**Ovum pickup (OPU)**

There are several method used for collect the ovum from ovaries in live and dead animals

1. **From live animals:**
2. Ovum aspiration by trans vaginal ultrasound guided aspiration
3. Laparotomy by abdominal surgical in small ruminants
4. Laparoscopic ovum pick up
5. **From slaughter animals**

Ovum collect from dead animals during half hours after slaughter and put in physiological solution added to broad spectrum antibiotic after that transfer to laboratory at 25 to 40 C temperature during period do not increase for 2 hours after slaughter .The first step to producing embryos in the laboratory is the aspiration of the egg from the ovaries by the previous method.

**OPU TECHNIQUE**

 Using transvaginal ovum pickup (OPU) ova can be harvested repeatedly from the same cow, potentially providing many more ova. Advantage of (OPU) is that it can be performed during the first trimester of pregnancy and also on prepuberal, including fetal, animals. The equipment used consists of an ultrasound apparatus whose transducer has a built in needle guide. After epidural anaesthesia of the donor, the transducer is introduced into the vagina and the ovary to be aspirated is moved per rectum to a position just anterior to the vaginal fornix. Thus, follicles can be imaged and the needle guide used to pass an echogenic needle through the vaginal wall into the ovary. Target follicles are positioned and aspirated by means of a foot-controlled vacuum. The level of vacuum used represents a compromise between the need to retrieve the oocyte and at the same time maintaining the integrity of its surrounding cumulus cells. One of the main drawbacks of in vitro embryo production is that less than 40% of oocytes obtained by (OPU) subsequently develop into blastocysts, probably because of the quality of the oocytes themselves, rather than the efficiency of subsequent procedures. This hardly surprising when it is considered that a very high proportion of ovarian follicles are destined by nature to become atretic . furthermore, the oocytes obtained will be at varying stages of development.





