

was used to determine phospholipid synthesis. DNA synthesis closely preceded mitosis in these fractions and stromal synthesis was significantly different in the pregnant and pseudopregnant horns. DNA and phospholipid synthesis will be discussed in relation to the state of the stromal cells at the onset of decidualisation.

GESTATION ET ÉVÉNEMENTS POST PARTUM

PURIFICATION AND LACTOGENIC ACTIVITY OF AN OVINE PLACENTAL HORMONE. — J. MARTAL, J. DJIANE, C. DELOUIS. *I. N. R. A., Jouy en Josas (France)*.

An Ovine Placental Lactogenic hormone (OPL) was isolated and purified from placentas obtained at 100-120 days of pregnancy. Lactogenic activities of various fractions have been measured by a radioreceptor assay, through competitive binding with prolactin. Principal steps of purification were : homogenization of foetal cotyledons, saline extraction at pH 9.5, acid precipitation at pH 4.5, ammonium sulfate precipitation (65 p. 100 saturation). After dialysis, the product is fractionated on DEAE Sephadex, lyophilized and filtered on G-75 S. F. Sephadex.

This purified hormone, studied by disc gel electrophoresis, showed only one band that migrated slowly to the anode, like sheep growth hormone. According to several immunological analysis, it was neither contaminated by ovine growth hormone nor by ovine prolactin. The purified hormone retained lactogenic activity in pseudopregnant rabbit mammary gland organ cultures. Lactogenesis *in vitro* was estimated by histological examination, by the appearance of lactose-synthetase activities, the increase of galactosyltransferase activities and the appearance of casein synthesis.

EVOLUTION IN THE SERUM OF A PLACENTAL LACTOGENIC HORMONE DURING PREGNANCY IN RUMINANTS. — J. DJIANE and G. KANN. *I. N. R. A., Jouy en Josas (France)*.

Co-cultures of mammary gland and sheep foetal cotylo-donary tissue showed that placenta produced a lactogenic hormone. This hormone did not immunologically cross-react with ovine prolactin antibodies and bound to the same hormone receptor of the plasmic membranes prepared from lactating rabbit mammary glands. The levels of this hormone were estimated by a radioreceptor assay. In the ewe, a significant level of ovine placental lactogen (OPL) was present in serum obtained from day 80 of pregnancy ; the highest level was observed about day 120 ; a few days before parturition OPL decreased rapidly in the serum. In the goat, lactogenic activity of the placenta was lower than in the sheep but higher than in the cow. In the cow, the lactogenic activity measured in the serum the last two months of pregnancy was very low. Ergocryptin (CB 154 Sandoz) administration which inhibited prolactin release did not reduce OPL levels in the serum.

RELATIONSHIP BETWEEN PLASMA ESTROGENS LEVELS OF PREGNANT COW AND SHEEP AND YOUNG BIRTH WEIGHT. — M. TERQUI, C. DELOUIS, G. KANN. *I. N. R. A., 37380 Nouzilly, I. N. R. A., 78350 Jouy en Josas (France)*.

Total plasma oestrogens were measured by radioimmunoassay after enzymatic hydrolysis and extraction of peripheral plasma from pregnant cows and sheep. The level of conjugated oestrogens was higher than that of free oestrogens.