



**Investor Presentation** 

**Dr Tom Duthy**Executive Director

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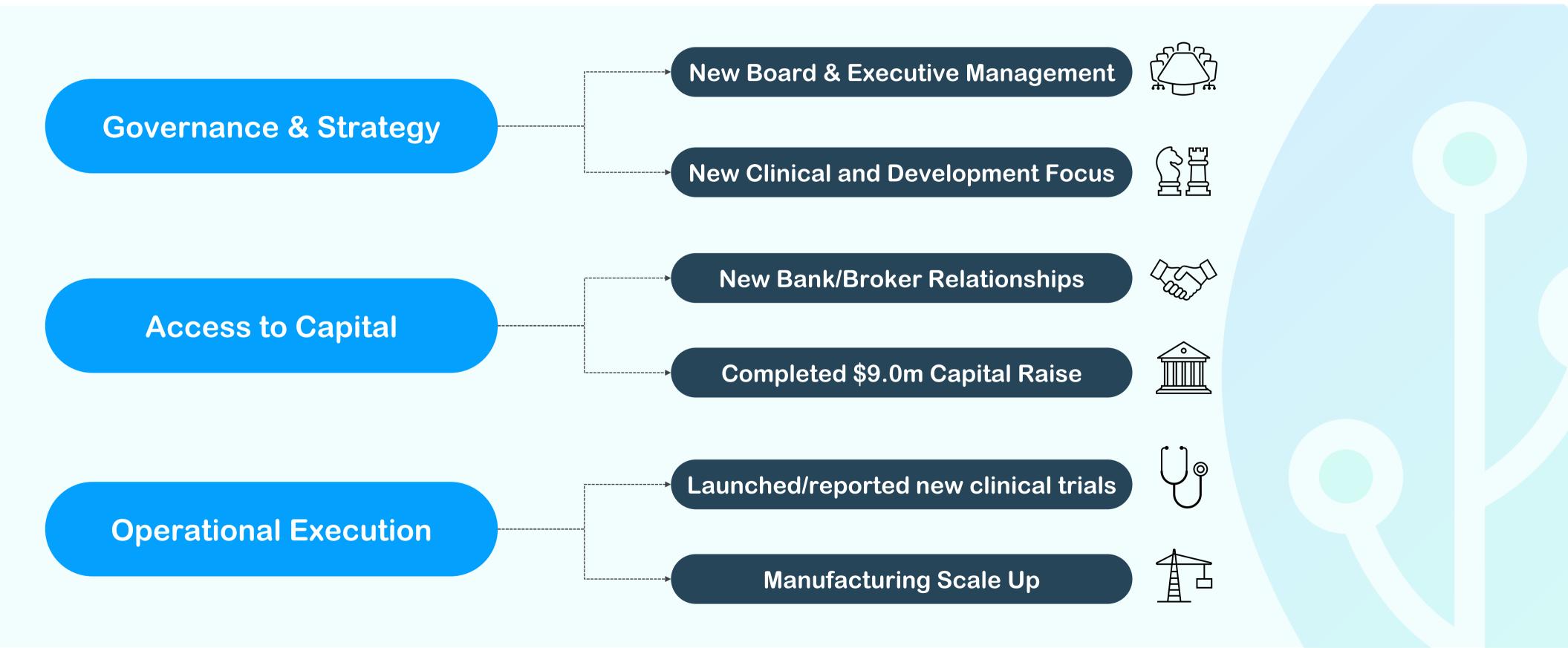
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# FY23 – A Year of Significant Progress







# Corporate / Capital Summary



\$0.056
Share price

(as at 20 Nov 2023)

\$49.4M

Market capitalisation

\$6.1M

Pro-Forma Cash as 30 Sept\*

~1,900

No. of shareholders

882.3M

**Share on issue** 

116.3M^

NTIOA (13.5c) +

Other Options

\$6.5M

**FY23 R&D Exp.** (up from \$2.6M in FY22)

53%

**Top 20 Holders** 

# Neurotech is a clinical-stage biopharmaceutical development company focused predominately on paediatric neurological disorders





NTI164 exclusive worldwide licence for neurological disorders



Patents Pending – Use, Composition



Novel oral biopharmaceutical cannabinoid platform (NTI164)



