Actinogen Medical presenting at Bioshares Biotech 2017 Summit

Sydney,19 July 2017: Actinogen Medical (ASX: ACW) is pleased to announce that the Company's CEO, Dr. Bill Ketelbey, is presenting **Xanamem™ for Alzheimer's disease** at the **Bioshares Biotech 2017 Summit** in Queenstown in July 2017.

The presentation is attached.

ENDS

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About Actinogen Medical

Actinogen Medical (ASX: ACW) is an ASX-listed biotech company focused on innovative approaches to treating cognitive decline that occurs in chronic neurodegenerative and metabolic diseases. Actinogen Medical is developing Xanamem a promising new therapy for Alzheimer's disease, a condition with a multibillion dollar market potential. In the US alone, the cost of managing Alzheimer's disease is estimated to be US$250bn, and is set to increase to US$2tn by 2050, outstripping the treatment costs of all other diseases. Alzheimer's disease is now the leading cause of death in the UK and second only to ischaemic heart disease in Australia

About Xanamem™

Xanamem's novel mechanism of action sets it apart from other Alzheimer's treatments. It works by blocking the excess production of cortisol - the stress hormone – through the inhibition of the 11β-HSD1 enzyme in the brain. This enzyme is highly concentrated in the hippocampus and frontal cortex, the areas of the brain most affected by Alzheimer's disease. There is a strong association between chronic stress and excess cortisol that leads to changes in the brain affecting memory, and to the development of amyloid plaques and neural death – all hallmarks of Alzheimer's disease.

About XanADu

XanADu is a Phase II double-blind, 12-week, randomised, placebo-controlled study to assess the safety, tolerability and efficacy of Xanamem in subjects with mild dementia due to Alzheimer's disease. XanADu, will enrol 174 patients at 20 research sites across Australia, the UK and the USA. The trial is registered on www.clinicaltrials.gov with the identifier: NCT02727699.

Actinogen Medical encourages all current investors to go paperless by registering their details with the designated registry service provider, Link Market Services.

Xanamem™ for Alzheimer's Disease

Dr Bill Ketelbey, CEO, Actinogen Medical

Bioshares Biotech Summit
July 2017

Actinogen Medical

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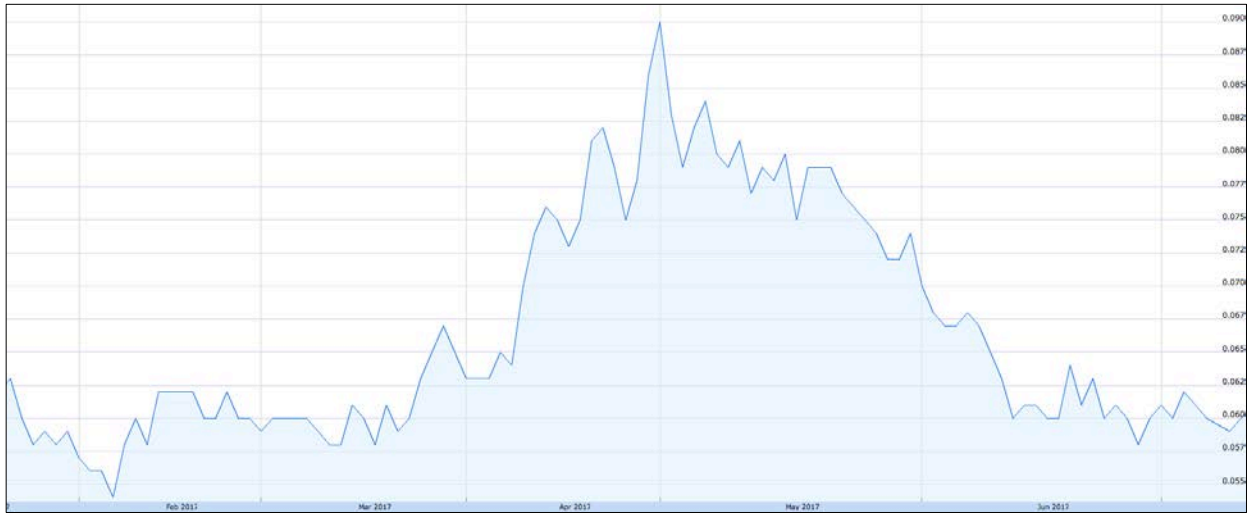
ACTINOGEN MEDICAL

- Headquartered in Sydney, Australia. ASX:ACW
- Targeting Alzheimer's disease (AD) and cognitive impairment in chronic neurodegenerative diseases
- Xanamem™, a first in class, brain penetrant 11βHSD1 inhibitor:
  - for AD, diabetes cognitive impairment (DCI) and other indications associated with cognitive decline
- Experienced board and management; expert scientific advisory board

