



botanix

PHARMACEUTICALS



RESTORING HEALTHY SKIN

Investor Presentation
March 2017



Investment highlights

Botanix is well positioned to capitalise on early value creation opportunities

- Experienced **US based leadership team** in place with a **proven track record of achieving FDA approvals**
- **Addressing growing, multi-billion dollar dermatology markets with no new products approved in last 20 years** (within the acne space)
- Key products based on **pharmaceutical grade synthetic cannabidiol** (versus variable naturally derived cannabidiol), greatly enhances the probability of clinical development success
- **Exclusive global rights** to use Permetrex™ delivery technology for **all drugs that treat skin diseases with potential to deliver near term revenues**
- **Accelerated development pathway for dermatology pharmaceuticals** compared to standard development pathways, **driving lower costs and a faster timeline to approval**
- **Strong intellectual property portfolio** which includes 12 patent applications across 6 patent families, and substantial volumes of proprietary knowledge, know-how, and trade secrets
- **Multiple near term potential revenue streams** to complement longer term development upside



Corporate overview

Innovative medical dermatology company with a clear path to commercialisation, and a highly aligned Board and management team holding 39% of Botanix shares

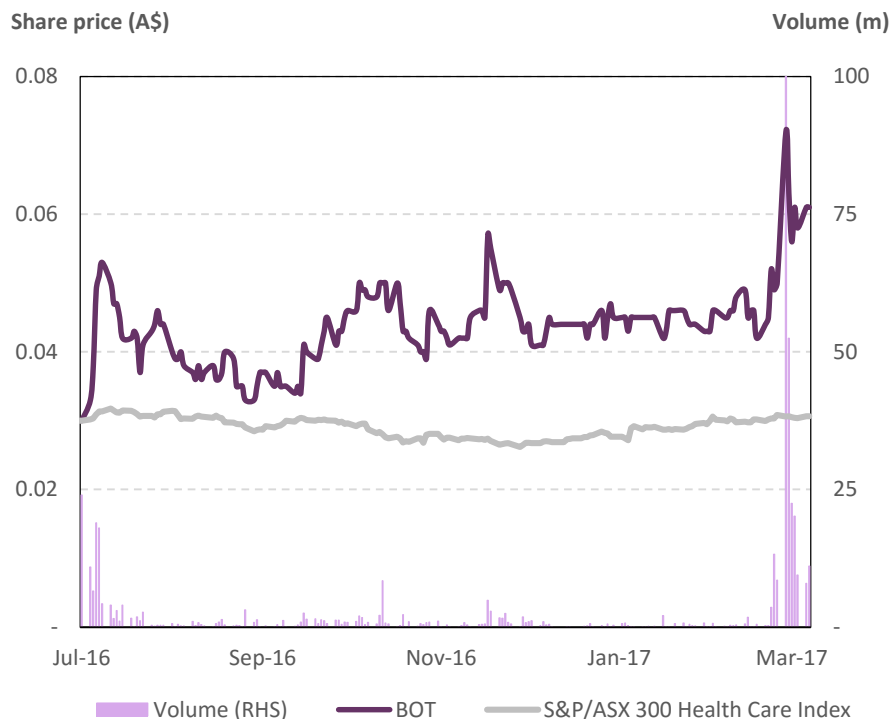
Trading information

Share price (21-Mar-17)	A\$0.061
52 week low / high	A\$0.026 / A\$0.072
Shares outstanding ^{1,2}	408.8m
Market capitalisation	A\$24.9m
Cash (as at 31-Dec-16) ²	A\$2.4m
Debt (as at 31-Dec-16)	Nil
Enterprise value	A\$22.5m

Top shareholders (as at Mar 2017)

Shareholder	%
Matthew Callahan – <i>Executive Director</i>	17.3
Caperi Pty Ltd – <i>Co-founder</i>	17.3
Board and management (excl. shareholders above)	5.0

Share price performance



Source: IRESS

1. Includes 156.5m fully paid ordinary shares subject to escrow until 15 July 2018
2. Excludes 38.8m unlisted options with exercise price range of A\$0.03 - A\$0.133 and expiry date range of Dec 2016 to Jun 2019



Recent corporate and product development

Recent corporate developments have provided a strong platform for Botanix to accelerate its clinical development program

Corporate milestones

Mar 2016

Pre-RTO: Bone Medical announce reverse take over (RTO) by Botanix Pharmaceuticals

Jul 2016

Completed RTO and commencement of trading as Botanix Pharmaceuticals (ASX:BOT)

Jul 2016 to Feb 2017

Key staff hires across the business divisions of clinical and regulatory, manufacturing, toxicology and operations

Feb 2017

Completed expansion of Permetrex™ license to cover the delivery of all drug actives used in treating skin diseases

Accelerating business development through advancement of BTX 1503, Permetrex™ pipeline and other licensing and partnerships

Development milestones

Jul 2016

Secured access to commercial scale synthetic cannabidiol

Nov 2016

Manufactured BTX 1503 trial formulation using FDA quality components

Dec 2016

Completed first human safety and irritation study with Permetrex™

Mar 2016

Submitted ethics application for first human study utilising BTX 1503

Ethics approval and commencement of clinical trials of BTX 1503 and other pipeline products utilising Permetrex™ delivery platform

Formulation

Confirm Permetrex™ Safety

Proof of Concept

Key milestones achieved

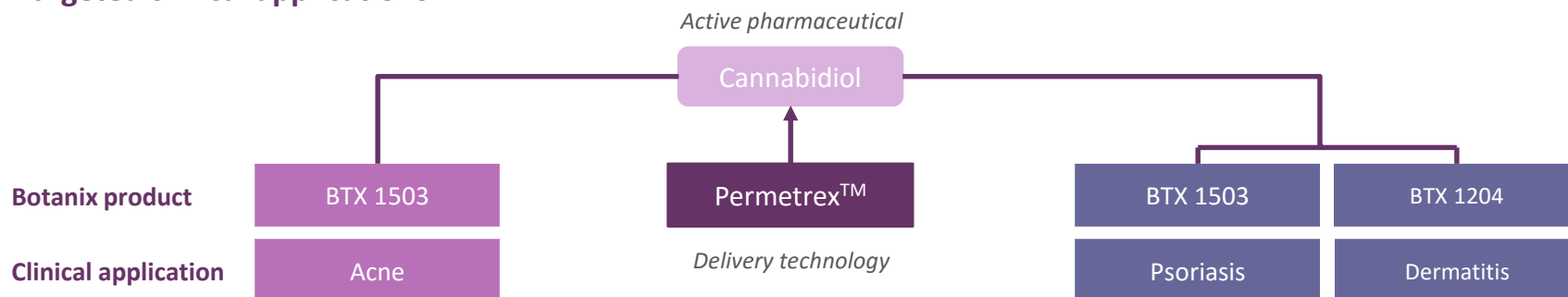
Near term focus



Strategic and commercialisation focus

Botanix is currently executing on its primary strategy of commercialising BTX 1503, while also developing a pipeline of other medical dermatology products

