varies between 3% and 30%, according to Canadian and European standards.

**Tetrahydrocannabinol (THC)** – THC is the main psychoactive compound in cannabis that produces the high sensation. THC mimics anandamide, a natural chemical in the brain that influences the function of communication.

**Therapeutic Goods Administration (TGA)** – This organisation is responsible for regulating supply, import, export, manufacturing and advertising of therapeutic goods in Australia via enforcement of standards, compliance and licensing.

**Vertical Integration** – A business strategy where the firm has control over suppliers, distributors and/or retailers that are involved in the supply chain. It allows the firm to exercise greater control and improve the relative efficiency of its supply chain.

## Appendix II – Capital Structure

ECS capital structure, as of 1 September 2021	In millions	% of fully diluted
Ordinary fully paid shares	863.0	97.7%
Options	20.7	2.3%
<b>Fully diluted shares</b>	<b>883.7</b>	

Source: Company



## Appendix III – Analyst Qualifications

Stuart Roberts, lead analyst on this report, has been an equities analyst since 2002.

- Stuart obtained a Master of Applied Finance and Investment from the Securities Institute of Australia in 2002. Previously, from the Securities Institute of Australia, he obtained a Certificate of Financial Markets (1994) and a Graduate Diploma in Finance and Investment (1999).
- Stuart joined Southern Cross Equities as an equities analyst in April 2001. From February 2002 to July 2013, his research speciality at Southern Cross Equities and its acquirer, Bell Potter Securities, was Healthcare and Biotechnology. During this time, he covered a variety of established healthcare companies, such as CSL, Cochlear and Resmed, as well as numerous emerging companies. Stuart was a Healthcare and Biotechnology analyst at Baillieu Holst from October 2013 to January 2015.
- After 15 months over 2015–2016 doing Investor Relations for two ASX-listed cancer drug developers, Stuart founded NDF Research in May 2016 to provide issuer-sponsored equity research on ASX-listed Life Sciences companies.
- In July 2016, with Marc Kennis, Stuart co-founded Pitt Street Research Pty Ltd, which provides issuer-sponsored research on ASX-listed companies across the entire market, including Life Sciences companies.
- Since 2018, Stuart has led Pitt Street Research's Resources Sector franchise, spearheading research on both mining and energy companies.

Cheng Ge is an equities research analyst at Pitt Street Research.

- Cheng obtained a B.Com in Finance and an LLB from the University of New South Wales in 2013, and passed all three levels of the CFA Program.
- Before joining Pitt Street Research, he worked for several financial services firms in Sydney, where his focus was on financial advice.
- He joined Pitt Street Research in January 2020.



## ECS Botanics

<b>Profit &amp; Loss (A\$m)</b>	<b>2019a</b>	<b>2020a</b>	<b>2021a</b>	<b>2022e</b>	<b>2023e</b>	<b>2024e</b>
<b>Sales Revenue</b>	<b>0.0</b>	<b>0.8</b>	<b>1.2</b>	<b>6.1</b>	<b>12.0</b>	<b>20.2</b>
Operating expenses	(0.9)	(2.9)	(4.6)	(7.8)	(11.7)	(16.5)
<b>EBITDA</b>	<b>(0.9)</b>	<b>(2.1)</b>	<b>(3.4)</b>	<b>(1.7)</b>	<b>0.3</b>	<b>3.8</b>
Depn & Amort	(0.0)	(0.0)	(0.2)	(0.2)	(0.3)	(0.5)
<b>EBIT</b>	<b>(0.9)</b>	<b>(2.1)</b>	<b>(3.6)</b>	<b>(1.9)</b>	<b>0.0</b>	<b>3.2</b>
Net Interest	0.0	0.1	0.0	0.0	0.0	0.0
<b>Profit before tax (before exceptionals)</b>	<b>(0.8)</b>	<b>(2.0)</b>	<b>(3.5)</b>	<b>(1.9)</b>	<b>0.0</b>	<b>3.2</b>
Tax expense	-	-	0.8	-	-	-
Abnormals + Minorities	-	(2.6)	(1.6)	-	-	-
<b>NPAT</b>	<b>(0.8)</b>	<b>(4.6)</b>	<b>(4.3)</b>	<b>(1.9)</b>	<b>0.0</b>	<b>3.2</b>
<b>Cash Flow (A\$m)</b>	<b>2019a</b>	<b>2020a</b>	<b>2021a</b>	<b>2022e</b>	<b>2023e</b>	<b>2024e</b>
Profit after tax	(0.2)	(4.6)	(4.3)	(1.9)	0.0	3.2
Depreciation	-	0.0	0.2	0.2	0.3	0.5
Change in working capital	(0.6)	(0.9)	0.1	(0.3)	(1.2)	(1.4)
Other operating activities	-	2.5	1.8	-	-	-
<b>Operating cashflow</b>	<b>(0.8)</b>	<b>(2.9)</b>	<b>(2.3)</b>	<b>(2.0)</b>	<b>(0.9)</b>	<b>2.3</b>
Capex (- asset sales)	(0.1)	(2.2)	(4.6)	(0.3)	(0.6)	(1.0)
Other investing activities	-	-	-	-	-	-
<b>Investing cashflow</b>	<b>(0.1)</b>	<b>(2.2)</b>	<b>(4.6)</b>	<b>(0.3)</b>	<b>(0.6)</b>	<b>(1.0)</b>
Dividends	-	-	-	-	-	-
Equity raised (repurchased)	1.9	6.1	9.2	-	-	-
Debt drawdown (repaid)	-	-	-	-	-	-
Other financing activities	-	-	(0.0)	-	-	-
<b>Financing cashflow</b>	<b>1.9</b>	<b>6.1</b>	<b>9.2</b>	<b>-</b>	<b>-</b>	<b>-</b>
Cash at End Period	1.0	1.9	4.2	1.9	0.4	1.8
Net Debt (Cash)	(0.9)	(1.9)	(4.2)	(1.9)	(0.4)	(1.7)
<b>Balance Sheet (A\$m)</b>	<b>2019a</b>	<b>2020a</b>	<b>2021a</b>	<b>2022e</b>	<b>2023e</b>	<b>2024e</b>
Cash	1.0	1.9	4.2	1.9	0.4	1.8
Total Assets	1.2	5.5	18.7	17.0	17.5	21.4
Total Debt	0.0	0.0	0.0	0.0	0.0	0.0
Total Liabilities	0.2	0.4	1.4	1.7	2.2	2.7
Shareholders' Funds	1.0	5.1	17.2	15.3	15.3	18.5

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