Bionomics

Corporate Presentation

March 2018

Safe Harbor Statement

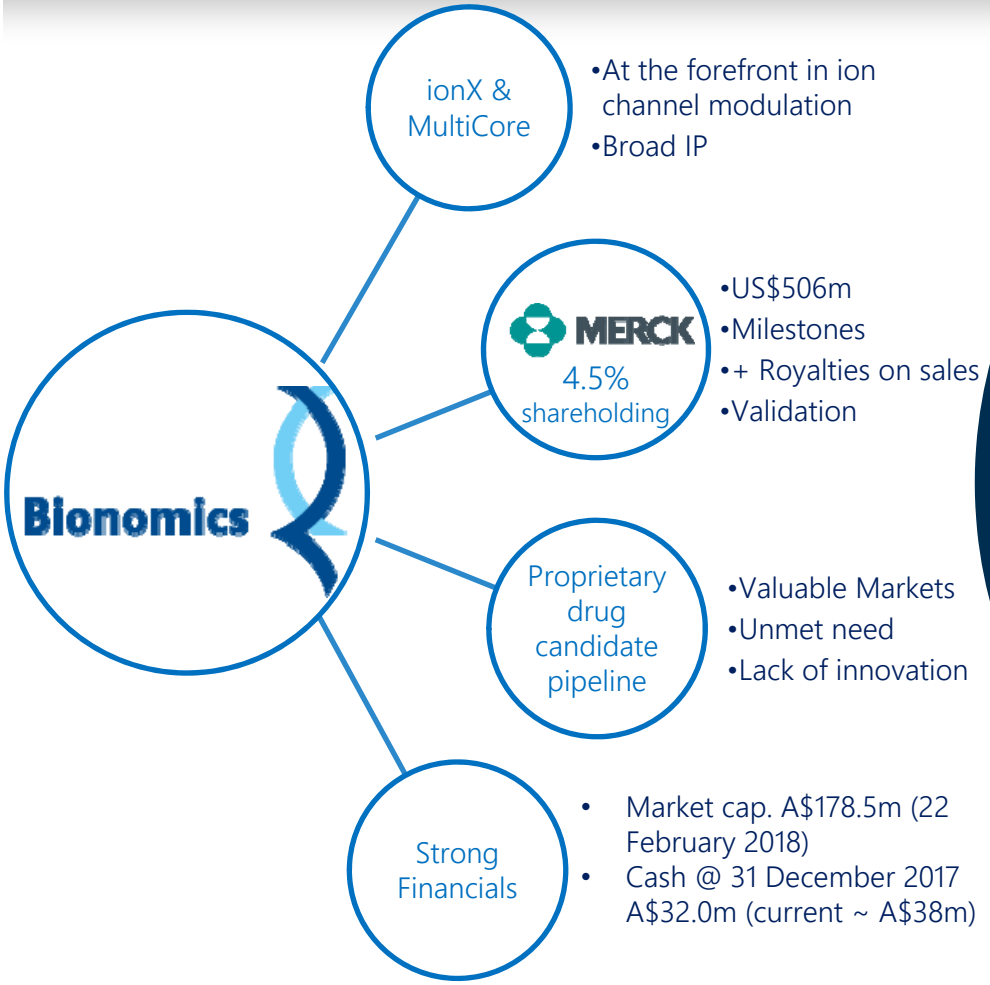
Factors Affecting Future Performance

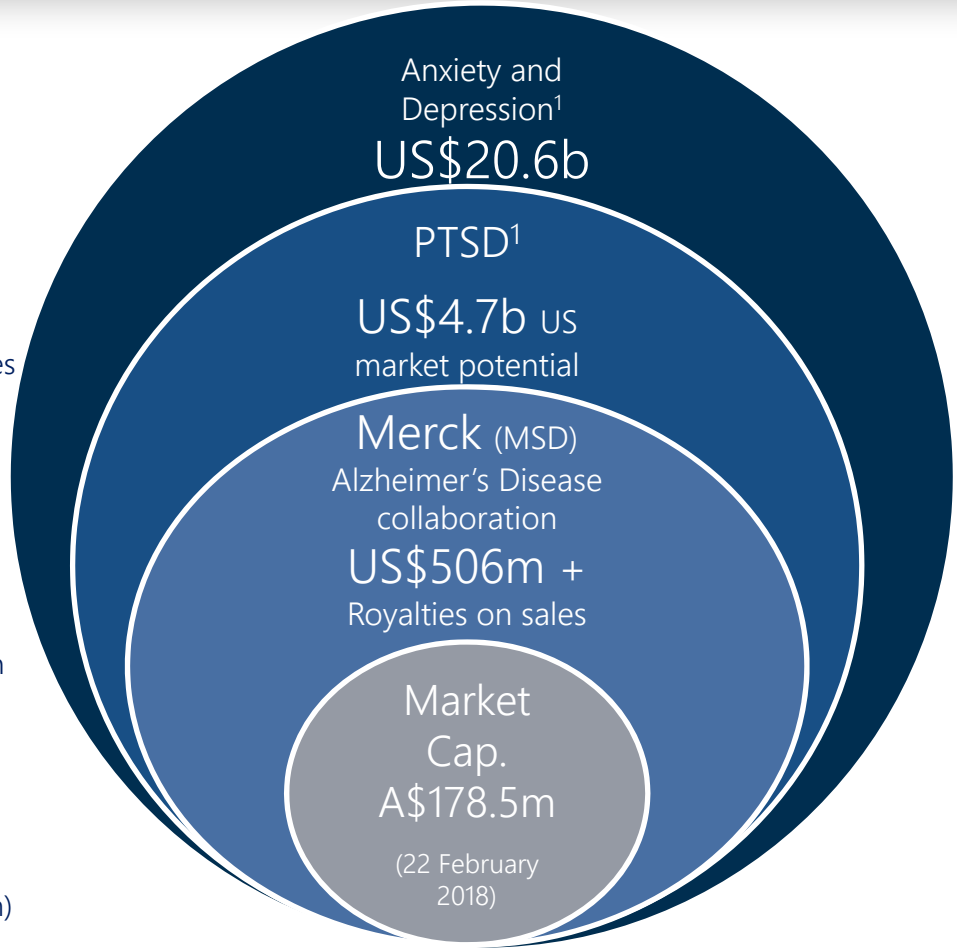
This presentation contains "forward-looking" statements within the meaning of the United States' Private Securities Litigation Reform Act of 1995. Any statements contained in this presentation that relate to prospective events or developments, including, without limitation, statements made regarding Bionomics' drug candidates (including BNC210, BNC105 and BNC101), its licensing agreement with Merck & Co. and any milestone or royalty payments thereunder, drug discovery programs, ongoing and future clinical trials, and timing of the receipt of clinical data for our drug candidates are deemed to be forward-looking statements. Words such as "believes," "anticipates," "plans," "expects," "projects," "forecasts," "will" and similar expressions are intended to identify forward-looking statements.

There are a number of important factors that could cause actual results or events to differ materially from those indicated by these forward-looking statements, including unexpected safety or efficacy data, unexpected side effects observed in clinical trials, risks related to our available funds or existing funding arrangements, our failure to introduce new drug candidates or platform technologies or obtain regulatory approvals in a timely manner or at all, regulatory changes, inability to protect our intellectual property, risks related to our international operations, our inability to integrate acquired businesses and technologies into our existing business and to our competitive advantage, as well as other factors. Results of studies performed on our drug candidates and competitors' drugs and drug candidates may vary from those reported when tested in different settings.

Subject to the requirements of any applicable legislation or the listing rules of any stock exchange on which our securities are quoted, we disclaim any intention or obligation to update any forward-looking statements as a result of developments occurring after the date of this presentation.