Targeted clinical applications



Near term focus

BTX 1503 development and commercialisation

- Focused on **designing and executing** an efficient clinical development program for first-in-class acne product BTX 1503
- **Accelerating clinical development** through undertaking low cost initial clinical studies in Australia, feeding into US based FDA approvals

Near to medium term focus

Permetrex™ licensing

- **Disciplined approach to the licensing of the Permetrex™** delivery system to strategic parties, to generate **potential near term revenue**
- Utilizing Permetrex™ to **develop proof of concept products for near term outlicensing**

Medium to long term focus

Other pipeline products

- Leverage **data from BTX 1503 program to accelerate development of new products** in psoriasis and dermatitis
- Potential to further develop **non-cannabidiol product** (BTX 1701) for “over the counter” markets **which does not require FDA approval**



Senior leadership: track record of success

Proven industry professionals with a demonstrated ability to lead the development, financing, regulatory approval and commercialisation of pharmaceuticals



Mr Matthew Callahan

Executive Director (Appointed Jul 2016)



Expertise: clinical and corporate

- Founding CEO of iCeutica Inc, which has developed **3 products to date that have received FDA approval**
- Co-inventor of SoluMatrix Technology delivery platform that iCeutica uses to develop new pharmaceuticals
- Previous investment director of 2 venture capital firms investing in life sciences



Dr Bill Bosch

Executive Director (Appointed Jul 2016)



Expertise: technology and clinical

- **6 FDA approved products to date** and co-inventor of the iCeutica SoluMatrix Technology
- Managed the commercial development of 4 nanotechnology products as the former Director of Pharmaceutical research at Elan Corporation
- Co-founder of NanoSystems and the co-inventor of the drug delivery technology NanoCrystal



Dr Michael Thurn

Chief Operating Officer (Appointed Feb 2017)



Expertise: regulatory and clinical

- Extensive start up life sciences experience across a range of technology platforms
- Over 20 years experience in drug regulation, drug discovery, pre-clinical and clinical
- Previous Managing Director of Spinifex Pharmaceutical, which was taken out by Novartis for A\$700m

**20+ FDA approved products
credited to the broader Botanix
leadership team**



Vivlodex™



Tivorbex™



MEGACEES



Rapamune®



ZORVOLEX™



Zyclara™



provant
life. changing.

Industry experts that have identified a compelling unmet market opportunity in dermatology, with acne treatment being the initial primary clinical focus

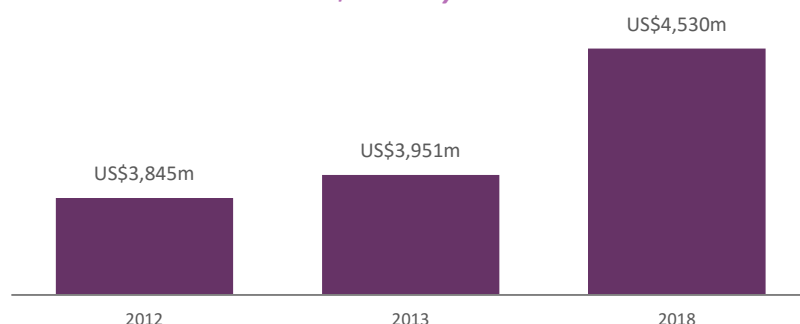


Significant and growing market opportunity

Global acne prescription products market expected to grow to >US\$4.5bn by 2018, driven by the significant US market, and is only a subset of the global dermatology opportunity

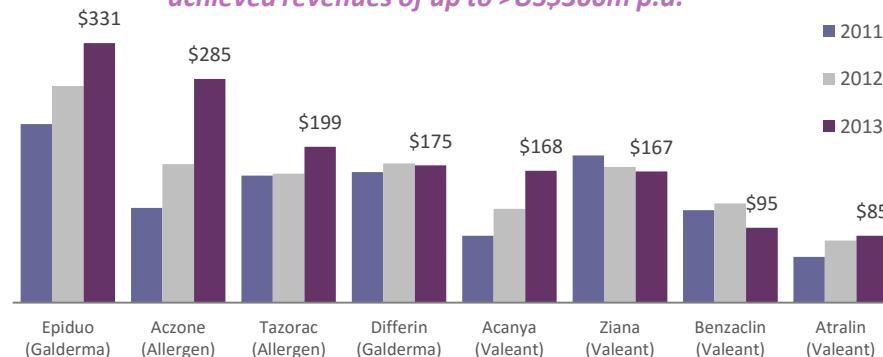
Global prescription acne product revenues (topical and oral treatments)

Value of the global acne prescription market is expected to reach US\$4.5bn by 2018¹



Annual topical prescription acne product revenues

Top branded acne products containing only generic drugs have achieved revenues of up to >US\$300m p.a.²



Large demand with limited recent product development

- **50 million patients** (in the US alone) used an acne product in 2015
- **No new chemical entities have been approved by the FDA in the last 20 years** for the treatment of acne
- Only “new” products launched in this period were **combinations of old drugs in new formulations or new packaging**
- Little development expected in future years, with **very few products currently in the development pipeline**
- Acne is just a subset of an even larger dermatology market opportunity (psoriasis, eczema, etc.) which is **in the order of US\$20bn p.a.**

1. BCC Research, May 2013. Skin Disease Treatment and Global Markets
2. Symphony Health Solutions, Pharmaceutical Audit Suite for 2012 as reported in Demira S1



Botanix's most advanced product – BTX 1503

BTX 1503 is topically applied for the treatment of moderate and severe acne, and utilises synthetic cannabidiol combined with a novel skin delivery technology