STOCK METRICS*



ASX CODE	ACW
Market Capitalisation	$37.2m
Enterprise Value	$32.0m
52-week High/Low	$0.04-$0.09
Top 20 Shareholdings	55%

*Data as at 13 July 2017

COMMERCIALLY EXPERIENCED, GLOBALLY RECOGNISED

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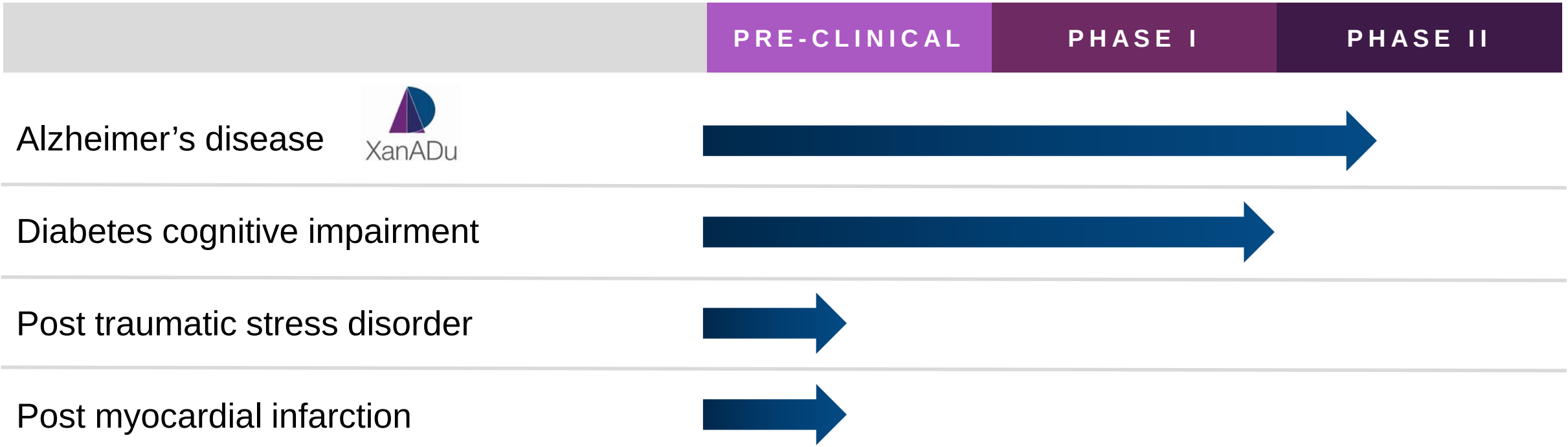
XANAMEM™

- **A novel, first in class, potent, orally bioavailable, brain-penetrant, 11βHSD1 inhibitor**
- **Differentiated mechanism of action:** blocking cortisol production in the brain
- **Symptomatic and disease modifying effects *in vivo***
- **Well-tolerated:** acceptable clinical safety, toxicity and PK/PD profile
- **Efficacious human brain concentrations**
- **Compelling data package:** clinical safety, in vitro and in vivo mechanistic and efficacy data
- **XanADu – phase II clinical study underway,** dosing subjects with mild AD dementia in USA, UK, AU
- Planning for Phase II study in **Diabetes Cognitive Impairment**
- **Composition of matter IP coverage ≥ 2031,** patents granted in most major markets

