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STUDY ON THE SENSITIVITY OF CHICKEN MACROPHAGES  
TO *CHLAMYDIA PSITTACI*

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In order to analyze the sensitivity of chicken macrophages to chlamydial strains from different hosts, macrophages taken from the spleens of chickens (7 days old) were infected with *Chlamydia psittaci* (*C. p.*) strains Izawa-1, P-1041 and Bovine-Yokohama. The growth of chlamydia in macrophages was monitored by yolk sac inoculation and immunofluorescent techniques (IFA).

The results were summarized as follows :

1. Chicken peritoneal exudative cells and spleen cells were obtained from 3-, 7- and 14-day-old chickens. When the cell numbers were compared in preparations from the different age groups, spleen cells were superior in number to peritoneal exudative cells, and their number suddenly increased at 7 days of age. Glass-surface adherent cells were obtained from spleens of 7-day-old chickens and were used in the experiment.
2. Macrophages from spleens were cultured and examined for morphological characteristics. Cell numbers did not decrease greatly within 7 days of incubation ; therefore, experiments were performed within this period.
3. Spleen macrophage cultures were infected with *C. p.* strains Izawa-1, P-1041, Bovine-Yokohama, and the cell fractions and culture fluids were inoculated into the yolk sacs of 7-day-old chicken eggs. The results showed that the cell fractions had higher titers than the culture fluids. In macrophage cultures, *C. p.* strains Izawa-1 and P-1041 were shown to propagate more efficiently than Yokohama.
4. Yolk sacs of inoculated eggs were harvested and examined for the presence of chlamydial antigen by IFA using a monoclonal antibody against *C. p.*. The data showed that infective titers determined from egg lethality correlated clearly with those determined from examination of the antigen.