Focus on Paediatric Patients



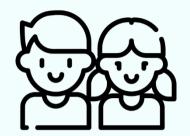
Multiple Phase I/II and Phase II/III Clinical Trials



Supportive Efficacy & Safety Data in Children

# Neurotech Four Core Strategies

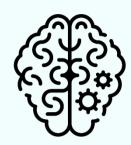




Focus on Paediatric Patients



Focus on Partnering with Key Opinion Leaders / Clinicians



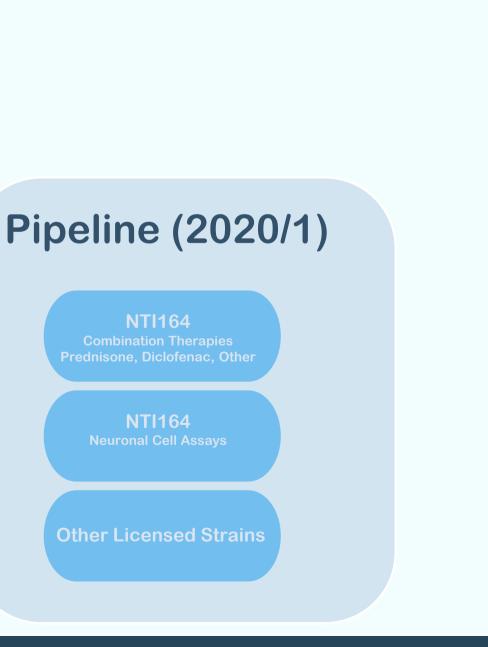
Focus On Rare Neurological Disorders with Neuroinflammation



Focus On Drug Product
Development

# Clinical Pipeline – 2023





**NTI164** 

**NTI164** 

#### **Pre-Clinical** Phase I/II Phase II/III **NTI164 NTI164 NTI164 Combination Therapies Cerebral Palsy ASD** Prednisone, Diclofenac, Other **Other Licensed NTI164** PANDAS / PANS<sup>1</sup> **Strains NTI164 ASD**

**NTI164 Rett Syndrome** (Expected 1H CY23)

(54 week open label extension)

# Therapeutic Agent: NTI164





High potency, Broad Spectrum Cannabinoid Formulation in Oil, *C. sativa L.* (Plant Derived)

THC < 0.3%

Major constituent Cannabidiolic acid (CBDA)

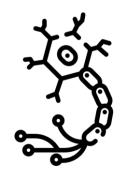
Minor constituents include other cannabinoids: CBD, CBG, CBGA, other + terpenes

Convenient 1x or 2x (split dose) oral formulation in oil, ideal format for pediatric patients 20mg/kg (CBDA)

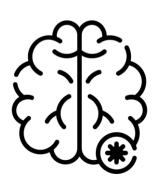
NTI164 is not a low dose CBD oil to be sold over-the-counter



**Entourage Effect** 



Neuroprotective



**Anti- Neuroinflammatory** 

# Developing NTI164 as a Therapeutic Agent





NTI164 to be registered as a prescription-only medicine







Neurotech investment into clinical trials to show safety and benefit



Regulatory approval(s) will allow Neurotech to make a medical claim





Significantly higher pricing and reimbursement + regulatory levers = strong competitive position

## **CBD OTC Market - Australia**



Highly Competitive, Low Margin, Low Price, Lack of Differentiation, Stringent Regulatory Oversight – Not the Market for NTI164

**CBD Products Registered on the** ARTG<sup>1</sup>

44/35

**Domestic Manufacturers / Importers** of Cannabis Products on ODC<sup>2</sup> Website

Number of over-the-counter (OTC) CBD products able to make a substantiated medical claim<sup>3</sup>

**Average Cost per mg CBD** 

150mg Max. amount of CBD per day

allowed (sub-therapeutic)

101/\$1.3M

The number of infringements and total fines issued by TGA in FY23 (unlawful advertising)<sup>4</sup>

Australian Register of Therapeutic Goods (ARTG)

Office of Drug Control (ODC)

