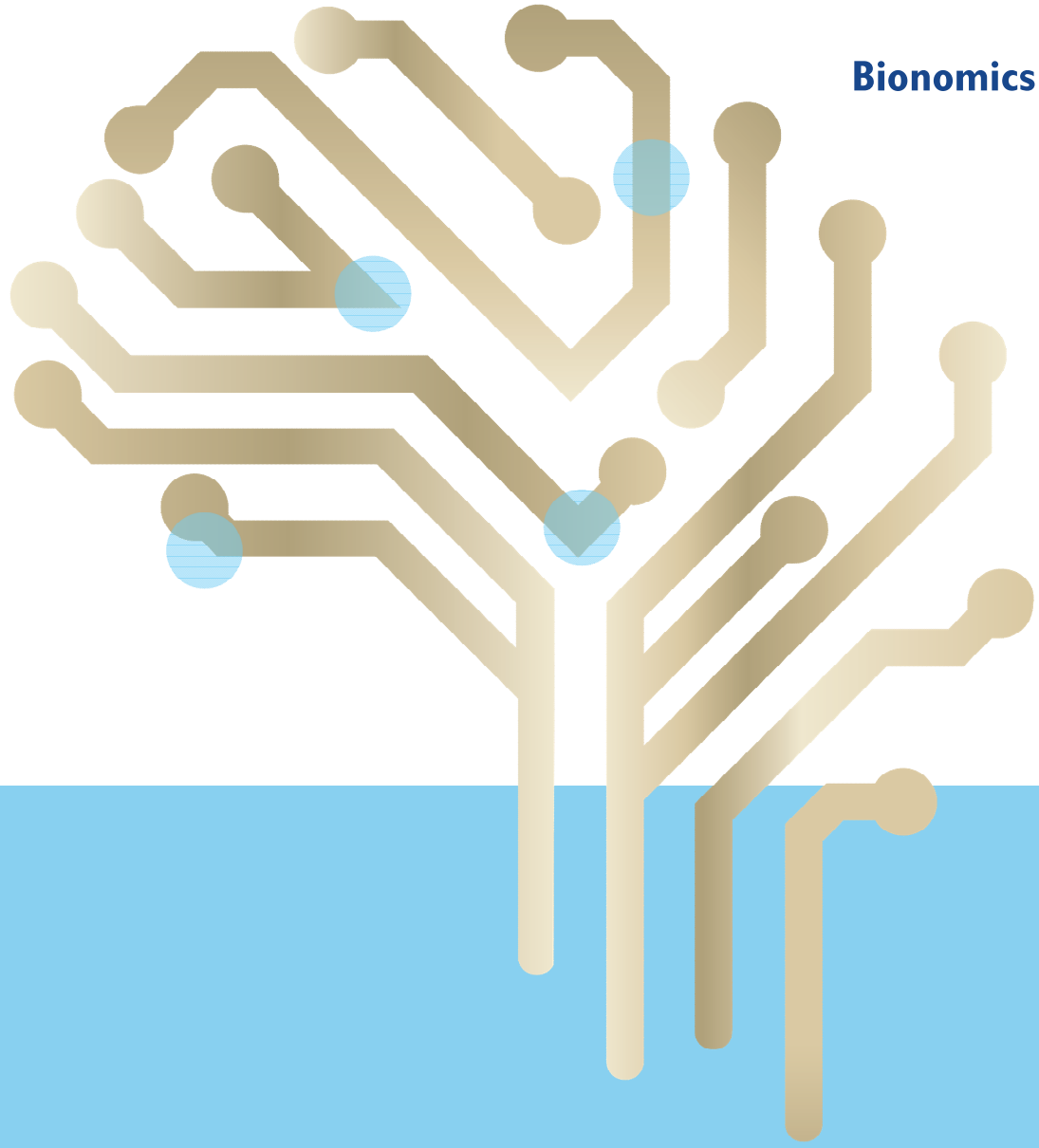
Bionomics



Corporate Presentation

NOVEMBER 2022

Improving the Lives of Patients with Serious CNS Disorders

ASX: BNO | Nasdaq: BNOX

Safe Harbor Statement

Factors Affecting Future Performance

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Bionomics Highlights

Targeting Social Anxiety Disorder (SAD), Post-Traumatic Stress Disorder (PTSD) and cognitive dysfunction associated with Alzheimer's disease, schizophrenia and other CNS conditions

Large underserved markets with over 25 million patients in the US alone suffering from SAD and PTSD and no new FDA approved therapies in nearly two decades

BNC210 (negative allosteric modulator of the α7 nicotinic acetylcholine receptor)

- ✓ Clinical proof of concept in Generalized Anxiety Disorder (GAD[2]) and panic attack model
- ✓ In Phase 2 PREVAIL trial with FDA Fast Track designation for acute treatment of SAD
- ✓ In Phase 2b ATTUNE trial with FDA Fast Track designation for treatment of PTSD

Partnerships & Collaborations

- ✓ Strategic partnership with Merck for treatment of cognitive deficits in Alzheimer's and other CNS disorders
- ✓ MOU with EmpathBio for feasibility assessment of EMP-01 (MDMA derivative) & BNC210 for PTSD treatment
- ✓ Pipeline of partnering candidates targeting potassium (Kv) and sodium (Nav) ion channels

Cash runway beyond multiple near-term catalysts

CNS = Central Nervous System
MOU = Memorandum of Understanding

1. *Bluestar BioAdvisors*
2. *Wise et al 2020, Biological Psychiatry; Perkins et al 2021, Molecular Psychiatry*

Bionomics

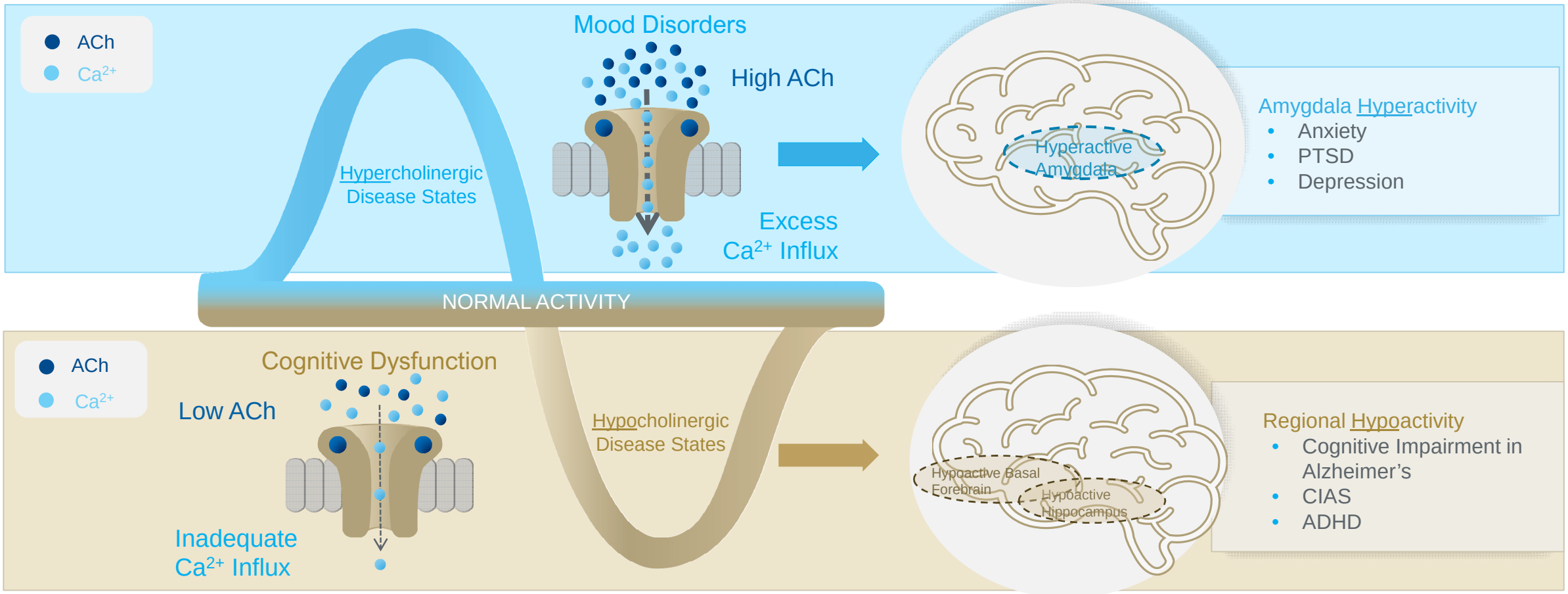
Focused CNS Pipeline with Multiple Catalysts on the Horizon

Program	Indication	Pre-Clinical	Phase 1	Phase 2	Phase 3	Expected Timing
Proprietary Programs:						
BNC210 α7 receptor NAM	Social Anxiety Disorder (SAD)			PREVAIL		Study underway Topline Data: YE 2022
	Post-Traumatic Stress Disorder (PTSD)			ATTUNE		Study underway Topline Data: mid 2023
Collaboration Programs:						
EmpathBio BNC210	+MDMA derivative EMP-01 (PTSD)		MOU to explore combination treatment regimen			Feasibility assessment
MERCK Collaboration α7 receptor PAM	2 candidates for Cognitive Deficit in Alzheimer's					Phase 1 safety & biomarker studies ongoing

FDA Fast Track designation

NAM = Negative Allosteric Modulator
PAM = Positive Allosteric Modulator

Acetylcholine Neurotransmitter and α7 Nicotinic Acetylcholine Receptor Imbalance Leads to Serious CNS Disorders



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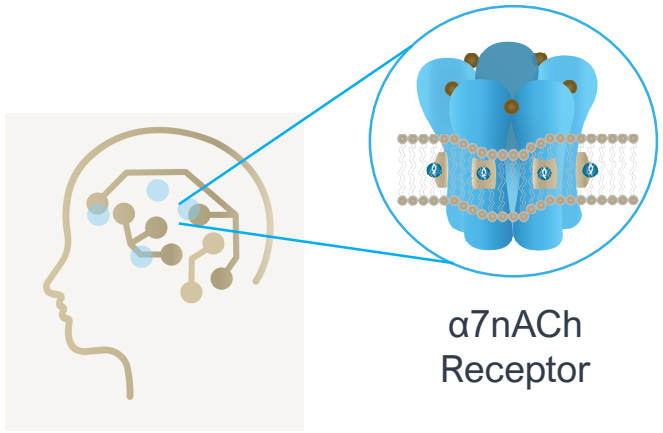
Cholinergic = System associated with memory, selective attention, and emotional processing cognitive functions
PTSD = Post-Traumatic Stress Disorder
CIAS = Cognitive Impairment Associated with Schizophrenia
ADHD = Attention Deficit Hyperactivity Disorder
ACh = Acetylcholine

Bionomics

Allosteric Modulation of α7 Nicotinic Acetylcholine Receptors: Potential to Enhance Efficacy and Minimize Side Effect Profile

