



Huacaya

Canada 17,000
Ontario 1,300

Tested
101 alpaca
28 herds
5 BVDV infected
3 BVDV PI
2 PI studied



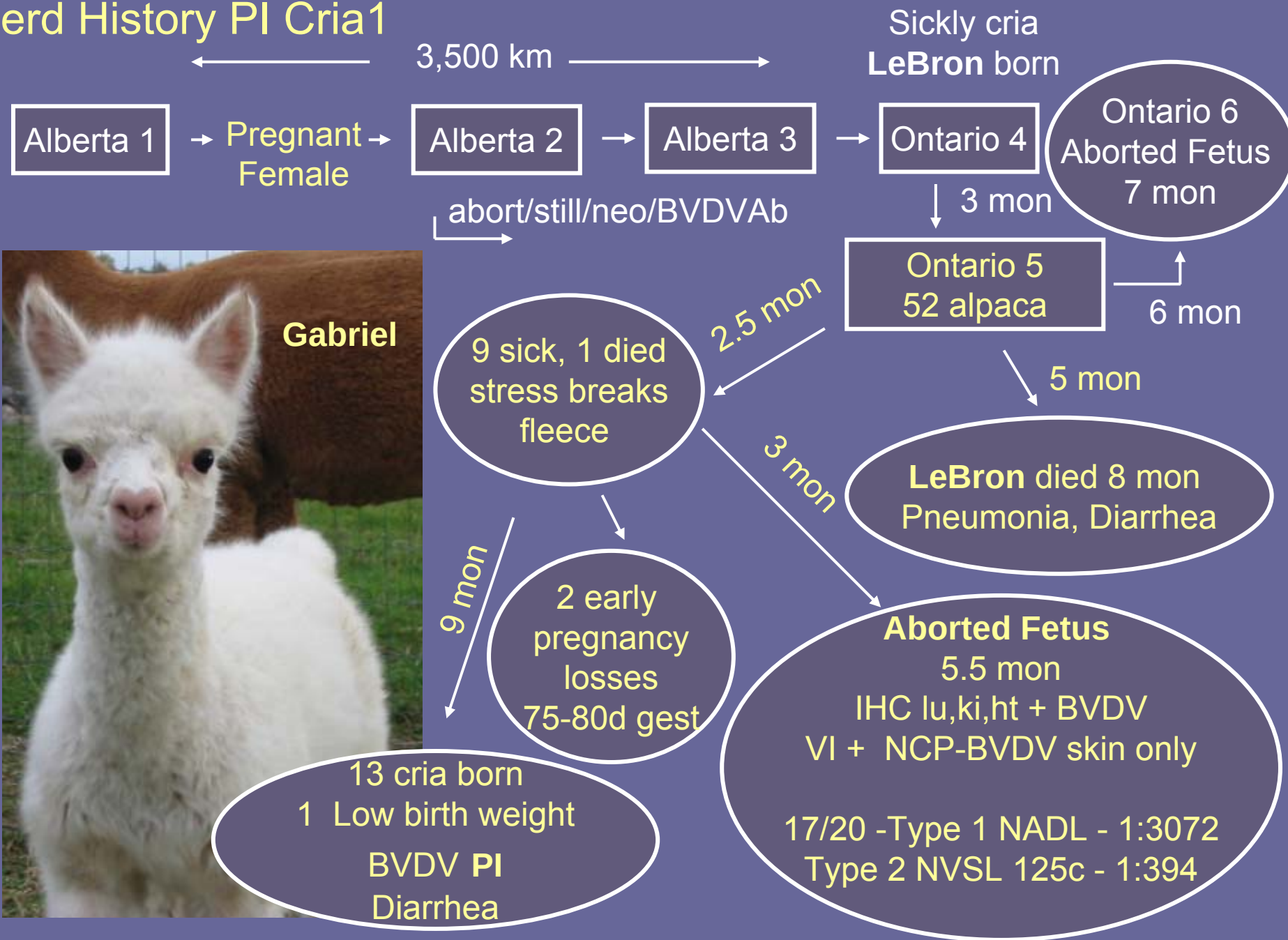
Suri

BVDV in Alpaca: Abortion and Persistent Infection

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Josepha Delay ¹
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Elginburg, ON ²
Canadian Food Inspection Agency ³