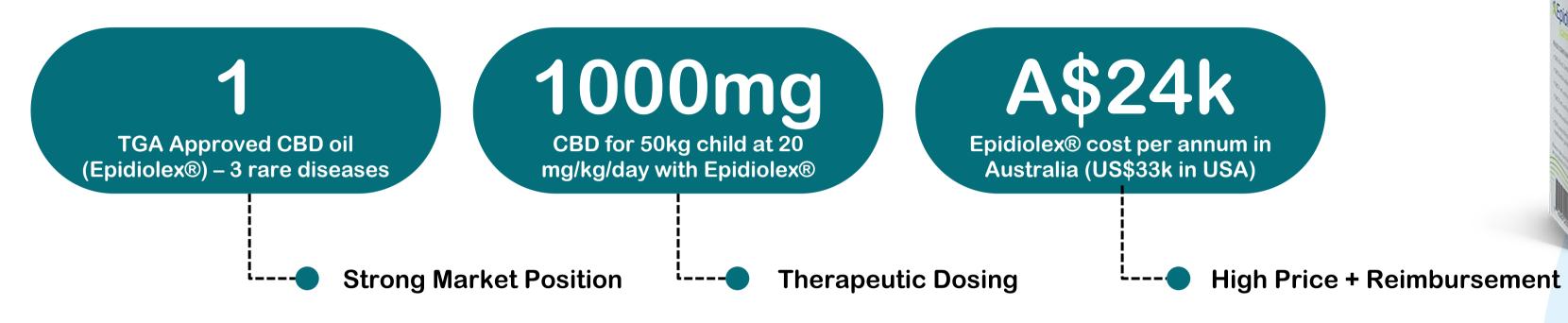
<sup>3.</sup> Approved by the Therapeutic Goods Administration (TGA) for one or more medical conditions via well-designed, valid clinical trials

# CBD as a Drug - Significant Long-Term Upside



**%**Epidiolex®

#### **TGA Approved Pharmaceutical Treatment – NTI164 Focus**



Epidiolex® Small Markets by Number Patients, Large by \$ Value – NTI164 Focus



Based on 73m children with 1/15,700 living with disease

<sup>2. &</sup>lt;a href="https://www.lgstoundation.org/">https://www.lgstoundation.org/</a>

Tuberous Sclerosis Complex (TSC)