Bionomics Overview





1. Eligible Patient US Market Potential: PTSD+MDD+BP+Panic+SAD+Agitation+GAD: PTSD 3.4-4% prevalence >18 yrs., ~25% of patients diagnosed and treated; MDD 6.7% prevalence, ~50% co-morbid anxiety, ~50% diagnosed and treated; BP 2.9% prevalence, 50% co-morbid anxiety (range in literature 25% to 75%), ~50% diagnosed and treated; Panic 2.7% prevalence, ~50% diagnosed and treated; SAD 6.8% prevalence, 15-20% diagnosed and treated; Agitation 3.1% dementia prevalence >40 yrs., ~9% agitation patients diagnosed and treated; GAD 2. 3.1% prevalence, ~25% diagnosed and treated, ~50% of SSRI patients treated are partial responders or relapsers; 3. 2.7% prevalence, ~50% diagnosed and treated. Assumes 5% premium to Trintellix 2016 AWP for 30-day supply of $380 – compliance adjusted.

Bionomics' – MSD: Overcoming Cognitive Impairment and Memory Loss

There is a significant market opportunity for drugs that improve cognition

This market includes many neurodegenerative & psychiatric disorders:

	Prevalence	Estimated global sales p.a.
Alzheimer's disease	7.6m (2016) 9.6m (2026 est.)	$3.0b (2016) $14.7b (2026 est.)
Schizophrenia	21m worldwide (2011 est)	No approved products for cognitive deficits
ADHD	Diagnosed 12mth 26.5m Treated 5.7m	$6.1b (2014) $13.9b (2024 est.)
Parkinson's Disease	3.2m (2012)	$3.1b (2012) $4.7b (2022 est.)

