ASX ANNOUNCEMENT

Cognitive improvement demonstrated with Xanamem™

- **Statistically significant results demonstrate cognitive improvement in healthy elderly subjects dosed with 20mg Xanamem daily in the XanaHES dose escalation study**
- **Statistically significant reduction in serum cortisol following treatment with Xanamem 20mg daily**
- **Xanamem 20mg daily continues to exhibit a good safety profile with no serious adverse events observed**
- **Results significantly enhance the Xanamem dataset and help shape Actinogen's drug development strategy for the treatment of Alzheimer's disease and other neurological and metabolic diseases associated with cognitive impairment**
- **Company to host a Conference Call on October 1st, 2019 (today) at 10:30am (AEST)**

Sydney 1 October 2019: Actinogen Medical ASX: ACW ('ACW' or 'the Company') is delighted to announce results from the XanaHES *(Xanamem in Healthy Elderly Subjects)* trial. The results demonstrate a significant improvement in cognition in trial participants dosed with Xanamem 20mg daily for 12 weeks, compared to placebo. This is the first time Xanamem has shown such a clear, statistically significant cognitive improvement in humans.

These breakthrough results reinforce the hypothesis and science underpinning the discovery and development of Xanamem - that lowering persistently raised cortisol levels in the brain is expected to positively enhance cognition.

Results from the study also showed that Xanamem, at a dose of 20mg daily, significantly ($p<0.001$) reduced serum cortisol levels in the trial participants over the study period. Furthermore, Xanamem 20mg daily exhibited a good safety profile over the 12 weeks of treatment, with no reports of serious adverse events.

Professor Michael Woodward from the Austin Health in Melbourne and one of the leading investigators in the XanADu trial said*: "It is just so pleasing and encouraging to see this positive efficacy data for Xanamem, following the disappointment of the XanADu trial. There have been so many past failures with the development of Alzheimer's drugs, so these promising results offer renewed hope for a treatment breakthrough for this devastating disease".*

As previously announced, the XanADu trial in mild Alzheimer's patients showed that Xanamem 10mg daily was safe and altered the cortisol pathway but did not demonstrate an improvement in cognition.

The XanaHES trial was primarily designed as a placebo-controlled study to investigate the safety of 20mg Xanamem in healthy elderly subjects, but also included an exploratory assessment of cognition to evaluate the cognitive efficacy of Xanamem, using the industry standard Cogstate Cognitive Test Battery. The Cogstate Battery evaluated six domains of cognition, with the goal of broadly investigating whether 20mg Xanamem daily could positively influence cognition. Results from this trial show cognitive improvement in three of the six domains investigated after 12 weeks treatment (see table 1 below for more detail):

- One Back Test: evaluating working memory - highly statistically significant ($p<0.01$ with an effect size of 0.83)
- Identification Test: evaluating visual attention – statistically significant ($p=0.05$ with an effect size of 0.67)

- Detection Test: evaluating psychomotor function – trend to statistical significance (p=0.09 with an effect size of 0.76).

Effect size is a quantitative measure of the magnitude of a result indicating that treatment with 20mg Xanamem daily has a potentially important impact on these cognitive domains. See table 1 below for more details.

These results demonstrate an encouraging clinical efficacy signal in cognitive domains that are core to cognitive evaluation across many diseases.

Actinogen Medical Clinical Advisory Board member, Professor Jeff Cummings from the Cleveland Clinic in the USA commented*: "These results from the XanaHES study provide Actinogen with evidence of Xanamem's ability to enhance cognition and inhibit cortisol production. Considering the broad array of medical conditions presenting with cognitive impairment and an associated raised cortisol, these promising results provide many opportunities for the ongoing development of the drug."*

Enhancement of cognition in the XanaHES trial supports Xanamem's potential for the treatment of Alzheimer's disease and other conditions associated with cognitive impairment, including mood disorders like bipolar disorder, and schizophrenia

Actinogen CEO Dr Bill Ketelbey said: *"These are the results we have been looking for. They are hugely important for the development of Xanamem and for the potential for Xanamem to treat Alzheimer's disease and other conditions associated with cognitive impairment"*

"As we gather and analyse more data from XanaHES and the other ongoing studies, we are building a much clearer picture of Xanamem's pharmacology, potential efficacy, safety, and mechanism of action; all of which will aid substantially in planning the future clinical development and commercialisation strategy for the drug."