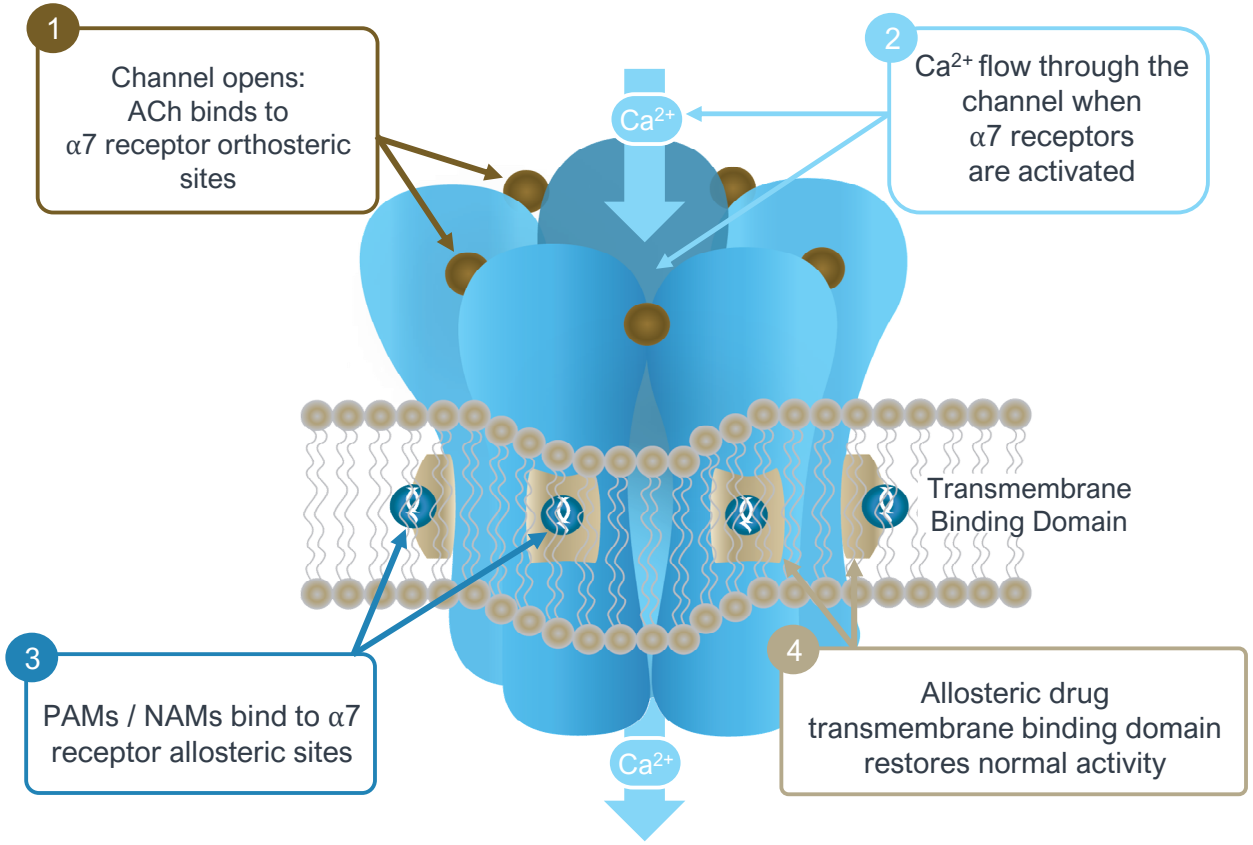
α7 Nicotinic Acetylcholine Receptor

- Validated target for treatment of cognitive deficits; however, direct agonists desensitize receptor and side effects led to discontinuation of previous drugs in Phase 3 trials
- A novel target for anxiety rationalized by effects of ACh on amygdala, hippocampus and cerebral cortex
- Allosteric modulation has potential to minimize side effects



α7nACh Receptor

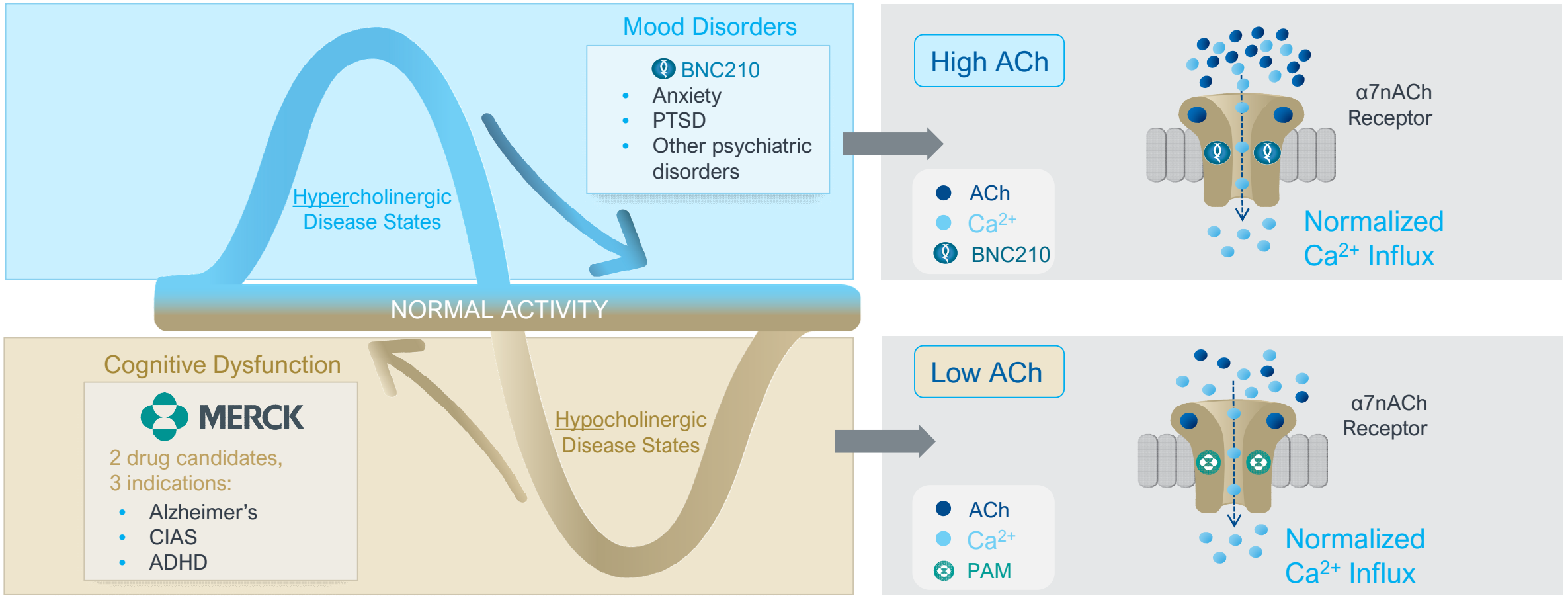
Normalizing Effect Utilizing Allosteric Modulation



ACh = Acetylcholine
PAM= Positive allosteric modulator
NAM = negative Allosteric modulator

Bionomics

Bionomics Clinical Assets Designed to Restore Neurotransmitter Balance Through Allosteric Modulation of the α7 Nicotinic Acetylcholine (nACh) Receptor



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Bionomics

BNC210 in

Social Anxiety Disorder

Bionomics

Social Anxiety Disorder: Overview and Impacts

SAD Represents a Significant Unmet Need

Social Anxiety Disorder (SAD), or Social Phobia, is a significant and persistent fear of social and performance-related situations

Includes anxiety from everyday social situations; a reoccurring episodic disorder

Amongst the largest mental health conditions with lifetime prevalence affecting >31M Americans. Triggers that exacerbate anxiety can occur at any time

Work

Patients may orient their careers around a narrow set of potential occupations and may struggle with job performance

Relationships

Friendships, family relationships, and romantic partnerships are physically draining and stressful. Moderate to severe patients often live alone

Lifestyle

Activities like dining out, attending social events, and traveling, are often very distressful and/or avoided by SAD patients

Daily Activities

Normal parts of everyday life such as grocery shopping, calling a handyman, or picking up coffee can be very challenging for SAD patients

Sources:
US Census Bureau. https://www.census.gov/library/stories/2021/08/united-states-adult-population-grew-faster-than-nations-total-population-from-2010-to-2020.html
NIMH. "Social Anxiety Disorder" data from 2017 National Comorbidity Survey (NCS). https://www.nimh.nih.gov/health/statistics/social-anxiety-disorder.shtml
Anxiety and Depression Association of America (ADAA). "Social Anxiety Disorder - Understand the Facts" https://adaa.org/understanding-anxiety/social-anxiety-disorder

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BNC210 Potentially Addresses the Shortcomings of Existing Social Anxiety Disorder Medications

	CURRENT THERAPIES FOR THE TREATMENT OF ANXIETY AND STRESSOR-RELATED DISORDERS*					
	DRUG	FAST ACTING	NO SEDATION	NO WITHDRAWAL SYNDROME	NO MEMORY IMPAIRMENT	NO MOTOR IMPAIRMENT
	BNC210	✓	✓	✓	✓	✓
Used off-label for as-needed treatment	Benzodiazepines[1]	✓	X	X	X	X
Approved for SAD	SSRIs / SNRIs[2]	X	✓	X	✓	✓

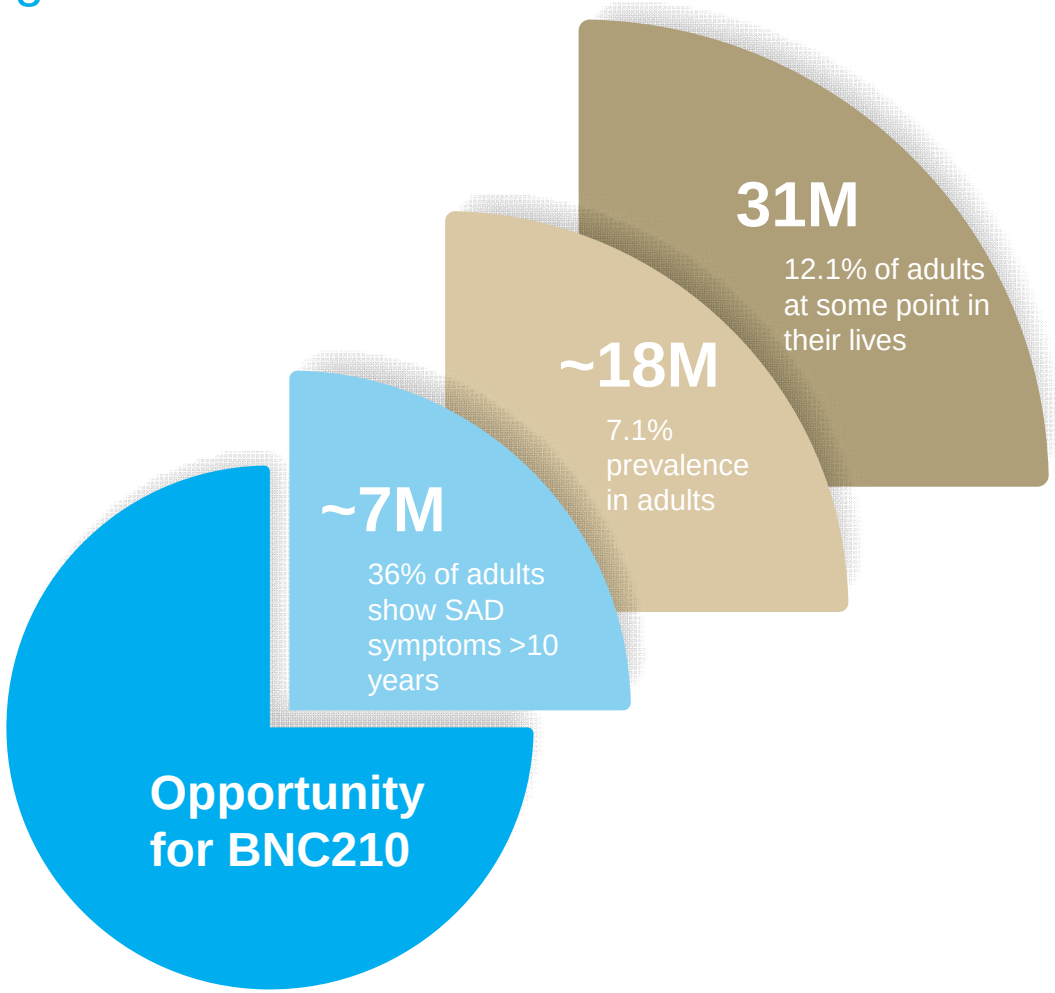
** Potential benefits based on analysis of data from separate studies and not on results that have been obtained from head-to-head studies. Such data may not be directly comparable due to differences in study protocols, conditions and patient populations. Accordingly, cross-trial comparisons may not be reliable predictors of the relative activity or other benefits of BNC210 compared to existing therapies or other product candidates that may be approved or are in development for the treatment of PTSD or SAD. The potential benefits of BNC210 does not imply an expectation of regulatory approval which is solely within the authority of the FDA (or applicable foreign regulator).*