Overview

- BTX 1503 is a formulation of pure, synthetic cannabidiol that is administered via the Permetrex™ delivery system
- Cannabidiol is a chemical that can be naturally found as an extract of the cannabis plant
- Cannabidiol has an established safety profile with >100 human clinical trials completed or underway, studying cannabidiol in a range of different diseases
- BTX 1503 is designed to maximise the delivery of cannabidiol to the sebaceous glands with little systemic exposure

- It has multiple mechanisms of action that directly target the 4 pathogenic factors that lead to acne:



Switches off excessive oil production



Reduces inflammation



Blocks cell proliferation



Reduces infection

Cannabidiol mechanism of action in acne

Lipostatic	✓ Normalises excessive and abnormal fatty oil production known as “sebum”
Anti-inflammatory	✓ Induces a novel anti-inflammatory pathway
Anti-proliferation	✓ Inhibits proliferation of sebum producing sebocytes (cells), without affecting their viability (an important safety aspect)
Anti-bacterial	✓ Demonstrated anti-bacterial targeting acne specific <i>Propionibacterium acnes</i> (<i>P. acnes</i>)



BTX 1503 key advantages

Synthetic cannabidiol manufacturing process and skin based application provides significant competitive advantages compared to other products in development

Challenge

Significant commercial and regulatory hurdles in extracting enough naturally derived cannabidiol at the required purity, lowers the chance of achieving clinical success

Botanix solution

Synthetically derived cannabidiol allows for **consistent manufacturing, greater scalability** and more **straightforward regulatory approval** prospects

Advantages of synthetic cannabidiol

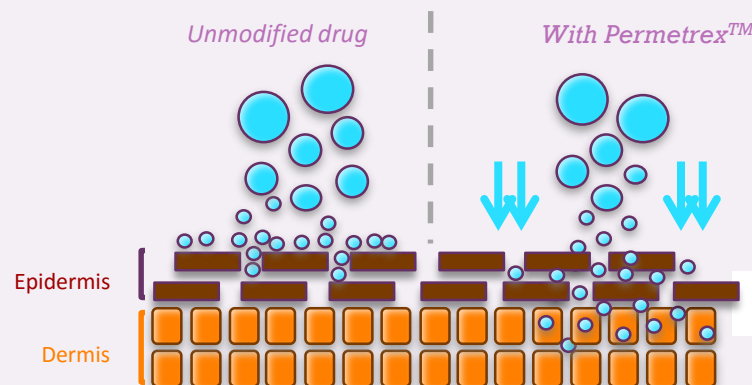
Synthetic cannabidiol	Naturally extracted cannabidiol
1 chemical	100+ chemicals
100% pure	Multiple impurities
Scaled up to ~50kg	Scaled up to ~1kg
Material registered with FDA	Not registered with FDA
No additional compliance required	Must comply with FDA's "Botanical Drug Development Guidance for Industry"

Challenge

Medicinal cannabidiol is generally administered orally, however, only 6% of cannabidiol consumed orally is available in the blood stream (even less makes it to the target organs in the skin)

Botanix solution

Permetrex™ **delivers cannabidiol efficiently into the skin** for the targeted treatment of various skin diseases. **Safe and non-irritating formulation** facilitates the **efficient delivery of cannabidiol into the skin**



Botanix holds the **exclusive rights** to utilise Permetrex™ for all drugs that treat skin diseases










BTX 1503 market positioning

Once developed and approved BTX 1503 has the potential to be the market leading product for acne treatment with no undesirable side effects

Market landscape for acne treatments¹

- BTX 1503 has multiple mechanisms of action that directly treat the key pathogenic factors causing acne, making it a potentially superior treatment to existing therapies
- While systematic therapies (i.e. oral isotretinoin) may inhibit sebum (skin-oil) production, its use is limited by very serious side-effects
- Significant unmet need for an effective therapy that targets the cause of acne (i.e. sebum production) and does not have the undesirable side effects associated with traditional acne treatments
- Significant market opportunity; major existing treatments fetched annual revenues in the range of US\$700m-US\$800m when they were patented products
- BTX 1503's patent protection is a significant competitive advantage, as all other treatments below are now generic products

							
Method of action	BTX 1503	Clindamycin	Tretinoin	Adapalene	Minocycline	Erythromycin	Accutane
Reduces excessive sebum (skin oil) production	✓						✓
Anti-inflammatory	✓		✓	✓			✓
Anti-bacterial	✓	✓			✓	✓	✓
Topical (applied to a specific area of the body)	✓		✓	✓			
Minimal side effects	✓		✓	✓		✓	
Patent protected (not a generic product)	✓						

