

The test of passive cutaneous anaphylaxis was sensitive to the action of Sodium chromoglycate while the immediate hypersensitivity reactions like Arthus, were not sensitive to it nor to antihistamincs.

The homocytotropic antibody titer was not dependant on precipitating antilysozyme antibodies as revealed by passive hemagglutination tests. However, certain conditions of the immunization procedure may enhance reaginic antibodies : inoculation route, type of adjuvants.

Anaphylactic shocks were frequently observed at the antigen booster injection : the intravenous route leading usually to the animal's death. The intranasal or per buccal administration of antigen never gave such pathological symptoms.

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### VIII. — PHYSIOLOGY OF REPRODUCTION

#### **Birth mechanisms in the sow. Hormonal balances before and after parturition**

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The amount of progesterone required for maintenance of pregnancy is secreted at a constant level during almost whole pregnancy. During the pre partum period, (7 days prior to farrowing) there is a fall in the maternal blood levels of progesterone (from 15 ng/ml to 2 ng/ml). Simultaneously, the foetal blood level of cortisol increases in a spectacular way (from 20 ng/ml to 210 ng/ml at birth). If pregnancy is prolonged beyond the normal birth date by foetal hypophysectomy, the foetal blood level of cortisol remains very low without any rise, whereas the maternal blood level of progesterone remains high. It therefore seems that the rise in the foetal blood levels of glucocorticosteroids plays a part in the mechanisms of luteolysis.

In the maternal blood plasma, oestradiol-17  $\beta$  does not exhibit any significant variations until the day before farrowing, whereas the level of oestrone increases progressively. Within the hours prior to parturition, there is a rapid increase in the maternal blood levels of these oestrogens (until 4 ng/ml for oestrone and 500 pg/ml for oestradiol-17 $\beta$ ). It can be assumed that these oestrogens affect the uterine contractions and increase the synthesis and release of prostaglandins F<sub>2 $\alpha$</sub> . Oestrogens, in particular by their action on prostaglandins F<sub>2 $\alpha$</sub>  which are able to bring about premature farrowing in the sow, play an important part in the mechanisms of parturition.

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