1. *Includes Valium and certain other benzodiazepines*
2. *Includes Prozac and certain other SSRIs (Selective Serotonin Reuptake Inhibitors) / SNRIs (Serotonin-Norepinephrine Reuptake Inhibitors)*

Bionomics

Targeting a Large Segment of the Anxiety Market

No FDA-approved fast-acting medications for as-needed treatment



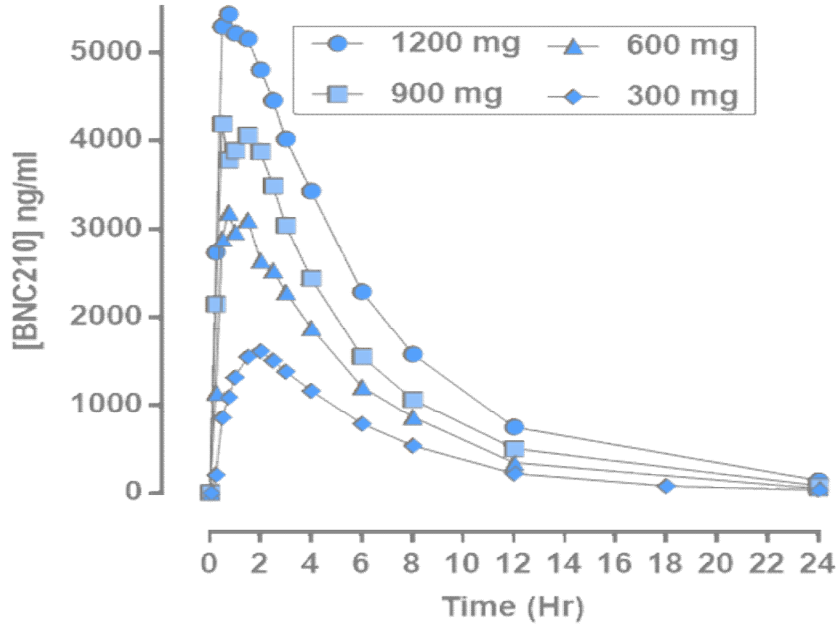
Sources:
US Census Bureau. https://www.census.gov/library/stories/2021/08/united-states-adult-population-grew-faster-than-nations-total-population-from-2010-to-2020.html
NIMH. "Social Anxiety Disorder" data from 2017 National Comorbidity Survey (NCS). https://www.nimh.nih.gov/health/statistics/social-anxiety-disorder.shtml
Anxiety and Depression Association of America (ADAA). "Social Anxiety Disorder - Understand the Facts" https://adaa.org/understanding-anxiety/social-anxiety-disorder

Bionomics

BNC210's Unique Profile is Well-Positioned for Acute Treatment of SAD

Rapid Onset of Action with BNC210 Formulation

45 – 105 min to reach maximum blood concentrations across dose range following oral administration of tablet



Potentially well-suited for acute dosing – rapidly absorbed to high concentrations with coverage extending for several hours

Proof of Concept in GAD and Panic Attack Model

- SAD shares many characteristics with General Anxiety Disorder (GAD), including a common neural basis in amygdala hyperactivation expressed as excessive or unrealistic anxiety
- BNC210 clinically demonstrated its potential for reducing anxiety in acute treatment of GAD patients and following panic induction in healthy volunteers
- Observed acute anxiolytic activity reduction of BNC210 similar to lorazepam without sedating properties or addiction liability
- Our studies also provide evidence of clear demonstration of clinical activity using biomarker data including EEG and fMRI

EEG = Electroencephalogram
fMRI = Functional magnetic resonance imaging

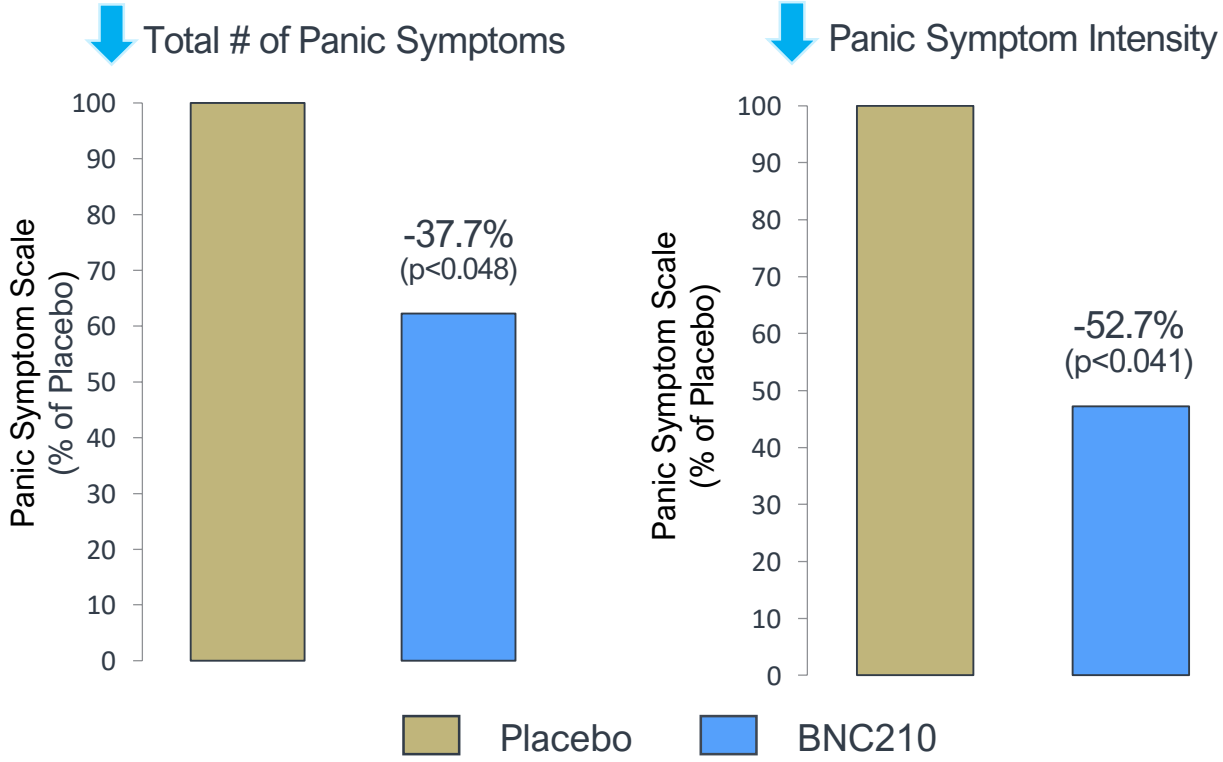
Bionomics

BNC210 Observed to Reduce Anxiety and Panic Symptoms in Humans

Phase 1b placebo-controlled study evaluating BNC210 in acute anxiety in 15 healthy volunteers who experienced a CCK-4-induced panic attack

- Subjects assessed after a single dose of BNC210 as they would be in an acute SAD trial setting
- Proof of Principle in demonstrating anxiolytic activity

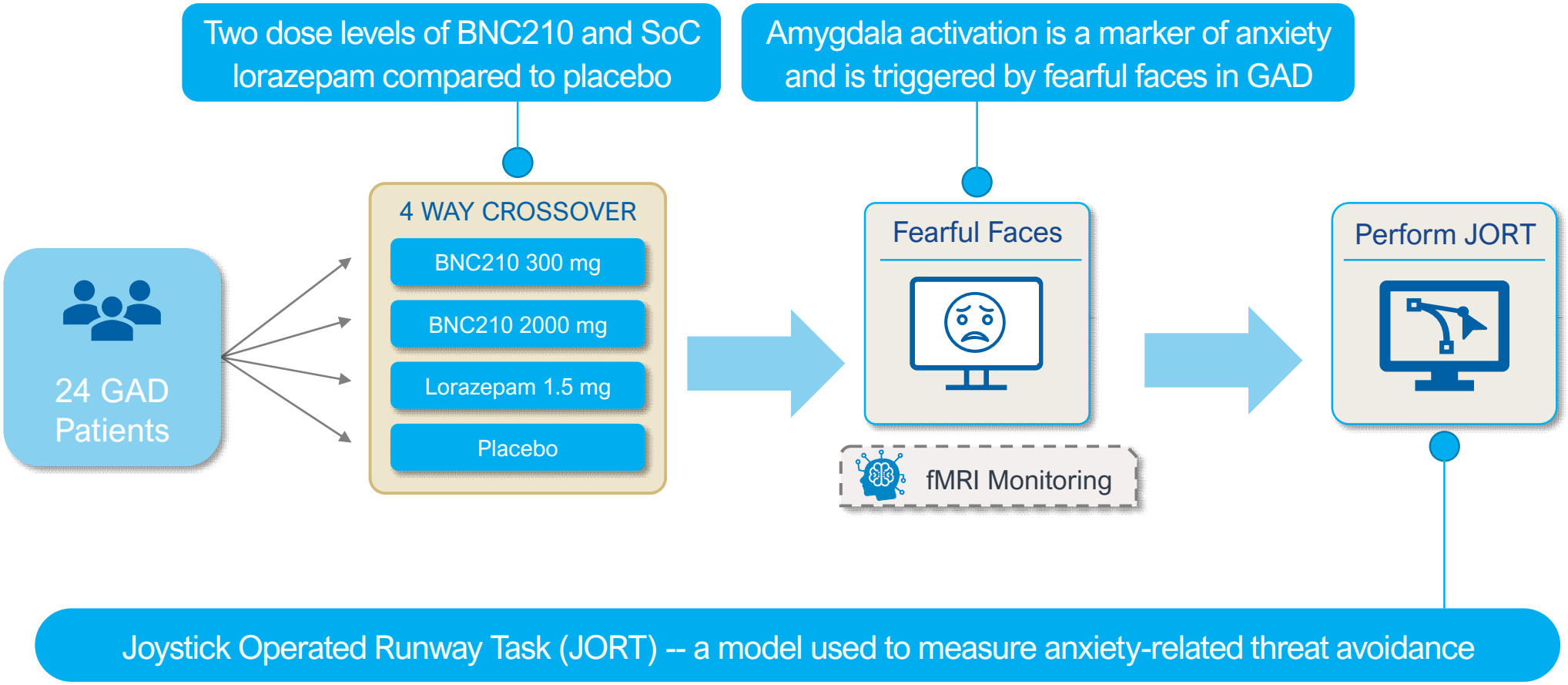
BNC210 observed to reduce panic symptoms as measured with the Panic Symptom Scale



CCK-4 = Cholecystokinin Tetrapeptide (a peptide that induces anxiety and panic symptoms)