1. Subject to relevant successful development and approvals

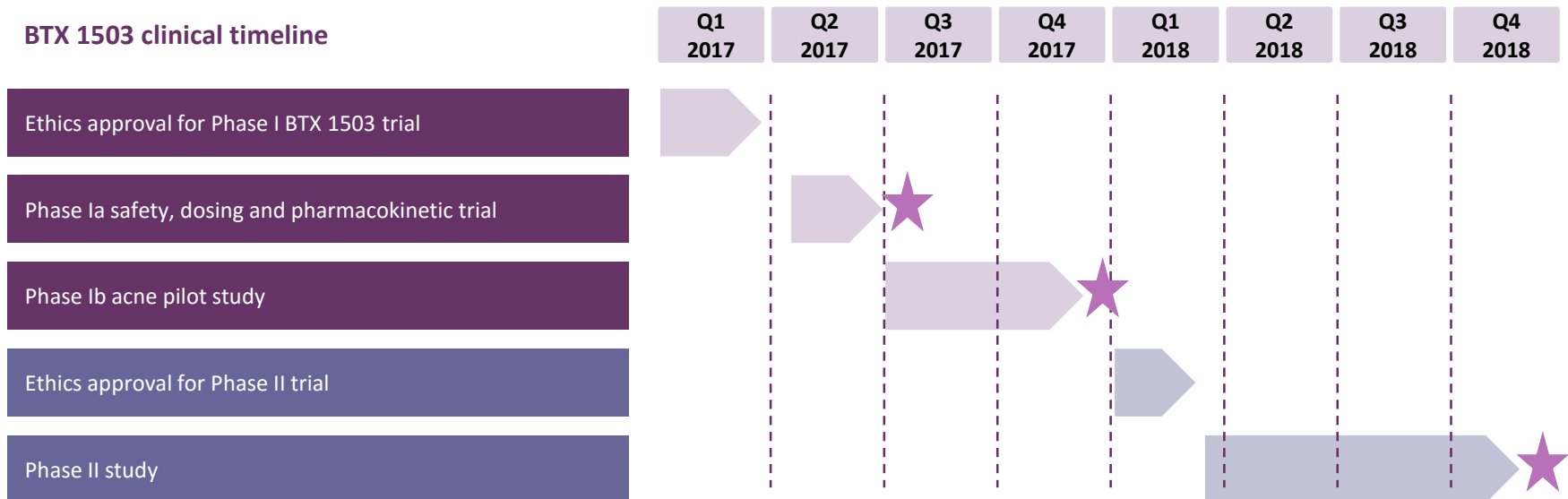


BTX 1503 accelerated clinical development

Botanix is pursuing a rapid clinical development strategy in order to minimise the time until product commercialisation and first revenues

- In December 2016, Botanix completed its first human study of the Permetrex™ delivery technology and successfully showed that Permetrex™ did not cause any safety or irritation issues
- First enrolment of Phase 1a acne study estimated for 2Q CY2017
- Successful product development of Permetrex™ skin delivery technology for the topical application of cannabidiol
- Botanix is funded through the Phase I clinical trials of BTX 1503, with potential further funding from Permetrex™ licensing revenues

BTX 1503 clinical timeline



Clinical milestones where potential development partnerships and/or licensing agreements may be considered



Accelerated development timeline

Botanix is executing on an efficient, more economical and less risky clinical development strategy compared to traditional pharmaceutical development pathways

Botanix's accelerated clinical timeline

Proven ability to execute: Achieved since listing

Phases	Traditional process		Botanix approach	
	Costs (est.)	Timing (est.)	Costs (est.)	Timing (est.)
Discovery and pre-clinical	~\$430m	~5 years	~\$1m	~6 months
Investigational New Drug filing	~\$1m			
Phase I clinical	~\$25m	~7 years	~\$2m	~6 months
Phase II clinical	~\$35m		~\$5m	~28 months
Phase III clinical	~\$54m		~\$20m	
New Drug Application	~\$5m	~2 years	~\$2m	~12 months
Total	~\$460m	~14 years	~\$30m	~4 years

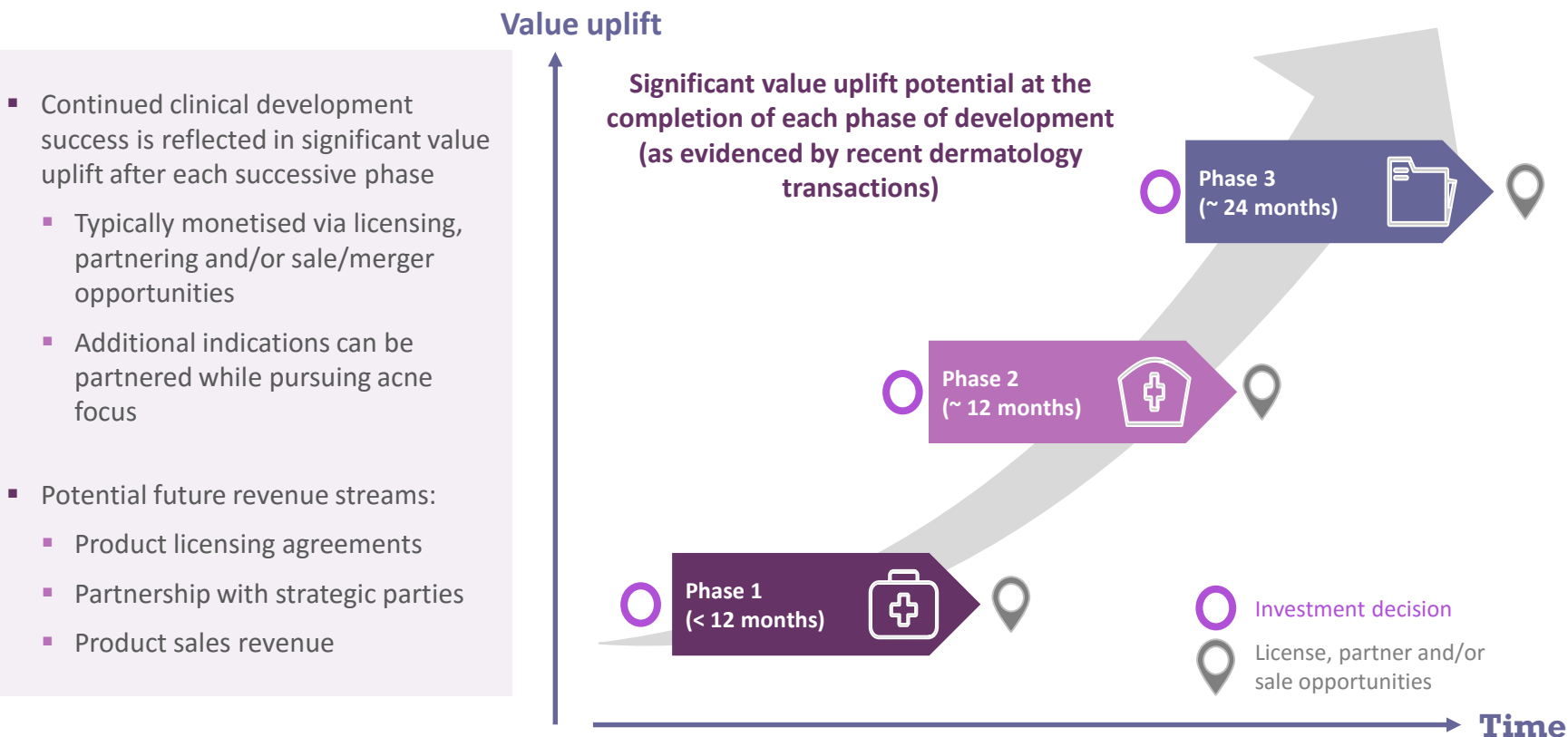
- Accelerated development timeline, due to:
 - Minimal pre-clinical development due to **known safety profile** of cannabidiol
 - Dermatology studies tend to be shorter in duration and require smaller study populations
 - **Objective measurements of efficacy** (end points are typically visual assessments)
- Opportunity to generate **near term revenue** from potential licensing agreements for Permetrex™
- In house expertise ensures clinical trials are appropriately designed and efficiently implemented
- Known safety profile **increases probability of successful clinical development**



