

Role of RF-Related Peptide in Male Reproductive Behaviour in Mice

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Selective serotonin reuptake inhibitors (SSRIs) are used as antidepressants but they cause sexual dysfunction. The effect of antidepressant, citalopram, treatment during early developmental stage and during adulthood on reproductive behaviour has been reported in rats. The action targets of citalopram in the brain are less recognized. We have been investigating the molecular mechanism of citalopram induced altered reproductive behaviours in male mice. We found that postnatal citalopram treated male mice showed lower locomotor activity in the home-cage during the late dark-phase and decreased reproductive behaviour. Similarly citalopram treated adult male mice showed decreased reproductive behaviour. We found that chronic treatment of citalopram to adult male mice enhances the expression of inhibitory reproductive neuropeptide, RF-related peptide (RFRP) in the dorsomedial hypothalamic nucleus. Furthermore, we observed increased RFRP receptors, G-protein-coupled receptor 147 gene expression and RFRP fiber projections in the preoptic area, which is a critical nucleus for the control of reproductive behaviour. In this presentation, we will discuss the role of RFRP and antidepressants in reproductive behaviours.