Bionomics

Phase 2 Study of BNC210 Assessing Acute Anxiolytic Activity in GAD



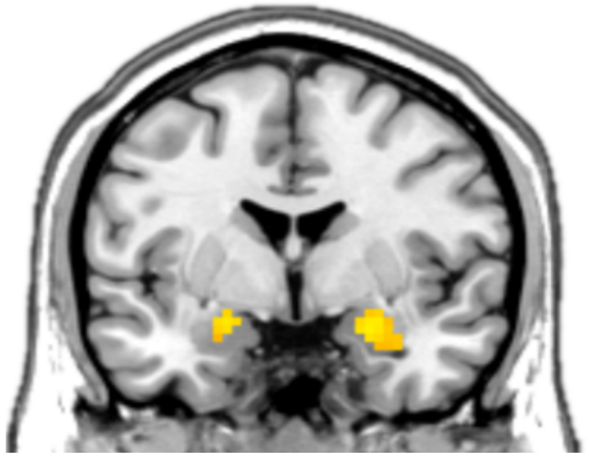
Wise T. et al., Biological Psychiatry 2020 (https://doi.org/10.1016/j.biopsych.2019.12.013); Perkins A. et al., Translational Psychiatry 2021 (https://doi.org/10.1038/s41398-020-01141-5)
GAD = Generalized Anxiety Disorder
SoC = Standard of Care
JORT = Joystick Operated Runway Task

Bionomics

BNC210 Reduces Acute Anxiety-Related Biomarkers in GAD Patients

Amygdala activation is an imaging surrogate for anxiety

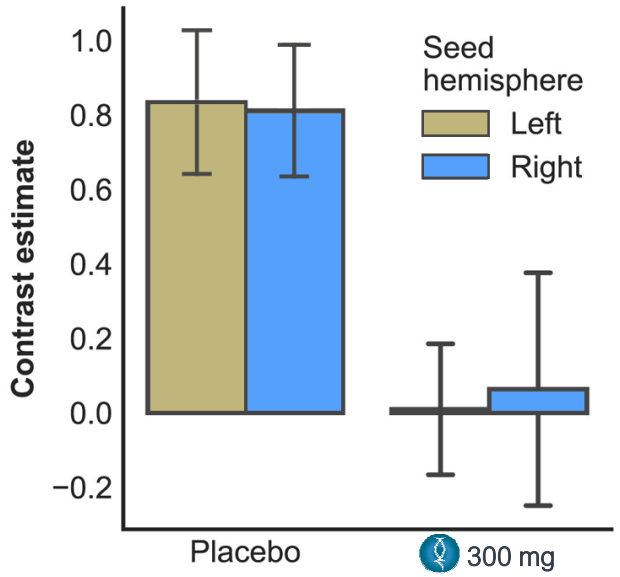
BNC210 reduced activation of L & R amygdala caused by viewing fearful faces (L: p=0.011; R: p=0.006)



300 mg

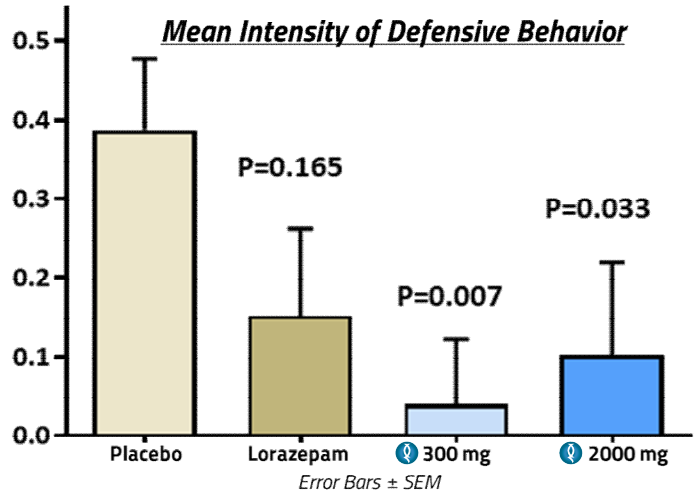
Connectivity between the amygdala and Anterior Cingulate Cortex (ACC) is very strong in high anxiety

BNC210 reduced connectivity between amygdala and ACC while viewing fearful faces (p=0.012)



BNC210 300 mg also significantly reduced self-reported state anxiety (p=0.003).

BNC210 300 mg reduced threat avoidance behavior of anxious subjects in the JORT behavioral task



= BNC210

Wise T. et al., Biological Psychiatry 2020 (https://doi.org/10.1016/j.biopsych.2019.12.013); Perkins A. et al., Translational Psychiatry 2021 (https://doi.org/10.1038/s41398-020-01141-5)

JORT = Joystick Operated Runway Task

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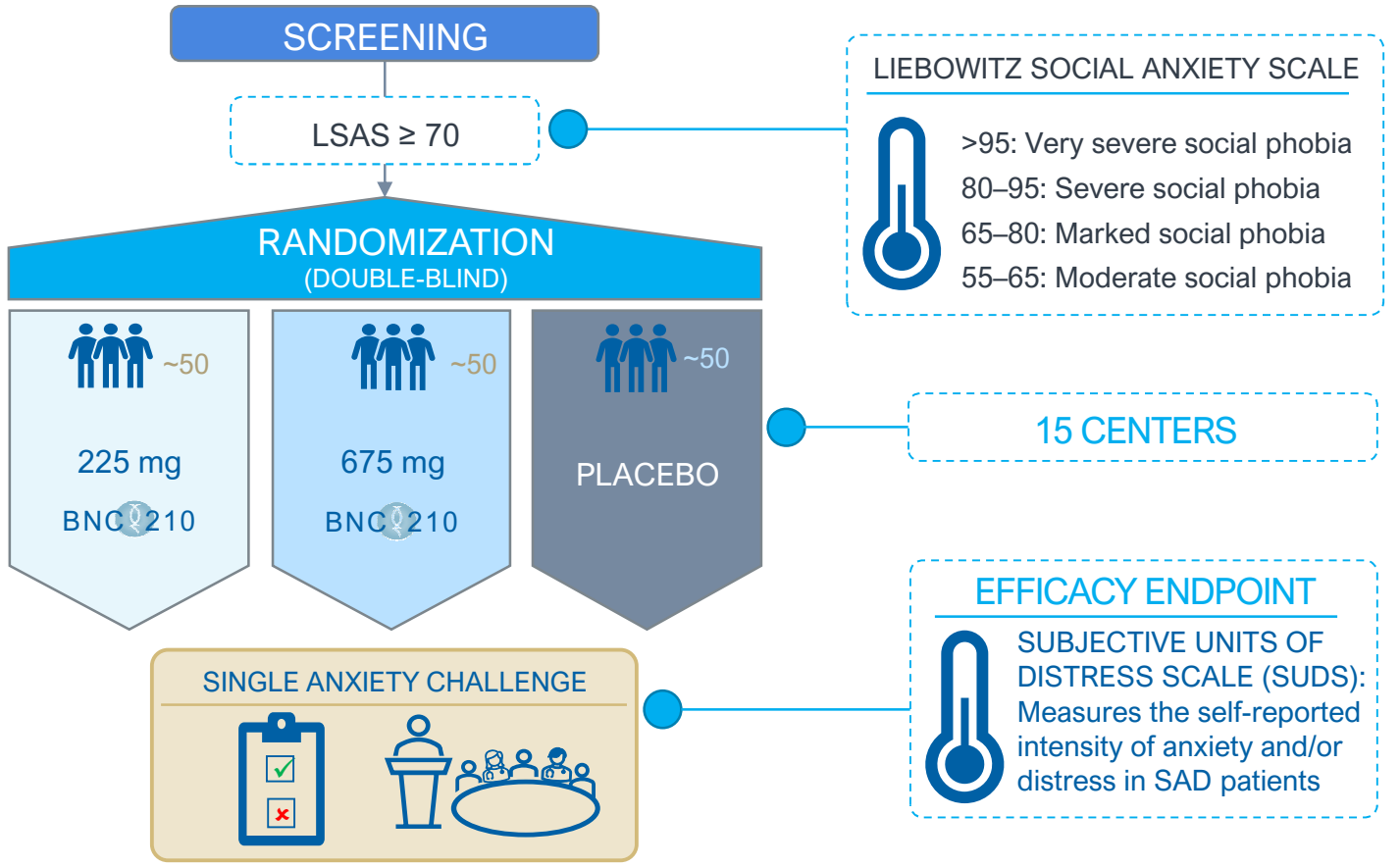
BNC210 Phase 2 Social Anxiety Disorder Trial

PREVAIL Study

Acute Social Anxiety Disorder Study Highlights

- Leveraging FDA precedent on simplified public speaking challenge endpoint for acute anxiety reduction vs. placebo*
- Cost-effective trial with an efficacy endpoint conducive to rapid data generation
- FDA Fast Track designation
- Phase 2 trial underway and will read out topline data expected by end of 2022

Phase 2 Study Design



*Based on path of CNS peer proceeding with registrational Phase 3 endpoint

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Compelling Rationale for BNC210 in Social and General Anxiety Disorders

Compelling rationale for BNC210 as an acute treatment in Social Anxiety Disorder

ANTI-PANIC	Doses observed to reduce panic symptoms & panic intensity in healthy volunteers experiencing a CCK-4 induced panic attack
ANTI-ANXIETY	Single doses observed to reduce amygdala activation in GAD patients performing the Emotional Faces task during fMRI
REDUCES PERCEPTION OF THREAT	Single dose observed to reduce threat avoidance behavior in GAD patients performing a behavioral task
FAST-ACTING	Pharmacokinetics of reformulated BNC210 tablet are well suited for acute dosing
UNMET NEED	No acute treatments are approved for SAD; represents potential for rapid path to market

Bionomics

BNC210 in Post-Traumatic Stress Disorder

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PTSD: Overview and Impacts

A Chronic Psychiatric Disorder with Significant Morbidity and Mortality

PTSD Represents a Significant Unmet Need

A debilitating progressive disorder that leads to social, occupational and interpersonal dysfunction

PTSD involves flashbacks, intrusive thoughts and nightmares

PTSD causes changes in cognition, mood, arousal and reactivity

PTSD results from exposure to actual or threatened death, serious injury or sexual violence

Only 20-30% of PTSD patients achieve clinical remission on SoC SSRI therapy[1]

Work

Patients may orient their careers around a narrow set of potential occupations and may struggle with job performance

Relationships

PTSD can impair trust, closeness, and communication, leading to difficulty maintaining family and romantic relationships

Lifestyle

PTSD-associated poor nutrition, reduced physical activity, and increased obesity and smoking, increase risk of cardiovascular and other diseases

Daily Activities

PTSD patients avoid people, places, or environments which may trigger trauma, making daily living difficult

1. *Lee DJ, et al. Psychotherapy versus pharmacotherapy for posttraumatic stress disorder: systemic review and meta-analyses to determine first-line treatments. Depress Anxiety. 2016;33(9):792–806.*