Commercialisation strategy

Botanix's focused and accelerated timeline to product commercialisation results in significant potential value uplift

Efficient commercialisation path with multiple options

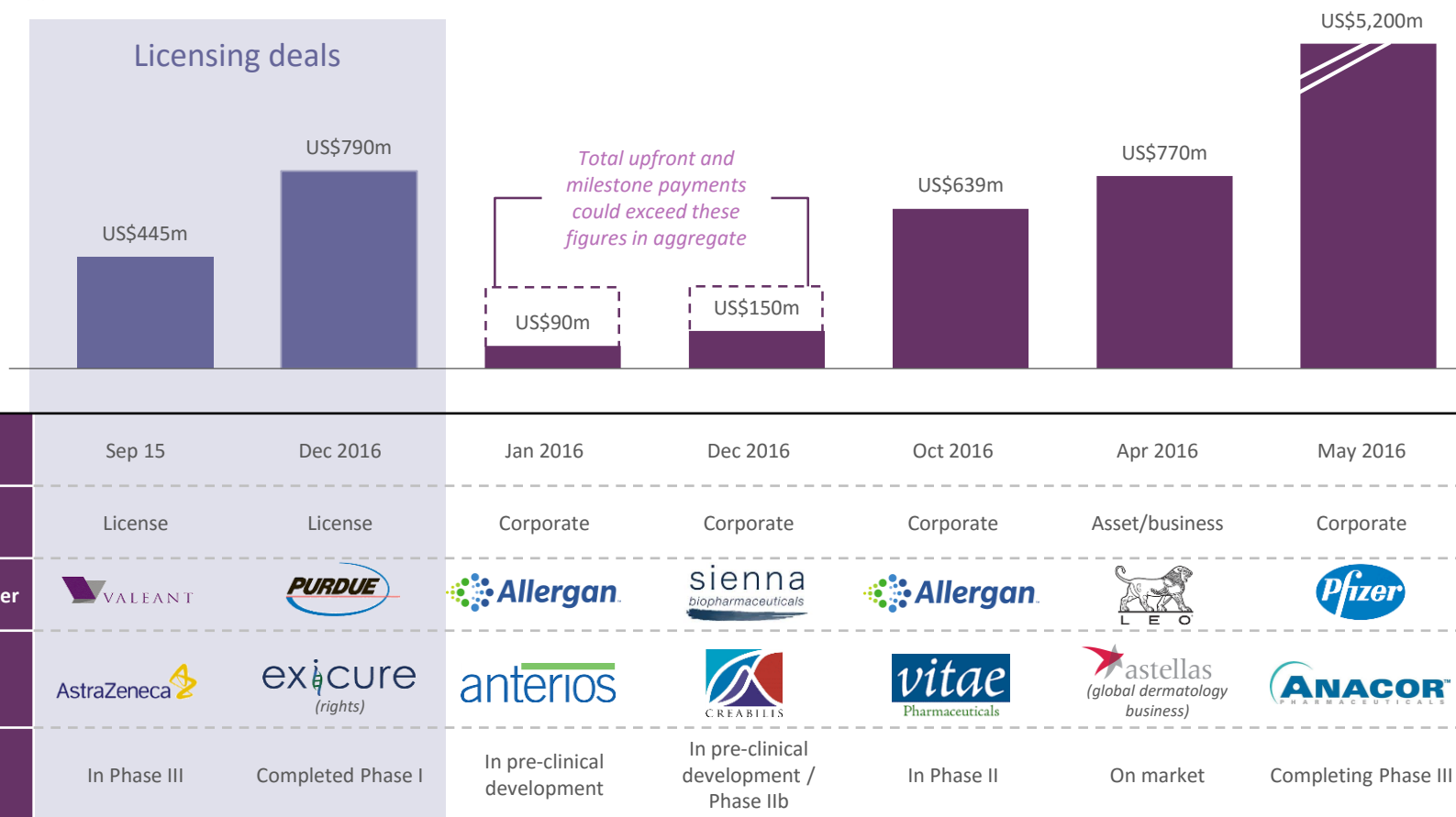




Recent dermatology transactions

Licensing and partnering transactions are potential monetisation options before product sales, with value increasing significantly as a product progress through the FDA process

Dermatology transactions



Source: Bloomberg, Company disclosure



Development pipeline

Development pipeline includes “over the counter” products with near term potential, that can be developed and marketed without FDA approval

Near term development potential

BTX 1701: cleanser/wash

- **Target market:** 50 million patients in the US alone purchased an acne treatment product in 2015
- **Market size:** ~US\$1bn+ p.a. for cleansers and washes
- **Comments:** acne treatment products (e.g. cleansers) will utilise the novel Permetrex™ delivery system

This product can be developed and marketed without FDA approval

Top 10 facial cleaners based on sales

	Sales (US\$m)	Change in sales (%)	Unit sales (m)	Change in unit sales (%)
Private label	137.5	6.0	33.5	5.2
Bioré	68.3	47.5	9.4	53.1
Simple	54.3	5.8	9.5	2.3
Cetaphil	51.1	22.2	5.8	12.0
Olay	46.6	-9.6	7.6	-10.1
Burt's Bees	46.0	21.3	7.1	23.1
Johnson's Clean & Clear Morning Burst	40.0	-4.1	11.0	3.4
CeraVe	39.8	24.1	3.7	33.4
Neutrogena Deep Clean	37.0	-4.9	5.9	-5.1
Pond's	33.4	4.5	7.0	0.5





Development pipeline

Development pipeline also includes other synthetic cannabidiol clinical development products targeting key dermatology markets

Mid-term clinical development products

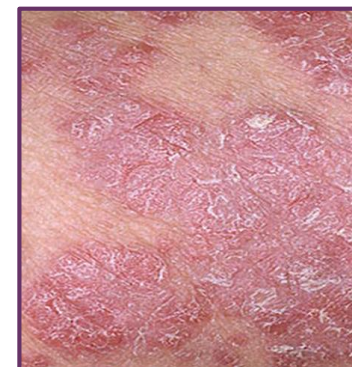
BTX 1308: psoriasis

- **Target market:** 7.5 million Americans have psoriasis (most have plaque psoriasis)
- **Market size:** estimated annual costs of injectable biologic treatments in the US is ~US\$20bn
- **Current issues:** biologic drugs are very expensive have serious side effect issues (including lymphoma)

