

ASX/Media Release

9 December 2019

Investor Presentation

Philadelphia PA and Sydney Australia, 9 December 2019: Clinical stage synthetic cannabinoid company Botanix Pharmaceuticals Limited (ASX:BOT, “Botanix” or “the Company”) is pleased to release an updated investor presentation. The presentation will be used to update shareholders, investors and strategic partners on the ongoing clinical trials, pipeline products in development and other key upcoming activities.

Vince Ippolito

President and Executive Chairman

About Botanix Pharmaceuticals

Botanix Pharmaceuticals Limited (ASX:BOT) is a clinical stage synthetic cannabinoid company based in Perth (Australia) and Philadelphia (USA) committed to the development of pharmaceutical products that are underpinned by science and supported by well-controlled randomised clinical trials. The Company’s focus is the development of safe and effective topical treatments for serious skin diseases, leveraging the unique anti-inflammatory, immune modulating and antimicrobial properties of synthetic cannabidiol. Botanix has an exclusive license to use a proprietary drug delivery system (Permetrex™) for direct skin delivery of active pharmaceuticals in all skin diseases.

The Company has announced data from its Phase 2 acne patient study and is preparing for the end of Phase 2 meeting with the FDA. A Phase 2 patient study in atopic dermatitis is now fully recruited with data planned for 1Q CY2020 and its new Phase 1b rosacea study recently received ethics approval. The Company has also successfully completed a mechanism of action study for synthetic cannabidiol in skin disease, with positive data announced in June 2019 and is developing a pipeline of product candidates that leverages the antimicrobial properties of cannabidiol, with first products planned to enter the clinic in Q1 CY2020.

To learn more please visit: <https://www.botanixpharma.com/>

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Cautionary Note on Forward-Looking Statements

Any statements in this press release about future expectations, plans and prospects for the Company, the Company's strategy, future operations, and other statements containing the words "anticipate," "believe," "estimate," "expect," "intend," "may," "plan," "predict," "project," "target," "potential," "will," "would," "could," "should," "continue," and similar expressions, constitute forward-looking statements. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, including: the Company's ability to successfully develop its product candidates and timely complete its planned clinical programs and the Company's ability to obtain marketing approvals for its product candidates. In addition, the forward-looking statements included in this press release represent the Company's views as of the date hereof. The Company anticipates that subsequent events and developments will cause the Company's views to change. However, while the Company may elect to update these forward-looking statements at some point in the future, the Company specifically disclaims any obligation to do so. These forward-looking statements should not be relied upon as representing the Company's views as of any date subsequent to the date hereof.



RESTORING HEALTHY SKIN

Botanix Pharmaceuticals

*Australian Non-Deal Roadshow
December 2019*



World class team

Global team with proven experience and an unrivalled track record



Vince Ippolito

President and Executive Chairman



- COO of Anacor and Medicis with 17 years at Novartis
- More than 30 years experience in pharma with 20+ years within dermatology



Dr Michael Thurn

COO and Board Director



Operations + Regulatory

- Extensive start up life sciences experience in dermatology
- Previous MD of Spinifex Pharmaceutical, which sold to Novartis for A\$700m



Howie McKibbin

Chief Commercial Officer



- SVP of Commercial at Anacor and Medicis
- More than 20 years dermatology and pharma commercial experience



Matt Callahan

Founder and Consultant



- Developed 4 products through FDA approval and launch
- Serial founder and ex-investment director of 2 venture capital firms in life sciences



Dr Stephane Levy

Chief Medical Officer



Medical + Clinical

- Ex-CMO of Almirall US operations and VP Clinical with Sanofi and Novartis
- Broad commercial and clinical development experience



Ric Peterson

Chief Financial Officer



Finance + Strategy

- Former CFO of Sienna, Novan and Medicis
- Unrivalled dermatology experience across multiple companies for more than 30 years



Jack Lawler

VP Development



Development + Clinical

- 20 years clinical trial and development experience
- Most recently VP at Egalet Corporation and Director at Viropharma (Shire)



Dr Joyce Rico

Strategic Advisor



Medical, Research & Development

- Recent CMO for Novan Pharmaceuticals
- Prior experience as a Board Member for the Society of Investigative Dermatology, VP, Medical Affairs at Astellas and dermatology faculty at Duke, NYU and Northwestern



Dr Judith Plon

VP Regulatory Affairs



Regulatory

- 30 years regulatory experience with multiple FDA approved dermatology products
- Ex-AVP Global Regulatory Affairs at Sanofi

Botanix overview

Botanix is a clinical stage synthetic cannabinoid company, focused on developing topical products for the treatment of skin diseases and bacterial infections



Pharma focused

One of the world's **most advanced pharmaceutically focused synthetic cannabinoid (CBD) companies**



Technology driven

Proprietary Permetrex™ technology **enhances topical delivery of synthetic cannabinoid** and provides **novel IP position**



Clinical data

Lead dermatology indications validated by **robust clinical efficacy and safety data** with mechanistic **support for expansion into other diseases**



World class team

Experienced and growing team with **significant dermatology and cannabinoid drug development expertise**








Near-term catalysts

Multiple near-term catalysts including Phase 2 atopic dermatitis data and commencement of rosacea and bacterial infection studies

Advanced dermatology pipeline with near term milestones

Combination of clinical, safety and mechanism of action data from recent Botanix studies provide support for ongoing clinical programs, including near term completion of Phase 2 AD study

Synthetic CBD with Permetrex™ topical technology	Product	Indication	Ph 1	Ph 1b	Ph 2	Ph 3	Status
	BTX 1503 Gel	Moderate to severe acne					Preparing for FDA end of Phase 2 meeting
	BTX 1204 Solution	Moderate atopic dermatitis					Study data 1Q CY2020
	BTX 1702 Solution	Rosacea					Ethics approval received for Phase 1b study
	BTX 1801 Ointment	Antimicrobial					Preparing for Phase 2 study
	BTX 1308 Ointment	Psoriasis					Successful MOA ¹ study