Herd History PI Cria1



East



Gabriel's
huacaya farm
52 alpaca



Dam & cria barn
facing south
Fleece storage

Courtesy Nancy Carr

Herd History PI Cria 2

← 1,500 km →

Ontario 7
64 alpaca

→ **Pregnant
Female** →
4 mons ges

New
Brunswick 9
97 alpaca

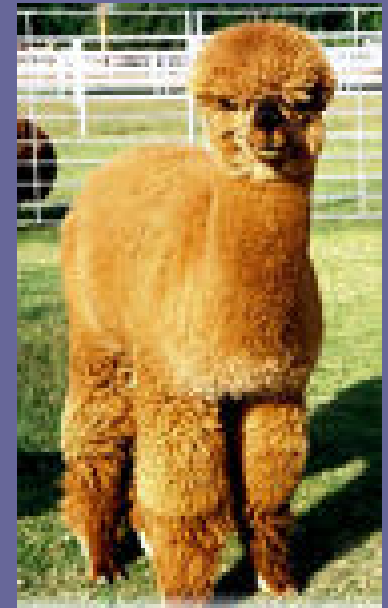
Ontario 8
33 alpaca

2 abortions

9/10 - Type 1 NADL - 1:384
Type 2 NVSL 125c - 1:96

21 tested
1 Low birth weight cria
PI BVDV

Lila
huacaya
4months
Pneumonia, Diarrhea



Gabriel - PI

- Exposed about 65d gestation
(Dam Ab Type 1, 1:768)
- NCP-BVDV iso from placenta;
3d, 26d, 46d buffy coat; 46d tissues
- RT-PCR - BVDV Type 1, - whole blood
-/+plasma, -/+serum, + buffy coat
- Ag ELISA 46d + serum, + ear notch
- Serum virus titer $10^{4.0}$ CCID₅₀/mL
- Serum Ab titer 46d - neg Type 1,2