XANAMEM™ DEVELOPMENT INDICATIONS



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CORTISOL: A VALIDATED BIOMARKER AND TARGET FOR AD

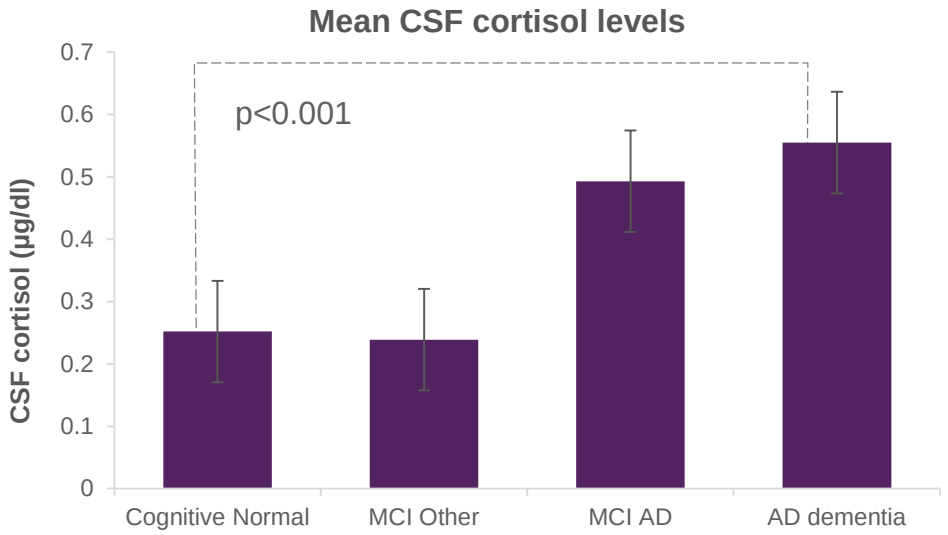
Cortisol and Alzheimer's

- Recent independent studies support the association between cortisol and development and progression of Alzheimer's disease [1-5]
- Cognitive impairment in patients with neuroendocrine dysfunction [6-9]
- Compelling evidence provided by the Australian Imaging, Biomarker & Lifestyle Study of Ageing (AIBL) study (2017) [5]
  - subjects with higher plasma cortisol at much greater risk of developing AD
  - accelerated effect of Aβ+ on decline in global cognition, episodic memory, and attention

Xanamem

- Data presented at four major international medical congresses in 2016 – AAIC Toronto; CTAD San Diego; ICE Beijing; MMC Lisbon.
- Pre-clinical and Phase I data published.[10-11]

