Latest Investor Presentation

Sydney, 27 March 2017: Actinogen Medical (ASX: ACW) is pleased to attach its latest Investor Presentation slide-deck, which is available on the "Investor Centre" section of Actinogen's website. Investors can also click on the following link to access the Presentation – http://actinogen.com.au/acw-investor-centre/#newsletters-reports.

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$2 trillion 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 hearth 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. Patient recruitment into XanADu will begin in early Q2 2017 – topline results are expected in Q1 2019. 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.

INVESTOR PRESENTATION

Dr Bill Ketelbey CEO

March 2017

Actinogen Medical

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OVERVIEW

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A DEVASTATING DISEASE

Alzheimer’s disease is the leading cause of death in the UK and Europe and the second leading cause of death in Australia.

Of the top-ten leading fatal illnesses, it remains the only one that cannot be prevented, treated or cured.

Drugs available to treat Alzheimer's disease provide limited benefit.

CORPORATE OVERVIEW

Actinogen Medical (ASX:ACW) is focused on an innovative approach for treating Alzheimer's disease and cognitive impairment in chronic neurodegenerative diseases, through the inhibition of cortisol production.

- The Company is developing Xanamem™, a novel drug for treating Alzheimer's disease, which has been specifically designed to block the production of cortisol in the brain.
- The inhibition of cortisol is a new approach in treating Alzheimer's disease.
- There is a growing body of research reinforcing the strong association between excess cortisol and the development and progression of Alzheimer's disease.
- Xanamem™ has the potential to treat multiple other conditions, including diabetes cognitive impairment and PTSD.

STOCK METRICS*

ASX CODE	ACW
Market Capitalisation	$36.4m
Enterprise Value	$30.6m
52-week High/Low	$0.04-$0.10
Top 20 Shareholdings	55%

* Data as at 24 March 2017.

A SIMPLE BUT COMPELLING STORY

Xanamem™ - a novel therapy for Alzheimer's disease that suppresses cortisol (stress hormone) production in the brain.

Independent research shows a strong association between excess cortisol in the brain and Alzheimer's disease.

Human trial of cortisol inhibition in the brain demonstrates cognitive improvement in the elderly. (Sundeep at al 2004)

Xanamem™ demonstrated a significant improvement in cognition in a mouse model of AD after only 28 days treatment, which continued out to 41 weeks. (Sooy et al 2015)

Phase I human trials confirm that Xanamem™ successfully crosses the blood-brain barrier and is safe for use in humans. (Walker et al 2017)

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BOARD OF DIRECTORS

DR GEOFF BROOKE
CHAIRMAN

Dr Brooke is a clinically trained physician turned venture capitalist with over 30 years' experience in the healthcare investment industry. He was the founder and managing director of two venture capital firms, Medvest Inc and GBS Venture Partners. GBS is viewed as one of the Asia Pacific region's premier healthcare venture investors.

Dr Brooke has been a major investor, chairman or director of companies in the healthcare sector with a combined realised value of $1.5 billion. Dr Brooke's expertise includes assisting high growth technology-based companies in areas such as development strategy, clinical trial design, fund raising, management structuring and investment exits.

Dr Brooke is a medical graduate of the University of Melbourne and has an MBA from IMEDE (now IMD), Lausanne Switzerland.

DR BILL KETELBEY
CEO & MANAGING DIRECTOR

Dr Ketelbey has 30 years' experience in the healthcare and pharmaceutical industry, including senior medical and management roles in the Asia Pacific Region with global pharmaceutical company Pfizer. Dr Ketelbey led the local clinical development, and was involved in the commercialisation, of Aricept™ (donepezil), the market-leading Alzheimer's disease therapy. More recently, he was involved in developing another therapy directed at clearing the amyloid plaques that are a feature of disease progression in Alzheimer's.

Dr Ketelbey is a medical graduate from the University of the Witwatersrand, South Africa and a Fellow of the Faculty of Pharmaceutical Physicians from the Royal College of Physicians in the United Kingdom. He also has an MBA from Macquarie Graduate School of Management, Australia, and is a Graduate of the Australian Institute of Company Directors.

