

**ULTRASTRUCTURAL LOCALIZATION OF AMINO RESIDUES IN PROTEINS DURING RAM SPERMATOGENESIS.** — J. L. COURTENS. *I. N. R. A., Nouzilly (France)*.

Two staining procedures have been tested in order to visualize  $\epsilon$  lysine at the ultrastructural level. The first one (hydroquinone-ferricyanure) binds specifically to each protein amino residue. The second one (PTA/E) permits visualization of six to seven adjacent  $\epsilon$  lysine. These techniques make it possible to distinguish : a) between different molecular sizes of lysine-rich proteins, b) between different spatial configurations of some of them.

Somatic-type histones leave the spermatid nucleus in the form of small MW molecules immediately after nuclear elongation has taken place. During this process, the nuclear envelope shows modifications in its biochemical composition ; the nuclear ring and post nuclear ring migrate toward a distal position. The perinuclear material and post acrosomal sheet appear in the cytoplasm following migration of the « rings ». They contain lysine rich proteins, the spatial configuration of which vary during sperm passage through epididymis.

**RELATION ENTRE LA SPERMATOGENÈSE ET LA SÉCRÉTION DU FLUIDE TESTICULAIRE.** — P. LAPORTE, J. GILLET, J. L. DACHEUX. *Faculté des Sciences de Poitiers, Faculté des Sciences de Tours et I. N. R. A., Nouzilly (France)*.

Des rats *Wistar* adultes ont été sacrifiés tous les quinze jours pendant deux mois et demi, après avoir reçu une seule injection IP de busulfan (10 mg/kg) ou un volume identique d'huile d'amande douce (témoins). 24 heures avant le sacrifice, les animaux ont subi sous anesthésie à l'éther, une ligature unilatérale du vas efferens. La production de fluide est estimée par le rapport pondéral des testicules ligaturés et non ligaturés (SETCHELL and WAITES, 1971). L'état spermatogénétique est contrôlé à chaque stade par l'examen histologique des gonades d'un rat de chaque lot.

La sécrétion du fluide testiculaire augmente significativement tandis qu'involue la spermatogénèse. Inversement, lorsque celle-ci reprend, la sécrétion exocrine revient progressivement à la valeur des témoins normaux.

Cette influence de la spermatogénèse sur la sécrétion du fluide est probablement indirecte et dépendante de l'hypophyse.

**THE IN VITRO EFFECTS OF  $\alpha$ -CHLOROHYDRIN ON THE METABOLISM OF GLYCEROL AND GLUCOSE BY RAM TESTICULAR AND EPIDIDYMAL SPERMATOOZOA.** — E. M. EDWARDS, J. L. DACHEUX, G. M. H. WAITES. *Reading et I. N. R. A., Nouzilly (France)*.

$\alpha$ -chlorohydrin is an effective antifertility agent in a variety of male mammals. In low doses, it is thought to have a direct effect on spermatozoa in the cauda epididymidis.

Spermatozoa have been collected through cannulae in the rete testis and vas deferens of conscious rams. The morphology of testicular spermatozoa collected for varying lengths of time and at different temperatures has been studied with the electron microscope.

The production of  $^{14}\text{CO}_2$  and by spermatozoa from  $^{14}\text{C}$ -glycerol and  $^{14}\text{C}$ -glucose was reduced by  $\alpha$ -chlorohydrin. The effect was greater with epididymal than with testicular sperm, and was dependent upon a period of pre-incubation of these cells with  $\alpha$ -chlorohydrin without the presence of added substrate. These results will be discussed in relation to the action of  $\alpha$ -chlorohydrin *in vivo*.