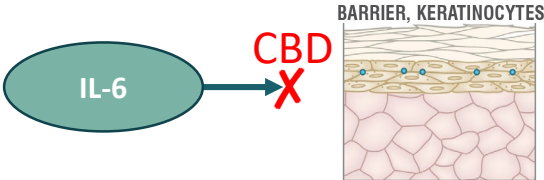
1. MOA: Mechanism of Action

Topical CBD is well suited to treat skin disease and infections

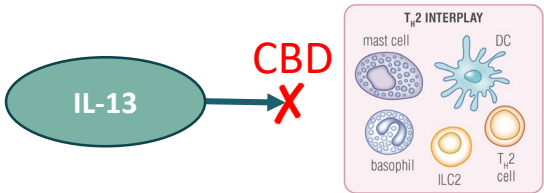
Botanix has generated strong scientific support for synthetic CBD’s anti-inflammatory and immune modulation mechanisms of actions, combined with newly identified antimicrobial effects¹

CBD anti-inflammatory / immune modulating effects

CBD inhibits a key cytokine which affects skin barrier disfunction



CBD attenuates a well-known cytokine which drives the inflammatory response



CBD inhibits a pathway which disrupts the signaling driving the body’s immune response

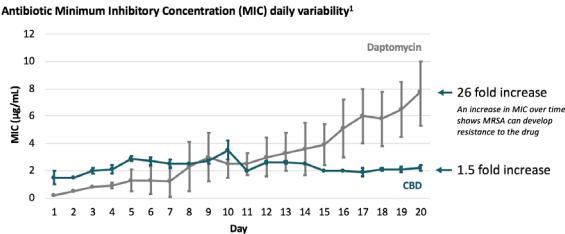


CBD antimicrobial effects

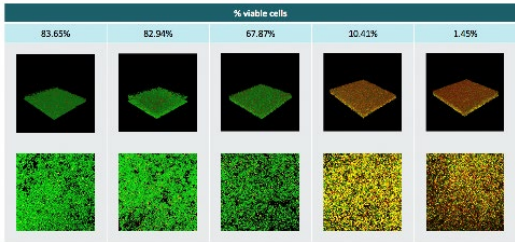
CBD is active against all tested gram +ve bacteria

Antibiotic	S. aureus all isolates (µg/mL)			MRSA ¹ (µg/mL)		MSSA ² (µg/mL)	
	MIC ₅₀	MIC ₉₀	Range	MIC ₅₀	MIC ₉₀	MIC ₅₀	MIC ₉₀
Cannabidiol	2	4	0.25 - 8	2	2	2	4
Mupirocin	0.5	0.5	0.125 - 64	0.5	0.5	0.5	0.5
Vancomycin	1	2	0.5 - 64	1	1	1	2
Daptomycin	2	4	0.5 - 16	2	2	2	4
Clindamycin	0.125	64	0.03 - 64	0.125	0.1875	0.125	64

Bacteria cannot form resistance to CBD’s rapid killing power



CBD disrupts the bacteria’s biofilm protective cover



1. Botanix data on file, see slides 9, 10, 14, 19, and 23 of this deck for further data

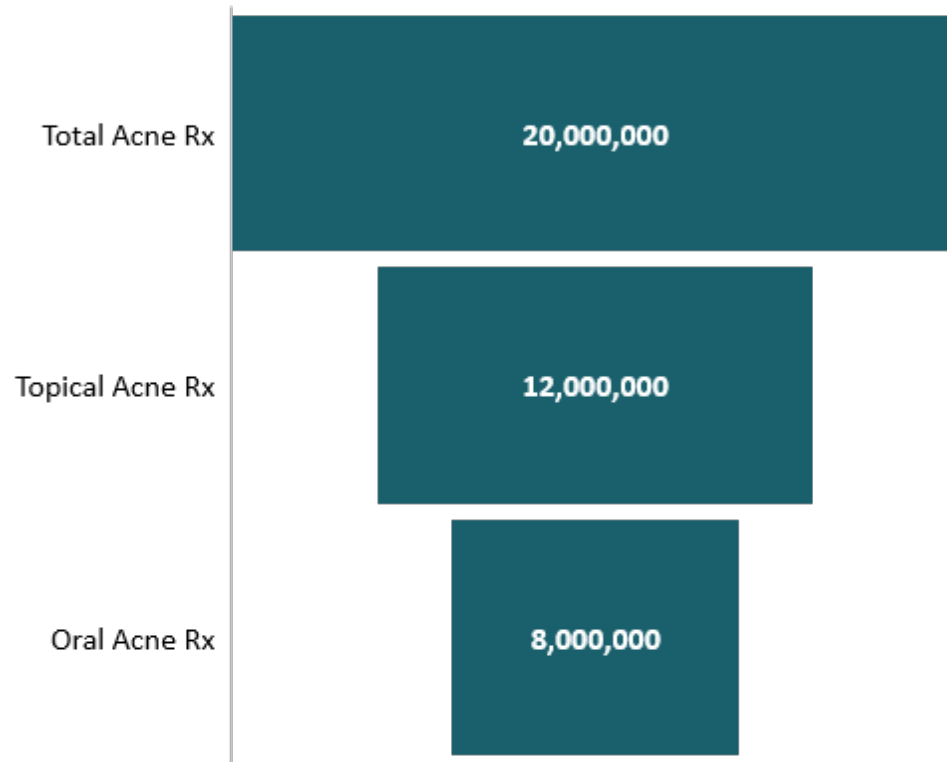
BTX 1503 – acne



Sizable acne market with a clear unmet medical need

Competitive products with tolerability and safety concerns, as well as antimicrobial resistance challenges, have generated significant annual sales