DR JASON LOVERIDGE
NON-EXECUTIVE DIRECTOR

Dr Loveridge has been working in the biomedical technology industry for over 20 years and has extensive experience in developing clinical stage biotechnology companies. As a venture investor with JAFCO Nomura, Dr Loveridge participated and invested in the start-up of over 24 companies in Europe, the United States and Israel. Since 2005, he has been directly involved in senior management of a number of small innovative companies in the biomedical field, specifically in refinancing and product commercialisation.

In addition to Actinogen Medical, Dr Loveridge is also a Non-Executive Director of Resonance Health (ASX: RHT) and CEO of German based biopharmaceutical company 4SC AG.

DR ANTON UVAROV
NON-EXECUTIVE DIRECTOR

Dr Uvarov has significant experience as an equity analyst in the healthcare industry with a focus on biotechnology, both domestically and internationally. Prior to moving to Australia, he was with Citigroup Global Markets where he spent two years as a member of New York based biotechnology team that has been continuously ranked in the top four (in Biotechnology) in the All-America Institutional Investor survey. Dr Uvarov's scientific expertise and company knowledge spreads across a variety of therapeutic areas and spectrum of market capitalizations and he has a particular interest in early stage biotechnology companies.

Dr Uvarov holds a PhD degree in Biochemistry and Medical Genetics from the University of Manitoba, Canada and an MBA degree from the University of Calgary, Canada.

XANAMEM™ CLINICAL ADVISORY BOARD

PROFESSOR CRAIG RITCHIE (CHAIR)

Professor Ritchie is a world-leading authority on dementia and has been a senior investigator on more than 30 drug trials of both disease-modifying and symptomatic agents for the condition. Professor Ritchie is leading the PREVENT project to identify mid-life risks for dementia, and the European Prevention of Alzheimer's Dementia (EPAD) consortium, to understand early aspects of Alzheimer's disease before dementia develops.
Professor Ritchie has extensive knowledge of the pharmaceutical industry, having sat on advisory boards of numerous pharmaceutical companies, biotechnology companies, and clinical research organizations, all with an in interest in developing drugs and clinical trials for Alzheimer's disease. Professor Ritchie is the Chair of the Psychiatry of Ageing and Director of the Centre for Dementia Prevention at the University of Edinburgh.

PROFESSOR COLIN MASTERS AO

Professor Masters' research career in Alzheimer's disease and other neurodegenerative diseases spans over 35 years. He is widely acknowledged as a major worldwide influencer on Alzheimer's disease research and our understanding of what causes the disease. More recently, his focus has been on describing the natural history of Alzheimer's disease as a necessary step for therapeutic intervention.
Professor Masters is a driving force behind the Australian Imaging, Biomarkers & Lifestyle (AIBL) study to determine which biomarkers, cognitive characteristics, and health and lifestyle factors determine subsequent development of Alzheimer's.
Professor Masters is the Laureate Professor of Dementia Research, Head, Neurodegeneration Division at The Florey Institute, The University of Melbourne and he is also a consultant at the Royal Melbourne Hospital.

PROFESSOR JEFFREY CUMMINGS

Professor Cummings is a world leader in clinical trials and developing new therapies for brain diseases. His significant contribution to Alzheimer's disease research has been recognized through the Henderson Award of the American Geriatrics Society (2006), the Research Award of the John Douglas French Alzheimer's Research Foundation (2008), and the Ronald and Nancy Reagan Research Award of the national Alzheimer's Association (2008). In 2010, he was honoured by the American Association of Geriatric Psychiatry with their Distinguished Scientist Award.
Professor Cummings is the Camille and Larry Ruvo Chair of the Neurological Institute of Cleveland Clinic and Professor of Medicine (Neurology), Cleveland Clinic Lerner College of Medicine, Case Western Reserve University.