aibl
The Australian Imaging, Biomarkers and Lifestyle Flagship Study of Ageing

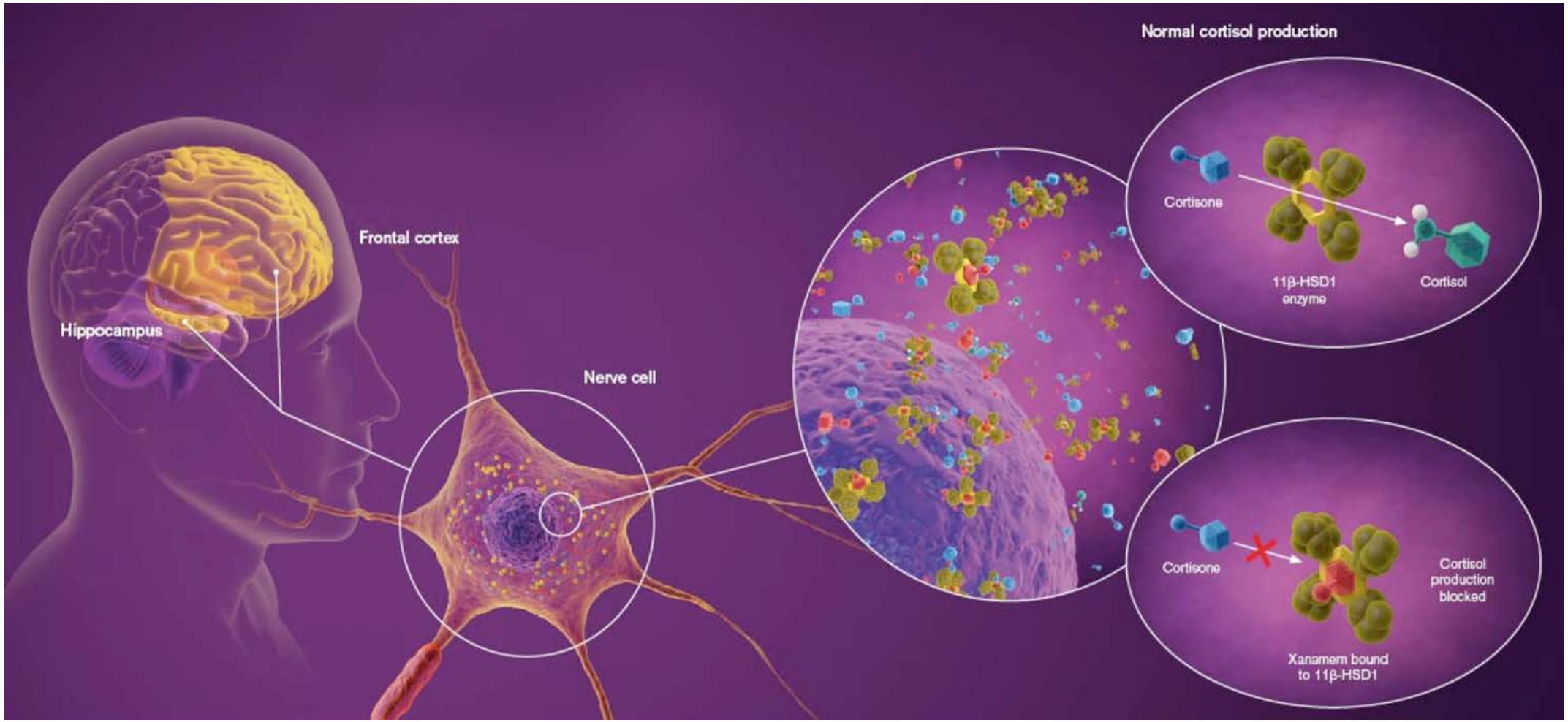


Popp et al, 2015

[1] Geerlings *et al.*, 2015, Neurology 85: 1-8; [2] Lehallier *et al.*, 2015, JAMA Neurology 14:1-10; [3] Popp *et al.*, 2015, Neurobiol. Aging 36:601–607; [4] Ennis *et al.*, 2017, Neurology 88(4):371-378; [5] Pietrzak *et al.*, 2017, Biol Psychiatry: Cognitive Neuroscience and Neuroimagery, 2:45-52; [6] Lupien et al., 2009, Nat Rev Neurosci 10:434–445; [7] Starkman et al., 1999, Biol Psychiatry 46: 1595–1602; [8] Lupien et al., 1998, Nat Neurosci 1:69–73; [9] MacLullich et al., 2005, Psychoneuroendocrinology 30:505–515; [10] Sooy *et al.*, 2015. Endocrinology 156(12):4592-4603; [11] Webster *et al.*, 2017, British J Pharmacol 174:396-408.

MECHANISM OF ACTION

Xanamem™ binds to 11βHSD1, reducing brain cortisol production



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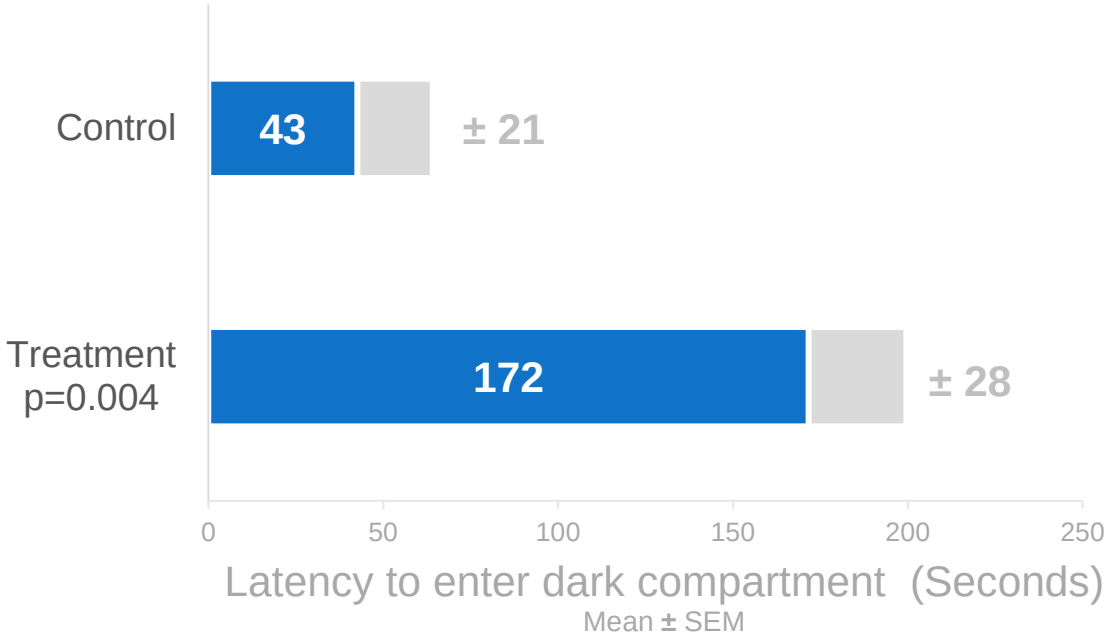
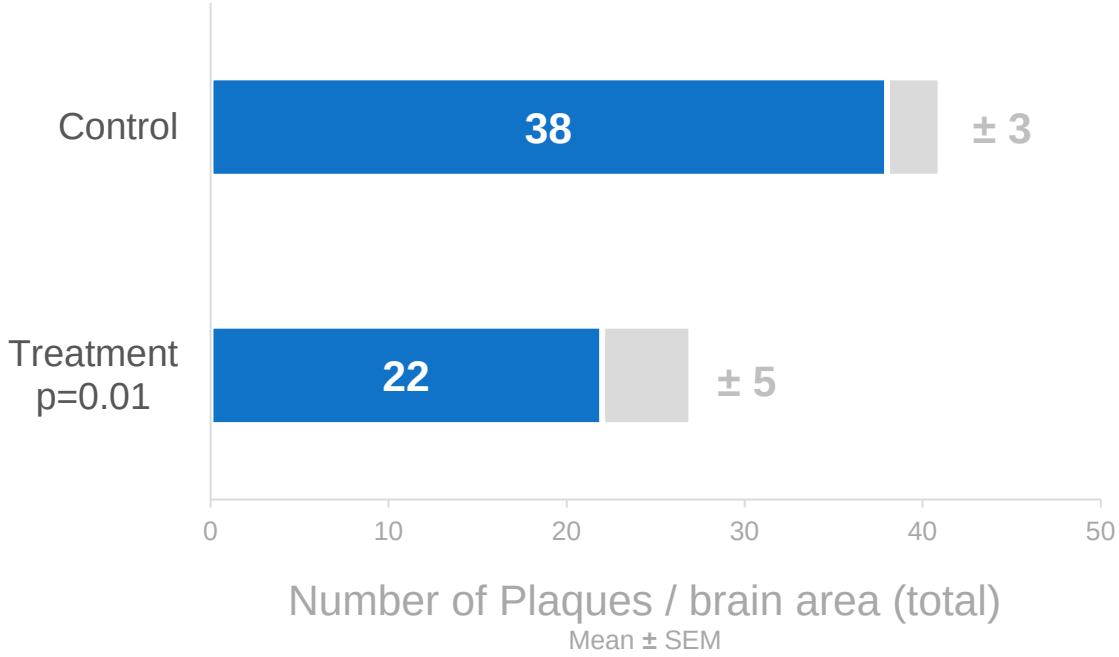
XANAMEM™

