Bionomics

CREATING INNOVATIVE THERAPIES
FOR SERIOUS HUMAN DISEASES.

Corporate Presentation

Asia Investment Series

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.

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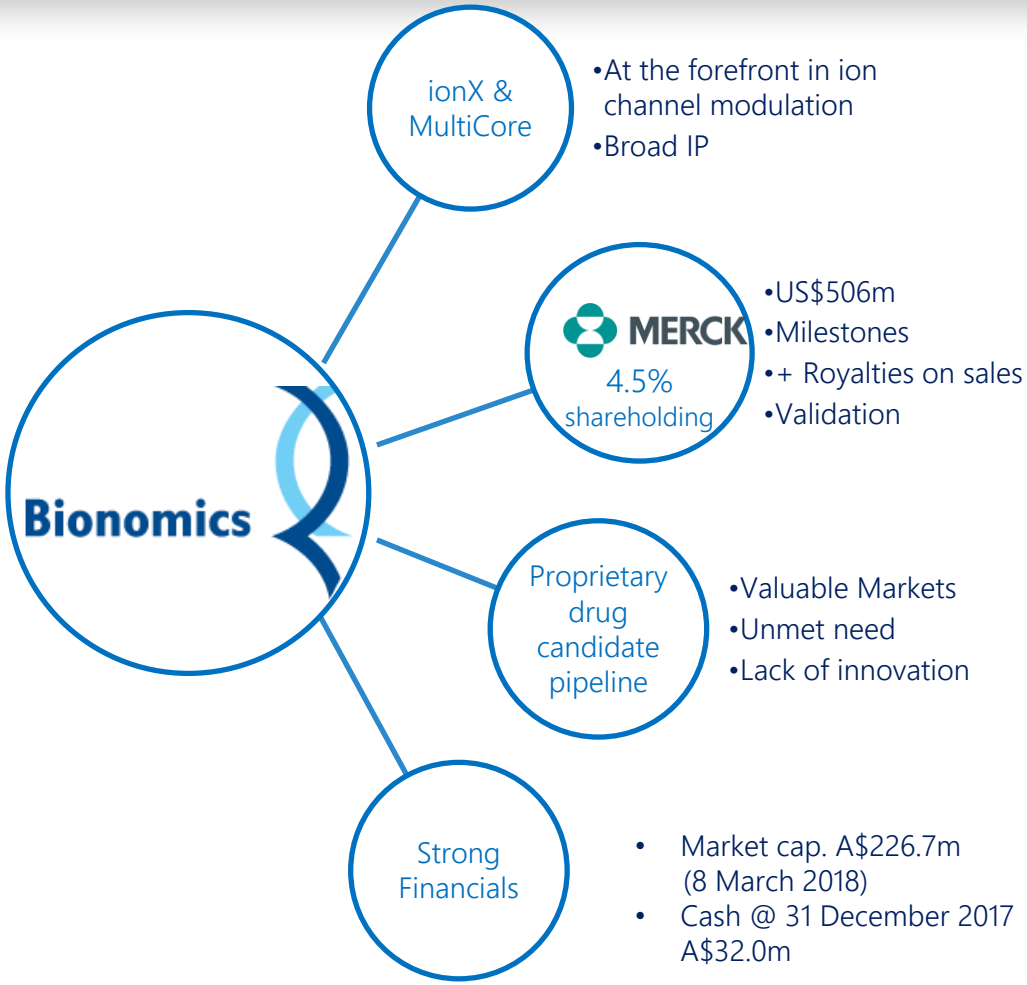
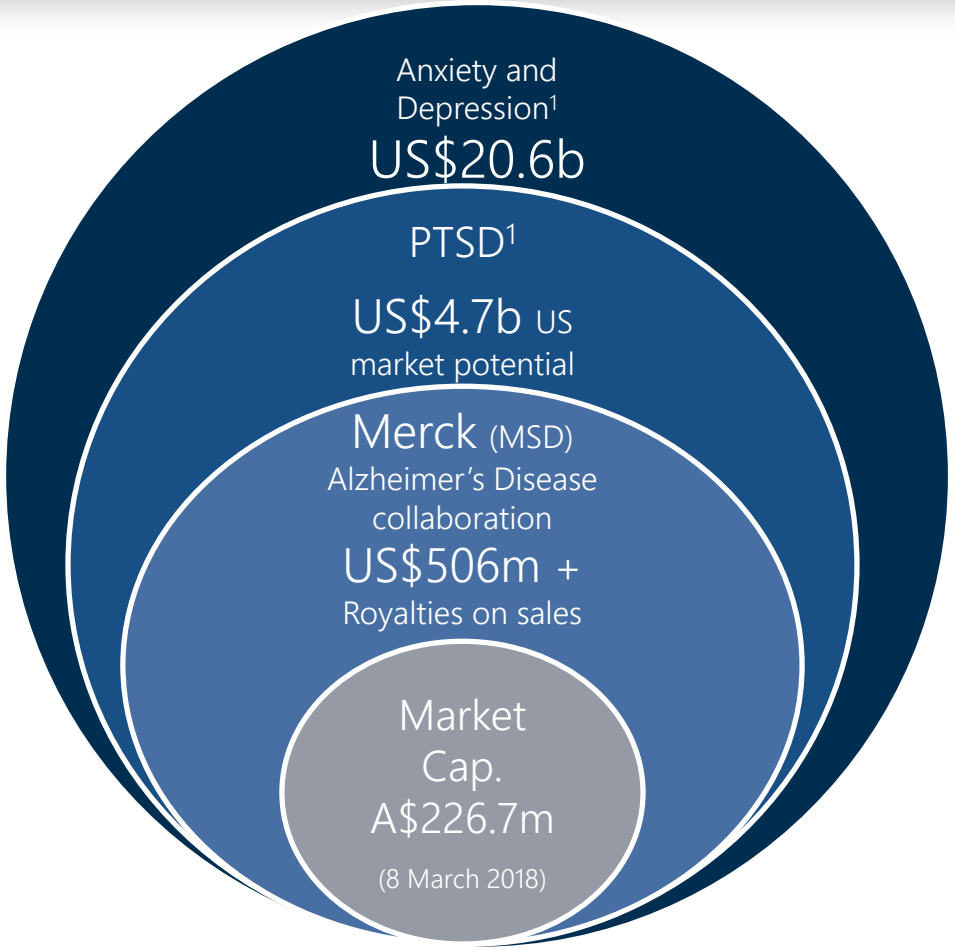
Bionomics Overview