Acne prescription market



Top brands at peak sales

Rank	Brands	Peak gross sales	US peak prescriptions
1	SOLODYN Minocycline	~\$1B	1,295,346
2	DORYX FRANCHISE Doxycycline	~\$900m	983,368
3	EPIDUO FRANCHISE Adapalene+BPO	~\$700m	1,208,376
4	ACZONE FRANCHISE Dapsone	~\$300m	896,102

Source: IQVIA NPA

BTX 1503: Phase 2 top line data

Solid efficacy and safety results show BTX 1503 5% once-a-day (QD) dose is the best treatment to take forward into Phase 3 studies



BTX 1503 is safe and effective

All doses of BTX 1503 were very safe – no serious adverse events or treatment related discontinuations in BTX 1503 5% once a day (QD) group, while achieving positive effects on acne lesion reductions



BTX 1503 once a day is the dose

BTX 1503 as a once daily application had the best performance, which from a patient compliance and commercial perspective, is the ideal dosing regime



Clinical response

A strong and consistent impact on inflammatory lesions was seen with an even greater effect on non-inflammatory lesions



Positive efficacy and Australian data is statistically significant

Overall efficacy outcome is positive and Australian sites showed clear separation of BTX 1503 5% once a day (QD)



USA only vehicle response

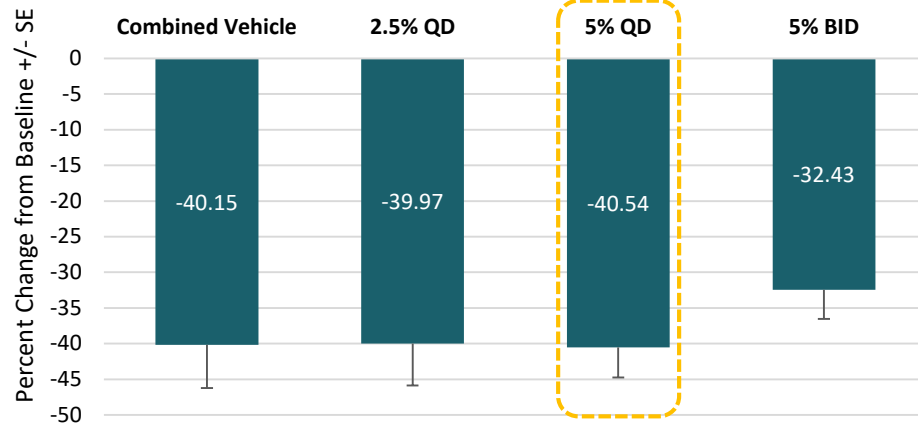
Patients in the USA that received vehicle had an unusually high vehicle response which skewed the overall primary endpoint

Source: BTX 1503 Phase 2 Study Results released 22 October 2019

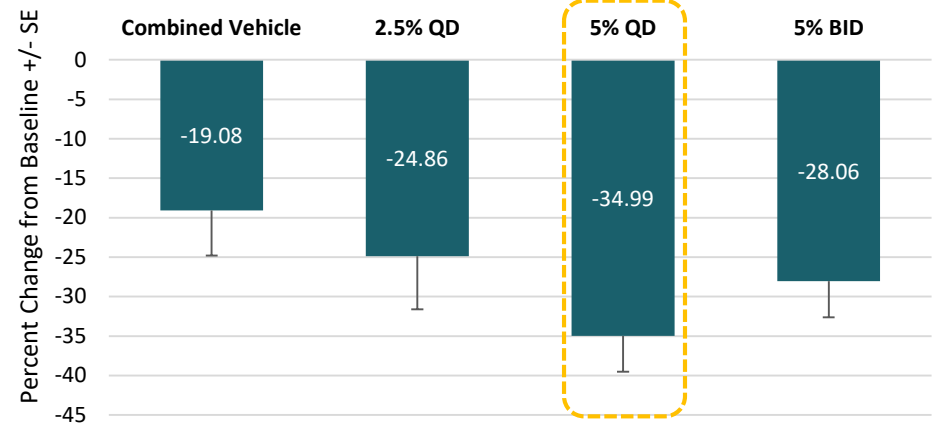
Combined results: Inflammatory and Non-Inflammatory Lesions

BTX 1503 5% once-a-day (QD) was the best performing active dose, but statistical significance was not reached for this primary endpoint, due to the very high vehicle response from the USA sites

Percentage Reduction in Inflammatory Lesions at Week 12 (Secondary Endpoint)



