(boPAG-1) or bovine pregnancy specific protein (bPSP-B) in the peripheral circulation of pregnant ewes encouraged the isolation and partial purification of pregnancy-associated glycoproteins in the ovine species. Recently, molecular biology studies identified 9 different molecules of pregnancy-associated glycoproteins in the sheep placenta (Xie *et al.*, 1997b). However, biochemical studies characterized only four different molecules (Xie *et al.*, 1997a) and only one molecule gave the same N terminal sequence in the two approaches.

The aim of this study was to isolate and to characterize PAGs from ewe placenta. Here we describe for the first time the purification of the protein identified as ovPAG-6 in molecular biology studies (Accession number O02726). The procedure was realized on placenta removed at 66 to 100 day of gestational stage. The tissue was washed with NaCl 0.9% and stored at -20°C. After thawing the tissue was extracted in phosphate buffer, then the proteins were submitted to acidic and ammonium sulfate precipitations, anion exchange chromatography (DEAE), gel filtration, cation exchange (CM ceramic), and chromatofocusing (mono P). The immunoreactivity was monitored by heterologous RIA that used caprine PAG_{55+62} and caprine PAG_{55+59} (Conzalez *et al.*, 1999) and the ovine PAG (Ranilla *et al.*, 1994).

In the crude extract, the PAGs represent 3.2% of the total proteins. After DEAE, gel filtration and CM columns the active fractions were tested in SDS-PAGE, Western blotting, 2D-electrophoresis and transferred onto PVDF membranes for sequencing. One of the CM immunoreactive peaks from the fractions eluted with 0.04 M NaCl DEAE gave single major stained bands on SDS-PAGE with apparent molecular masse of 58 kDa. Two dimensional gel electrophoresis showed that this major band was composed of several proteins (at least four), with acidic pIs ranging from 4.0 to 5.8 (5.8, 5.6, 5.0 and 4.0). The microsequencing of the spot corresponding to MM of 58 kDa and and pI 5.6 revealed the **RGSNLTIHPLRNTKS** sequence, characteristic of the ovPAG-6 (Xie *et al.*, 1997b). This report is the first to describe the biochemical purification and the characterization of ovPAG-6.

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PEPSINOGEN AND PROGESTERONE CONCENTRATION DURING PREGNANCY IN SOWS

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During pregnancy progesterone stimulates the secretion of proteins and other molecules that support the developing conceptus. In this way, many proteins or enzymes appear or increase in maternal blood circulation during pregnancy. Pregnancy is also claimed to be associated with a wide variety of physiological and biochemical changes in virtually all the organ systems and particularly the entire length of the gastrointestinal tract (Singer, Brandt, 1991). Among the enzymes secreted into the lumen of digestive tract, pepsinogen can be also found in blood in small but measurable quantity, which is relatively constant in a given individual. The aim of this study was to investigate the relationships between pregnancy and gastrointestinal enzyme by analysing progesterone and pepsinogen levels during pregnancy.

The experiment was carried out in the experimental farm of the faculty of Veterinary Medicine of Liege (Belgium). Belgian pietrain (n=3) from 12 to 16 months old and about 130 kg body weight were controlled daily for oestrus behaviour and were artificially inseminated. The day of the insemination was called day 0. Blood samples were collected in the same time in jugular vein into heparinized vacutainer tubes at day 0, 28, 42, 56, 70, 86, and 100. Plasma obtained by centrifugation (15 min at 1500g) were stored at −20°C until radioimmunoassay procedures. Progesterone concentrations were estimated by direct solid phase I125 RIA method as described by Ranilla *et al.* (1994). Whereas, pepsinogen concentration was measured by using a specific radioimmunoassay as previously described (Banga-Mboko *et al.*, 2000). The results showed a negative correlation (r = -0.7; p<0.001) between pepsinogen and progesterone showing inverse profiles. Pepsinogen and progesterone profiles presented in **figure 1**, can be separated in 3 parts:

- the first cross phase: it took place from day 0 up day 28. During this phase progesterone concentration was increasing whereas pepsinogen level is decreasing.
- the equilibrium phase (or a linear phase): from day 28 up day 70. During this stage there was no rise of concentration, although the pepsinogen concentration showed a small peak between day 70 and day 100.
- the second cross phase: from day 86 or day 100 up mid lactation. This phase contrasts with the first phase. Indeed, progesterone concentration decreased continuously, on the other hand pepsinogen increased and reached initial concentration.

This result shows for the first time the profile of porcine pepsinogen during pregnancy and the negative relationship with the progesterone concentration. Further studies are in progress in order to establish the profiles of other gastric aspartic proteases during pregnancy.

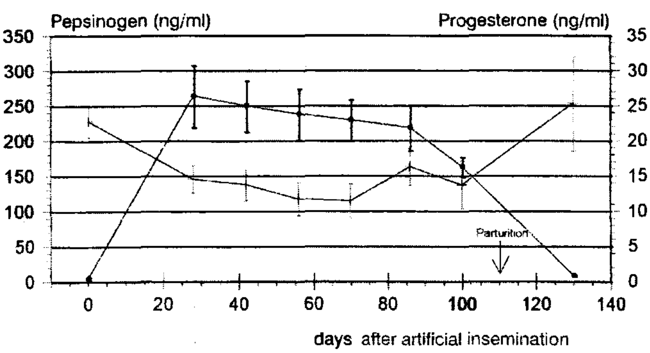

Figure 1. Pepsinogen and progesterone concentration during pregnancy in sows.

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EFFET DE LA PARITÉ SUR LES PARAMÈTRES MÉTABOLIQUES ET HORMONAUX DE LA FEMELLE DE RÉFORME BLANC-BLEU-BELGE CULARDE

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Introduction

Les paramètres endocriniens de la femelle de réforme Blanc-Bleu Belge sont actuellement très peu connus. Il a donc paru intéressant d'étudier les teneurs plasmatiques en quelques hormones impliquées dans les phénomènes d'engraissement chez des génisses et des vaches de réforme BBB.

Matériel et méthodes

Au cours de deux années d'expérience, un total de vingt-quatre femelles Blanc-Bleu Belge a été divisé en trois lots en fonction de la parité : génisses (G), vaches réformées après deux vêlages (V2) et vaches réformées après quatre vêlages (V4). Les animaux ont reçu une ration d'engraissement à base d'ensilage de maïs, distribuée *ad libitum*. Le glucose, les hormones thyroïdiennes (T3 et T4) et l'IGF-1 plasmatiques ont été mesurés sur des prélèvements sanguins bimensuels. Les teneurs en insuline et en hormone de croissance (GH) ont été déterminées, au début et en fin d'engraissement, sur des prises de sang réalisées pendant 12 h à 20 minutes d'intervalle.

Résultats

Il n'y a pas eu de différence significative au niveau de la glycémie. Par contre, les concentrations plasmatiques en T3 et en IGF-1 ont diminué significativement avec l'âge. Une tendance a