BTX 1204: dermatitis

- **Target market:** US patient incidence estimated to be 31 million (10% to 18% of children)
- **Market size:** estimated annual cost of treating atopic dermatitis in the US is ~US\$4bn
- **Current issues:** most treatments on the market (i.e. steroids) only address the symptoms

These products will leverage both the BTX 1503 synthetic cannabidiol clinical program as well as the Permetrex™ delivery system



Psoriasis



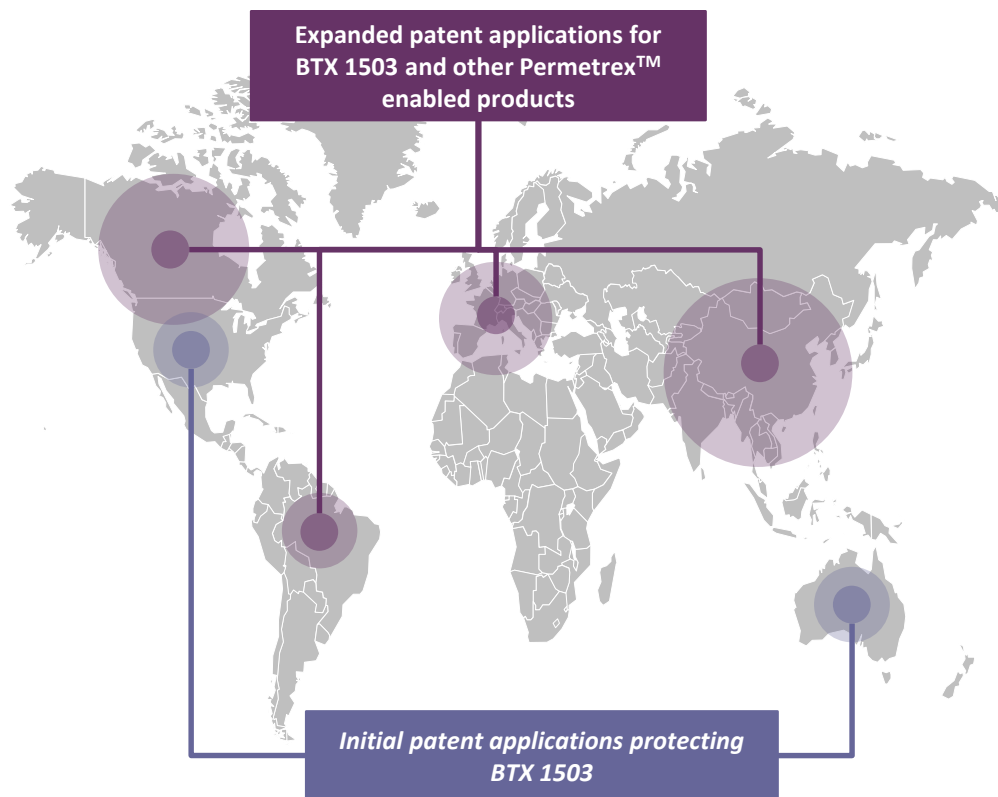
Dermatitis



Valuable intellectual property portfolio

Botanix has protected its suit of development products through various patent applications across key global markets

- Botanix currently has 12 patent applications across 6 different patent families
- Patents applications cover lead acne product and other Permetrex™ enabled products
- Patent protection targeted at key geographic regions with large and viable dermatology markets (i.e. initially filed in US and Australia, but following into the EU, UK, Japan, India, China, South America and other jurisdictions in National phase)
- Botanix positioned as the leading player in the sector – underpinned by substantial volumes of proprietary knowledge, manufacturing know-how and trade secrets
- Additional IP opportunities will be pursued on each Permetrex™ product developed internally or with partners