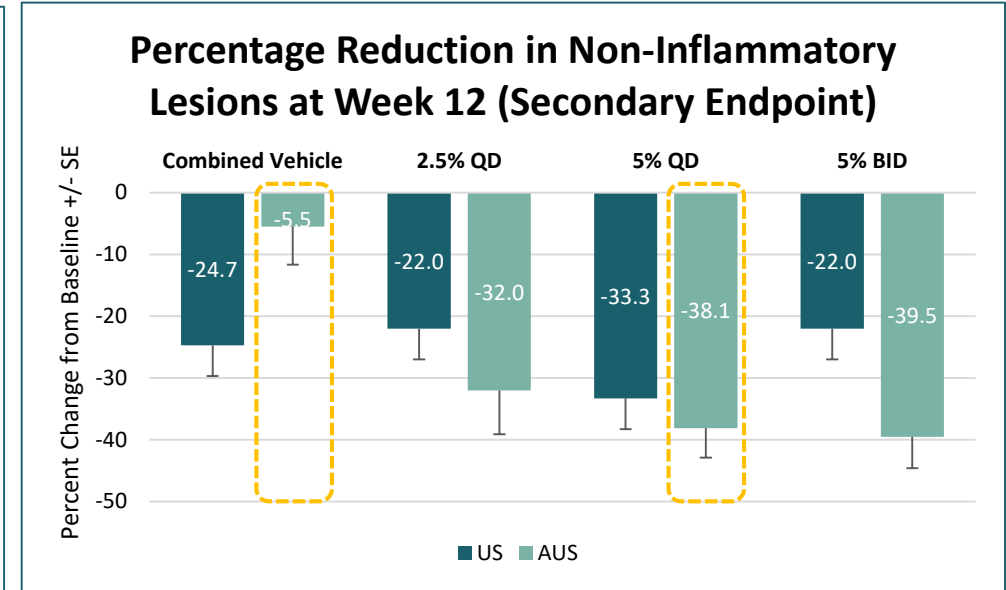
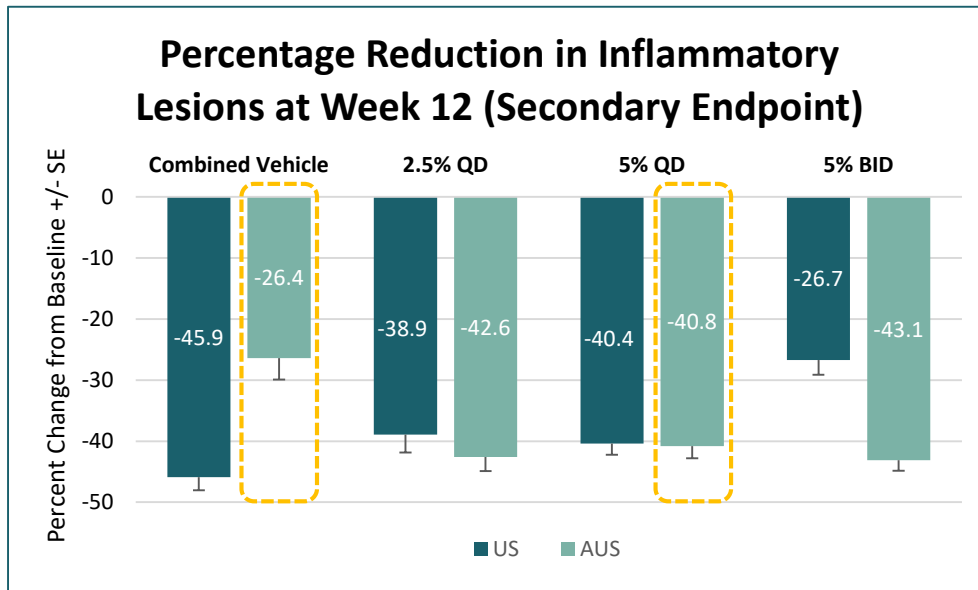
Percentage Reduction in Non-Inflammatory Lesions at Week 12 (Secondary Endpoint)



- BTX 1503 5% QD effect on inflammatory lesions was in line with target product profile at 12 weeks
- Vehicle response from USA sites was significantly greater than seen in Australia (see next slide for geographic break out)
- Efficacy in line with leading topical acne prescription products

Australia & USA results: Inflammatory and Non-Inflammatory Lesions

Australian data highlights the efficacy and separation expected from vehicle



- Australian clinical sites showed statistically significant improvements in reduction in inflammatory lesions with BTX 1503 BID - 43.1% reduction ($p < 0.05$) with BTX 1503 QD showing a 40.8% reduction
- Non-inflammatory lesions were reduced in Australia and the USA following treatment with BTX 1503 – with the Australian BTX 1503 5% QD group showing a 38.1% reduction vs a 5.5% reduction for Vehicle ($p < 0.002$)
- Vehicle group response in USA was almost two to four times the response seen in Australia

Next steps

Overall efficacy and safety combined with statistical significance of Australian data provide confidence to proceed with end of Phase 2 FDA meeting and preparation for Phase 3 clinical studies

Outcomes support and expand on Phase 1b results

- Overall safety and efficacy is positive and Australian data shows strong separation from vehicle and excellent safety profile
- Non-inflammatory lesion reduction performance exceeds expectations across geographies

Phase 2 patient population reflects Phase 3 study design requirements

- Approximately half of patients included in the Phase 2 study were under 18 years old which have traditionally been the lowest responders in acne studies
- Endpoints mirror those required in Phase 3 studies for approval

Safety and efficacy data with once a day dose reflects optimal patient compliance and commercial target product profile

- Exceptionally clean safety profile positions BTX 1503 on top of comparative products
- Efficacy in inflammatory and non-inflammatory lesion reduction in line with target profile

End of Phase 2 meeting with FDA to be scheduled alongside preparation for Phase 3 clinical studies

Source: BTX 1503 Phase 2 Study Results released 22 October 2019 – Botanix data on file

BTX 1204 – atopic dermatitis



BTX 1204: CBD mechanism of action in atopic dermatitis

Ideal therapy that addresses multiple factors of disease pathology

1 CBD inhibits itch

Suppresses itch by interacting with VR / TRPV-1 receptors present on mast cells and keratinocytes³

