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INVESTOR PRESENTATION

19 November 2013

Dr Richard Treagus – Executive Chairman

Jon Pilcher – Chief Financial Officer

Forward Looking Statements

This presentation contains forward looking statements that involve risks and uncertainties. Although we believe that the expectations reflected in the forward looking statements are reasonable at this time, Neuren can give no assurance that these expectations will prove to be correct. Actual results could differ materially from those anticipated. Reasons may include risks associated with drug development and manufacture, risks inherent in the regulatory processes, delays in clinical trials, risks associated with patent protection, future capital needs or other general risks or factors.

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Company Snapshot

- Stock code ASX: NEU – market cap approximately A$175 million
- Developing treatments for chronic and acute neurological conditions
  - Large markets with no therapies currently available
  - Potential for abbreviated regulatory pathways and orphan drug designation
- Fully funded through to completion of Phase 2 trials in 4 different indications
  - Two trials underway, two trials in preparation
  - Trials will report results from H2 2014
  - Cash reserves A$23 million
- Key strategic relationships
  - US Army Medical Research & Materiel Command
  - International Rett Syndrome Foundation
  - Fragile X Research Alliance
  - Fragile X Drug Validation Initiative

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Leadership

BOARD OF DIRECTORS

- Richard Treagus (Executive Chairman)
  - Former CEO Acrux Limited
- Trevor Scott
  - Head of Audit Committee
- Bruce Hancox
  - Former Group CEO Brierley Investments Limited
- Larry Glass

MANAGEMENT

- Larry Glass (CSO)
  - 9 years with Neuren
- Jon Pilcher (CFO)
  - Former CFO Acrux Limited
- James Shaw (COO)
  - Former Quintiles Asia-Pac
- Joe Horrigan (CDMA)
  - Neuropsychiatrist
  - Former Head of Medical Research at Autism Speaks

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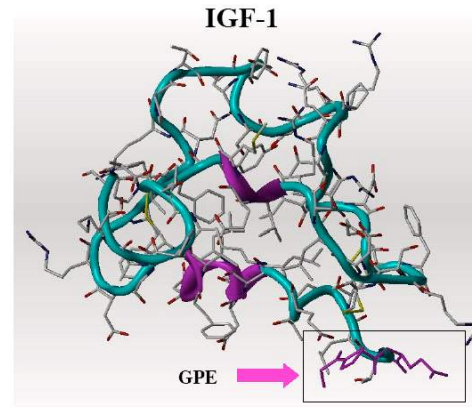
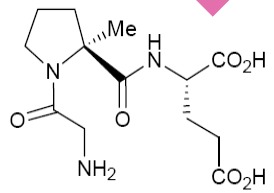
Scientific Foundation

- **IGF-1** is a naturally occurring growth factor in the brain
  - Produced following brain injury and stress
  - One of the brain's self-repair mechanisms
- **Glypromate** (GPE) is considered the active part of the molecule
- **NNZ-2566** is a synthetic analogue of Glypromate
- **NNZ-2566** influences the processes underlying acute and chronic CNS disorders
  - Inflammation
  - Microglial function
  - Synaptic plasticity (inter-neuronal communication)
  - Abnormal electrical activity (e.g., seizures)
- **NNZ-2566** potentially treats a wide range of neurological conditions
- **NNZ-2591** is in the same class of peptides



NNZ-2566



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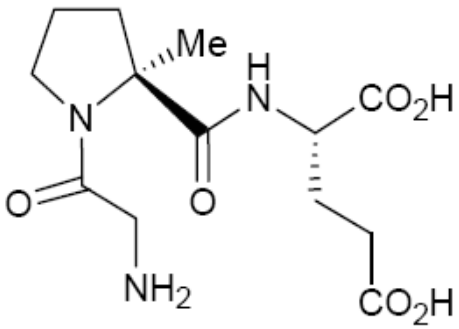
NNZ-2566

- Pre-clinical efficacy has been demonstrated in animal models of TBI, stroke, cognition, Fragile X and Rett Syndromes
- Administered **intravenously** or **orally**
- 40-50% orally bioavailable, with or without food
- Crosses the blood brain barrier
- Well tolerated at therapeutic doses
- Validated manufacturing process in the USA
- Patent protected