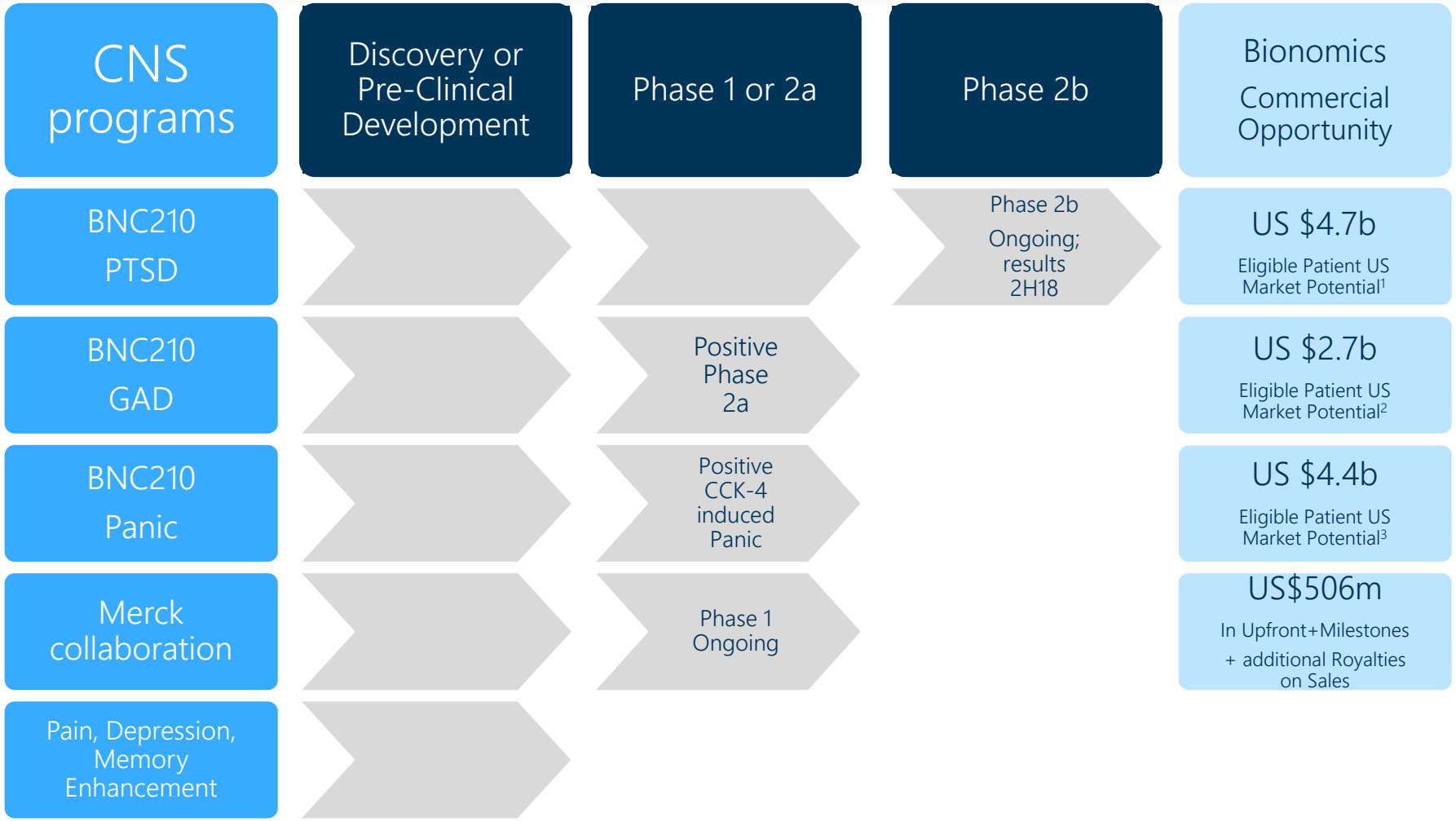
Source: Global Data, WHO

Clinical Progression of Cognition Drug Candidate in MSD Collaboration Provides Technical Validation

Partnership with MSD in cognition generated US$20M in upfront payment in 2014, research funding 2014-2017 and US$10M first clinical milestone in February 2017

Deal valued up to US$506M in upfront, research and milestone payments plus additional royalties on net sales of licensed drugs

Bionomics Pipeline



1. 3.4-4% prevalence >18 yrs., ~25% of patients diagnosed and treated; 2. 3.1% GAD prevalence, ~25% diagnosed and treated, ~50% of SSRI patients treated are partial responders or relapsers; 3. 2.7% prevalence, ~50% diagnosed and treated. Assumes 5% premium to Trintellix 2016 AWP for 30-day supply of $380 – compliance adjusted.

BNC210: A Next Generation Treatment for Anxiety, Depression and Trauma-related Disorders

- BNC210 seeks to overcome problems associated with currently marketed drugs such as Valium and Prozac:
  - Safe, rapid action
  - Lacks major side effects such as sedation, potential for addiction and memory impairment
- Positive clinical data in suppressing symptoms of Panic attacks and demonstrating anti-anxiety effects in patients with Generalised Anxiety Disorder (GAD)
- Approaching Major Infection Point with Phase 2 Data in PTSD 2H, CY2018
- Bionomics retains all rights to development and commercialisation
- Strong IP position which includes composition of matter
- Significant market opportunity across a range of conditions including anxiety and depressive disorders and PTSD

BNC210: Next Generation Drug Candidate with Potential to Treat Anxiety & Depression

Potential Competitive Advantages of BNC210*						
Drug	No sedation	No withdrawal syndrome	No memory impairment	Fast acting	No drug/drug interactions	Once-a-day dosing
BNC210	✓	✓	✓	✓	✓	✓
Valium and other BZD	X	X	X	✓	✓	X
Prozac and certain other SSRI/SNRI	✓	X	✓	X	X	✓