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 Pipeline

CNS Programs	Discovery or Pre-Clinical Development	Phase 1 or 2a	Phase 2b	Bionomics Commercial Opportunity
BNC210 PTSD			**Phase 2b** Ongoing; **Results 2H18**	US $4.7b Eligible Patient US Market Potential[1]
BNC210 GAD		Positive Phase 2a		US $2.7b Eligible Patient US Market Potential[2]
BNC210 Panic		Positive CCK-4 induced Panic		US $4.4b Eligible Patient US Market Potential[3]
MERCK Partnership		Phase 1 Ongoing		US$506m In Upfront+Milestones + additional Royalties on Sales
Pain, Depression, Memory Enhancement				

INFLECTION POINT

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: Next Generation Drug Candidate with Potential to Treat PTSD, 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

Post Traumatic Stress Disorder (PTSD) Treatments

- Sertraline (Zoloft) and paroxetine (Paxil) are only US FDA approved anti-depressants drugs for PTSD.
- Despite lack of efficacy, addictive potential and other harms associated with chronic use, BZDs are still over-prescribed.
- An estimated 2.8M scripts are written off-label for management of PTSD symptoms.
- VA/DoD 'Practice Guideline for PTSD' recommends against the use of benzodiazepines (BZDs) such as Valium for PTSD.
- 50% increase in overall mortality rates associated with long-term benzodiazepine use in PTSD patients– overdosing, sudden unexplained deaths, car crashes, falls.