MARKET OPPORTUNITY AND ABOUT XANAMEM™

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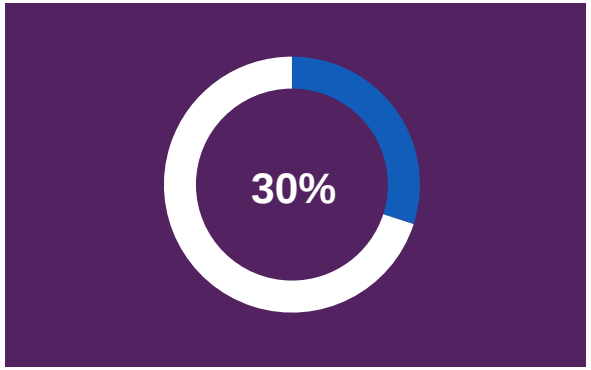
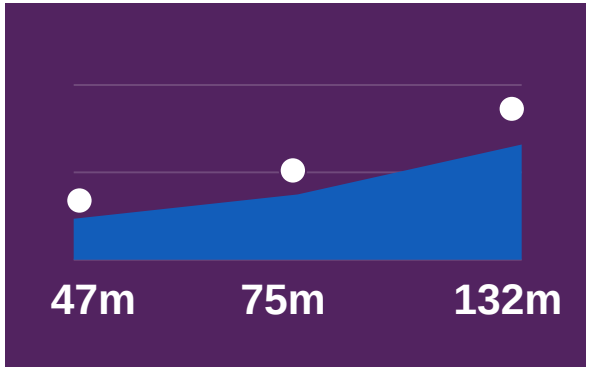
ALZHEIMER'S DISEASE: A VAST UNMET MEDICAL NEED

- There are nearly 50 million Alzheimer's disease sufferers world-wide and the number is set to double every 20 years.
- It's the leading cause of death in the UK and second only to heart disease in Australia.
- Of the top-ten leading fatal illnesses, Alzheimer's remains the only one that cannot be prevented, treated or cured.
- There are only 4 drugs available to treat Alzheimer's disease (donepezil, rivastigmine, galantamine, memantine), however they all provide only limited symptomatic benefit – generally around 6 months. Once the patient fails on one of these, there are no alternatives.



30% OF 85 YEAR OLDS HAVE ALZHEIMER'S DISEASE

1 in 3 seniors will die with Alzheimer's disease or other dementia



NUMBERS WILL DOUBLE EVERY 20 YEARS

ONE PERSON EVERY 3 SECONDS

Globally there were ~10m new cases of dementia in 2015

TOTAL COST RISES TO US$2 TRILLION BY 2030

Dementia will become a trillion dollar disease by 2018

The Alzheimer's Association Facts and Figures, 2014. The World Alzheimer's Report.

WHY THERE IS VAST MARKET POTENTIAL FOR XANAMEM™

- The incidence and cost of treating Alzheimer’s is growing rapidly. Management of Alzheimer's will swamp available budgets.
- There are currently only four approved drugs to treat Alzheimer’s, none of which modify the underlying disease and only provide limited benefit for around six months.
- Sales of the leading global treatment, Aricept totaled $2.5bn in 2016 (even as a generic medicine), showing that Xanamem™ has the potential to be a blockbuster treatment.

THE CURRENT STATE OF AD DRUGS IN DEVELOPMENT

- There are around 100 different compounds in human research for Alzheimer's disease.
- Xanamem is only one of two cortisol inhibitors under development.
- Xanamem will be used in combination with other drugs under development.
- Xanamem is an oral medication