Symptomatic and disease modifying effects in mouse models

Cognition: treatment 28 days



Amyloid Clearance: treatment 28 days



Significant improvement in cognition after only 28 days treatment, continuing out to 41 weeks

UE2316 in Tg2576 rodent model of Alzheimer's disease.
Source: Sooy, et al., 2015. Endocrinology 156 (12) 4592-4603

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CLINICAL DEVELOPMENT

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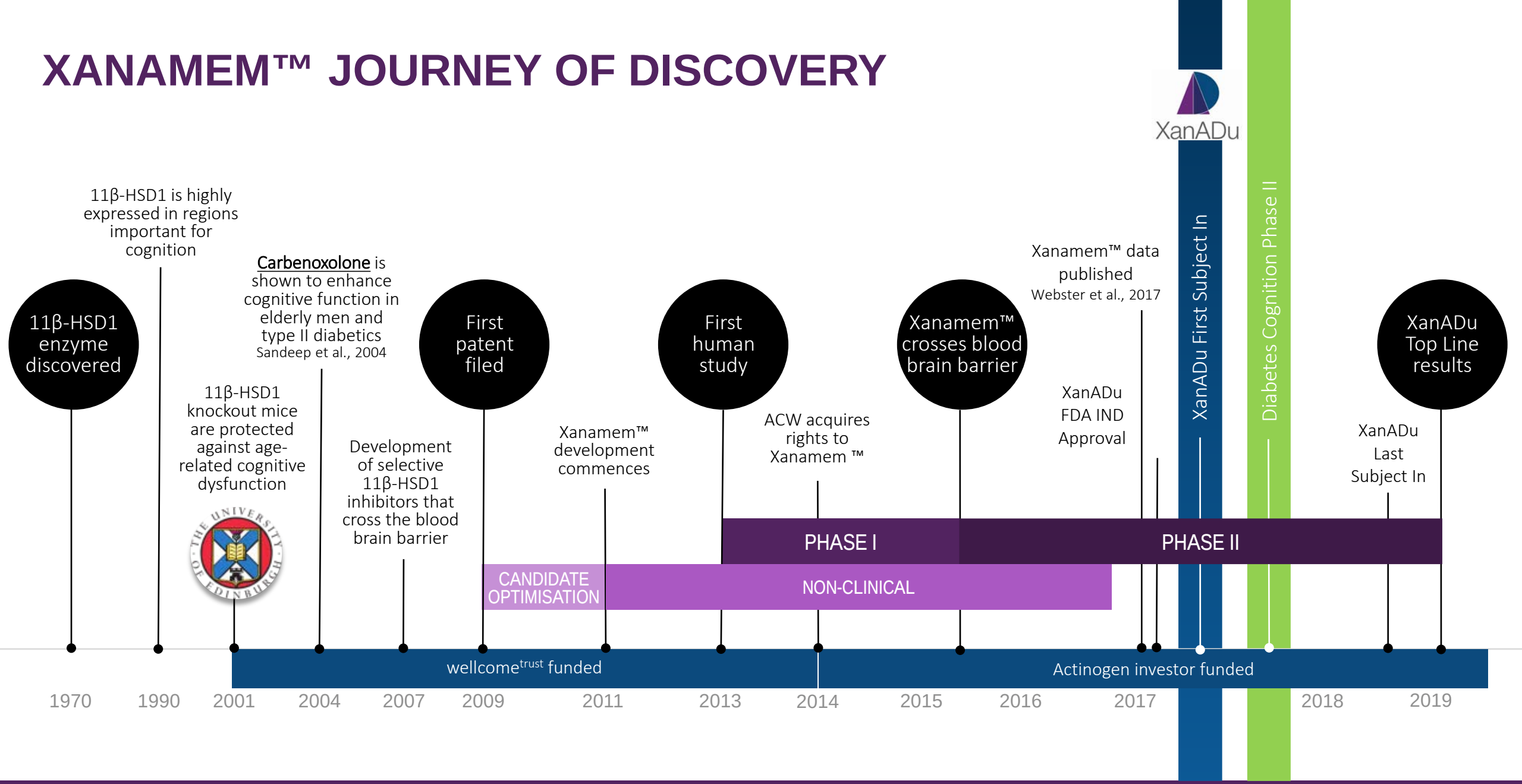
XANAMEM™ JOURNEY OF DISCOVERY



