### Course Title
Advanced Animal Hygiene

### Instructor
Koji UETSUKA, Yasuki OGAWA

### Code
MA051300

### Semester
1st (April-)

### Credit(s)
1

### Day／Period
Thu, 5

### Description Code
A-AAH-512

### Outline
The former classes (the 1st - 4th) of this lecture are concerned about the immune system against infectious microbes in animals, in which lymphocyte maturation and immune responses are mainly expressed. The later classes (the 5th - 8th) are concerned about the applied immunological clinical tests for infection-suspected animals.

### Keywords
immune cells, Immune response, microbes, infection

### Goals
1) You can understand the principal mechanisms of immunity in animals.
2) You can understand applied immunological clinical tests for infection-suspected animals.

[Diploma Policy] 1. Academic and research skills in the specialized field.

### Course Plan
1: Guidance, Functions of immunity, Innate and acquired immunity (OGAWA)
2: Properties of the immune system, Immune response, Immunologic tolerance (OGAWA)
3: Antibody and its use (OGAWA)
4: Antigen receptor (OGAWA)
5: A latex agglutination test for the qualitative detection of bacterial toxin (UETSUKA)
6: Detection of microbial toxin by enzyme-linked immunosorbent assay (ELISA) (UETSUKA)
7: Comparison of Western immunoblot and gene detection assay for identification of toxin-productive microbial isolates (UETSUKA)
8: Animal test in the skin for identification of microbial toxin types (UETSUKA)

### Advice for Preview and Review
Homework: Please look into technical terms described below before taking the classes.
1: Immune system, Innate immunity, Acquired immunity
2: Immune response, Effector cells, Antigen presentation, Immunologic tolerance
3: Antigen-antibody reaction, Western

### Prerequisite
1) A related subject is Advanced Animal Management. 2) Being late and early leaving: Total 3 cases of being late and early leaving are corresponded to 1 absence case. 3) Office hour: Please see the guideline text.

### Grading Criteria
Two reports (100%): One for the former classes (50%) and another for the later (50%) (Diploma Policy 1)

### Texts/References
Text: none specified.
Reference: 1)"Janeway's Immunobiology", Kenneth Murphy, Garland Science, 7,455 yen.
2)"Cellular and Molecular Immunology", Abul K. Abbas, Saunders, 6,897 yen.