2 CBD repairs barrier dysfunction

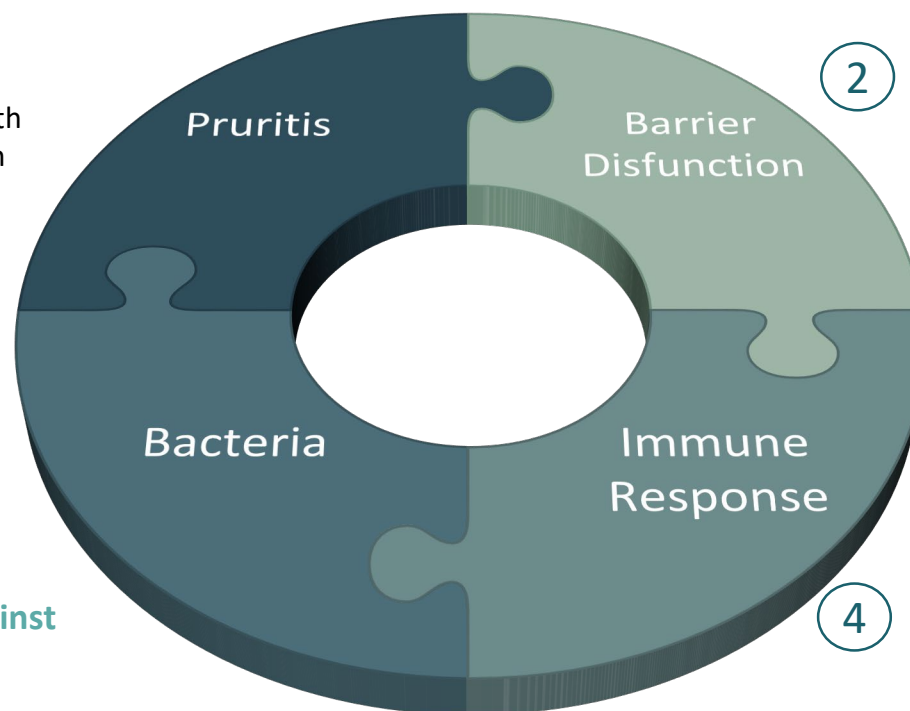
Inhibits p38 MAP Kinase activation and IL-6 production in keratinocytes which interrupts the signaling process to dendritic cells and Th2 helper cells^{1,2}

3 CBD is potent antibiotic against *S. aureus* bacteria

Reduces *S. aureus* and MRSA colonisation responsible for triggering skin inflammation and secondary skin infections⁴

4 CBD modulates the immune system

Inhibits Th17 (IL-17) and Th2 responses (IL-13) responses limiting the release of pro-inflammatory cytokines (TNF α , IL-1, IL-6, IL-8, and IL-12)^{1,5}



1. BTX 1308 Phase 1b clinical study – BOT data on file

2. Tan et al. Mol Med Rep 2017;16((6) 8883-8867

3. Eigelston et al. Dermatol Onlin J. 2018 Jun 15;24 (6)

4. Based on University of Queensland testing – BOT data on file

5. Petrosino et al. J Pharmacol Exp Ther. 2018 Jun;365(3):652-663

Atopic dermatitis market projected to be ~US\$25B in 2027

BTX 1204 is being developed to address the need for a safe, non-steroid option for chronic use with multiple mechanisms of action including anti-inflammatory, anti-microbial and immune modulation

One of the most common skin diseases¹

- Characterised by flare-ups of itch, red / inflamed rash and excessive dryness or scaling
- Affects 20-25m Americans^{2,3} of which 90% are mild to moderate^{4,5}
- ~85% of cases present by the age of 5 years⁶

Large unmet need across the atopic dermatitis population⁷

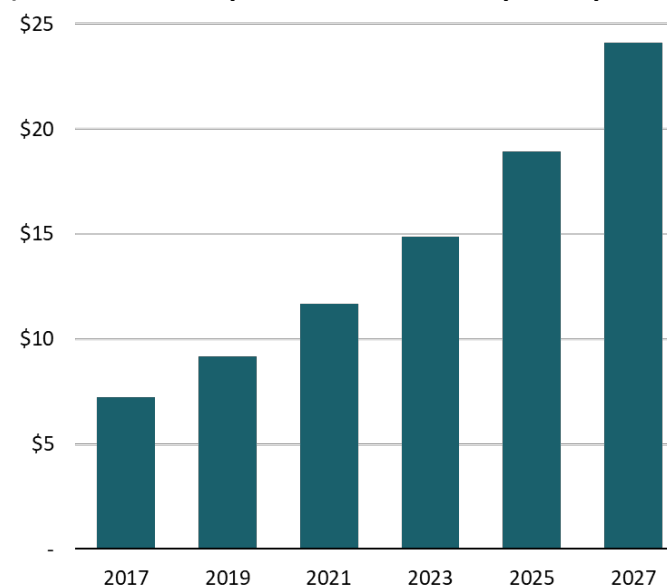
- Limited options for safe and effective treatment of chronic disease
- Biologics are reserved for the severe population (~10% patients)

Pediatric population particularly needs a steroid free alternative¹

- Safety concerns with chronic use of high potency steroids
- Topical Calcineurin Inhibitors (Protopic / Elidel) have a boxed warning
- Current non-steroidal options have been reported to have tolerability concerns

Projected atopic dermatitis market by revenue (US\$B)⁸

(includes 44m topical corticosteroids prescriptions)