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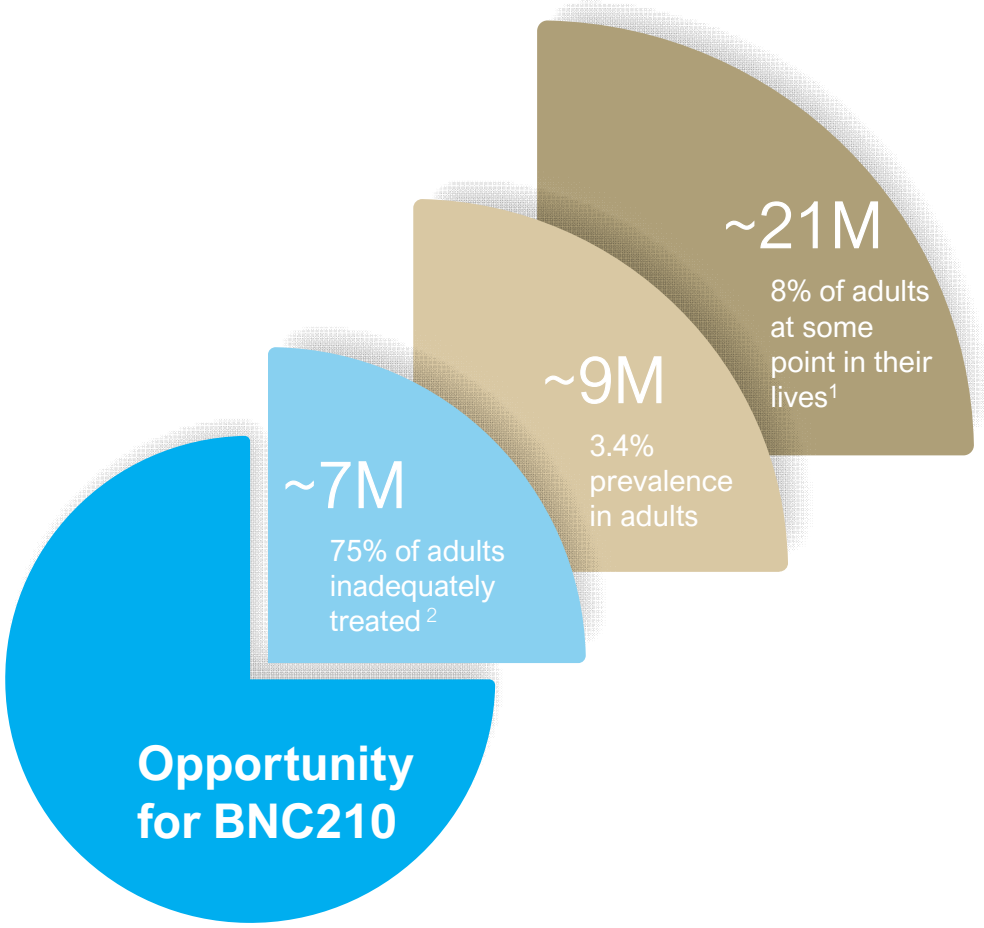
PTSD Represents a Significant Unmet Need and Market Opportunity

No newly approved pharmacotherapy in almost two decades



1. *Kilpatrick, D., Resnick, H., Milanak, M., Miller, M., Keyes, K. and Friedman, M., 2013. National Estimates of Exposure to Traumatic Events and PTSD Prevalence Using DSM-IV and DSM-5 Criteria. Journal of Traumatic Stress, 26(5), pp.537–547; 2 Mayo LM, Asratain A., Lindé J et al. Elevated Anandamide, Enhanced Recall of Fear Extinction, and Attenuated Stress Responses Following Inhibition of Fatty Acid Amide Hydrolase: A Randomized, Controlled Experimental Medicine Trial. Biol Psychiatry. 2020 Mar 15; 87(6): 538-54*
2. *Only 20 to 30% of PTSD patients achieve clinical remission on SSRI therapies.*

US Census Bureau. https://www.census.gov/library/stories/2021/08/united-states-adult-population-grew-faster-than-nations-total-population-from-2010-to-2020.html

BNC210 Potentially Addresses the Shortcomings of Existing and Emerging PTSD Approaches

	CURRENT THERAPIES FOR THE TREATMENT OF ANXIETY AND STRESSOR-RELATED DISORDERS*					
	DRUG	FAST ACTING	NO SEDATION	NO WITHDRAWAL SYNDROME	NO MEMORY IMPAIRMENT	NO MOTOR IMPAIRMENT
	BNC210	✓	✓	✓	✓	✓
Used off-label for as-needed treatment	Benzodiazepines[1]	✓	X	X	X	X
Approved for SAD	SSRIs / SNRIs[2]	X	✓	X	✓	✓

** Potential benefits based on analysis of data from separate studies and not on results that have been obtained from head-to-head studies. Such data may not be directly comparable due to differences in study protocols, conditions and patient populations. Accordingly, cross-trial comparisons may not be reliable predictors of the relative activity or other benefits of BNC210 compared to existing therapies or other product candidates that may be approved or are in development for the treatment of PTSD or SAD. The potential benefits of BNC210 does not imply an expectation of regulatory approval which is solely within the authority of the FDA (or applicable foreign regulator).*

1. *Includes Valium and certain other benzodiazepines*
2. *Includes Prozac and certain other SSRIs (Selective Serotonin Reuptake Inhibitors) / SNRIs (Serotonin-Norepinephrine Reuptake Inhibitors)*

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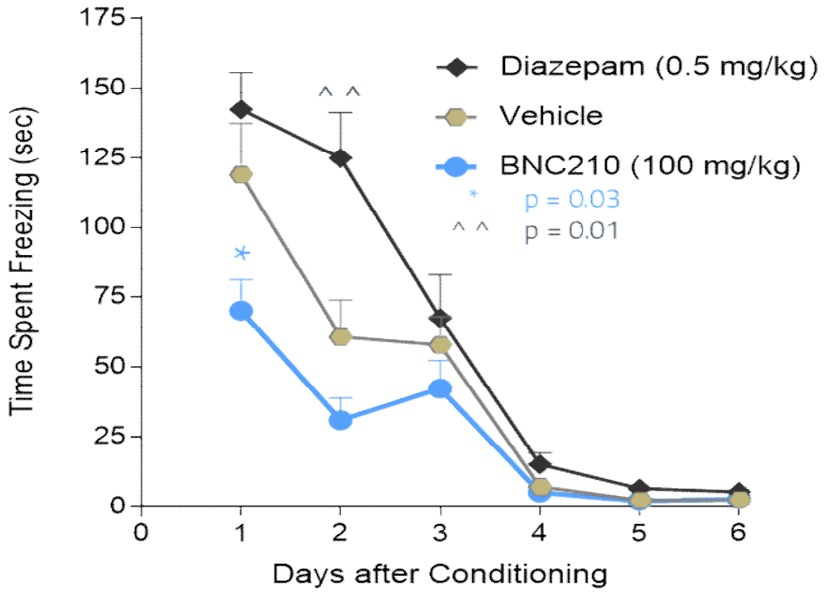
BNC210 Observed to Promote Fear Extinction in Animal and Human Models

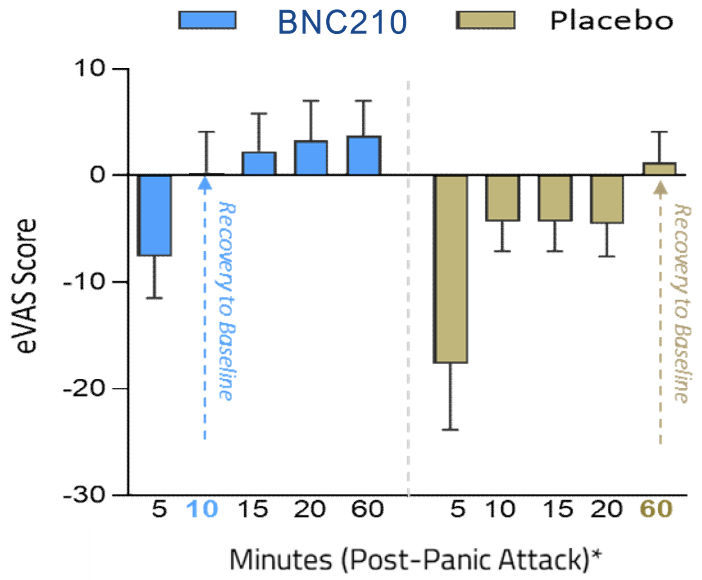
People with anxiety disorders and PTSD have amplified fear responses to trauma- or stress-related stimuli and impaired fear extinction

Conditioned Fear Extinction Model



BNC210 observed to **enhance fear extinction** following conditioned response training

Emotional Visual Analog Scale (eVAS)



BNC210 observed to **enhance emotional recovery** following a CCK-induced panic attack

**Time in minutes after CCK-4 injection*
CCK-4 = Cholecystokinin Tetrapeptide (a peptide that induces anxiety and panic symptoms)
eVAS = Emotional Visual Analog Scale

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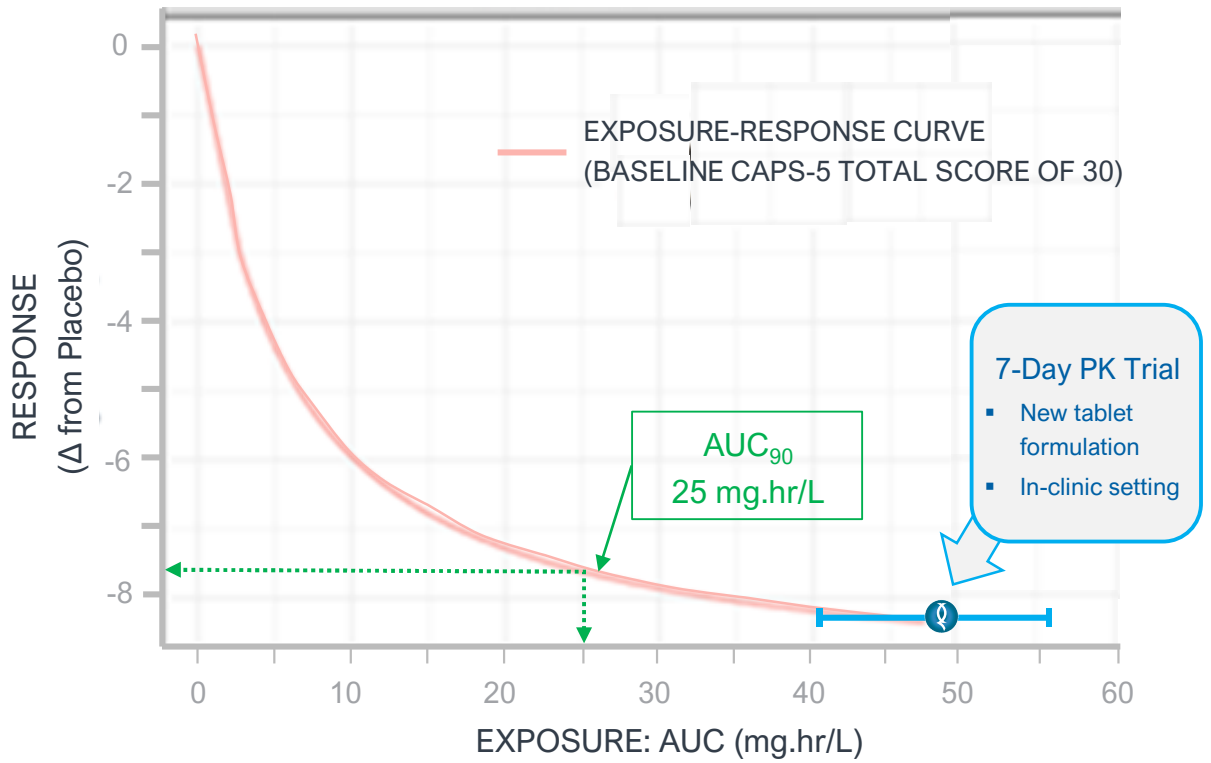
Phase 2 Study Determined Target BNC210 Blood Exposure for PTSD

Pharmacometric (PMX) Analysis Target Exposure

PMX modelling on prior Phase 2 PTSD trial identified 25 mg.hr/L blood exposure target

Pharmacometric analysis identified a statistically significant exposure-response relationship for the CAPS-5 Total score (p value <0.01)

AUC Values (plasma exposure) = CAPS-5 Score (PTSD symptoms)



7-Day Pharmacokinetic study of BNC210 tablet formulation mean AUC (mg.hr/L) ± standard deviation

