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Title	CYTOGENETICAL STUDIES ON SWINE INTERSEXES
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ponents of single ribosomes, large subunits and small subunits, were found to be 81S, 61S and 44S respectively. Ribosomal subunits dissociated in the moderate magnesium concentration (0.5~0.2 mM) reassociated into 81S single ribosomes, when the magnesium concentration was restored to its initial level.

In examining the structural change of silk gland ribosomes subjected to X-irradiation, measurements were made of the sedimentation profiles of sucrose gradient centrifugation. In 2,000R irradiated ribosomes after the dialysis against a buffer with 0.2 mM magnesium and lacked magnesium, no change was found in their sedimentation profiles. However, in the irradiated sample dialyzed against a buffer with 0.05~0.02 mM magnesium, a tendency of "unfolding" was progressed than in the non-irradiated one.

## CYTOGENETICAL STUDIES ON SWINE INTERSEXES

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Eight cases of swine intersexes, about 6 months old, from a slaughterhouse were investigated on macroscopical and histological findings of the sexual organs, chromosome karyotype, sex chromatin, drum stick and the presence of spermatozoa on gonadal smears. Six normal animals, three of each sex, of similar ages were used as controls. The results obtained will be summarized as follows :

1) The intersexes examined were classified into the following 5 types according to the morphology of the gonads.

Type A: both sides testis-like: 2 cases ;

Type B: both sides ovo-testis: 2 cases ;

Type C: one side testis-like, the other side ovo-testis: 1 case ;

Type D: one side ovary-like, the other side testis-like: 1 case ;

Type E: one side ovary-like, the other side ovo-testis: 2 cases.

2) Histological findings of the testis-like gonad and ovo-testis showed the seminiferous tubules without any male germ cells, but features of the sertoli cells and interstitial cells were similar to those in normal males.

3) Thirty metaphase plates were examined for chromosome karyotype of leucocytes derived from the sternum bone marrow. Intersex cases, as well as control females, exhibited unexceptionally the normal female karyotype in the swine, 38,XX, whereas normal males had 38,XY.

On 500 nuclei of kidney cells, positive percentages of sex chromatin in the intersexes, normal females and males were 1.0~3.2, 1.8~2.2 and 1.4~2.0%, respectively. The results seemed to be unsuitable for the sex diagnosis of the swine.

The drum stick incidence per 1,000 neutrophilic leucocytes on smear preparations from spleen blood was 0.6~1.3% in intersexes, 0.7~0.8% in normal females and 0~0.3% in normal males, respectively. The fact may support the view that intersexes in the swine are genetically female, as is shown clearly in the results of chromosome karyotype analysis.

4) None of intersexes showed spermatozoa on gonadal smears, while control males did normally.

## **HEMATOLOGICAL OBSERVATIONS OF EXPERIMENTAL IMMUNO-HEMOLYTIC ANEMIA IN THE DOG**

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Two groups of three and five normal adult dogs were injected intravenously at the rate of 1.5 ml of normal ovine serum and anti-canine red cell ovine serum respectively per kg of body weight. Changes in the blood were examined for 27 days. In the group injected with normal ovine serum, prominent leukopenia was observed as early as one hour after injection. However, other significant blood changes did not appear in the entire experimental course. On the other hand, the blood changes of the group injected with anti-serum were as follows:

1) Marked diphasic anemia was observed between 12 and 24 hours and between 6 and 7 days after injection.

2) Reductions of minimum and maximum resistances of red cells were observed from the 1st hour after injection.

3) Various types of abnormal or young red cells were observed after injection.

4) Leukocytes decreased markedly in number at the 1st hour after injection, but increased thereafter.

5) Erythrophages appeared at the 1st hour and disappeared completely on the 6th day after injection.

6) Sideroleukocytes appeared from the 3rd hour and exhibited their maximum number of appearances at the 6th hour; then they decreased gradually, and disappeared completely on the 27th day after injection.