nism of biosynthesis of aromatic amino acids in microorganisms[15]. The precise location of phenylpyruvic and *p*-hydroxyphenylpyruvic acid in the series of biogenetic reactions leading to opium alkaloids remains, however, an open question.

Zusammenfassung. Bei *Papaver somniferum* L. wurde im Laufe der Ontogenese die Anwesenheit von Ketosäuren des Zitronensäurecyclus verfolgt. Zur Blütezeit und nach dem Verblühen konnten auch die aromatischen Ketosäuren, Phenylbrenztraubensäure und *p*-Hydroxyphenylbrenztraubensäure nachgewiesen werden (2,4-Dinitrophenylhydrazone und nach Reduktion zu Aminosäuren: Phenylalanin und Tyrosin).

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The Serum Histaminase Activity in Guinea-Pig Pregnancy

The increased Histamine (H) formation and a higher H metabolism in pregnancy of various species has already been reported[1–6]. The interest in the role of H in pregnancy has increased, especially since KAHLSON's hypothesis was published concerning H as an important factor in tissue growth[7,8]. But KAHLSON's hypothesis, though very interesting, is limited on account of the use of a single species, the rat, in his investigations. That makes any generalization impossible.

More active metabolism of H in pregnancy is manifested, among other things, by the increased histaminase activity. In this paper results are presented concerning the histaminase activity in the guinea-pig in different periods of gestation and one day after parturition.

Methods. Experiments were made on 20 guinea-pigs of 450–620 g body weight. Every two or four weeks, 5 ml of blood were taken from each guinea-pig by heart puncture, and the histaminase activity was determined in the serum. In each guinea-pig we obtained 3 to 5 histaminase activity determinations in different periods of pregnancy. The last determination was made 24 h after parturition. The histaminase activity was determined by KAPELLER-ADLER's microvolumetric method[9]. One PU gives 0.46 µg/g/h of histamine inactivated ($6.95 \cdot 10^{-5}$ µmol H/min).

Results. The results are presented in the Figure. The histaminase activity in the guinea-pig begins to increase in the second week of gestation and reaches its peak in about 4–7 weeks. Then the histaminase activity decreases but remains detectable, in every case, before parturition. 24 h after parturition the histaminase activity reaches its normal level. The shape of the curve of histaminase activity in the guinea-pig is almost the same as that in pregnant women[9–12].

It cannot be excluded that the reasons for augmented histaminase activity are the same. Unfortunately, the H level in pregnant women and pregnant guinea-pigs has not been examined. In pregnant rats the H level is elevated and depends on the number of litters. The higher the number of litters, the higher is the H level[2,3,6,13]. Upon removing the foetuses the H level decreases and reaches normal[13]. Our findings are the same with regard to the histaminase activity in women after artificial interruption. 24 h after abortion, the histaminase activity reaches its normal level[10].

The analogy suggests that augmented histaminase activity is related to a higher H level in pregnancy. If it is taken into account that H production by the rat foetus is very active and H passes to the mother, it seems probable that augmented histaminase activity in maternal blood can be related to that phenomenon.

It is possible that H plays an important role in pregnancy not only in the rat but also in women and in the guinea-pig.

Résumé. Chez les cobayes enceintes l'activité de l'histaminase est considérablement augmentée.

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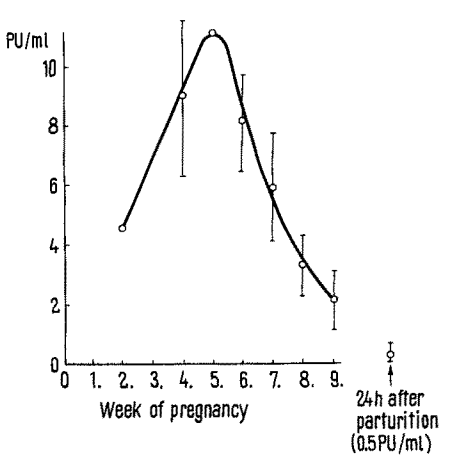

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