AUC = Area under the curve

PMX = Pharmacometric modelling

CAPS-5 = Clinician-Administered PTSD Scale for DSM-5

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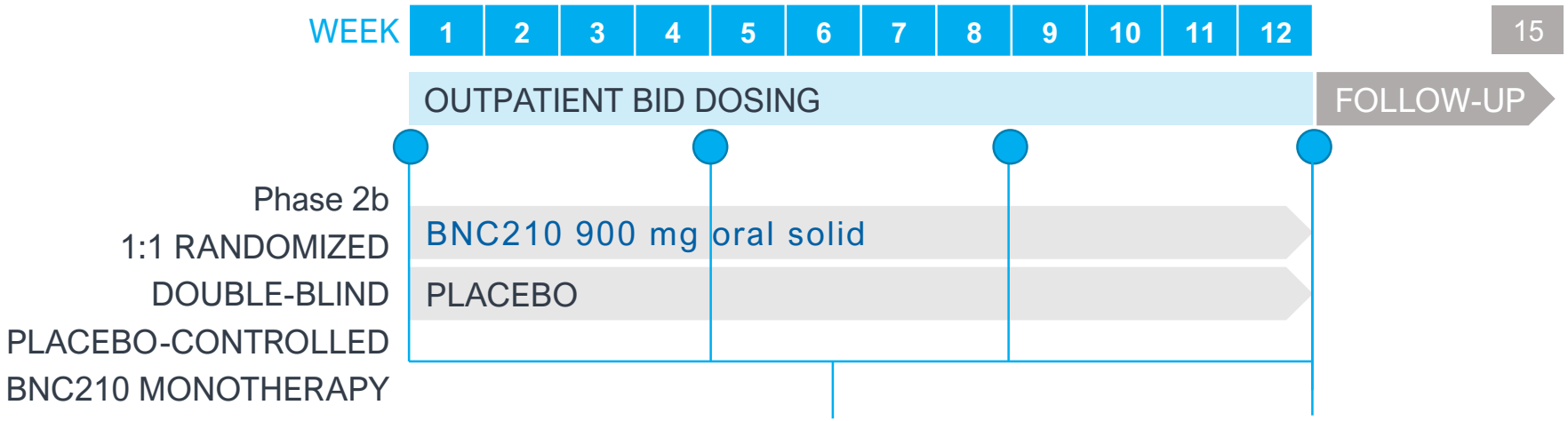
BNC210 Phase 2b PTSD Trial Underway

ATTUNE Study



SECONDARY ENDPOINTS

Various patient-reported symptoms of PTSD, changes in anxiety and depression symptoms, and global and social functioning; Safety & tolerability endpoints

PRIMARY ENDPOINT

Investigator-rated PTSD symptoms on CAPS-5 Total Symptom Severity Scores in change from Baseline to Week 12 compared to placebo

Phase 2b

Single trial for monotherapy treatment in PTSD

KEY INCLUSION CRITERIA

Female and male (18 – 75 years)
Current PTSD diagnosis
CAPS-5 ≥ 30 (Screening & Baseline)
(& ≤ 25% decrease Screening to Baseline)

~25 Sites

Fast Track designation from FDA

Topline data expected mid 2023

BID = Twice daily dosing
CAPS-5 = Clinician-Administered PTSD Scale for the Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5)

Bionomics

Compelling Rationale for BNC210 in PTSD

Therapeutic potential for PTSD underpinned by mechanism & pharmacology of BNC210

ANXIETY REDUCTION	Reduced anxious behavior in many rodent models AND reduced amygdala hyperactivity in GAD patients
ANTI-DEPRESSANT	Antidepressant effects in rat model AND in PTSD trial at early time points
ENHANCED FEAR EXTINCTION	Enhanced fear extinction in mice AND promoted more rapid recovery in healthy humans following panic attack (CCK-4)
ANTI-PANIC ACTIVITY	Reduced number AND intensity of panic symptoms in phase 1 CCK-4 challenge
THREAT AVOIDANCE REDUCTION	Reduced threat avoidance behavior in animals (various models of threat) AND in GAD patients

Bionomics

BNC210 “Pipeline in a Pill”: Development Strategy Highlights

Seek approval in first acute indication: Acute SAD

Potential for rapid approval in acute setting

Seek approval in first chronic indication: PTSD

Building robust safety database for BNC210 as a potential chronic treatment[1]

Leveraging robust safety database across BNC210 programs

Evaluate other indications for BNC210

Evaluate other acute and chronic anxiety and stressor-related disorders

Co-Morbid Anxiety

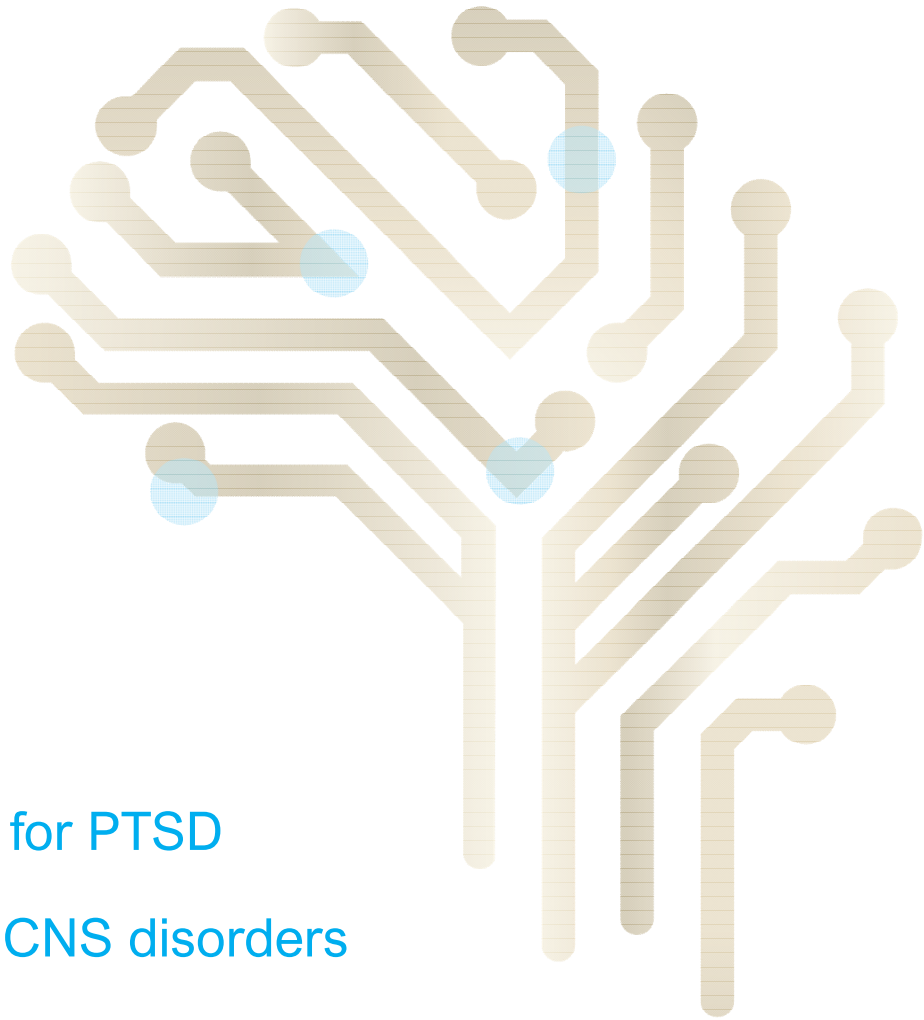
- Chronic Social Anxiety Disorder
- Generalized Anxiety Disorder
- Panic Disorder
- Bipolar Disorder
- Major Depressive Disorder

Neurodegenerative Disease

- Anxiety & Agitation

1. *Clinical data observed in ~400 subjects to date in 12 clinical trials, excluding ongoing ATTUNE and PREVAIL studies.*

Bionomics



CNS-focused Collaborations

MDMA Derivative in combination with BNC210 for PTSD

Cognitive Impairment in Alzheimer’s and other CNS disorders

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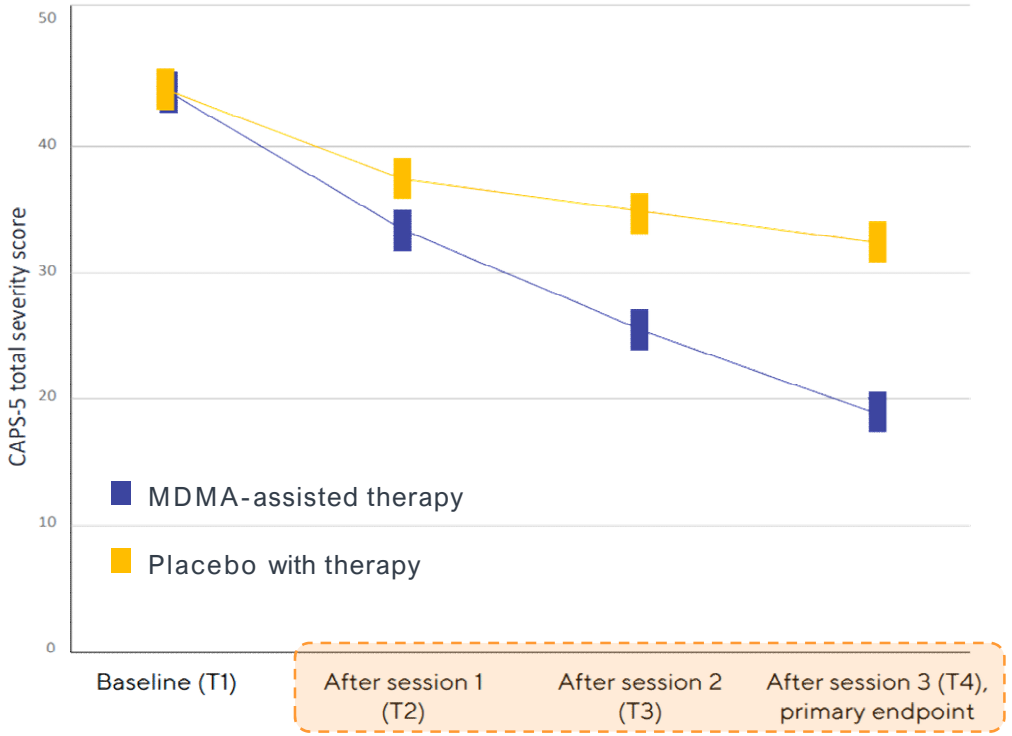
Memorandum of Understanding with EmpathBio for BNC210 and MDMA Derivative for PTSD

MDMA-assisted therapy significantly reduced CAPS-V scores in PTSD patients (primary endpoint) [1] (n=90)



Joint Feasibility Assessment

EMP-01 (3,4-Methylenedioxymethamphetamine) (MDMA) derivative

BNC210 + EMP-01 could relieve the burden of pairing MDMA with CBT, potentially reducing the number of CBT sessions needed with MDMA treatment

MOU with EmpathBio's MDMA Derivative (EMP-01)

- Initial collaborative framework of preclinical studies to collectively explore a combination drug treatment regimen with BNC210 and EMP-01
- MDMA-assisted CBT has demonstrated significant symptom improvement in PTSD patients
- FDA has granted a Breakthrough Therapy designation to MDMA-assisted psychotherapy
- EmpathBio is developing MDMA derivatives that may permit the entactogenic effects of MDMA to be separated from some of the known adverse effects
- To explore the possibility of a combination treatment regimen warranting clinical evaluation

1. Change in CAPS-V total severity score from T1 to T4 ($P < 0.0001$, $d = 0.91$, $n = 89$ (MDMA $n = 46$)), as a measure of the primary outcome. Primary analysis was completed using least square means from a mixed model repeated measure (MMRM) analysis model; (n=90)