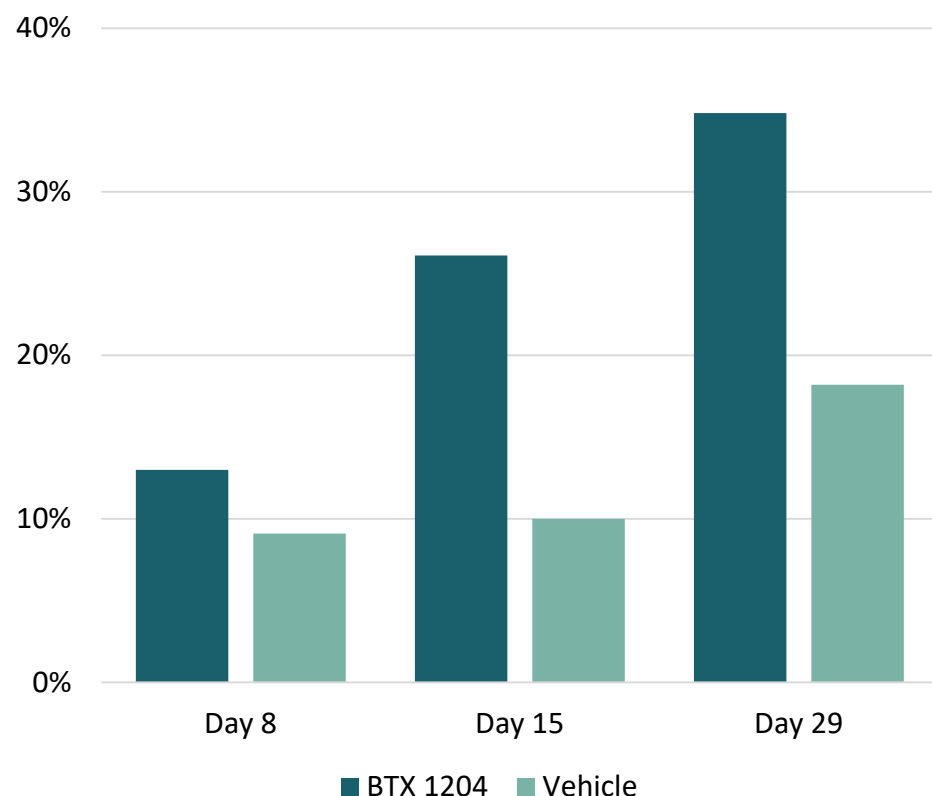


1. Eichenfield LF, Tom WL, Chamlin SL, Feldman SR, Hanifin JM, Simpson EL, et al Guidelines of care for the management of atopic dermatitis, Section 1 diagnosis and assessment of atopic dermatitis. *J Am Acad Dermatol* 2014 Feb; 70(2):338-51.
2. Hanfin, J.M. et al. *Dermatitis*, 2007, 82(2): 82-91
3. Silverberg, J.I. & Hanifin, J.M. *J Allergy Clin Immunol*, 2013, 132(5): 1132-1138
4. Silverberg, J.I. & Simpson, E.L. *Dermatitis*, 2014, 25(3): 107-114
5. Barbarot et al. *Allergy*, 2018, 73:1284-1293
6. <https://www.aad.org/media/stats-numbers>
7. Global Data. *Pharmapoint Atopic Dermatitis* Nov 2015
8. Symphony Health Services (PHAST) 2017/IQUVIA

BTX 1204 Phase 1b study results support efficacy and safety potential

BTX 1204 was twice as effective as vehicle (with efficacy still increasing at study completion) and displayed a substantial improvement in the study endpoints (key signs of atopic dermatitis)¹

Treatment success (%)²



Efficacy still increasing at 4 week timepoint (n=36)

- Achieved treatment success similar to many competitive topical products
- Data suggests longer treatment period for BTX 1204 possible for increased efficacy

Clear separation from vehicle (placebo)

- Despite being a small study, BTX 1204 shows superiority over vehicle, starting at early time points

Excellent safety profile

- Safe and well tolerated with no SAE's
- BTX 1204 profile may allow extended dosing which remains a key challenge with most available therapies

1. Botanix data on file. Results indicated substantial reduction in key signs of AD, providing confidence that unmet needs in AD can be addressed

2. Signs of AD score and Investigators Static Global Assessment (ISGA) score on target lesion. Treatment success based on greater than, or equal to, a 4 point improvement

BTX 1204: atopic dermatitis – Phase 2 fully recruited

12-week randomised, double-blind, vehicle-controlled study to evaluate the safety and efficacy of BTX 1204 in patients with moderate atopic dermatitis

Study Design

- 2 dose groups: ~200 subjects
 - BTX 1204: ~100 subjects
 - Vehicle/Control: ~100 subjects
- ~25 US and Australian dermatology sites
- Children (> 12 years) and adults
- Moderate AD patients
- Treatment period of 12 weeks

Endpoints

- **Primary endpoint**
 - Proportion of subjects with ISGA success defined as an ISGA score of “Clear” (0) or “Almost Clear” (1) with at least a 2 grade improvement from Baseline at Week 12
- **Secondary endpoints**
 - Change from Baseline in the Signs of AD
 - % body surface area (BSA) affected by AD
 - Time to achieve IGA success
- **Safety**
 - Adverse events and local tolerability

On track to report top line data in 1Q CY2020

Additional Pipeline programs

1. BTX 1702: rosacea
2. BTX 1801: bacterial infections



BTX 1702: impact of papulopustular rosacea

Papulopustular rosacea is a chronic skin disease characterised by redness (inflammation) and acne-like break-outs¹

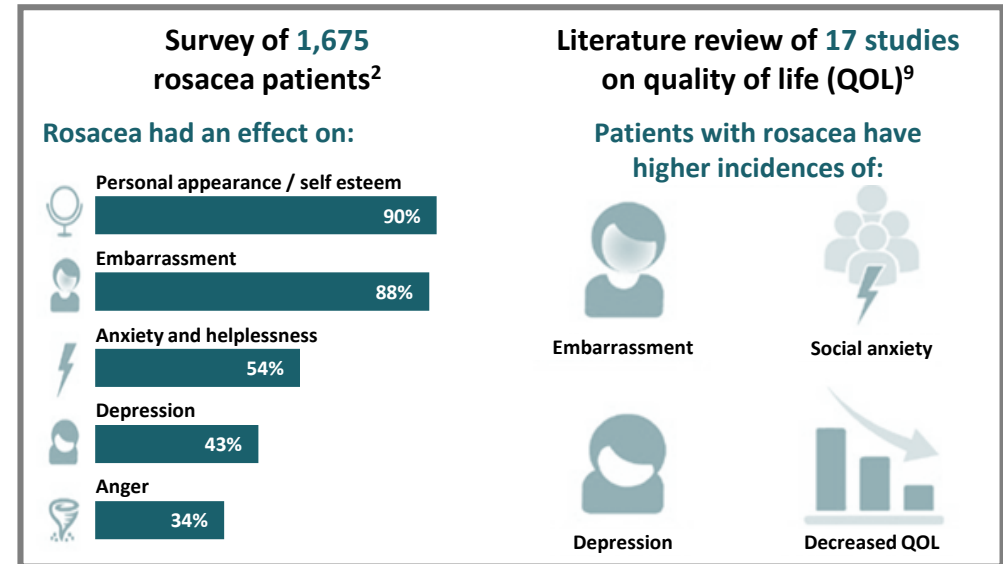
~16M Americans affected by rosacea²

- Affects 5.5% of the world-wide population³
- 85% of patients are over 30 years old⁴
- Most common in middle aged women with light skin⁵
- Side effects associated current options affect treatment preferences, satisfaction, and QOL⁶