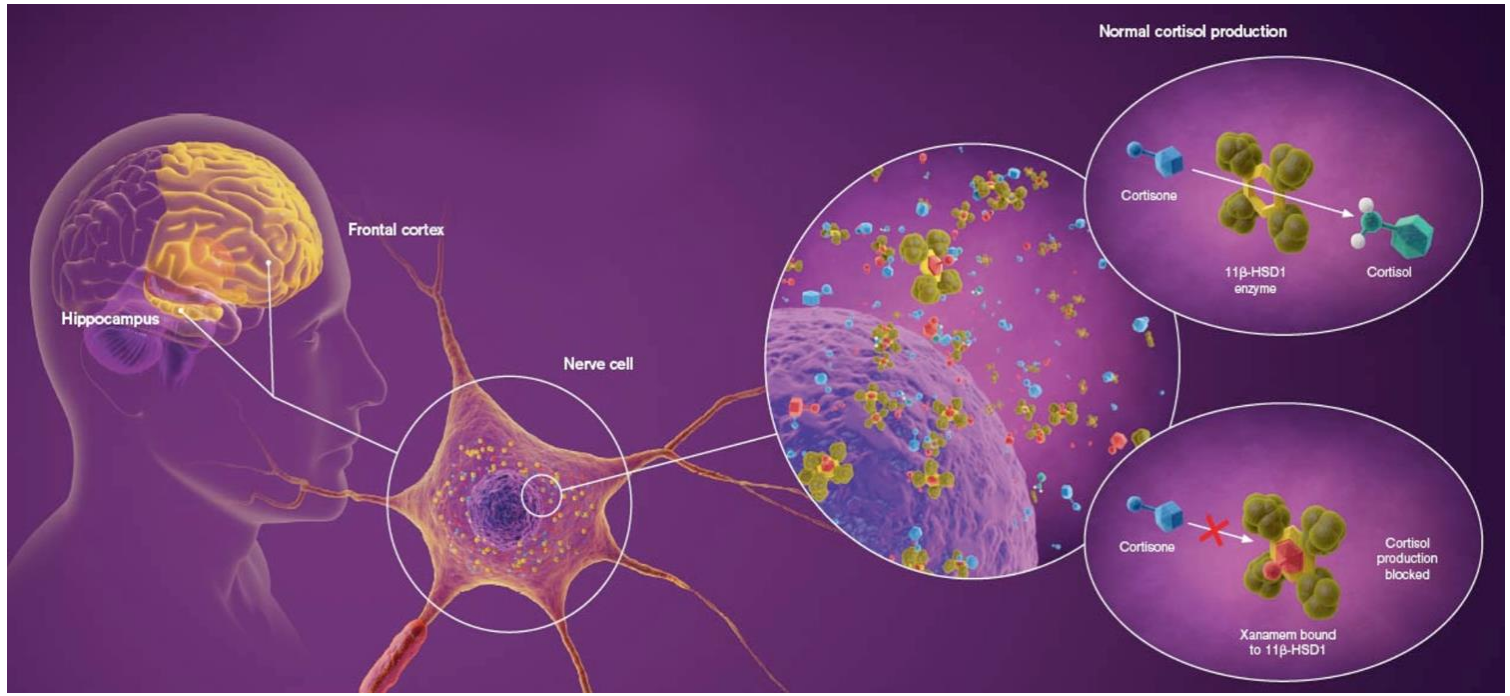
THERAPEUTIC CLASSES	MECHANISM CLASSES	PHASE I	PHASE II	PHASE III
SYMPTOM RELIEF	11β-HSD1 enzyme inhibition	1	1	-
	Neuroprotective	5	13	1
	Neurotransmitter-based	3	13	6
DISEASE MODIFYING	Anti-amyloid (except BACE inhibitor)	11	9	9
	BACE inhibitor	1	4	4
	Anti-Tau	2	1	1
	Metabolic	2	6	3

Source: Cummings, J., et al., 2016

ABOUT XANAMEM™

Actinogen Medical's research candidate, Xanamem™, is a novel drug under development for the treatment of Alzheimer's disease.

- Research has demonstrated that increased cortisol, also known as the "stress hormone", is associated with cognitive impairment, the development of beta-amyloid plaques and nerve death in the brain – the hallmarks of Alzheimer's disease.
- Xanamem™ has been specifically designed to block the production of cortisol in the brain, and in the areas of the brain most commonly affected by Alzheimer's.
- Xanamem™ has the potential to treat multiple other conditions, including diabetes cognitive impairment and PTSD.