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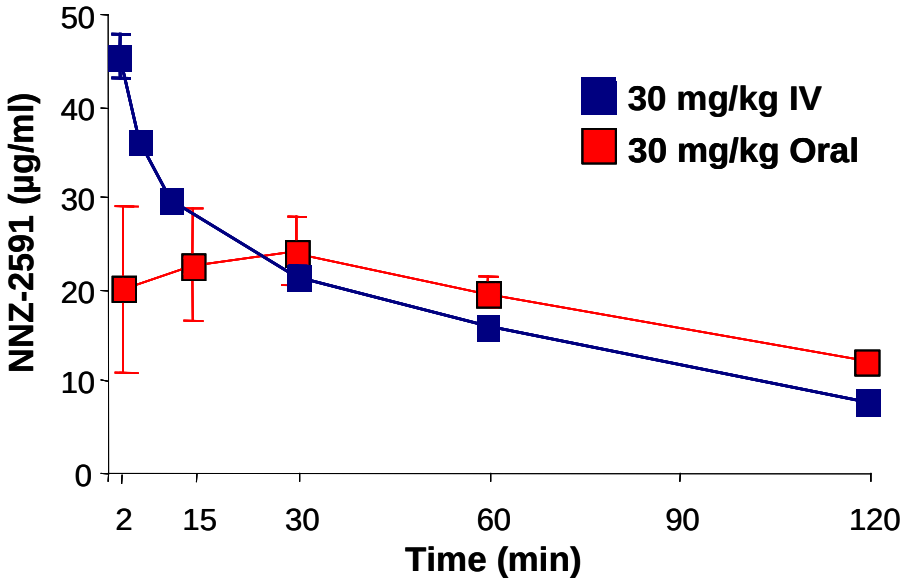
NNZ-2591

- Synthetic analog - cyclic dipeptide
- **100%** orally bioavailable
- Testing in Fragile X model completed; ***results comparable to NNZ-2566 at 1/3rd the dose***
- US Army working on mechanism of action under Cooperative R&D Agreement
- Preclinical development to be advanced in 2014



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Intellectual Property

- Broad patent estate with no royalties payable
- **NNZ-2566** and other GPE analogues
  - 7 issued patents covering composition, oral formulation and methods of use
  - 7 pending applications
  - Remaining patent life between 9 and 15 years
  - Additional market exclusivity may be available via Orphan and Pediatric Drug designations
- **NNZ-2591** and other bicyclic analogues
  - 3 issued patents covering composition, formulation and methods of use
  - 3 pending applications
  - Remaining patent life between 11 and 15 years

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Strategy

- Demonstrate the therapeutic benefit of **NNZ-2566** in human subjects in both **acute** and **chronic** conditions
- Potential to establish a **"gateway"** to autism and other neurodevelopmental disorders
- Criteria for selecting therapeutic targets
  - Significant unmet need and commercial opportunity with no approved drugs
  - Regulatory advantages – eligible for *Fast Track*, *Orphan Drug*, *Breakthrough Therapy*
  - Strong support from advocacy groups and other stakeholders
- Realising value
  - Generate clinical data with NNZ-2566 in Phase 2 clinical trials
  - Advance pre-clinical development of NNZ-2591
  - Optimise manufacturing process for commercial product supply
  - Maintain dialogue with potential partners

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Key Clinical Programmes

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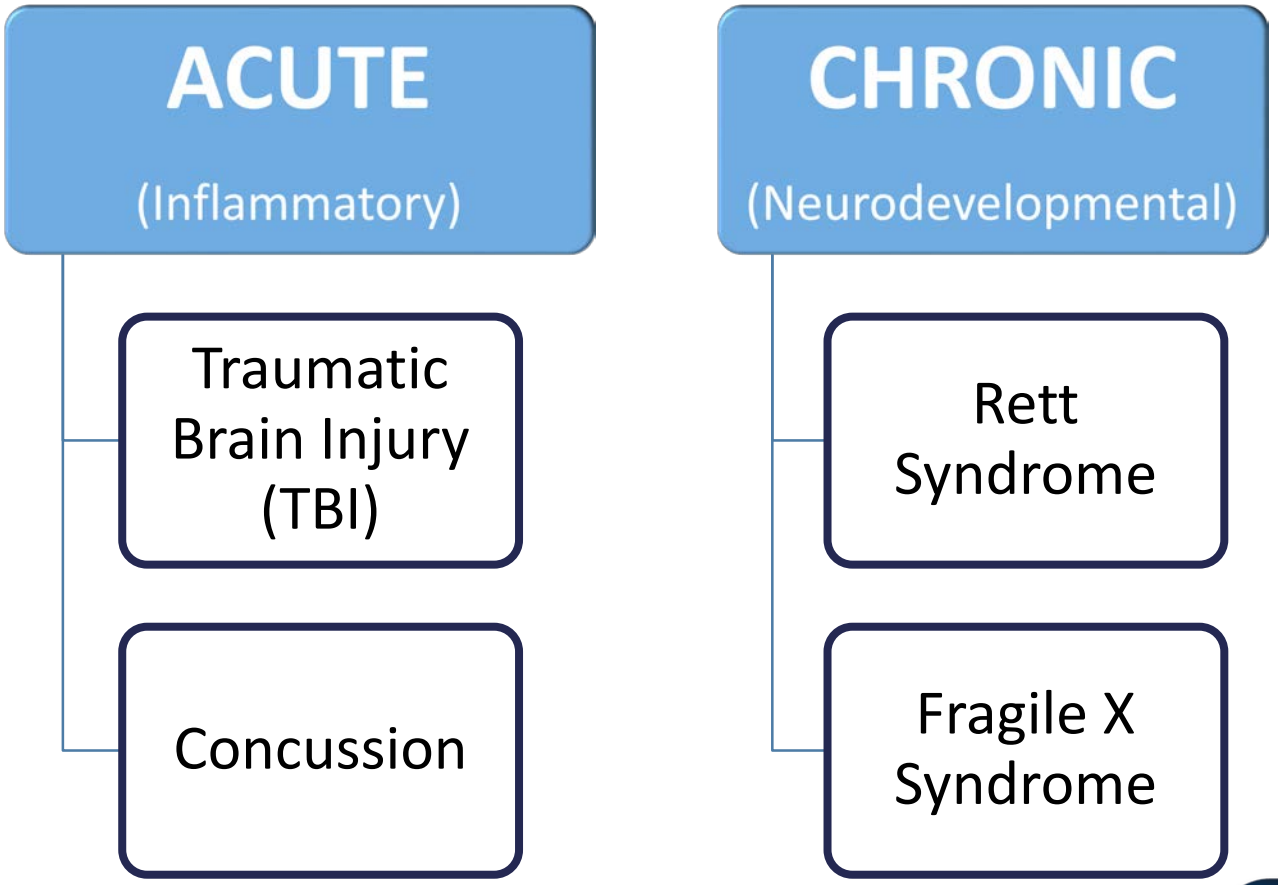
NNZ -2566 Clinical Strategy