Anxiety Treatments

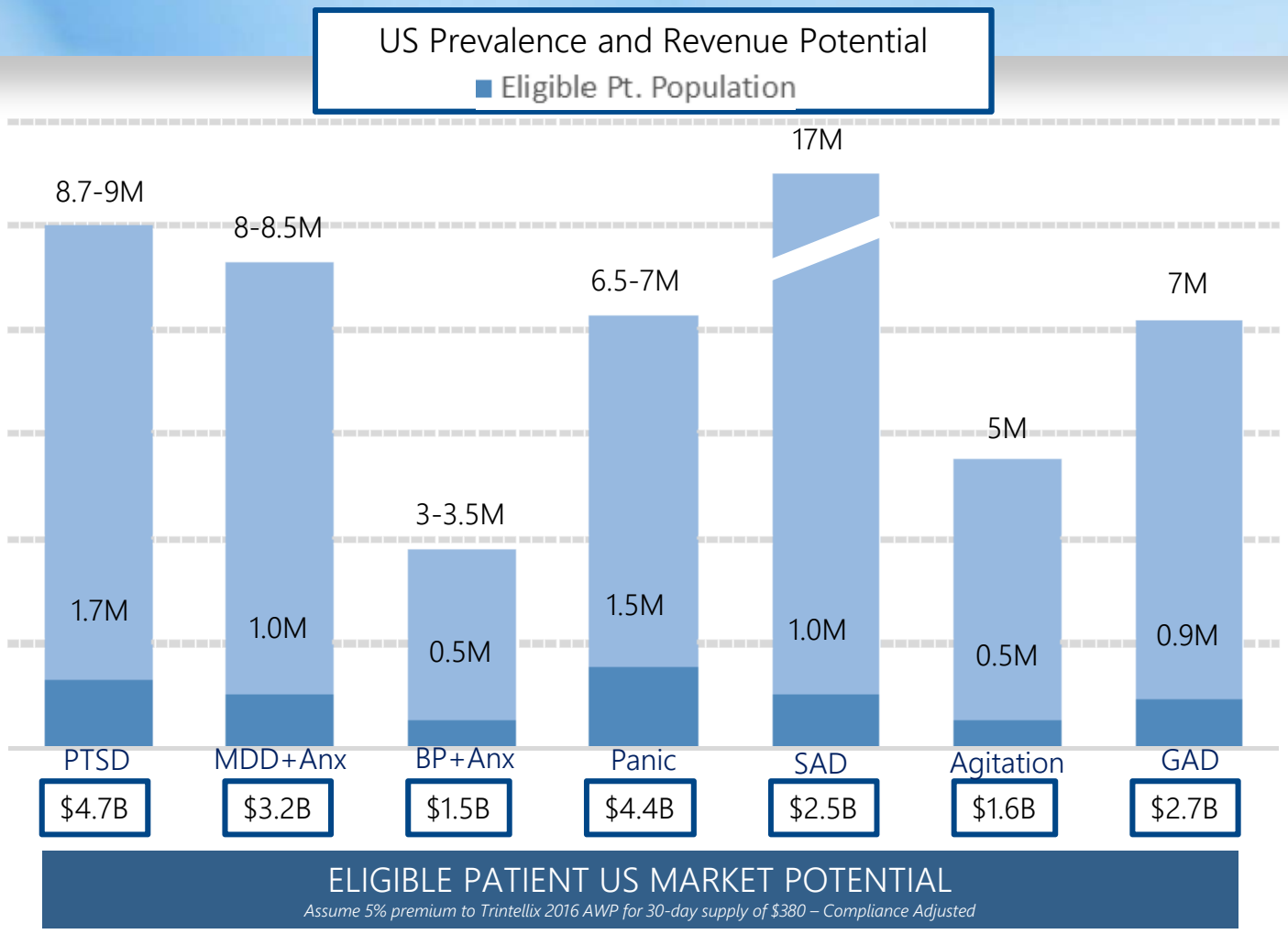
- Dominated by benzodiazepines
- Associated with sedation, abuse liability, tolerance and cognitive disturbances
- Not recommended for long-term treatment

Depression Treatments

- SSRIs and SNRIs used to treat depression and anxiety
- Modest efficacy, late onset of action, discontinuation, weight gain, sexual dysfunction and increased thoughts of suicide in adolescents
- Many have black box warnings

*Based on data from preclinical studies, Phase 1 & 2 clinical trials.

BNC210 Targets Multi-Billion Dollar Markets with Unmet Need



- ✓ *Innovative, first-in-class*
- ✓ *Unmet need in large patient population*
- ✓ *Advancement in care*
- ✓ *Limited branded competition*
- ✓ *Ability to achieve large market share*