VALIDATION

CORTISOL and ALZHEIMER'S:

- A number of recent independent studies support the association between cortisol and the development and progression of Alzheimer's disease.
  (Geerlings et al 2015, Lehallier et al 2015, Popp et al 2015, Ennis et al 2017, Peitrzak et al 2017)
- Some of the most compelling evidence provided by the Australian Imaging, Biomarker & Lifestyle Study of Ageing (AIBL) study published in early 2017.
- The study, which is part-funded by the CSIRO and a number of universities, followed 416 healthy elderly Australians over nearly six years.
- AIBL concluded that those subjects with a higher blood cortisol had a much greater chance of developing Alzheimer's disease. (Peitrzak et al 2017)

Archival Report

Biological Psychiatry: CNNI

Plasma Cortisol, Brain Amyloid-β, and Cognitive Decline in Preclinical Alzheimer's Disease: A 6-Year Prospective Cohort Study

Robert H. Pietrzak, Simon M. Laws, Yen Ying Lim, Sophie J. Bender, Tenielle Porter, James Doecke, David Ames, Christopher Fowler, Colin L. Masters, Lidija Milicic, Stephanie Rainey-Smith, Victor L. Villemagne, Christopher C. Rowe, Ralph N. Martins, and Paul Maruff, for the Australian Imaging, Biomarkers and Lifestyle Research Group

ABSTRACT

BACKGROUND: Hypothalamic-pituitary-adrenal axis dysregulation, which is typically assessed by measuring cortisol levels, is associated with cognitive dysfunction, hippocampal atrophy, and increased risk for mild cognitive impairment and Alzheimer's disease (AD). However, little is known about the role of hypothalamic-pituitary-adrenal axis dysregulation in moderating the effect of high levels of amyloid-β (Aβ+) on cognitive decline in the preclinical phase of AD, which is often protracted, and thus offers opportunities for prevention and early intervention.

British Journal of Pharmacology

British Journal of Pharmacology (2017) •• ••–•• 1

RESEARCH PAPER

Selection and early clinical evaluation of the brain-penetrant 11β-hydroxysteroid dehydrogenase type 1 (11β-HSD1) inhibitor UE2343 (Xanamem™)

Correspondence Scott P Webster, Centre for Cardiovascular Science, University of Edinburgh, Queen's Medical Research Institute, 47 Little France Crescent, Edinburgh EH16 4TJ, UK. E-mail: scott.webster@ed.ac.uk

Received 23 August 2016; Revised 21 November 2016; Accepted 15 December 2016

Scott P Webster[1], Andrew McBride[1], Margaret Binnie[1], Karen Sooy[1], Jonathan R Seckl[1], Ruth Andrew[1], T David Pallin[2], Hazel J Hunt[3], Trevor R Perrior[4], Vincent S Ruffles[5], J William Ketelbey[5], Alan Boyd[6] and Brian R Walker[1]

XANAMEM™:

- Xanamem™ data presented at four major international medical congresses in 2016 – AAIC Toronto; CTAD San Diego; ICE Beijing; MMC Lisbon.
- Xanamem™ pre-clinical and Phase I data published. (Sooy et al 2015; Walker et al 2017)