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Rett Syndrome

- Mutation in a gene on the X chromosome
- 1 / 10,000 females (20,000 USA)
- Most physically disabling of the autism spectrum disorders
- Many girls live into adulthood, requiring total 24-hr-day care
- Profound disability and financial burden for >50,000 patients and families globally
- Symptoms include:
  - Intellectual disability, loss of speech and motor control
  - Compulsive hand movements
  - Disorders of breathing and cardiovascular function
  - Extreme anxiety
  - Seizures

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Rett Syndrome Phase II (RTT-001)

- Phase 2 randomized (2:1), placebo-controlled, dose escalation, safety and efficacy study
- Up to 60 (48 complete) female subjects ages 16-40 years
- NNZ-2566 oral solution or placebo administered for 28 days following 3 days of dose titration up to 35 or 70 mg/kg b.i.d.
- Endpoints: safety, EEG and seizures, cardiac and respiratory irregularities, caregiver and clinician assessments of symptom severity and behaviour
- Sites: Rett Syndrome Centers at Baylor College of Medicine and University of Alabama
- 20 subjects enrolled to date; 14 have completed the entire study
- “Fast Track” designation granted by the FDA

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Fragile X Syndrome

- Mutation on the X chromosome affecting both males and females
- The most common inherited cause of intellectual disabilities and the most common known cause of autism
- 1 / 4,000 males and 1 / 6,000 females (58,000 USA)
- Symptoms include:
  - Intellectual disabilities
  - Attention deficit, hyperactivity and autistic behaviour
  - Anxiety and unstable mood
  - Seizures (approximately 1 in 4)
- Large pharma actively investigating Fragile X Syndrome

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Fragile X Syndrome pre-clinical efficacy

- NNZ-2566 and NNZ-2591 were separately tested in a model of Fragile X Syndrome by FRAXA Drug Validation Initiative
- "Wild type" (normal) mice and "*fmr1* knockout" mice (bred with the Fragile X chromosome defect) were dosed with Neuren drug and placebo
- Each of NNZ-2566 and NNZ-2591 were shown to reverse the differences between the two mice types, normalizing known Fragile X behavioural, anatomic and biochemical characteristics in the *fmr1* knockout mice – statistically significant on all measures
- Each drug had no significant effect on the wild type mice

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Fragile X Syndrome Phase II (FXS-001)

- Phase 2 randomized (1:1:1), placebo-controlled, fixed dose, safety and efficacy study
- Up to 72 (60 complete) male subjects ages 16-40 years
- NNZ-2566 oral solution or placebo administered for 28 days at 35 or 70 mg/kg b.i.d
- Endpoints: safety, seizure activity, caregiver and clinician assessments of symptom severity and behavior, biomarkers
- Sites: Rush University Medical Center and up to 4 other Fragile X Syndrome centers
- To be initiated in December 2013
- “Fast Track” and “Orphan Drug” designation granted by the FDA

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Traumatic Brain Injury (TBI) and Concussion