Mitchell et al., "MDMA-assisted therapy for severe PTSD: a randomized, double-blind, placebo-controlled phase 3 study" (2021)

CBT = Cognitive Behavioral Therapy

Merck & Co Strategic Collaboration: Positive Allosteric Modulators (PAMs) of α7 Nicotinic Acetylcholine Receptor for Treatment of Cognitive Deficits

α7 Receptor PAMs correct hypocholinergic states in cognitive dysfunction and impairment

MERCK
PARTNERSHIP

MSD Collaboration Overview

2014 agreement to develop α7 receptor PAMs targeting cognitive dysfunction associated with Alzheimer's disease, schizophrenia and other CNS conditions

Merck funds all research and clinical development, and WW commercialization of any resulting products

Payments received: US$20M upfront and US$10M for Phase 1 milestone

Eligible to receive up to US$465M in additional milestone payments plus royalties

Development Updates

Two α7 receptor PAM candidates in early-stage Phase 1 safety and biomarker studies for cognitive impairment

1st compound has completed Phase 1 safety clinical trials in healthy subjects and biomarker studies ongoing

In 2020, a second molecule with an improved potency profile in non-human primate models was advanced into Phase 1 clinical trials

Wang et al. J Pharmacol Exp Ther 373:311–324, May 2020 https://pubmed.ncbi.nlm.nih.gov/32094294/
PAM = Positive allosteric modulator
MSD = A tradename of Merck & Co., Inc., Kenilworth NJ USA

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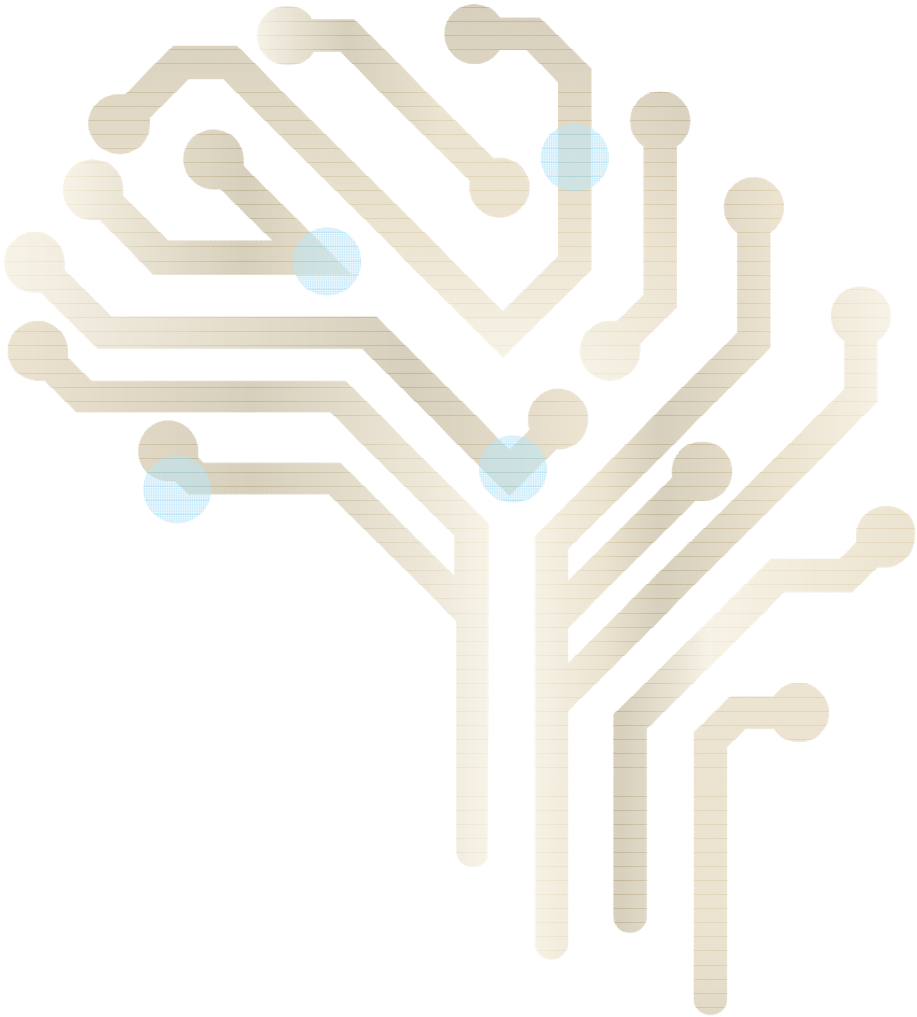
Financial Information &

Investment Highlights



Bionomics

Stock, Financial and IP Snapshot

Lean operations with modest burn

Well-capitalized through CY2023, bolstered by Aus. R&D tax credits

A$33.6M (US$23.1M) of and cash equivalents of of June 30, 2022

Listed on two global exchanges

ASX : BNO

Nasdaq : BNOX

Leading Significant Investors

APEIRON INVESTMENT GROUP

BVF PARTNERS L.P.

PRESIGHT CAPITAL

MERCK

Research Coverage

BERENBERG PRIVATBANKIERS SEIT 1590

CANTOR Fitzgerald

EVERCORE

HCW H.C.WAINWRIGHT&CO.

LOOP CAPITAL

William Blair

Robust CNS IP Portfolio

USA: 10 granted (incl. continuations/divisional) from 4 PCT Applications, 2 PCT Applications pending

WW: 29 granted from 4 PCT Applications, 2 PCT Applications pending

BNC210 freedom to operate opinion

Figures as of June 30, 2022

Bionomics Highlights

Balanced business model with multiple value-driving clinical milestones expected over the next 4 quarters

BNC210 potential in large underserved markets with over 25 million patients in the US alone suffering from SAD and PTSD and no new FDA approved therapies in nearly two decades

BNC210's Phase 2 PREVAIL trial under way with Fast Track designation for acute treatment of SAD with topline data expected by YE 2022; Established clinical proof-of-concept

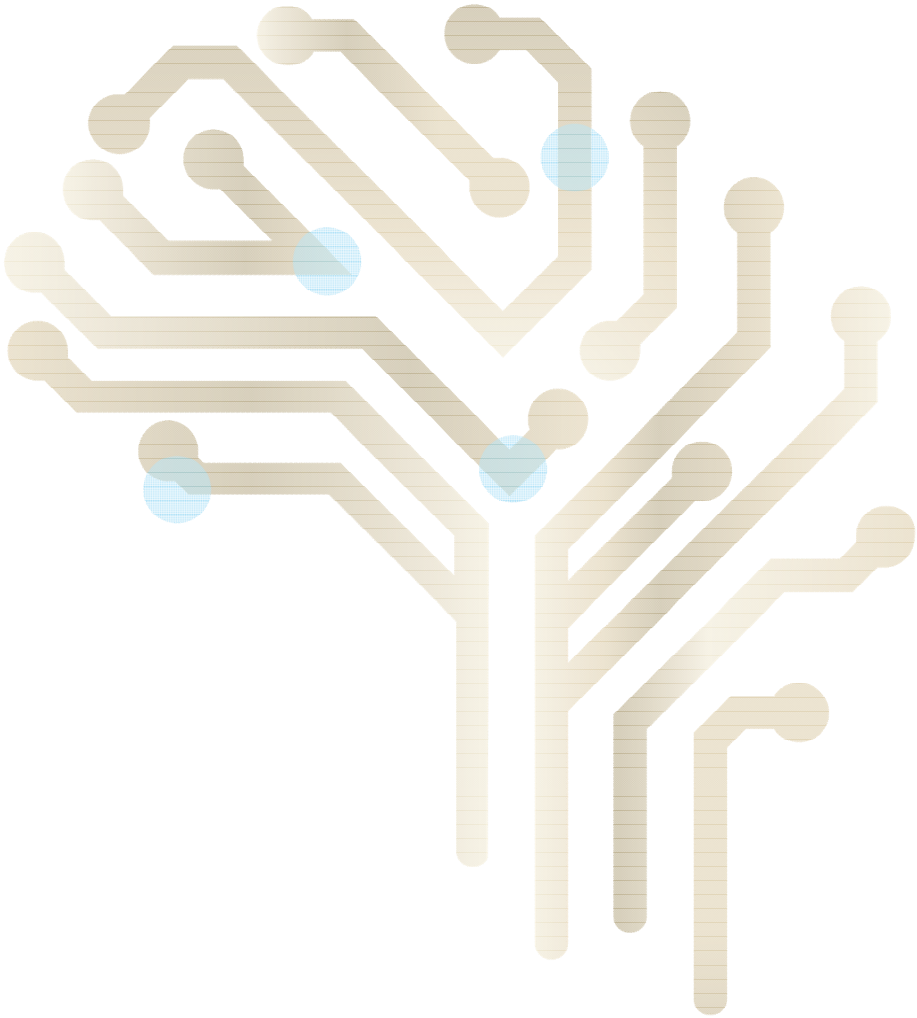
BNC210 Phase 2b ATTUNE PTSD study under way with Fast Track designation, topline data expected by mid 2023; Tablet formulation achieves blood exposure projected from pharmacometric analysis

Merck strategic partnership for treatment of cognitive impairment in Alzheimer's disease and Schizophrenia with two compounds in clinical development

Well-capitalized balance sheet and experienced leadership

1. *Bluestar BioAdvisors*

Appendix



Pre-Clinical Assets

Kv3.1 / Kv3.2 Ion Channel Activators for Cognitive Dysfunction and Negative Symptoms in Schizophrenia and other Disorders

Nav1.7/1.8 Inhibitors: Potential Non-Addictive, Reduced Side-Effect Chronic Pain Therapies

Bionomics

Promising Therapeutic Strategy for Improving Cognitive Dysfunction and Social Withdrawal Symptoms

Kv3.1 / Kv3.2 Ion Channel Activators for treatment of Cognitive Dysfunction and Negative Symptoms

Potential in schizophrenia, Autism Spectrum disorders and conditions with cognitive impairments

Bionomics' molecules target Kv3.1/3.2 ion channels on Parvalbumin (+), GABAergic interneurons in the PFC

~600 COMPOUNDS SYNTHESIZED

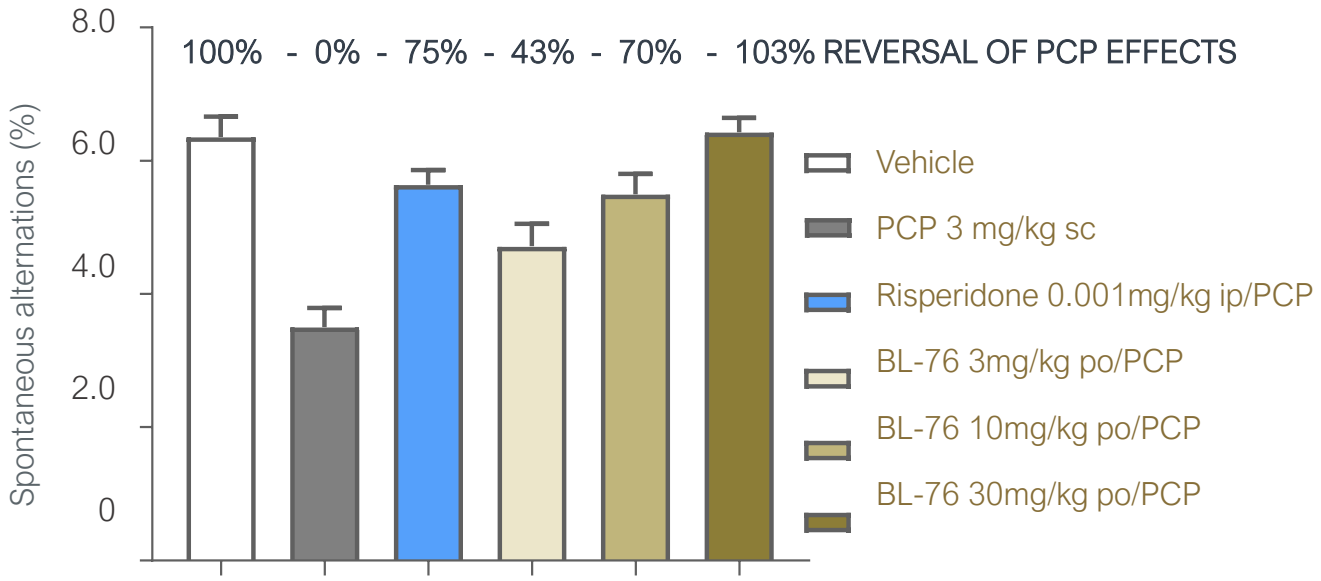
2 SERIES PATENTED

Lead Compound BL-76

Back-up Compounds

2 Patents Filed

Lead Compound BL-76 Fully Reverses PCP-induced Cognitive Deficit in Mice in the T-maze