Clearly identified unmet medical need²

- Market is projected to grow to \$2.6B by 2025⁷
- 5M prescriptions in the US alone⁸

Very high emotional and psychological impact²



1. Blount BW, Pelletier AL. Am Fam Physician. 2002;66:435-440.

2. National Rosacea Society. www.rosacea.org

3. Gether L, et al. Br J Dermatol. 2018;179:282-289

4. Aimee Two, et al, JAAD, Volume 72, Issue 5, May 2015

5. Mayo Clinic. www.mayoclinic.org

6. Todd Williamson, et al. Am Drug Benefits, 2018 Apr; 11(2): 97-106

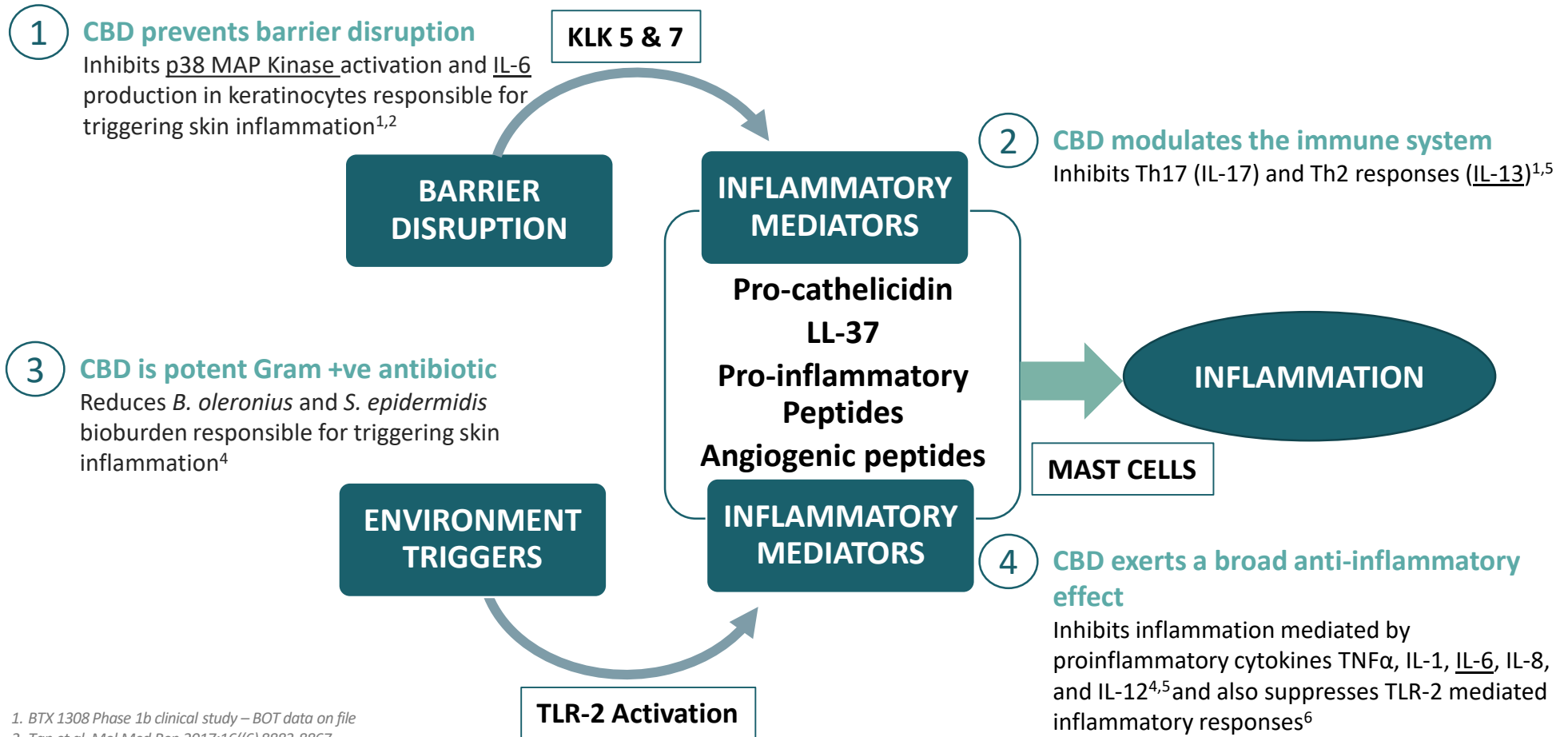
7. Grandview Research. www.grandviewresearch.com

8. Symphony Health Solutions, PHAST

9. Moustafa F. J Am Acad Dermatol. 2014;71:973-980.

BTX 1702: CBD mechanism of action in rosacea

CBD has the potential to target multiple points in the rosacea inflammatory cascade and other mediators³



1. BTX 1308 Phase 1b clinical study – BOT data on file
 2. Tan et al. Mol Med Rep 2017;16((6) 8883-8867
 3. Egelston et al. Dermatol Onlin J. 2018 Jun 15;24 (6)
 4. Based on University of Queensland testing – BOT data on file
 5. Petrosino et al. J Pharmacol Exp Ther. 2018 Jun;365(3):652-663
 6. McCoy Mediators Inflamm. 2016;2016:5831315