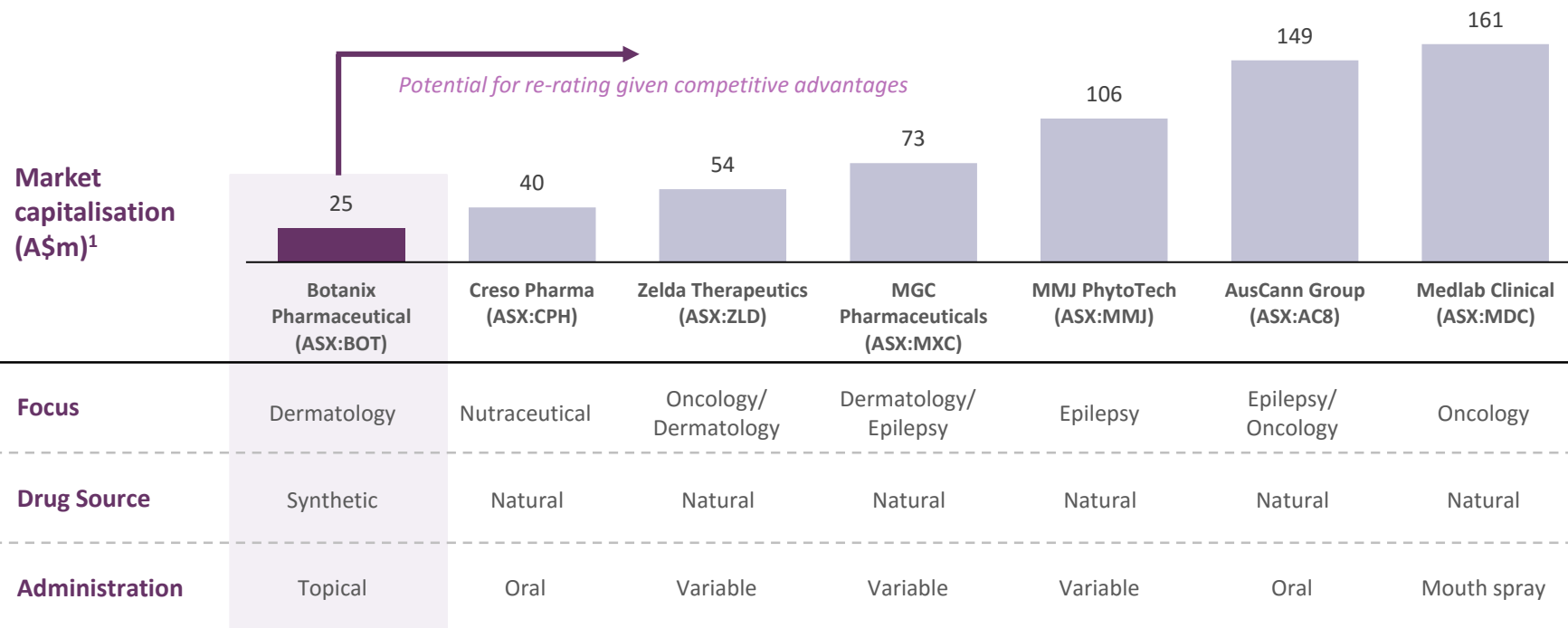


Botanix vs. ASX-listed medical cannabis companies

Botanix is the most compelling early stage cannabis related opportunity on the ASX

Botanix's **competitive advantages**:

- Synthetic cannabidiol formulation - ↑ probability and speed of FDA approval
- Unmet clinical need - No FDA approved acne treatments in last 20 years
- Significant addressable market - \$4.5 billion in annual prescription sales of acne products
- Faster development pathway – simple end points and skin based administration



Source: IRESS, Company disclosure

1. Market capitalisation as at close 21 March 2017 and calculated via the following formula (ordinary shares on issue + ordinary shares subject to escrow)*share price

Botanix Pharmaceuticals Ltd.

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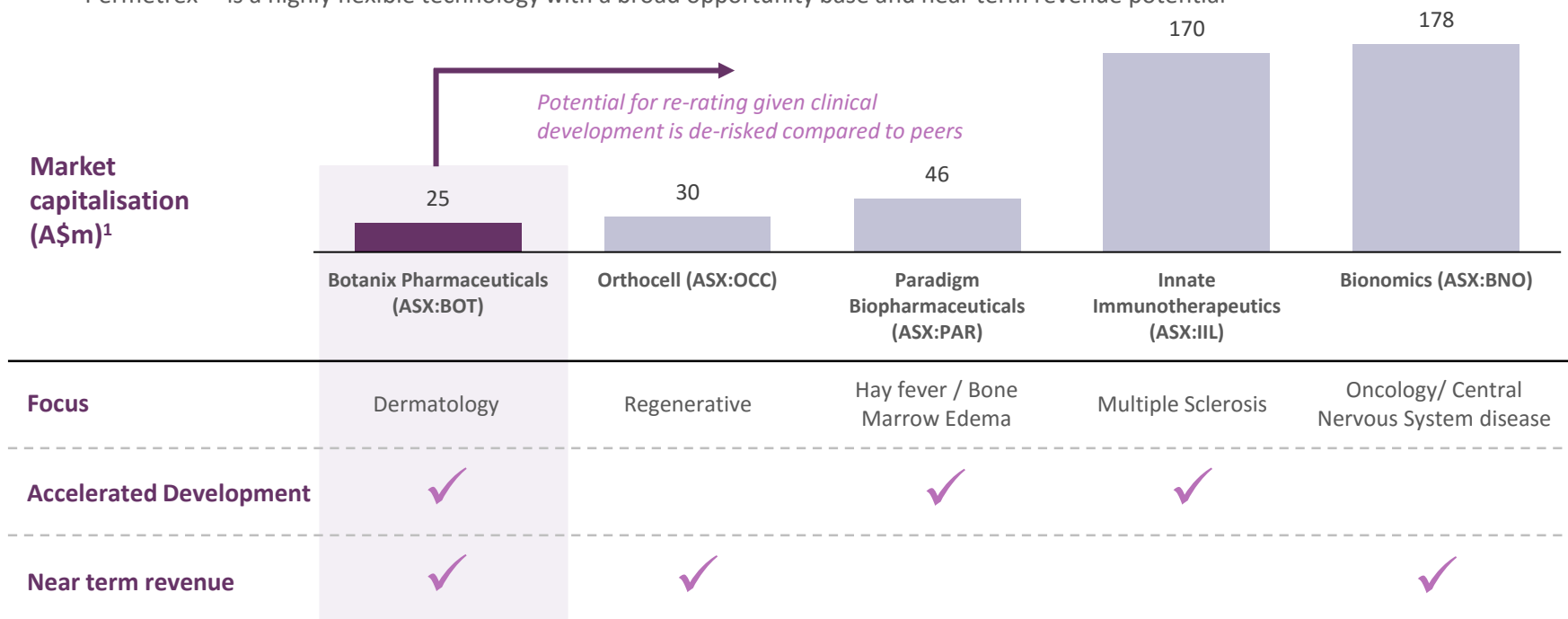
ASX market landscape

An accelerated clinical development timeline and near term catalysts should support a sustained re-rating in market valuation

Botanix vs. early stage ASX-listed pharmaceutical and biotechnology companies

Botanix's clinical development pathway is **de-risked compared to peers**:

- Simple clinical trials with an accelerated development timeline - ↓ time and cost to achieve FDA approval
- Targeting an unmet clinical need with large market opportunity and few competing products in development
- Permetrex™ is a highly flexible technology with a broad opportunity base and near term revenue potential



Source: IRESS, Company disclosure

1. Market capitalisation as at close 21 March 2017 and calculated via the following formula (ordinary shares on issue + ordinary shares subject to escrow)*share price



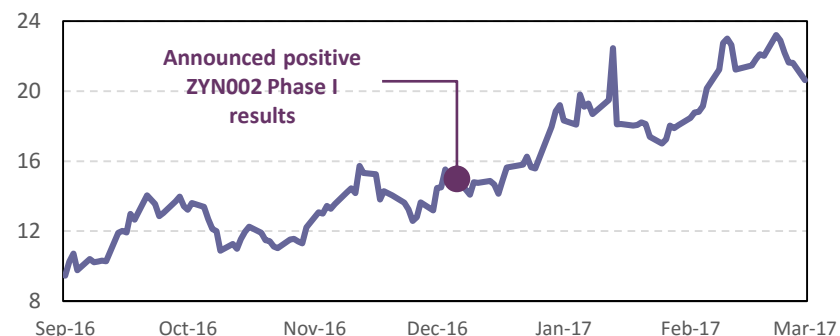
International landscape

Botanix represents a significant value accretive opportunity when compared to key global peers with positive Phase I and Phase II data