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XANAMEM™ COMPLETED CLINICAL STUDIES

(Building on extensive historic 11βHSD1 class safety data from metabolic disease research)

- A phase I **single ascending dose** (SAD) study [1]
  - Surrogate peripheral pharmacodynamic markers support **potent target engagement** (48 healthy males and females)
  - Low number of clinically insignificant treatment-emergent adverse events (TEAEs)
- A phase I **multiple ascending dose** (MAD) study[1]
  - TEAEs mild to moderate in intensity (24 healthy males)
- A phase I **single-dose fed-fasted crossover** study
  - TEAEs mild to moderate in intensity (12 healthy males)
- A phase I **CSF/plasma pharmacokinetic** study[1]
  - Xanamem **readily achieves CSF concentrations higher than its IC_{50}** (4 healthy males)
  - TEAEs mild to moderate in intensity.

[1] Webster *et al.*, 2017, British J Pharmacol 174:396-408;

XANADU PHASE II TRIAL

Phase II double blind, randomised, placebo-controlled study to assess the efficacy and safety of Xanamem™ in participants with mild Alzheimer's disease*

- First patient enrolled May 2017. All sites selected and most open in all 3 countries. Patients enrolled in Aus and USA
- On track for top line results in Q1 2019

Xanamem™ treatment course
12 weeks

174
Mild Alzheimer's patients

Xanamem™ 10mg daily
for 12 weeks Vs placebo

Trial conducted at 20 sites in
AUS, USA and UK

Primary and secondary endpoints are standard and experimental cognitive outcome measures used in Alzheimer's research:
ADASCog14, ADCOMs, CDR-SOB, MMSE, RAVLT, NTB-ED

