

5th International Conference on

Alzheimer's Disease & Dementia

September 29-October 01, 2016 London, UK

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6XQGD\ \$ \$MD\L 'HUHN \$ 'LRQQH 'DULD) +XWFKLQVRQan@HDPND ORKQMRGDQMD 6RR 6KHUQD]
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Insulin deficiency and insulin resistance has both been reported in Alzheimer's disease. This study was designed to examine whether insulin protein or markers of insulin promoter activity can be observed in the mouse brain and to also determine the effects of brain-specific insulin gene (Ins2) knockout on behaviour to ascertain the possible role of insulin produced locally in the brain. We have employed germline Ins2 knockout mice (Ins2^{-/-}), heterozygous mutant mice (Ins2^{+/-}), and their wildtype littermate controls (Ins2^{+/+}), as well as cell type specific Ins2 knockout mice derived by crossing NesCre, SynCre, or CamkCre mice with mice harboring a loxP-flanked Ins2 allele (on the Ins1^{-/-} background). Mice were genotyped using PCR. Insulin mRNA analysis using qPCR confirmed the deletion of the Ins2 gene in the germline knockout animals, but revealed a paradoxical increase in Ins2 mRNA in many brain regions of the Ins1^{-/-}

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