The oviduct is a female reproductive organ connecting the ovary and uterus. The oocyte ovulated from the ovary is captured by the distal end of the oviduct, called infundibulum, then travels down the oviductal lumen. If sperm are present, fertilization takes place at the second area of the oviduct, the ampulla. Preimplantation embryo development continues during traveling in the oviduct towards the uterus. At the blastocyst stage, the embryos reach to the uterus for implantation. Although the oviduct is an essential organ for internal fertilization in mammals, little is known about how it forms in development, cellular heterogeneity in the oviduct and mechanisms of its homeostasis. In addition to its reproductive roles, the oviduct has recently attracted scientific attentions as the cell-of-origin of the most common type of ovarian cancer, high-grade serous ovarian cancer. This suggests that the oviduct epithelial cells at the distal end are somehow susceptible for carcinogenic transformation.

In my talk, I will discuss about our work for the last 5 yrs and unique properties of the distal end of oviductal epithelial cells.