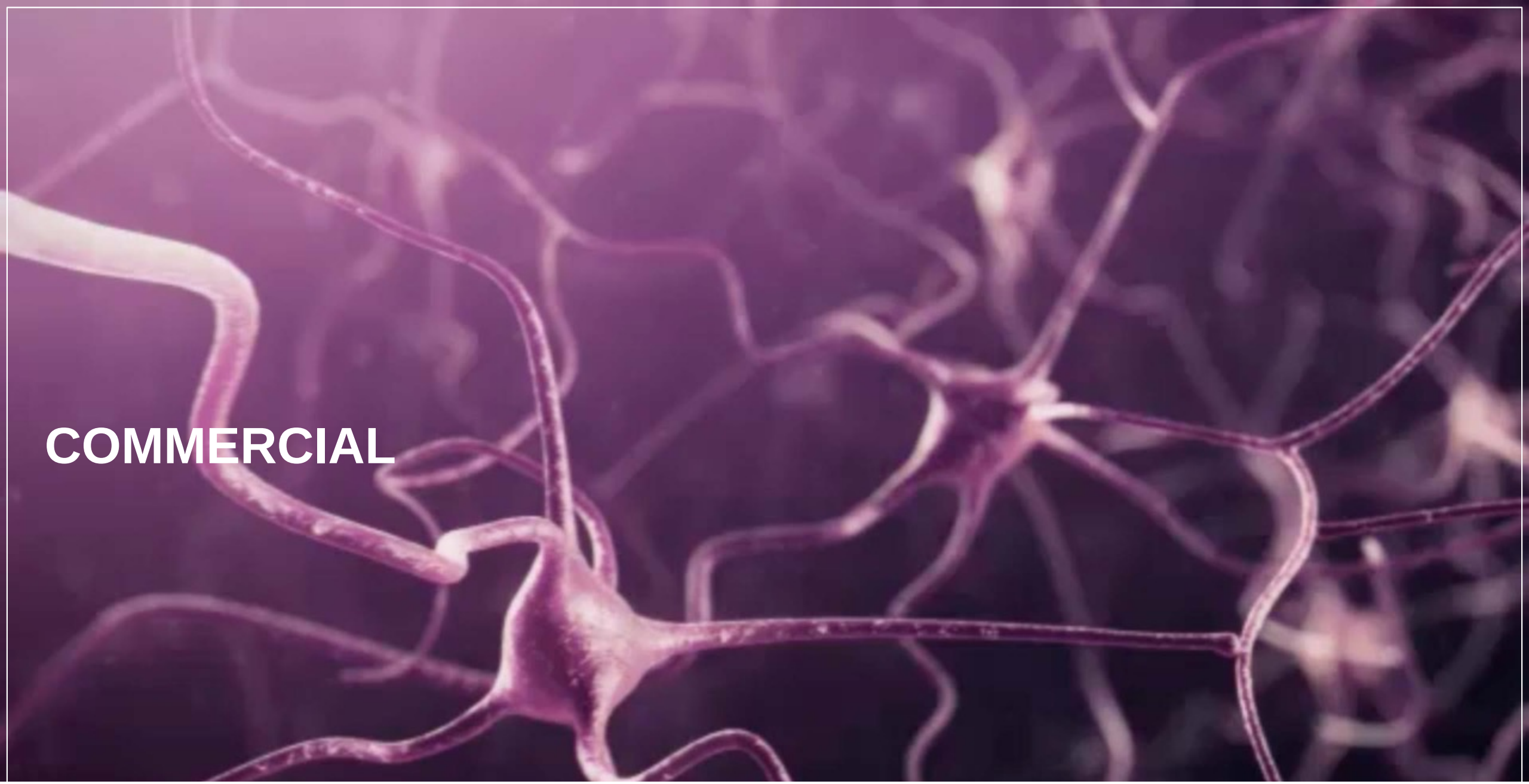
*Registered on Clinicaltrials.gov: NCT02727699

XANAMEM SECONDARY INDICATION – DCI

Diabetes-related mild Cognitive Impairment

- Several potential secondary indications considered
- DCI selected due to a strategic mix of scientific, clinical, and commercial factors
  - Type 2 Diabetes Mellitus (T2DM) is a significant risk factor for cognitive impairment and dementia [1-4]
  - T2DM patients more likely to show abnormalities in hypothalamic-pituitary-adrenal (HPA) axis regulation [5]
  - Non-selective 11βHSD1 inhibitor carbenoxolone demonstrated cognitive improvements in cognitively normal patients with T2DM [6]
  - Large potential patient population, >15M diabetes patients with dementia
  - Expert clinical development partner (University of Edinburgh, UK)

[1] Saedi *et al.*, 2016, World J Diabetes 7(17):412-422; [2] Whitmer *et al.*, 2009, JAMA 301(15):1565-1572; [3] Saczynski *et al.*, 2008, Am J Epidemiology 168(10):1132–1139; [4] Cukieman-Yaffe *et al.*, 2009, Diabetes Care 32(2):221-226; [5] Fienkohl *et al.*, 2015, Alzheimer's Research and Therapy 7:46; [6] Sandeep *et al.*, 2004, Proc Natl Acad Sci USA 101:6734–6739.