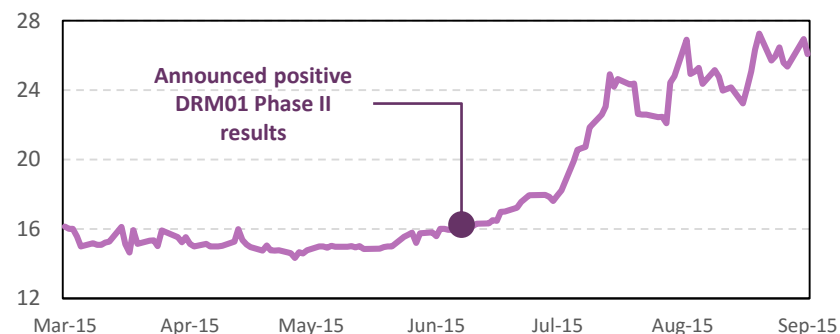
Market capitalisation of key international peers¹

	Novan	Zynerba	Cassiopea	Dermira
	US\$104m	US\$251m	US\$335m	US\$1,441m
Dermatology focused	✓		✓	✓
Cannabidiol focused		✓		
No. of products	Multiple	Multiple	Multiple	Multiple
Clinical development phase	SB206: II SB208: II SB414: I SB414: I	ZYN002 CBD Gel: II ZYN001 THC Pro-Drug Patch: I	Winlevi®: III Breezula®: III CB-06-01: II CB-06-02: II	Glycopyrronium Tosylate: III CIMZIA®: III Olumacostat Glasaretil: III

Zynerba share price performance (US\$)



Dermira share price performance (US\$)



Source: Bloomberg, Company disclosure

1. Market capitalisation figures as at close 21 March 2017



Key catalysts over the next 12 months

Significant operational milestones expected over the next 12 months, as Botanix completes preparation for and launches first human studies

	1H CY2017	2H CY2017
BTX 1503 milestones	<ul style="list-style-type: none">▪ Ethics approval for BTX 1503 Phase Ia study▪ DEA export licenses for cannabidiol to be used in clinical studies▪ Study commencement (and data) for BTX 1503 Phase Ia safety study	<ul style="list-style-type: none">▪ Commencement (and completion) of BTX 1503 Phase Ib acne pilot study and results▪ Collaboration on pipeline cannabidiol program with external partner▪ Preparation for Phase II BTX 1503 clinical study
Permetrex™ and pipeline product milestones	<ul style="list-style-type: none">▪ Study data from Permetrex™ pipeline product▪ Sign licensing agreement for Permetrex™ technology with external strategic partner▪ New patent filings on other pipeline products	<ul style="list-style-type: none">▪ Sign collaborative research arrangement/s▪ New product additions to pipeline (utilising the Permetrex™ technology)▪ Sign agreement/s on pipeline product/s



Appendix

Board of Directors and clinical team



Botanix Board of Directors

Highly credentialed Board of Directors with a proven record of building and leading successful pharmaceuticals businesses



Graham Griffiths
Chairman

Appointed July 2016

- 40 years executive experience in technology based companies, across sales, marketing and product development
- Former Managing Director of ipernica, responsible for acquisition and commercialisation of nearmap.com (ASX:NEA)
- Non-Executive Director of Pointerra (ASX:3DP), iperative and NGIS Australia



Commercialisation



Matthew Callahan
Executive Director

Appointed July 2016

- Founding CEO of iCeutica and Churchill Pharmaceuticals
- Co-inventor of iCeutica's SoluMatrix Technology
- Developed 3 FDA approved products
- Investment director at 2 venture capital firms
- 20 years experience in legal, IP and investment management
- Director of Orthocell (ASX:OCC) and Glycan Bioscience LLC



Clinical and corporate



Dr Bill Bosch
Executive Director

Appointed July 2016

- 20 years experience in the pharmaceutical industry
- Co-inventor of iCeutica's SoluMatrix Technology
- Developed 6 FDA approved products
- Developed 4 commercial nanotechnology products at Elan Corporation
- Co-founder of NanoSystems LLC and co-inventor of NanoCrystal Technology



Technology and clinical



Rob Towner
Director

Appointed July 2016

- 20 years corporate advisory experience
- Founder and sole director of Cornerstone Corporate
- Founding Executive Director of bioMD
- bioMD merged with Allied Health Care in 2011 to form Admedus (ASX:AHZ, \$200m market capitalisation)
- Executive Director of Triangle Energy (ASX:TEG)



Financing and capital markets



Botanix executive management

Highly credentialed clinical development team with extensive expertise in leading novel products through clinical and regulatory development



Dr Mark Davis
VP Clinical and Regulatory

- 30 years of clinical experience with 19 FDA approved products
- Unique experience with cannabidiol through Insys
- Former clinical lead with Medicis and Connetics

Clinical and regulatory



Dr Michael Thurn
Chief Operating Officer

- Extensive start up life sciences experience across a range of technology platforms
- +20 years experience in drug regulation, drug discovery, pre-clinical and clinical
- Previous Managing Director of Spinifex Pharmaceuticals

Regulatory and clinical



Dr Gene Cooper
Consultant

- 40 years pharmaceutical experience
- 10 FDA approved products
- Expert in skin delivery
- Inventor of Permetrex™

Technology and innovation



Dr Joel Gelfand
Medical Director of Clinical Studies

- Professor of Dermatology at the University of Pennsylvania
- Expert in skin disease and clinical trial management

Clinical Studies



Professor James Leyden
Scientific Adviser

- Professor of Dermatology at the University of Pennsylvania
- World leading acne and skin specialist

Key Opinion Leader



Professor Diane Thiboutot
Scientific Adviser

- Professor of Dermatology at Pennsylvania State University
- Researcher in acne and rosacea
- Pre-clinical and clinical trials services provider

Key Opinion Leader



Steve Newhard
Manufacturing/Quality

- 35 years manufacturing and development experience
- Former senior executive with Medicis
- Project leader for formulation

Formulation/manufacturing



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