<sup>4</sup> lazz Pharmacouticals

## **Summary of Strategy**

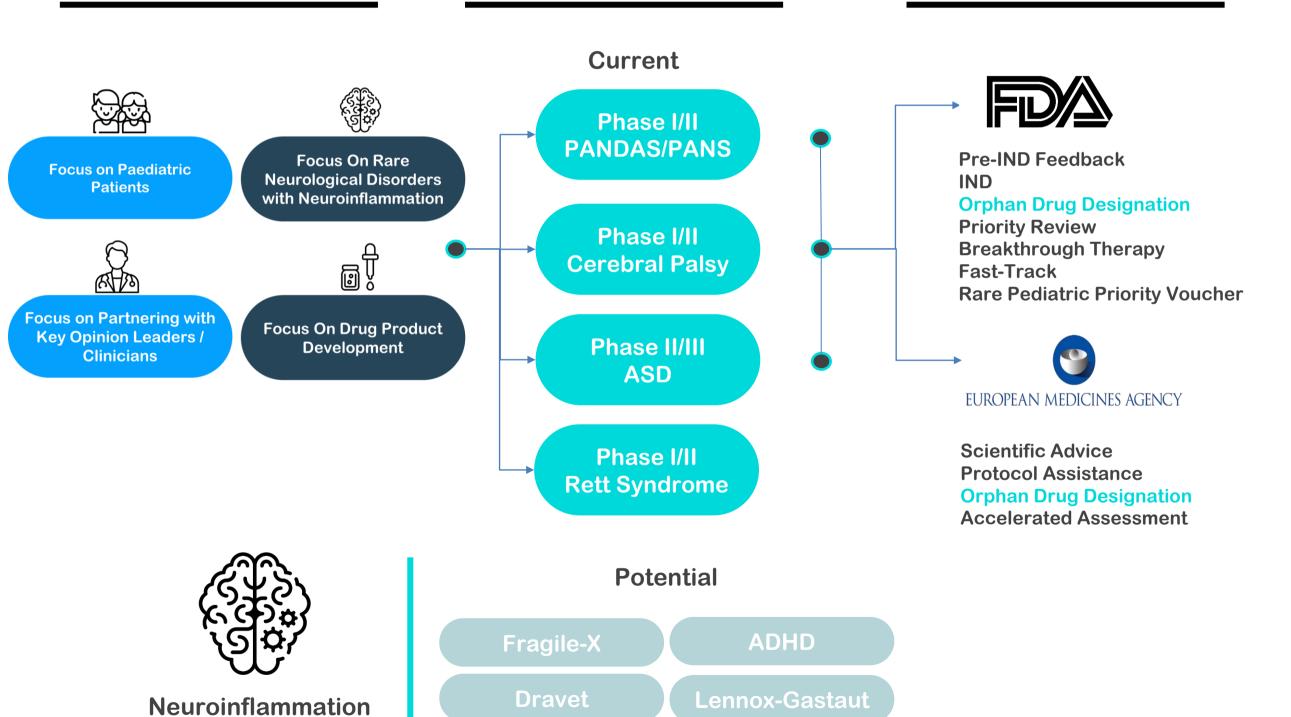


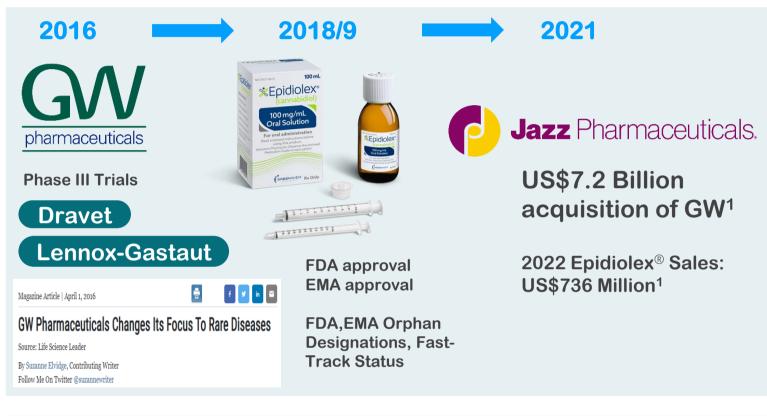
**Group Strategy** 

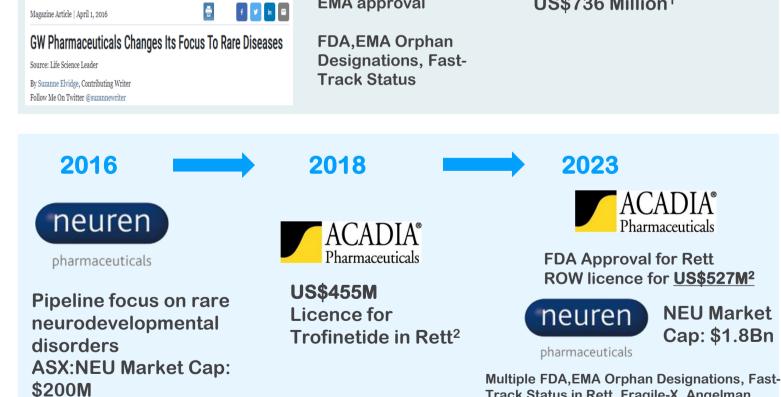
Implementation to Development

Potential Regulatory Levers









Track Status in Rett, Fragile-X, Angelman, Phelan-McDermid, Pitt Hopkins, Prader-Will

## **Clinical Focus**

**ASD** 

**PANDAS/PANS** 

**Cerebral Palsy** 

**Rett Syndrome** 

Neurological & Neuroinflammation

Lack of effective treatments

Rare / Orphan

**Paediatric Onset** 



## Strong Scientific Rationale for NTI164

- Anti-inflammatory effects + safety
- Clinician support
- High Patient/Caregiver interest



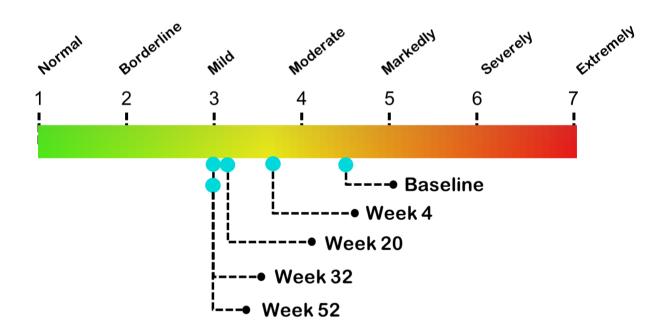
# Austism Spectrum Disorder





 Phase I/II Clinical Trial reported data out to 52 weeks of treatment

#### **Severity of illness Scale (CGI-S)**



CGI-Severity of illness $^{1}$  (p = 0.03)