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CLINICAL DEVELOPMENT

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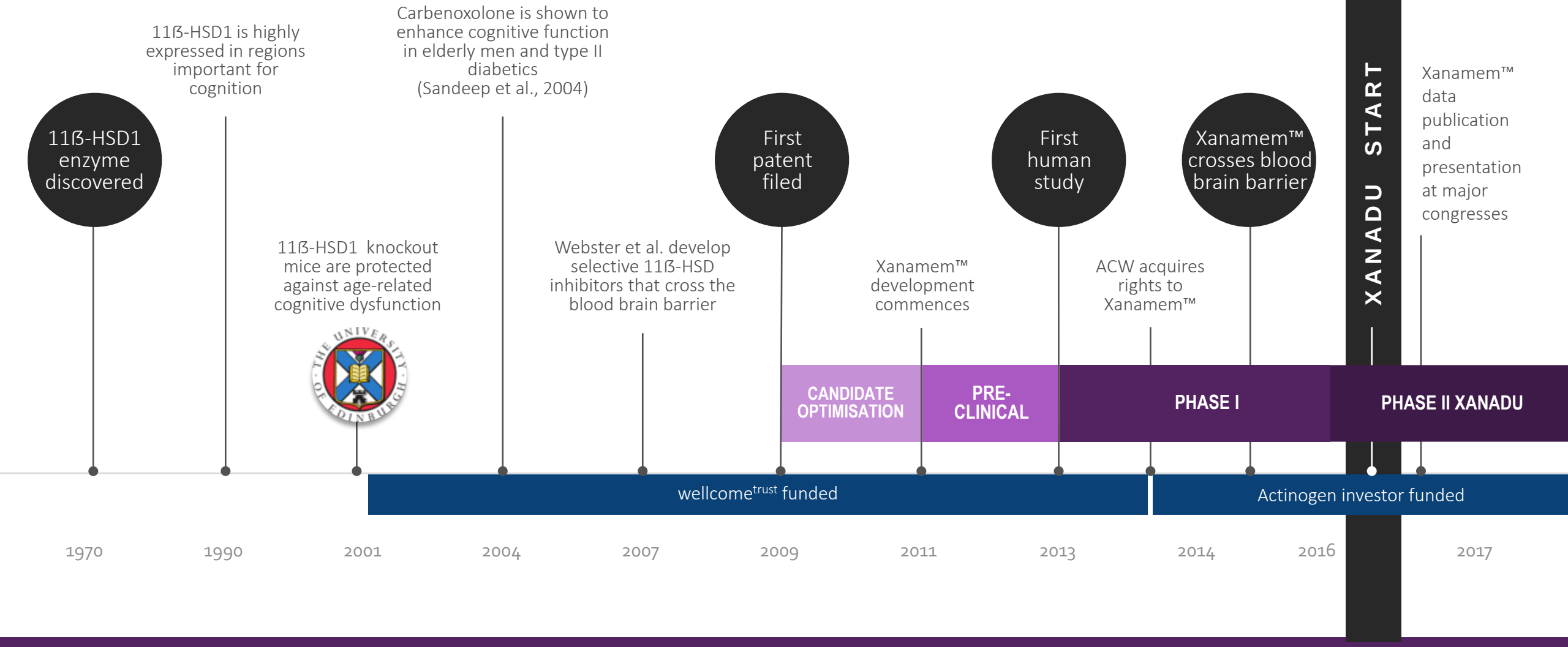
HISTORICAL TIMELINE



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

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 cognitive outcome measures used in Alzheimer's research:

ADASCog14, ADCOMs, CDR-SOB, MMSE, RAVLT, NTB-ED

*Registered on Clinicaltrials.gov: NCT02727699

DISEASES BEING TARGETED WITH XANAMEM™

	PRE-CLINICAL	PHASE I	PHASE II
Alzheimer's disease XanADu	→	→	→
Diabetes cognitive impairment	→	→	→
Post traumatic stress disorder	→		
Post myocardial infarction	→		

