Abstract

Oxytocin (OXT) is a well-preserved ancestral neuropeptide hormone essential in the regulation of human behaviours vital for sustaining life such as social bonding, empathy, attachment, food intake, and reproduction – and their role in stress reduction. Importantly, these behaviours also have strong associations with the brain’s reward circuitry. Both human and animal research has provided good evidence that increases in OXT have anorexigenic properties, especially for sweet carbohydrates. To date, there has been little OXT-genetic research in the field of eating behaviors. However, a recent study from our lab identified several single nucleotide polymorphisms (SNPs) on the OXT receptor gene (OXTR), which were associated with overeating, and endophenotypes of overeating such as reward sensitivity and food preferences. The present study will expand on this work by analyzing SNPs of the LNPEP, CD38, and OXTG genes – all of which contribute to the management of OXT availability in the brain. Such information will contribute to a better understanding of neural targets of over-consumption and addictive tendencies towards highly palatable foods.