• 34% of the 550,000 NDIS participants have ASD,  $40\% \le 14$  years old (860,000 by 2030)

Federal government set to cut NDIS funding for autism



Vineland-3 Domain	P-value (Paired T-Test) 20 weeks	P-value (Paired T-Test) 52 weeks 0.0278	
Adaptive behaviour composite	0.0005		
Communication	0.002	0.0001	
Daily living skills	0.019	0.0050	
Socialisation	0.014	0.118	

Adaptive functioning, which are skills people need to function independently at home, at school and in the community is an important factor in predicting long-term outcomes for people with ASD.

Improving adaptive abilities in patients is therefore a desirable treatment goal



- Prevalence of ASD in Australia est. 1 in 50
- 40-fold increase in 20 years<sup>5</sup>



World first trial of broad-spectrum cannabinoid therapy



11 children continue treatment under Special Access > 52 weeks



NTI164 is a patient 'enabling' drug with nondrug behavioural therapies



Chronic administration required to maintain effects



No serious adverse events over 52 weeks of daily oral treatment



About to complete larger Phase II/III trial

<sup>1.</sup> Clinical Global Impression (CGI)- is a physician/observer-rated scale synthesizing the clinician's impression of the global state of an individual & frequently employed in clinical trials for neuropsychiatric disorders. The CGI is a 3item observer-rated scale that measures illness severity, global improvement and therapeutic effect.

## PANDAS/PANS



Paediatric Autoimmune Neuropsychiatric Disorders Associated with Streptococcal Infections (PANDAS) and Paediatric Acute-Onset Neuropsychiatric Syndrome (PANS)



# Phase I/II reported: 15 patients with moderate-severe PANDAS/PANS recruited, 12-week data

**Attractive Clinical and Market Dynamics** 

Significant Improvement in anxiety / depression

**Significant Improvement in Disease Severity** 



Rare, paediatric onset with NO Approved treatments



Diagnostic and Treatment Criteria now accepted



Strong correlation to brain inflammation



World first trial of broad-spectrum cannabinoid therapy



All patients continue treatment > 12 weeks, some now adults

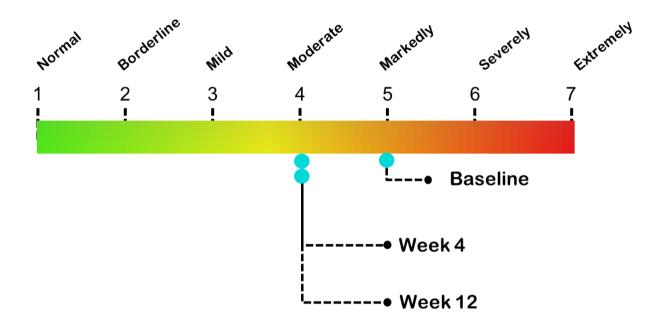


Seeking orphan drug designations (ODDs) in US, EU

#### **RCADS-P (n=15)**



#### **Severity of illness Scale (CGI-S)**



 $RCADS-P^{1}(p = 0.016)$ 

CGI-Severity of illness<sup>1</sup> (p = 0.0005)

<sup>1.</sup> Revised Child Anxiety and Depression Scale – Parent Version (RCADS-P) - is a 47-item parent-report questionnaire of youth anxiety and depression (a scale of anxiety, social phobia, panic disorder, OCD, and low mood, a score below 65 represents low severity, scores between 65-70 represent medium severity and are on the borderline clinical threshold, and scores above 70 represent high severity and are above the clinical threshold). This test is completed at the site.

<sup>2.</sup> Clinical Global Impression (CGI)- is a physician/observer-rated scale synthesizing the clinician's impression of the global state of an individual & frequently employed in clinical trials for neuropsychiatric disorders. The CGI is a 3-item observer-rated scale that measures illness severity, global improvement and therapeutic effect.