- NNZ-2566 improves functional recovery, preserves cognitive function, inhibits post-injury seizures
- > 1.5 million head injuries annually in the US alone; >75% are mild or concussion
- Leading cause of death and disability, especially in young people and the elderly
- Partnership funding of ~US$23 million by US Army
- Only late-stage competition is progesterone
- $4+ billion estimated global market potential

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Traumatic Brain Injury (*INTREPID*)

- Phase 2 randomized (2:1), placebo-controlled, fixed dose escalation, safety and efficacy study
- 260 subjects, ages 16-75 with moderate to severe TBI (Glasgow Coma Scale 4-12)
- NNZ-2566 IV solution or placebo administered within 8 hours of injury as a 20 mg/kg bolus followed by 72 hours of infusion at 1, 3 or 6 mg/kg/hr (30, 30 and 200 subjects, respectively)
- Endpoints: safety, functional status at 1 and 3 months, cognitive and neuropsychological function at 1 and 3 months, non-convulsive seizures and biomarkers in the first 5 days
- 2 protocols: LAR and EFIC (Exception from Informed Consent)
- Goal: 18 Level I and II US trauma centers with 10 under EFIC
- 126 subjects enrolled to date
- “Fast Track” designation granted by the FDA

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Concussion

- Phase 2 randomized (1:1:1), placebo-controlled, fixed dose safety and efficacy study
- 132 subjects, 18-55 with mild TBI (Glasgow Coma Scale 13-15) and a pre-injury computerized neurocognitive assessment
- NNZ-2566 oral solution or placebo administered within 24 hours of injury at 35 or 70 mg/kg twice daily for 7 days
- Endpoints: safety, change from baseline cognitive function and time to return to pre-injury baseline cognitive function assessed at 1, 2, 4 and 8 weeks
- Sites: 1-2 US military training facilities
- To be initiated in H1 2014

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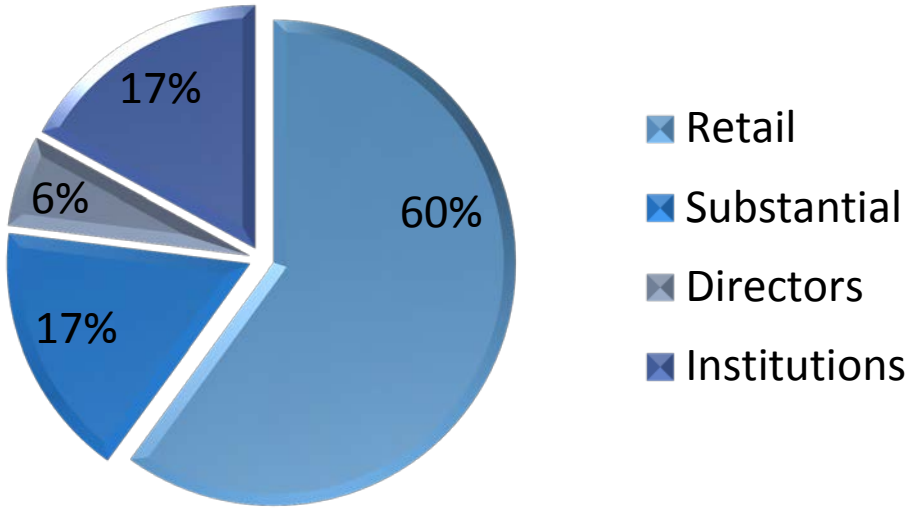
Shareholdings and Financial Position

Fully funded through to completion of Phase 2 trials in 4 different indications

- A$23m cash reserves at 15 November 2013
- A$5.4m expected from options through 2016

Shares outstanding:	1.5 billion
Options outstanding:	221 million (1.3 cents to 4.6 cents per share)
Closing price 15 Nov 2013	12.5 cents
52 week range:	3 cents - 14 cents



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Investment Summary

- **Patented drug analogues** of naturally occurring brain growth factors
- Potentially applicable to both **acute** and **chronic** neurological conditions – large markets with no therapies currently available
- **Compelling pre-clinical efficacy data** in TBI, Fragile X and Rett Syndrome models
- Abbreviated regulatory pathways - with possible **Orphan Drug** designation
- Experienced clinical and commercial management team
- Phase 2 clinical trials in 4 indications will report results from mid-2014
- Clinical data will provide the basis for FDA and partnering discussions

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Expected News Flow

Initiate Fragile X Phase 2	December 2013
Complete enrollment in Rett Phase 2	1H-2014
Initiate Concussion Phase 2	1H-2014
Top-line results for Rett Phase 2	2H-2014
Complete enrollment in Fragile X Phase 2	2H-2014
Complete enrollment in *INTREPID*	2H-2014
Top-line results for Fragile X Phase 2	1H-2015
Top-line results for *INTREPID*	1H-2015
Top-line results for Concussion Phase 2	2H-2015

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