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VALUATION AND OUTLOOK

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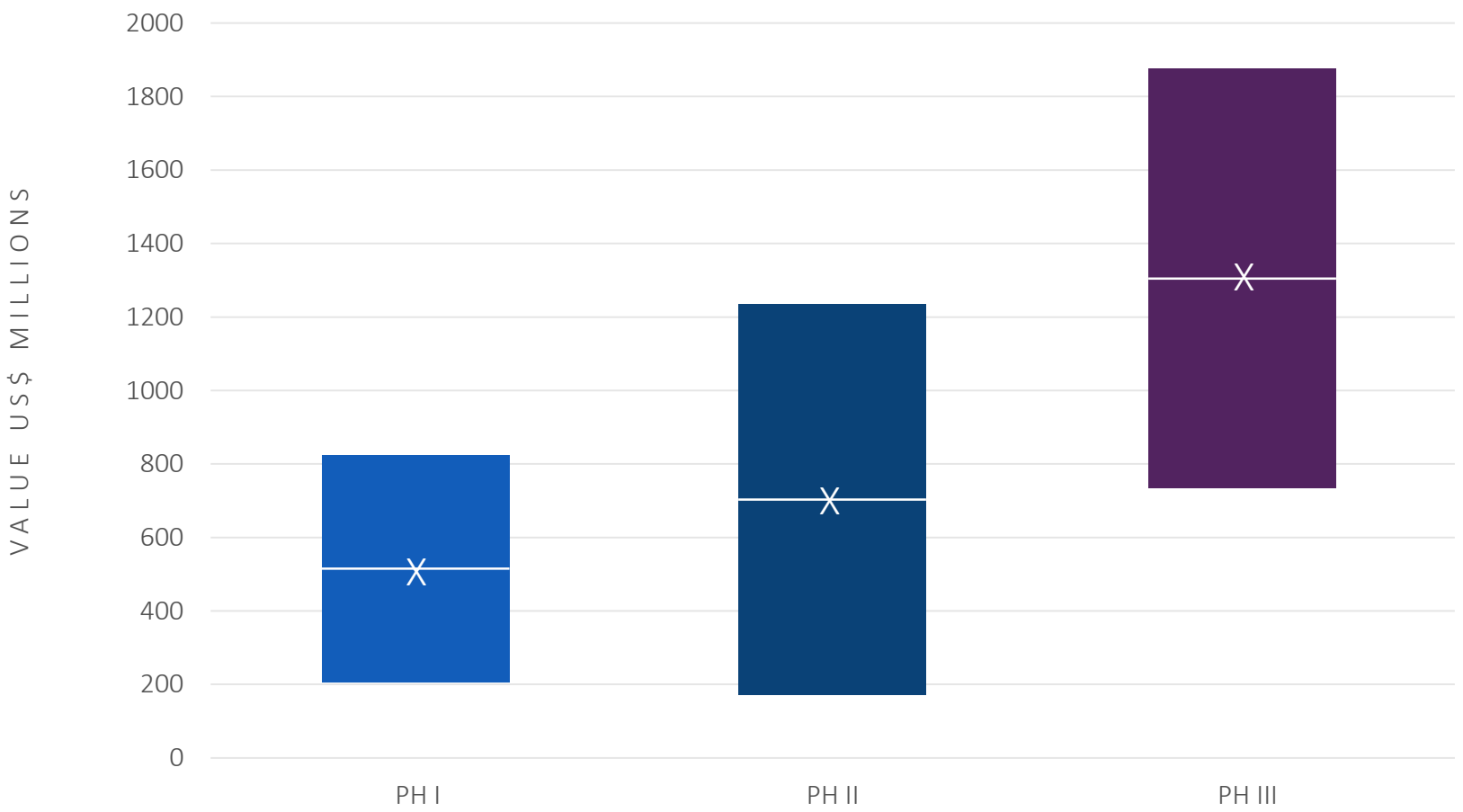
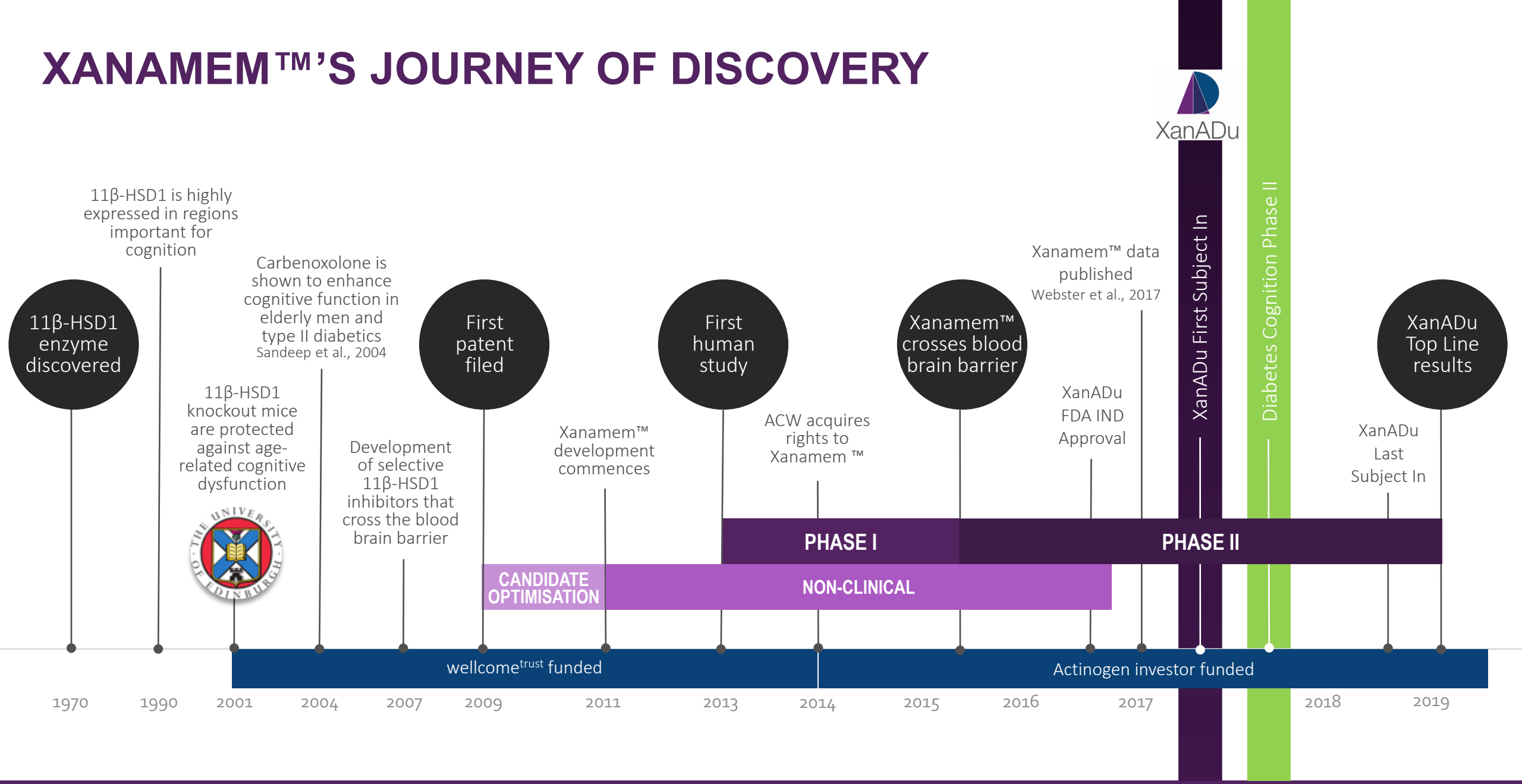
PEER COMPARISON