"We look forward to sharing Actinogen's future development plans for Xanamem once they have been reviewed alongside these very pleasing results."

Table 1: Results summary

COGNITIVE EVALUATION (Test)	P value	Effect Size: Cohen's d			
		Week 2	Week 4	Week 8	Week 12
WORKING MEMORY (One Back Test)	<0.01*	0.64#	0.78#	0.64#	0.83Δ
VISUAL ATTENTION (Identification Test)	0.05*	0.19	0.67#	0.62#	0.67#
PSYCHOMOTOR FUNCTION (Detection Test)	0.09	0.47	0.65#	1.12Δ	0.76#

Notes: * statistical significance achieved;
effect size >0.5 (medium treatment effect);
Δ effect size >0.8 (large treatment effect)

Conference Call at 10.30am today

The Company will host a **conference call at 10:30am (AEST) on Tuesday 1st October 2019 (today).**

The presentation that will be referred to in the call, is attached to this announcement.

The Company invites participants to ask questions during the call. In addition, interested parties may submit questions prior to the call to info@actinogen.com.au.

Participants are encouraged to pre-register for the call here:

https://s1.c-conf.com/DiamondPass/Actinogen-invite.html

You will receive a PIN and diary note for fast-track entry to the call. Alternatively, participants may dial in at the scheduled time using the dial-in number below

Conference ID: 10002238

AUSTRALIA:	1800 870 643
ALTERNATIVE AUSTRALIAN NUMBER:	1800 809 971
OTHER INTERNATIONAL (METERED):	+61 7 3145 4010
SYDNEY:	02 9007 3187
NEW ZEALAND:	0800 4530 55
AUCKLAND:	0992 9168 7
CHRISTCHURCH:	0397 4263 2
WELLINGTON:	0497 4773 8
CHINA:	4001 2006 59
FRANCE:	0800 9814 98
GERMANY:	0800 1827 617
HONG KONG:	8009 66806
JAPAN:	0053 1161 281
SINGAPORE:	8001 0127 85
SOUTH KOREA:	0079 8142 0632 75
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About Actinogen Medical

Actinogen Medical (ASX: ACW) is an ASX-listed biotechnology company focused on innovative approaches to treating cognitive decline that occurs in chronic neurological and metabolic diseases. Actinogen Medical is developing its lead compound Xanamem, as a promising new therapy for Alzheimer's disease, a condition with multibillion-dollar market potential and material human impact. In the US alone, the cost of managing Alzheimer's disease is estimated to be US$250bn and is projected 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. In addition, Actinogen is currently planning an expanded clinical development program for Xanamem in cognitive impairment in mood disorders and schizophrenia. In the US alone, the collective economic costs of mood disorders and schizophrenia are estimated to exceed $550bn, with the burden increasing every year. The cognitive dysfunction associated with these conditions is significantly debilitating for affected patients, with a substantial unmet medical need for novel, improved treatments.

About Xanamem™

Xanamem's novel mechanism of action sets it apart from other Alzheimer's treatments. Xanamem is brain penetrant and works by blocking the excess production of cortisol - the stress hormone – through the inhibition of the 11β-HSD1 enzyme. There is a strong association between chronic stress and excess cortisol that leads to changes in the brain affecting memory. The 11β-HSD1 enzyme is highly concentrated in the hippocampus and frontal cortex, the areas of the brain associated with cognitive impairment in neurological diseases, including Alzheimer's disease, mood disorders and schizophrenia.

About XanADu

XanADu is a Phase II double-blind, 12-week, randomised, placebo-controlled study to assess the safety, tolerability and efficacy of 10mg Xanamem once daily in subjects with mild dementia due to Alzheimer's disease. XanADu has fully enrolled 186 patients from 25 research sites across Australia, the UK and the USA. The trial is registered on www.clinicaltrials.gov with the identifier: NCT02727699, where more details on the trial can be found, including the study design, patient eligibility criteria and the locations of the study sites.

About XanaHES

XanaHES is a Phase I, randomised, single blinded, central reader blinded, placebo-controlled, dose escalation study to assess the safety and tolerability of Xanamem™ 20mg & 30mg once daily in healthy elderly volunteers. The XanaHES trial randomised 42 healthy elderly participants to receive either 20mg Xanamem daily (30 subjects) or placebo daily (12 subjects) for 12 weeks. Changes in cognitive performance from baseline to end-of-treatment will be measured as an exploratory efficacy outcome.

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