COMMERCIAL

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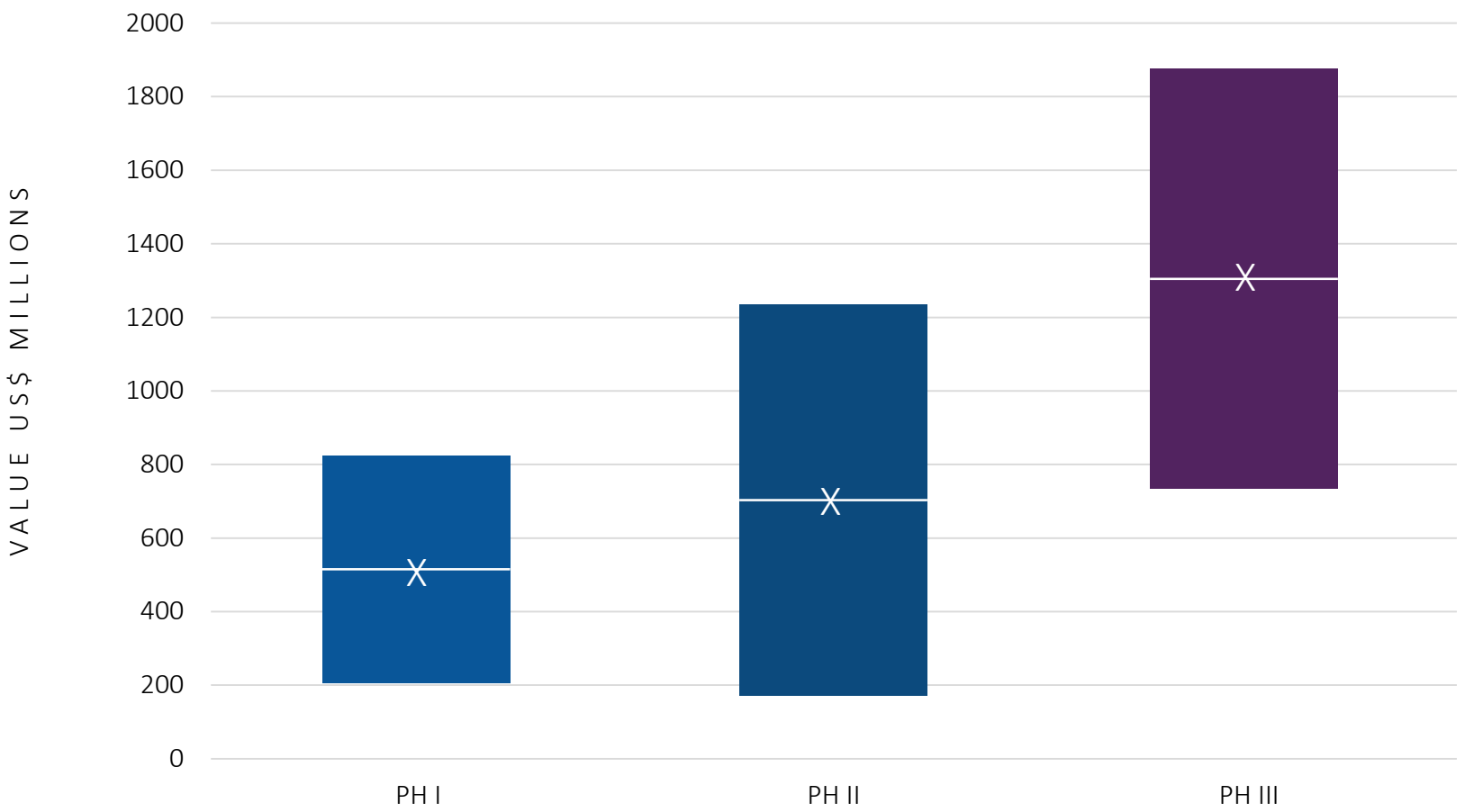
VALUE PROPOSITION

- Strong therapeutic rationale, differentiated mechanism of action
- Complementary to anti-Aβ, anti-Tau and other AD therapeutic strategies
- Solid non-clinical and clinical data set
- First in class compound, designed for brain penetration
- 11βHSD1 class safety data
- Significant opportunities in AD and DCI; positive outcomes to broaden indications
- Composition of matter IP coverage ≥ 2031, patents granted in most major markets
- Deep commercial, scientific and clinical expertise
- Strong commercial and clinical interest

PEER COMPARISON

What big pharma companies are paying for acquisition of drug developers in the Alzheimer's space



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SUMMARY

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- Strong therapeutic rationale, differentiated mechanism of action: blocking cortisol production in the brain
- Symptomatic and disease modifying effects *in vivo*
- Well-tolerated: acceptable clinical safety, toxicity and PK/PD profile
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- Planning for Phase II study in **Diabetes Cognitive Impairment**
- Complementary to anti-Aβ, anti-Tau and other AD therapeutic strategies
- Strong commercial and clinical interest
- Composition of matter IP coverage ≥ 2031, patents granted in most major markets
- Experienced board and management; expert scientific advisory board

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