**Lab 7 Results of Immunization animal results**

**Serology and Vaccines**

**Harvesting Blood + Detection of Antibodies**

* **Blood Harvesting**
* At the end of the immunization experiment performed in rabbit, blood should collected to detect antibody formation against the antigen had been injected {R.B.Cs (human and rabbit) and Serum(human and rabbit)}.
* There are two main sites to collect blood in rabbit, they are:
1. **AURICULAR ARTERY (Marginal ear vein)**

***Materials***

70% ethanol

Gauze sponge or swab

5- to 60-ml syringe with 21- to 22-G butterfly infusion set

***Procedure***

1. Restrain the rabbit or sedate with butorphanol/acetylpromazine.

2. Swab the ear with 70% ethanol on a gauze sponge or swab.

3. Attach a butterfly infusion set to the syringe.

4. Applying tension to the ear, insert needle at an angle parallel to the artery, directed toward the base of the ear.

5. Insert needle 10 mm into the arterial lumen.

6. Gently aspirate with syringe until desired volume is collected.

7. Withdraw needle and apply digital pressure with a gauze sponge or swab until all bleeding stops.



1. **CARDIAC PUNCTURE (Heart Puncture)**

***Materials***

Ketamine/xylazine solution

70% ethanol

Gauze sponge or swab

5-10-ml syringe with 18-20-G, 1.5-in. needle

***Procedure***

1. Anesthetize the rabbit with 50 mg/kg ketamine/5 mg/kg xylazine (1 ml/kg in PBS i.m.).

2. Clean the area over the xiphoid with 70% ethanol on a gauze sponge or swab.

3. A 20 gauge needle at least 1 ½ inches long be used.

4. Insert needle immediately to the left of the xiphoid cartilage at the base of the sternum at a 30◦ to 45◦ angle .

5. Gently aspirate syringe, collecting up to 50 ml for a survival procedure.



* **Detection of antibodies**
* The detection test is depending on type of antigen been injected.
* If the antigen injected is particular (R.B.Cs) then the test is Agglutination test.
* If the antigen injected is soluble (Serum) then the test is Precipitation test.

***If the antigen injected is particular (R.B.Cs) then the test is Agglutination test.***

**Drop of R.B.C (Ag)**

**Drop of rabbit serum (Ab)**

**MIX**

**+ve results**

**Agglutination**

**- ve results**

**No agglutination**

***If the antigen injected is soluble (Serum) then the test is Precipitation test.***

**Agarose**

**Homework:**

**How are Ouchterlony result are interpreted?**

**NOTE : Go to Lab 6 of IMMUNOLOGY**

***Ouchterlony test***

**Serum injected (Ag)**

**Rabbit serum (Ab)**