New BTX 1702 Phase 1b study design

6 week randomised, double-blind, vehicle-controlled study to evaluate the safety and tolerability of BTX 1702 in patients with papulopustular rosacea

Study Design

- 4 dose groups: ~120 patients
 - BTX 1702 Formulation A - twice daily: 30 patients
 - BTX 1702 Formulation B - twice daily: 30 patients
 - Vehicle A - twice daily: 30 patients
 - Vehicle B - twice daily: 30 patients
- Approx 6 Australian dermatology sites
- Adults: 18 years and older
- Moderate to severe papulopustular rosacea
- Treatment period of 6 weeks
- Facial photos with Canfield imaging

Endpoints

- **Primary endpoint**
 - Safety and local tolerability assessment
- **Exploratory endpoints**
 - Absolute change and percentage change in Inflammatory lesion counts (papules and pustules)
 - Proportion of subjects with a clear (0) or almost clear (1) IGA
 - Reduction of erythema severity assessments by patients and by the Investigator

Ethics approval received 4Q CY2019

BTX 1801: prevention of post-surgical bacterial infections

Cannabidiol is a powerful new antibiotic that is effective in tests against *Staphylococcus aureus* (“staph”) and *methicillin resistant Staphylococcus aureus* (“MRSA or golden staph”)¹

Antibiotic	<i>S. aureus</i> all isolates (µg/mL)			MRSA ¹ (µg/mL)		MSSA ² (µg/mL)	
	MIC ₅₀	MIC ₉₀	Range	MIC ₅₀	MIC ₉₀	MIC ₅₀	MIC ₉₀
Cannabidiol	2	4	0.25 - 8	2	2	2	4
Mupirocin	0.5	0.5	0.125 – 64	0.5	0.5	0.5	0.5
Vancomycin	1	2	0.5 – 64	1	1	1	2
Daptomycin	2	4	0.5 – 16	2	2	2	4
Clindamycin	0.125	64	0.03 – 64	0.125	0.1875	0.125	64

MIC₅₀ = min concentration to inhibit growth of 50% of isolates

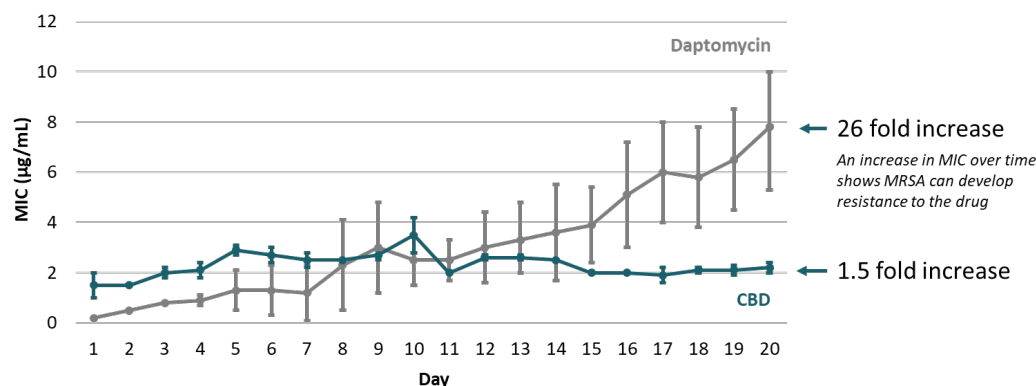
MIC₉₀ = min concentration to inhibit growth of 90% of isolates

MRSA = methicillin resistant *S. aureus*

MSSA = methicillin susceptible *S. aureus*

Repeat challenge experiments demonstrate that MRSA bacteria form resistance to commonly used antibiotics such as daptomycin, but cannot form resistance to synthetic cannabidiol

Antibiotic Minimum Inhibitory Concentration (MIC) daily variability²



1. Based on University of Queensland testing – BOT data on file

2. Based on average of 8 replicates (University of Queensland – BOT data on file)

Near term milestones

Key near term milestones combine clinical and other meaningful study endpoints providing solid news flow through CY2020

Event	Timing
BTX 1702 rosacea study ethics approval	4Q CY2019
BTX 1801 antimicrobial study kickoff	4Q CY2019
BTX 1204 atopic dermatitis study data	1Q CY2020
Dermatology Summit and JP Morgan Conferences	1Q CY2020

Cash Position	
End Sep 2019 - excludes potential R&D tax concession receipt of ~\$6m	A\$37.3m

Corporate Office: Level 1, 50 Angove Street North Perth W. Australia 6006

Operations: 3602 Horizon Drive, Suite 160 King of Prussia PA 19041



Inflammation + bacterial infection are important to most skin diseases¹

Newly announced data provide scientific support for synthetic CBD’s mechanism of action (MOA), which is highly relevant to all Botanix pipeline products

Acne



Relevance	CBD mechanism of action	Relevance
✓	Kills relevant bacteria (<i>P. Acnes</i> and <i>Staph/MRSA</i>) ²	✓
✓	Anti-inflammatory effect ³	✓
	Immune modulating ³	✓
✓	Skin barrier protectant ³	✓
✓	Safe and non-irritating ⁴	✓

Atopic dermatitis



Recent Phase 2 acne data supports synthetic cannabidiol MOA

1. Dainichi et al 2014 JDS Vol 76 Iss 2 81-86
2. Based on BTX1801 data (University of Queensland and Charles River testing) – BOT data on file
3. Based on BTX 1308 Phase 1b biopsy data – BOT data on file
4. Based on 3 Phase 1b studies for BTX1503, 1204 and 1308 respectively – BOT data on file

Disclaimer

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RESTORING HEALTHY SKIN

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