PFC – Prefrontal Cortex

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Nav1.7/1.8 Inhibitors: Potential Non-Addictive, Reduced Side-Effect Chronic Pain Therapies

BNOX Pan Nav Inhibitors

Small molecules with functional selectivity for voltage gated sodium channels: Nav1.7, Nav1.8 and potentially Nav1.9

Disease-related genetics: Gain & Loss-of-function mutations in Nav1.7, 1.8 and 1.9. associated with human pain syndromes where extreme pain or no pain is experienced

Lead Candidate Identified: BL-017881

Observed to reverse pain in the formalin paw model in mice

1000+ COMPOUNDS SYNTHESIZED

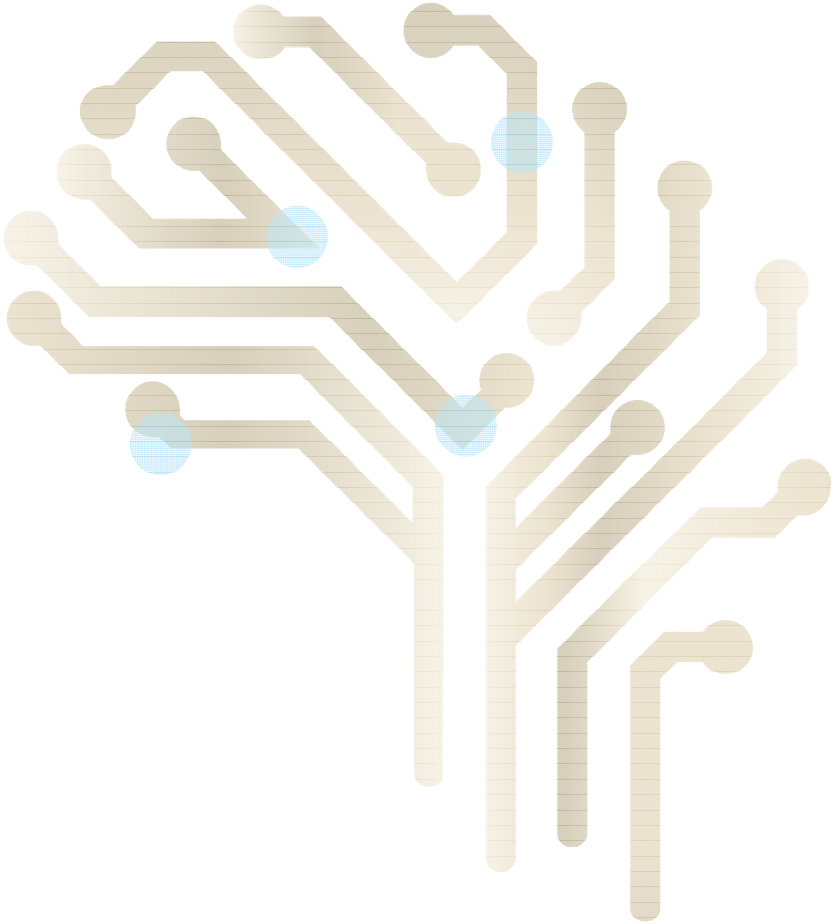
2 SERIES PATENTED

Lead Compound BL-017881

Back-up Compounds

2 Patents Filed

Management, Board and Supporting Information



Bionomics

Powered by a Seasoned and Experienced Management Team

Errol De Souza, PhD
Executive Chairman

Archemix · cyclerion · IDEXX LABORATORIES · Aventis · KURES · Neurocrine Biosciences · BIODEL · PALATIN · NeuroPore Therapies · BIONAUT LABS · ROYALTY PHARMA · CATALYST BIOSCIENCES · DUPONT · Synaptic Pharma Ltd.

Connor Bernstein
VP Strategy, Corporate Development & IR

GUGGENHEIM · RBC Capital Markets · LINK IMMUNOTHERAPEUTICS · Circumvent Pharma · PIPER | SANDLER

Liz Doolin
VP Clinical Development

ag · BRITISH BIOTECH · *New World Bio Limited*

Adrian Hinton
Interim Aus. Chief Financial Officer

Deloitte. · APAG

Bionomics

Board of Directors

Errol De Souza, PhD
Executive Chairman

David Wilson
Non-Executive Director

Alan Fisher
Non-Executive Director

Miles Davis
Non-Executive Director

Jane Ryan PhD
Non-Executive Director

Arron Weaver
Apeiron Nominee

Summary of BNC210 Clinical Trials

Phase	Description	Participants /Setting	Subjects Enrolled / Administered BNC210*	BNC210 Formulation and Doses	Location
1	Single Ascending Dose Safety and PK	Healthy volunteers / In-clinic	32/24	Suspension; single doses (5 to 2000 mg)	Australia
1	Single Ascending Dose Safety and PK; Food Effect	Healthy volunteers / In-clinic	4/3	Suspension; single doses (300 to 2000 mg)	Australia
1	Single Ascending Dose Safety and PK; Food Effect	Healthy volunteers / In-clinic	47/40	Capsule; single doses (300 to 3000 mg)	US
1b	Lorazepam Comparison	Healthy volunteers / In-clinic	24/22	Suspension; single doses (300 and 2000 mg)	France
1b	CCK-4 Panic Attack Model	Healthy volunteers / In-clinic	60/59	Suspension; single doses (2000 mg)	France
1b	Multiple Ascending Dose Safety and PK; Expanded Cohort for EEG Target Engagement	Healthy volunteers / In-clinic	56/44	Suspension; multiple doses (150 to 1000 mg twice daily for 8 days)	France
1	Suspension and Tablet Formulation PK Comparison	Healthy volunteers / In-clinic	6/6	Suspension and tablet; single doses (300 mg)	Australia
1	Single Ascending Dose Safety and PK	Healthy volunteers / In-clinic	5/5	Tablet; single doses (600 to 1200 mg)	Australia
1	Multiple Dosing Safety and PK	Healthy volunteers / In-clinic	10/10	Tablet; multiple doses (900 mg twice daily for 7 days)	Australia
2a	Imaging and Behavioral Study In Generalized Anxiety Disorder	Generalized anxiety disorder patients / In-clinic	27/25	Suspension; single doses (300 and 2000 mg)	UK
2a	Agitation in the Elderly in Hospital Setting	Agitated elderly patients / Hospital	38/18	Suspension; multiple doses (300 mg twice daily for 5 days)	Australia
2	Post-Traumatic Stress Disorder	Post-traumatic stress disorder patients / Out-patient	193/143	Suspension; multiple doses (150, 300 or 600 mg twice daily for 12 weeks)	Australia US
2b	Post-Traumatic Stress Disorder	Post-traumatic stress disorder patients / Out-patient	Ongoing	Tablet; multiple doses (900 mg twice daily for 12 weeks)	US
2	Social Anxiety Disorder	Social anxiety disorder patients / In-clinic	Ongoing	Tablet; single doses (225 and 675 mg)	US

** The number of enrolled subjects who were administered BNC210; other enrolled subjects were administered placebo only*
CCK-4 = Cholecystokinin Tetrapeptide. EEG = Electroencephalography. PK = Pharmacokinetic

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Novel Proprietary BNC210 Tablet Formulation Achieves Pharmacometric Modeling Blood Exposure Target for PTSD and Eliminates Food Effect

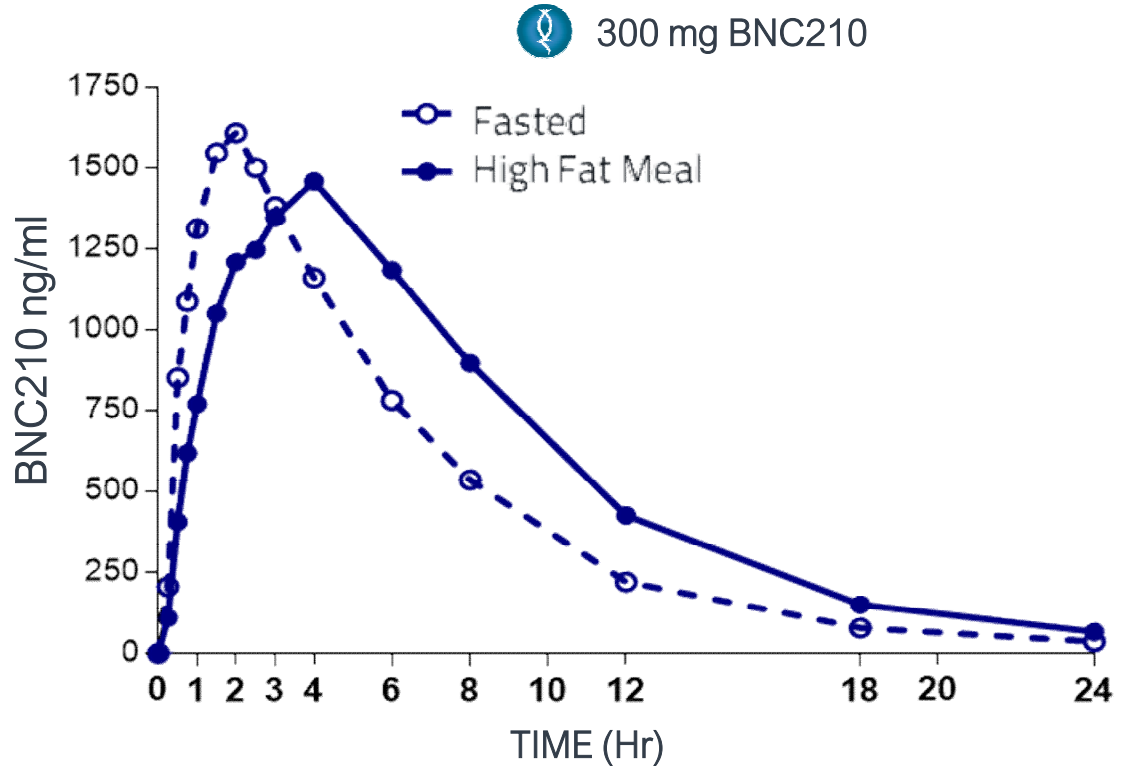
BNC210 Novel Spray- Dry Dispersion Formulation

BNC210 tablet formulation for PTSD

Novel spray-dry dispersion formulation used to produce a tablet with a favorable PK profile

Novel formulation achieves target AUC > 25 mg.hr/L blood exposure target with 900 mg dose b.i.d

Novel tablet alleviates food effect and has dose linear exposure



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