



Oxytocin prevents corticosterone-induced dendritic atrophy in mouse hippocampal neurons



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I am a medical doctor and a lecturer at the Department of Physiology, University of Medicine, Mandalay, the Republic of the Union of Myanmar. I was chosen as a long term participant in the Project for Enhancement of Medical Education (PEME) in Myanmar, which is sponsored by Japan International Cooperation Agency (JICA) in collaboration with the Six National Universities Network (SUN). I have studied my doctoral degree under supervision of Prof. Hideki Matsui and Dr. Hioaki Matsushita of the Department of Cellular Physiology, Okayama University since April, 2015.

Our group focuses on the role of oxytocin (OT)-OT receptor (OTR) system in stress regulation. OT, a neuropeptide produced in the hypothalamus, is essential in parturition and lactation. In the brain, OT plays an important role in regulation of emotional, parental, affiliative and sexual behaviors. Perturbed OT signaling is linked to several neurodevelopmental and psychiatric disorders, and OT has been shown to have anti-stress- and antidepressant-like effects in mice and rats. Intranasal OT has been shown to have positive effects in patients with post-traumatic stress disorder and major depressive disorder. We have shown that OT has inhibitory effects on

CORT-induced neuronal atrophy as well as neuronal death in primary cultured hippocampal neurons via acting on OTR. We have also shown that the OT-OTR system mediates anti-depressant effects of mating behavior and some drugs with anti-depressant potential. Our findings suggest that OT could have a pharmacological value in treating stress-related disorders. Due to the Global Burden of Disease study, depressive disorders would be one of the three leading causes of burden of disease in 2030. I plan to continue exploring the therapeutic value of OT in the context of psychotherapy by both basic science and translational research when I get back to my country.

I would like to thank the Physiological Society of Japan (PSJ) Chugoku-Shikoku Division for presenting me the Young Scholar Promotion Award in the 69th Annual Meeting of the PSJ Chugoku-Shikoku Division. I am very grateful to Prof. Hideki Matsui and Dr. Hioaki Matsushita for giving me a chance to study at their laboratory. I hope the friendship between our countries be closer and stronger in future.

Education

1999-2005 It may be better to be moved to the

next page. MBBS (Bachelor of Medicine, Bachelor of Surgery), University of Medicine, Mandalay, Myanmar (UMM)

2010-2012 MMedSc (Master of Medical Science) (Physiology), UMM

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Work

2006-2012 Demonstrator, Department of Physiology, UMM

2012-2014 Assistant Lecturer, Department of Physiology, University of Medicine, Magway

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