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“Oxytocin and vasopressin receptors in the brain: new therapeutic targets for neuropsychiatric disorders”

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BIO-SCKETCH  BICE CHINI is senior researcher and group leader at the Institute of Neuroscience of the Italian National Research Council (CNR). Her research interests include oxytocin and vasopressin receptors as prototypes of G-protein coupled receptors. She has investigated the conformational states underlying receptor activation and inactivation and the molecular basis of receptor signaling and trafficking with the final aim to develop new pharmacological analogues of potential use in neuropsychiatric disorders.

ABSTRACT  Despite the well known effects of oxytocin in regulating neuroendocrine, social and cognitive functions, and the preliminary clinical trials showing a beneficial effect of oxytocin in autistic patients, the molecular mechanisms of oxytocin-induced signalling in nervous and glial cells is still largely unknown. I will present data showing how oxytocin can trigger different signalling pathways in neuronal cells and how this impacts on the design of new drugs targeting this neuropeptide system. I will also discuss animal models in which genetically induced deficits in the oxytocin/vasopressin systems lead to impaired social interactions, and how such animal models can be instrumental to understand the neurochemical basis of autistic-like symptoms.

Selected publications: