

Cytological observation of oocyte genesis in *Urechis unicinctus*

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Introduction

Urechis unicinctus is Urechidae animal. Its body is large and has strong adaptability. Its body wall contained rich protein and many kinds of human essential amino acids. It is famous foodstuff in Korea, Japan and China. Its high economic value makes it become a kind of marine animal resource of breed aquatics potentiality.

In this paper, oocyte genesis process was observed by light and electronic microscope on the base of former research.

Materials and Methods

The coelomic fluid was taken out by syringe penetrating the body wall directly. The germ cells were gained by centrifugation. Mature oocyte was gained from store duct by dissecting animal.

The coelomic fluid was dropped onto the clean slide directly and then covered by a cover glass. Observed and taken photos in the Olympus BH-2 light microscope.

The samples for electronic microscope were fixed in 2.5% glutaraldehyde first and postfixed in the 1% osmium acid. Epon-812 embed. The sections were cut by LKB microtome. Uranium and lead double stain. The sections were obserbation by Hitachi H-7000 type transmission electronic microscope(TEM).

Results and Discussion

Oocyte genesis of *Urechis unicinctus* was studied by light microscope and electronic microscope. The result showed that most stages of oocyte were finished in the coelome. oocyte was conglobation at early stage. Its nucleus was large and roundness, a obvious nucleolus. The ooplasm was less at this stage. Along with development, cells became dissociate. Mitochondria increased, Golgi bodies developed and secreted vesicles in the cytoplasm. The yolk were grown up and rich. The yolk matter was provided by endogenesis at early stage. But most yolk was provided by extragenesis. When mature; oocyte went to the nephridium. Its egg membrane presented multilayer. Its formation mode was discussed.

References

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