[1] 3.4-4% prevalence >18yrs., ~25% of patients diagnosed and treated
[2] 6.7% prevalence, ~50% co-morbid anxiety, ~50% diagnosed and treated
[3] ~2.9% prevalence, 50% co-morbid anxiety (range in literature 25 to 75%), ~50% diagnosed and treated
[4] ~2.7% prevalence, ~50% diagnosed and treated
[5] ~6.8% prevalence, 15-20% diagnosed and treated
[6] ~3.1% dementia prevalence >40yrs., ~9% agitation patients diagnosed and treated
[7] 3.1% GAD prevalence, assumes ~25% diagnosed and treated, ~50% of SSRI patients treated are partial responders or relapsers

Bionomics

PTSD: Poorly Served by Current Medications

- High prevalence of PTSD worldwide and it is a condition receiving greater attention.
- Patients are not well served with current medications and there is high off-label usage with unproven or contraindicated treatments.
- BNC210 may represent a potential opportunity to displace current therapies and expand market.

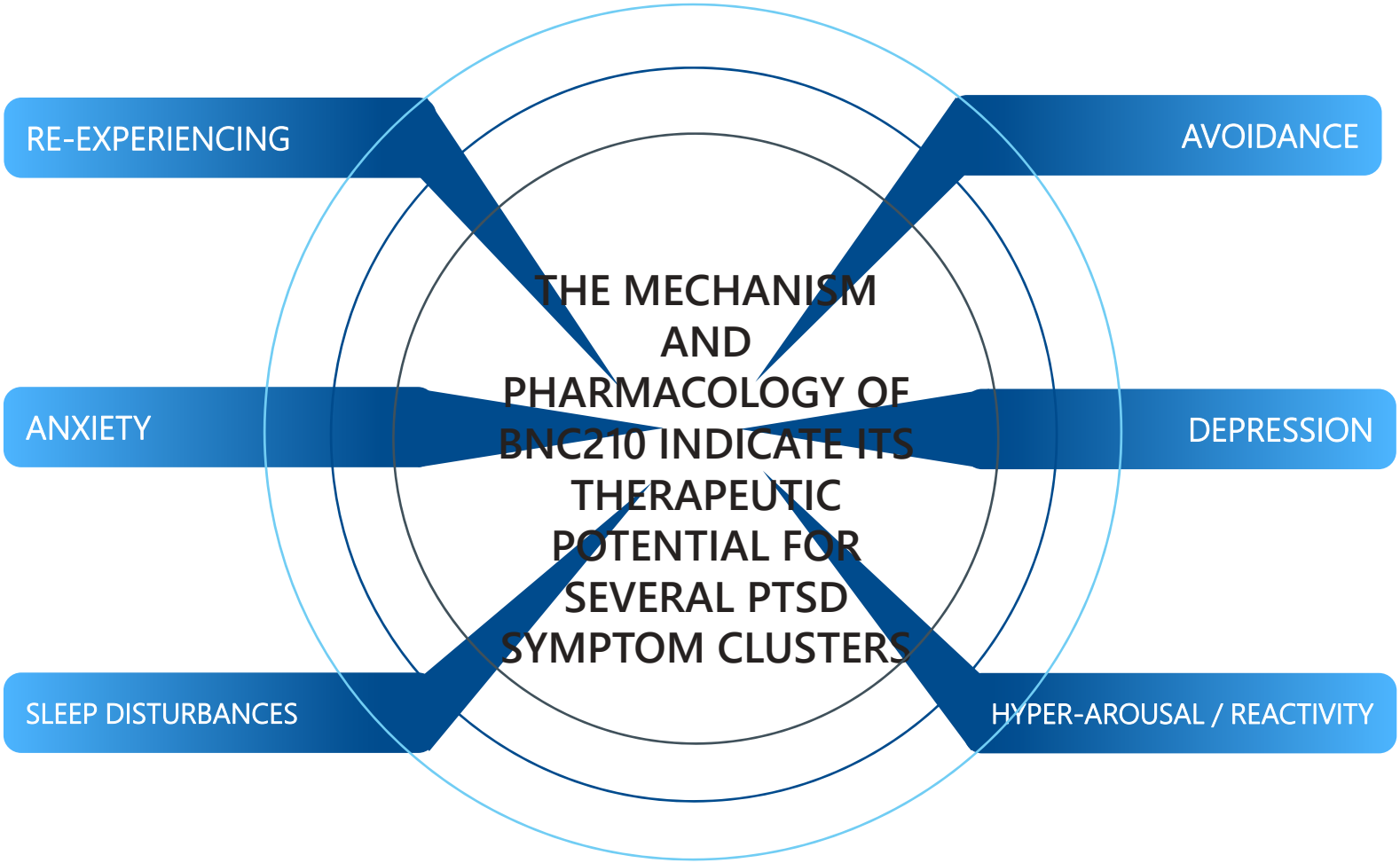
Bionomics

Insufficient PTSD Treatment Landscape

An estimated 2.8M benzodiazepine scripts are written off-label for the management of PTSD symptoms

- Sertraline (Zoloft) and paroxetine (Paxil) are only FDA approved anti-depressants drugs for PTSD.
- VA/DoD recommend fluoxetine (Prozac) & venlafaxine (Effexor) as first-line treatments.
- VA/DoD 'Practice Guideline for PTSD' recommends *against* the use of benzodiazepines (BZDs) such as Valium for PTSD.
- Evidence is mounting on harms associated with chronic benzodiazepine use in PTSD patients.
- Despite lack of efficacy, addictive potential and other harms associated with chronic use, BZDs are still over-prescribed.
- VA has several initiatives in place to reduce use of BZDs among patients with PTSD.
- There is 50% increase in overall mortality rates associated with long-term benzodiazepine use in PTSD patients– overdosing, sudden unexplained deaths, car crashes, falls.

BNC210 May Impact Multiple PTSD Symptoms



Bionomics

Phase 2 Trial in Post Traumatic Stress Disorder (PTSD) – Ongoing in Australia and US, Data Anticipated 2H, CY18

restore