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

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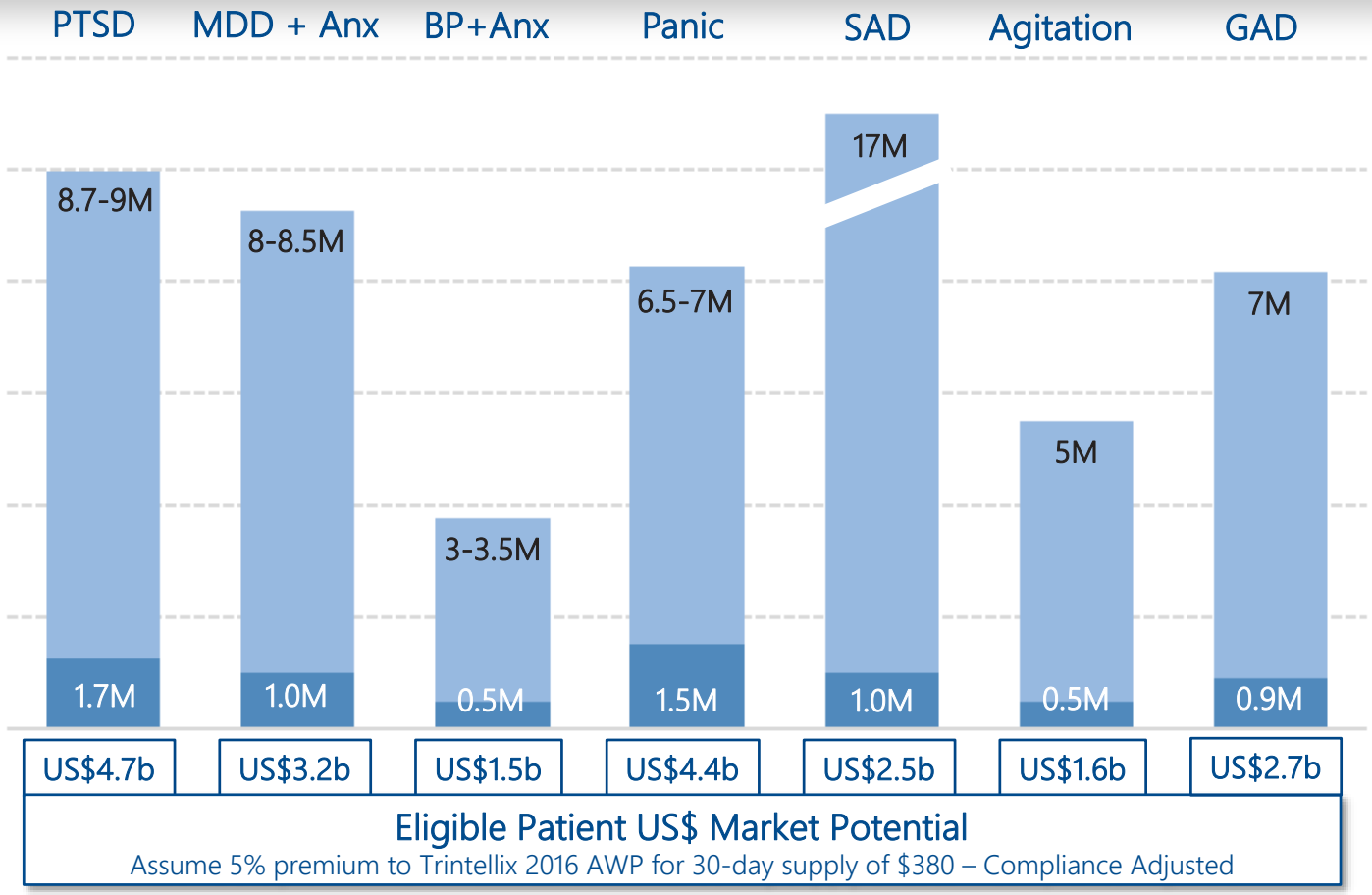
BNC210 Multi-Billion Dollar Markets with Unmet Need

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



US Prevalence

Eligible Patient Population

[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

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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.

Phase 2 Trial in 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

BNC210 mechanism and pharmacology indicate therapeutic potential to impact PTSD symptoms: re-experiencing, avoidance, negative alterations in cognition and mood, alterations in arousal and reactivity

Outlook & Milestones

- Phase 2 trial of BNC210 in patients with PTSD
  - Phase 2 PTSD data a major value inflection point
- Work closely with Merck Sharp & Dohme (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" oncology assets