

—Photogravure—

Distribution of Urocortin 2 and Urocortin 3 in Rat Brain

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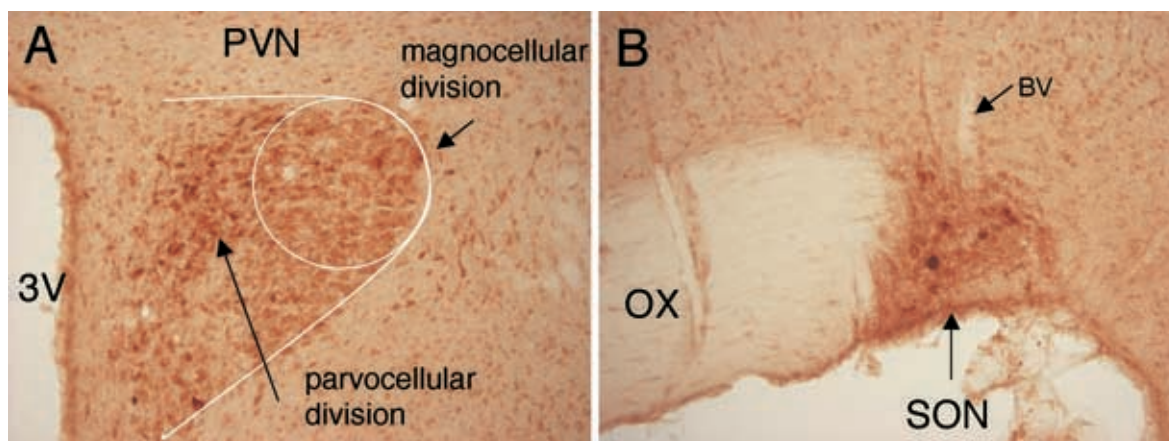


Fig. 1

Recently, urocortin (Ucn) 2 and Ucn 3 showing high sequence homologies to corticotropin-releasing factor (CRF) have been discovered as members of CRF peptide family¹⁻³. Both peptides bind specifically to CRF₂ receptor. We generated polyclonal antisera against Ucn 2 and Ucn 3 to define distribution patterns of these peptides in rat central nervous system.

Many Ucn 2 neurons are present in both parvocellular and magnocellular divisions of the paraventricular nucleus (PVN) and a few Ucn 2 neurons exist in the supraoptic nucleus (SON) of the hypothalamus. Ucn 3 neurons exist in the rostral perifornical area between the fornix and the PVN, with a few cells found in the magnocellular division of the PVN. In the extra-hypothalamic region, Ucn 3 neurons are found in the dorsal division of the medial nucleus of the amygdala. These distribution patterns suggest distinct functions of Ucn 2 and Ucn 3 in the brain.

References

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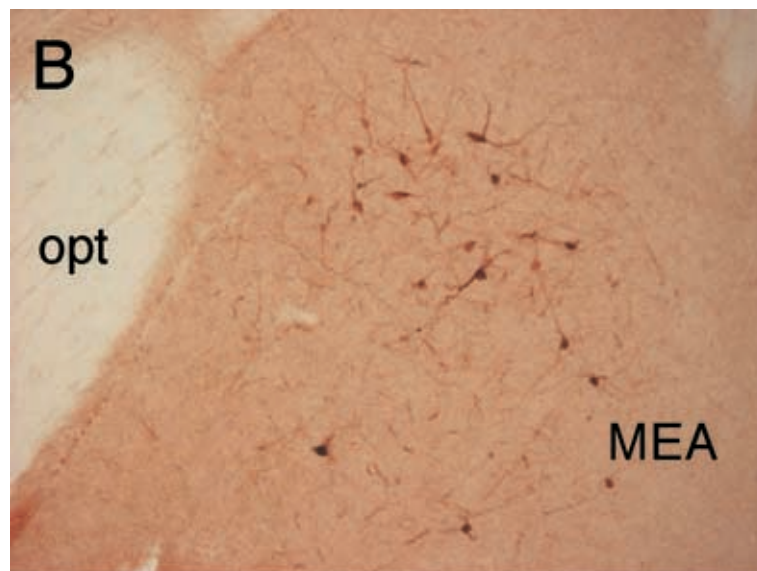
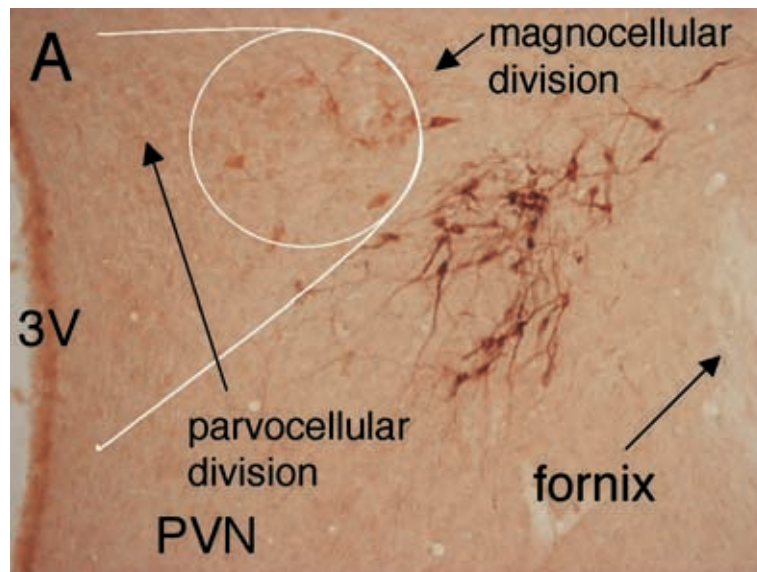


Fig. 2

Fig. 1 Ucn 2 neurons in the hypothalamus
 Ucn 2 neurons are mainly distributed in the parvocellular and magnocellular divisions in the PVN (A). A small number of Ucn 2 neurons are present in the SON (B).
 OX: optic chiasm, BV: blood vessel, 3V: third ventricle, PVN: paraventricular nucleus, SON: supraoptic nucleus

Fig. 2 Ucn 3 neurons in the brain
 Ucn 3 neurons are mainly distributed in the rostral perifornical area between the fornix and the PVN, with a few cells found in the magnocellular division of the PVN (A). In the extra-hypothalamic region, Ucn 3 neurons are found in the dorsal division of the medial nucleus of the amygdala (B).
 Opt: optic tract, 3V: third ventricle, MEA: medial nucleus of the amygdala