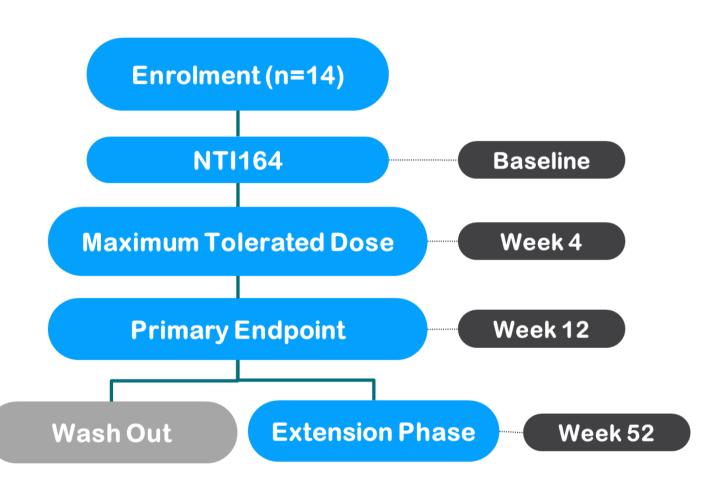
## Rett Syndrome





**Significant Market** 

**NTI164 Advantages** 



Phase I/II reported: 14 patients with Rett

Syndrome, 12-week data, fully recruited



One FDA approved therapy



Neuren (ASX:NEU) license deal with Arcadia (NASDAQ:ACAD) close to **US\$1** billion, multiple ODDs

Daybue™ (trofinetide)



US\$2.0 billion annual market, drug cost to patient ~US\$1,000 per day



US\$67 million in Q3 CY2023 net sales, 800 patient starts



15,000 patients in US (5,000 registered)



**Dual targeting both neuroprotection** and neuroinflammation



**Trofinetide sets FDA (+other)** benchmarks for safety and efficacy



NTI164 has exhibited excellent safety/efficacy in ASD and PANDAS/PANS



**Orphan Drug Designations planned** for US and Europe



Results in Q1 CY2024, anticipate good treatment durability

Improvement was seen by doctors in nearly 4 out of 10 patients (38%) taking DAYBUE at 12 weeks, compared with less than 2 out of 10 (15%) of those taking the placebo.

1	2	3	4	5	6	7
Very much improved	Much improved	Minimally improved	No change	Minimally worse	Much worse	Very much worse
0%	13%	24.7%	61%	1.3%	0%	0%
0%	4.7%	10.5%	81.4%	3.5%	0%	0%

DAYBU

Placeb

Individual results may vary.

Of the 154 patients who enrolled in LILAC, 84 (54.5%) completed the study<sup>3</sup>

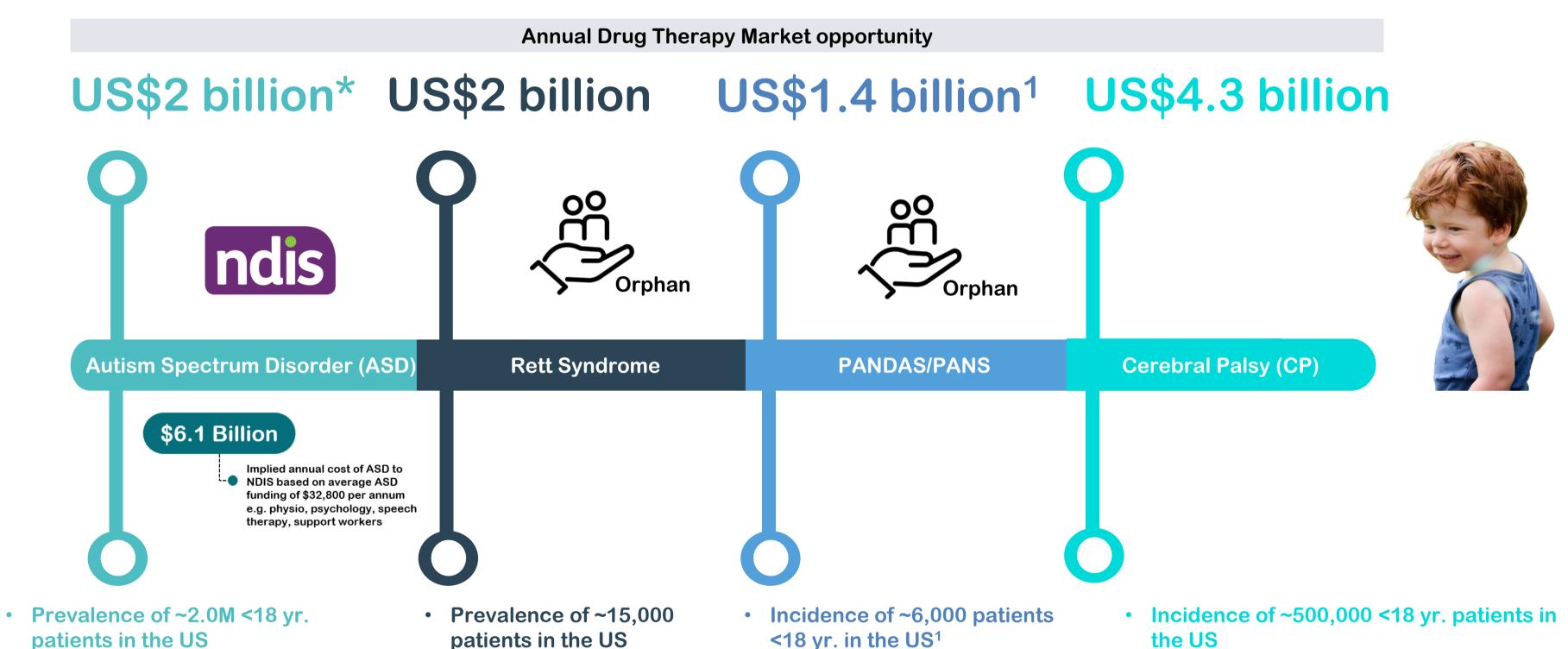
- ▶ 35.7% of patients discontinued due to adverse events<sup>3</sup>
- 3.2% of patients discontinued due to lack of efficacy<sup>3</sup>

Types of adverse events reported in the OLE study were comparable to those observed in LAVENDER.

# **Our Target Markets**



## Lack of effective therapies, significant unmet medical need



• Risperidone, Aripiprazole

2 Approved Drugs (\* limited use)

- patients in the US
- 1 Approved Drug
- Trofinetide

- <18 yr. in the US<sup>1</sup>
- No FDA/EMA Approved Drug
- 2 Approved Drugs for spastic CP
- Baclofen, Botox

# Key Milestones – NTI164



## 1H CY2023

- Final results of ASD Phase I/II Clinical Trial (52 weeks)
- Commencement of Patient Recruitment PANDAS/PANS Phase I/II Clinical Trial
- HREC/TGA Extension of ASD Phase I/II Clinical Trial 6 months
- FDA Pre-IND Meeting
- Launch Rett Syndrome Clinical Trial Initiative
- HREC/TGA Approval Rett Syndrome Phase I/II Clinical Trial \*
- Completion of Patient Recruitment PANDAS/ PANS Phase I/II Clinical Trial

## 2H CY2023



- Commence Phase II Clinical Trial in Rett Syndrome
- Results of PANDAS/PANS Phase I/II Clinical Trial



- Completion of patient recruitment of Rett Syndrome Phase I/II Clinical Trial
- Completion of Patient recruitment ASD Phase II/III Clinical Trial (Q4)
- HREC/TGA Approval Cerebral Palsy Phase I/II Clinical Trial (Q4)
- Publication(s) of ASD Phase I/II data (through to 52 weeks)(Q4)

## Q1 CY2024

- Results of Rett Syndrome Phase I/II Clinical Trial
- Results of ASD Phase II/III Clinical Trial

<sup>\* 10</sup> July 2023

## Outlook



- Focus on rare paediatric neurological disorders
- Accelerated clinical development via rapid & cost-effective proof of concept Phase I/II clinical trials in Australia for new paediatric neurological disorders (PANDAS/PANS, Rett and CP)
- Two further clinical trial read-outs in Q1 CY2024
- Access to numerous regulatory levers from the FDA and EMA initial focus on Orphan Drug Designations for PANDAS/PANS and Rett Syndrome in Europe and the US
- Planned meetings with TGA and FDA to refine regulatory process in 2024
- Fully funded to complete all current clinical trials





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