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



XANAMEM™'S JOURNEY OF DISCOVERY



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INVESTMENT SUMMARY

Huge unmet medical need: The total cost of Alzheimer's to rise to $US 1 trillion by 2020 and there are currently only four approved drugs approved to treat the symptoms of Alzheimer's disease. None significantly alters the course of the disease.

Novel approach: The association between cortisol and Alzheimer's disease is strongly supported by numerous studies, including the leading AIBL study funded by the Australian CSIRO and various universities.

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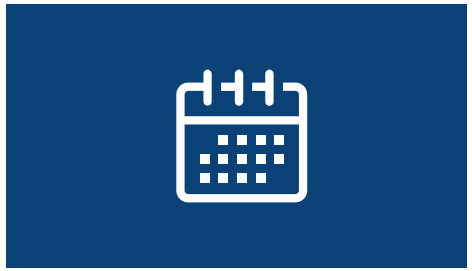
Multiple Potential Indications: Actinogen has identified a number of potential indications for Xanamem™ that substantially increases the scope of the Company's development pipeline.



Xanamem™ has a long patent life: Xanamem has composition-of-matter patent protection through to 2031 giving Actinogen a substantial window to benefit from a successful commercialisation.

Highly experienced Board and management team: Board and management have invaluable expertise in drug development, commercialisation and clinical research.

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