

145 EXPRESSION OF THE LOW-AFFINITY NERVE GROWTH FACTOR RECEPTOR AND OF *trkC* IN THE HUMAN FETAL TESTIS. G Siracusa,<sup>1</sup> C Manna,<sup>2,\*</sup> ML Giustizieri,<sup>1,\*</sup> F Germano,<sup>1,\*</sup> LF Rienzi,<sup>1,\*</sup> and MA Russo,<sup>1,\*</sup>. Depts. of Public Health and Cell Biology<sup>1</sup> and of Surgery<sup>2</sup>, University of Rome *Tor Vergata*, 00173 Rome, Italy.

Nerve growth factor (NGF) and the other members of the family of neurotrophic factors (the neurotrophins) exert effects on responsive neurons by binding to two types of cell surface receptors: a low-affinity receptor (LNGFR) and a high affinity tyrosine kinase receptor belonging to the *Trk* proto-oncogene family. Developmental studies have shown that neurotrophin receptors are also expressed in a variety of non-neuronal tissues, where they probably play a morphogenetic role. We have recently shown, by molecular and immunohistochemical techniques (M.A. Russo *et al*, *Mol. Reprod. Dev.*, in press), that LNGFR is expressed in the embryonic rodent testis, in cells that are initially scattered in the intertubular compartment and during postnatal development aggregate in cellular layers that surround myoid cells of the seminiferous tubule. We have now studied the expression of LNGFR and *trkC*, a receptor for neurotrophin-3, in the testis of a 20 week gestational age human fetus. Immunohistochemical analysis using an anti-human LNGFR monoclonal antibody, clone ME20-4, has shown intense immunoreactivity on numerous mesenchymal cells spread through the interstitial compartment, while cells of the developing testis cords were totally negative; such distribution is exactly coincident with that found in the testis of the 14.5 dpc rat embryo. An affinity purified polyclonal antibody raised against a *trkC*-specific peptide sequence appeared to label the same population of LNGFR-positive interstitial cells. Such labeling was prevented by pre-incubating the antibody with the peptide. Western blot analysis of protein extracted from the fetal testis revealed a single 140 kD band, as expected for *trkC* protein. The data indicate that neurotrophin receptors play a role in the morphogenesis of the testis in mammals, including human.