

[Placenta Suppl.](#) 1981;3:327-37.

**Peptides from human placenta: methionine enkephalin and substance P.**

[Sastry BV](#), [Tayeb OS](#), [Barnwell SL](#), [Janson VE](#), [Owens LK](#).

**Abstract**

The occurrence of methionine enkephalin (379 pg/g tissue), beta-endorphin (448 pg/g tissue) and Substance P (2.4 pg/g tissue) in human placental villus were demonstrated by sensitive and specific radioimmunoassays. Conditions for the bioassay of placental extracts for enkephalin-like activities using the rat vas deferens were described. Substance P did not interfere in this bioassay. Comparison of the enkephalin-like activities determined by bioassay and the content of beta-endorphin and methionine enkephalin determined by radioimmunoassays indicated that placental villus extracts contain other unidentified potent opioid-like peptides or substances. It is suggested that methionine enkephalin and/or beta-endorphin and Substance P regulate release of acetylcholine or hormones from placental villus. Alternatively, these peptides may regulate sensory transmission (pain impulses) locally from the distended uterus during pregnancy or from the vaginal tract during childbirth