What I learned from the class "Observation and analysis of ovary specimen"

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In this class, I could acquire the skills of making ovary specimen and observing them, and doing these experiments was precious experience for me. It was the first time for us, and the operations needed very long time, so I thought the experiments using ovary are difficult and delicate work. However, learning about the sophisticated process was interesting, and I really enjoyed the experiments. Observation of specimen we made was also interesting, and I could understand the importance of careful work and much experience. In this course, there are two things I realized important in biological research, and I would like to make use of these.

First, it is important to do experiments and operations carefully and deliberately when we process rare and precious samples. In the observation, there are many abnormal shapes of follicles especially in samples stored in frozen. In Fig.1(a), frozen sample of a dog (Shih Tzu, 6 months old), we could observe many follicles, but there were abnormal cavities around them. These cavities could be occurred when the sample was frozen. However, in Fig.1(b), fresh sample of a dog (Yorkshire terrier, 3 years and 10 months old), the cells' shape is round, and they don't have abnormal cavity, so it was easier to determine the stages of follicles. For example, in the largest follicle in the center is an antral follicle. In fresh dogs, there are less damage in the samples, and the shape of most of cells are normal, but there are damaged cells in frozen older samples. Therefore, it is necessary to deal with samples keeping that some steps of experiment or the methods of reservation can damage samples in mind.

Second, accumulated experience and deliberate observation are important. Deciding the follicles' stages was difficult for me, because there were abnormal shapes and damaged cells though these were in the same stage, so observing carefully is important. Furthermore, in the studies about ovary in WRC, animals' species is not limited, so it is necessary to know about differences among species. In this class, we also observe a rabbit's ovary specimen, and connecting two follicles could be observed only dogs and cats and so on, but such cells did not exist in the rabbit's sample (Fig.2). It is important to judge own results by oneself in any studies, so I would like to try my best to gain experience and enough knowledge in my research.

There are many important things I learned in this course, and they will lead to my research. Before the class, I thought that histological observation is a classic method, but I could learn that it is a unique method and can lead to interesting results other contemporary methods cannot.

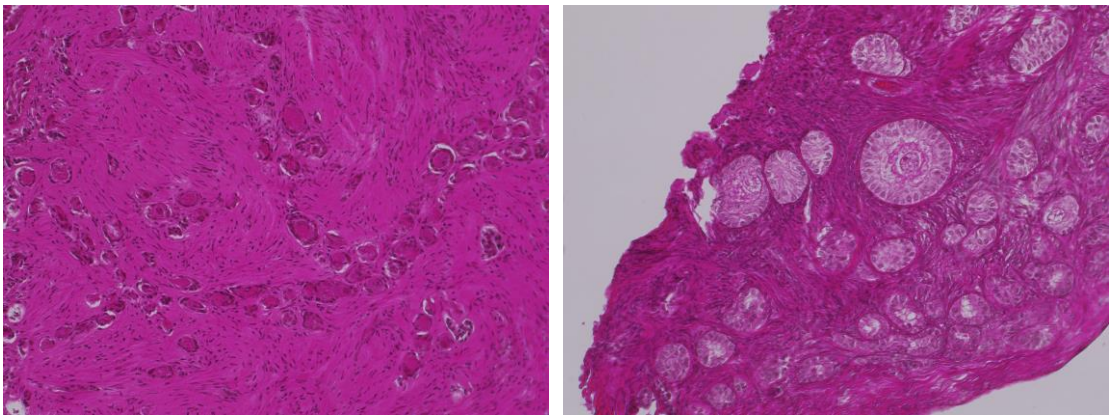

Fig1. (a) Frozen sample of a dog (Shih Tzu, 6 months old, left)
(b) Fresh sample of a dog (Yorkshire terrier, 3 years and 10 months old, right)
When the shape and condition of follicles are compared between frozen sample and fresh sample, it is clear that fresh sample has normal type of follicles and easy to observe.

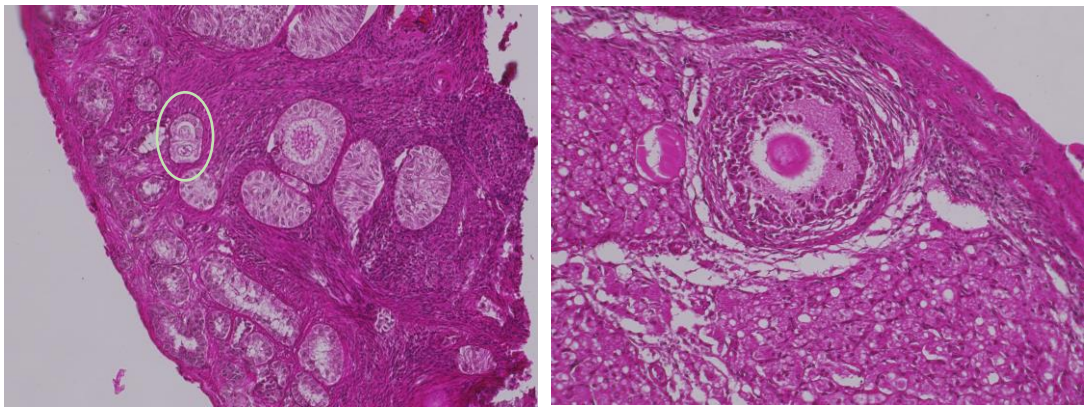

Fig.2 (a) Fresh sample of a dog (Yorkshire terrier, 3 years and 10 months old, left)
(b) Frozen sample of a rabbit (right)
In Fig.2 (a), two cells surrounded by a circle are connected each other. The shape of antral follicles are almost same, but we could see some differences between a dog and a rabbit.