Subjects	• 192 PTSD Patients
Protocol	• Double-blind, placebo controlled, randomized, multi-centre • 4 arms, 1 placebo, 3 BNC210 dose level treatment arms • 12 weeks, twice daily oral treatment
Primary Objective	• To determine whether BNC210 causes a decrease in symptoms of PTSD as measured by CAPS-5
Secondary & Exploratory Endpoints	• To determine the effects of BNC210 on anxiety (HAM-A), depression (MADRS) and cognitive functions • Correlation of genotype and imaging pharmacodynamics markers

PTSD is a risk factor for depression, alcohol or substance abuse, absenteeism/unemployment, homelessness, violent acts, suicidal thoughts and suicide

Half Year to 31 December 2017

A$'000	31-Dec-17	30-Jun-17	
Cash & Cash Equivalents	$ 32,021	$ 42,874	-25%
R&D Tax Incentive (Jan 18)	$ 6,788		
	$ 38,809	$ 42,874	-9%

Revenue from Continuing Operations	$ 7,169	$ 7,137	0%
Research & Development Expenses	$(11,757)	$ (9,337)	26%
Administration	$ (3,872)	$ (3,791)	2%
Occupancy	$ (675)	$ (1,272)	-47%
Compliance	$ (371)	$ (439)	-15%
	$ (4,918)	$ (5,502)	-11%
Unrealised exchange differences	$ (206)	$ (941)	-78%
Finance expenses	$ (867)	$ (986)	-12%
	$ (1,073)	$ (1,927)	-44%
(Loss) before tax	$(10,579)	$ (9,629)	10%

- Cash equivalent to approx. 2 years Operating Cashflow
- Increased Cash Outflows reflect increased investment in Research & Development
  - Primarily BNC210 PTSD Phase 2 study
- Reduction in other expenditure consistent with continued lean operations management philosophy

Outlook & Milestones

- Continue recruiting patients in ongoing Phase 2 trial of BNC210 in patients with PTSD with data expected in 2H, CY18.
  - Anticipate complete recruitment end 1Q, CY18
  - Phase 2 PTSD data a major value inflection point
- Work closely with MSD, enabling MSD to reach milestones and demonstrate Bionomics' strength in drug discovery.
  - ✓ Cognition therapeutic candidate entered clinical development triggering a US$10M milestone payment in February 2017.
- Progress pipeline of differentiated preclinical assets
- Monetisation of "off strategy" assets


Bionomics United