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Author: Andrew R. Tee Julian R. Sampson Deb K. Pal Joseph M. Bateman

PII: S1084-9521(16)30038-6
DOI: http://dx.doi.org/doi:10.1016/j.semcdb.2016.01.040
Reference: YSCDB 1951

To appear in: *Seminars in Cell & Developmental Biology*

Received date: 26-10-2015
Revised date: 5-1-2016
Accepted date: 25-1-2016

Please cite this article as: Tee Andrew R, Sampson Julian R, Pal Deb K, Bateman Joseph M.The role of mTOR signalling in neurogenesis, insights from tuberous sclerosis complex.*Seminars in Cell and Developmental Biology* http://dx.doi.org/10.1016/j.semcdb.2016.01.040

The role of mTOR signalling in neurogenesis, insights from tuberous sclerosis complex

Andrew R. Tee[1], Julian R. Sampson[1], Deb K. Pal[2] and Joseph M. Bateman[3#]
[#]Corresponding author

[1]Institute of Cancer & Genetics
Cardiff University School of Medicine
Institute of Medical Genetics Building
Heath Park
Cardiff CF14 4XN
U.K.

[2]Department of Basic & Clinical Neurosciences
Institute of Psychiatry, Psychology & Neuroscience
King's College
London SE5 8RX
U.K.

[3]Wolfson Centre for Age-Related Diseases
King's College London
Guy's campus
London, SE1 1UL
U.K.

Abstract

Understanding the development and function of the nervous system is one of the foremost aims of current biomedical research. The nervous system is generated during a relatively short period of intense neurogenesis that is orchestrated by a number of key molecular signalling pathways. Even subtle defects in the activity of these molecules can have serious repercussions resulting in neurological, neurodevelopmental and neurocognitive problems including epilepsy, intellectual disability and autism. Tuberous sclerosis complex (TSC) is a monogenic disease characterised by these problems and by the formation of benign tumours