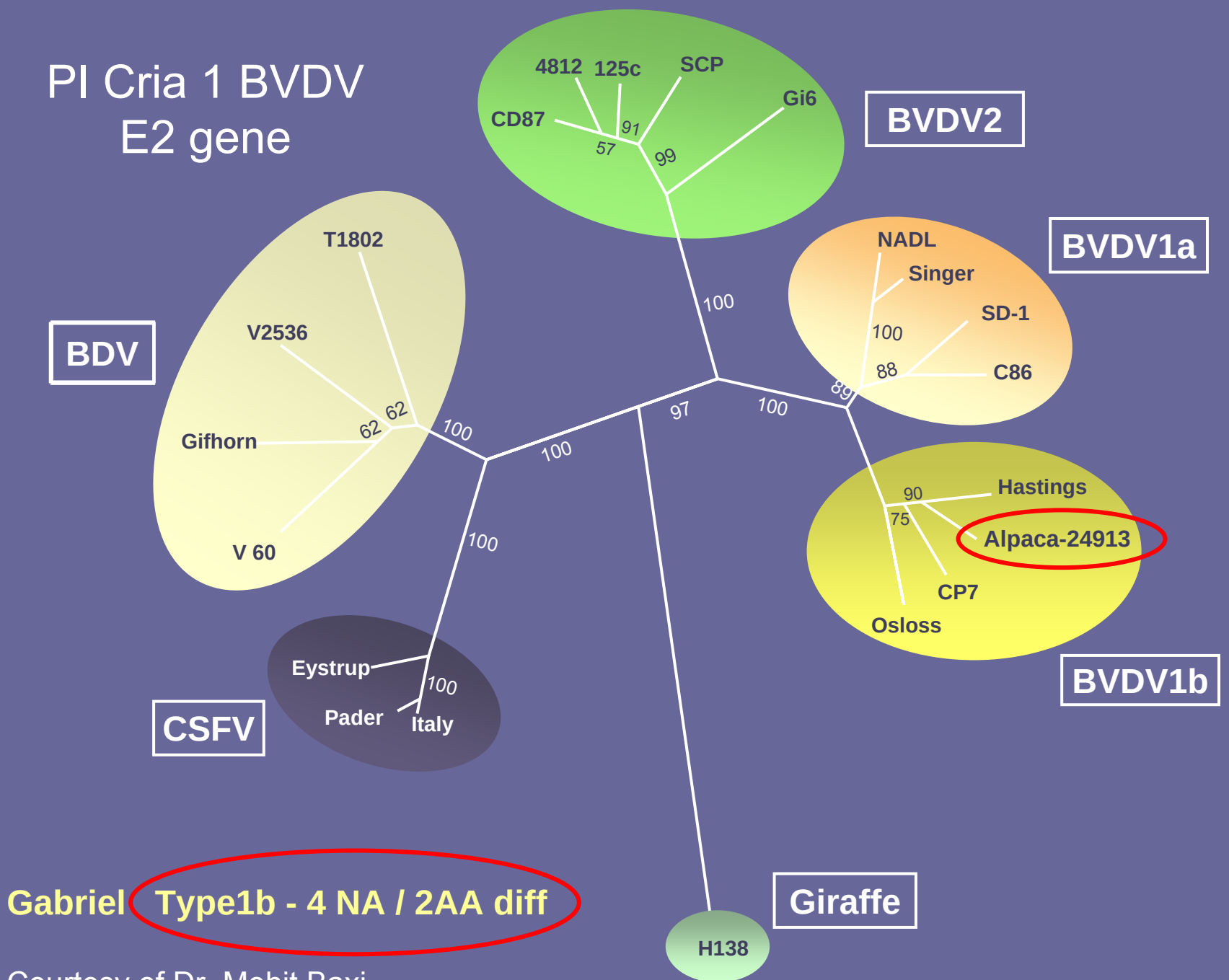


Lila - PI

- Exposed before 120d gestation
- NCP-BVDV iso 75d buffy coat;
75d, 104d, 120d serum; 120d tissues
- RT-PCR - BVDV Type 1,
-/+/- serum 120d
- Ag ELISA 120d +serum
- Serum virus titer $10^{5.0}$ CCID₅₀/mL
- Serum Ab titer 120d - neg Type 1, 2

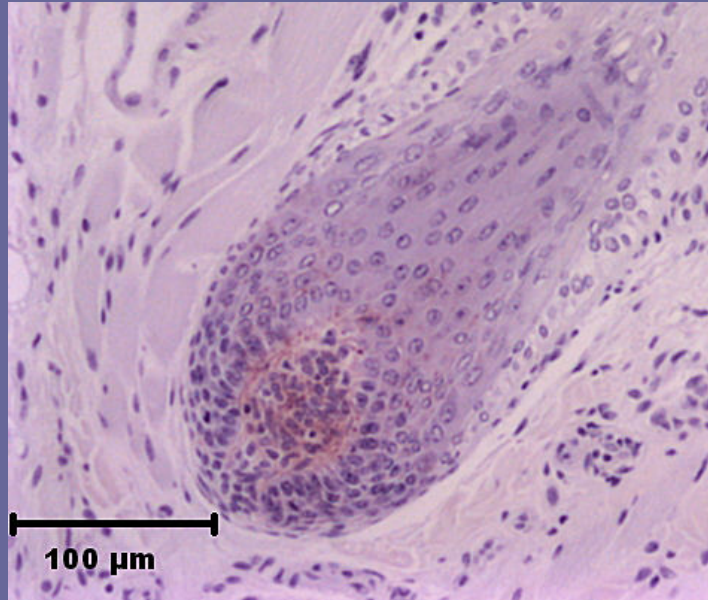


PI Cria 1 BVDV
E2 gene

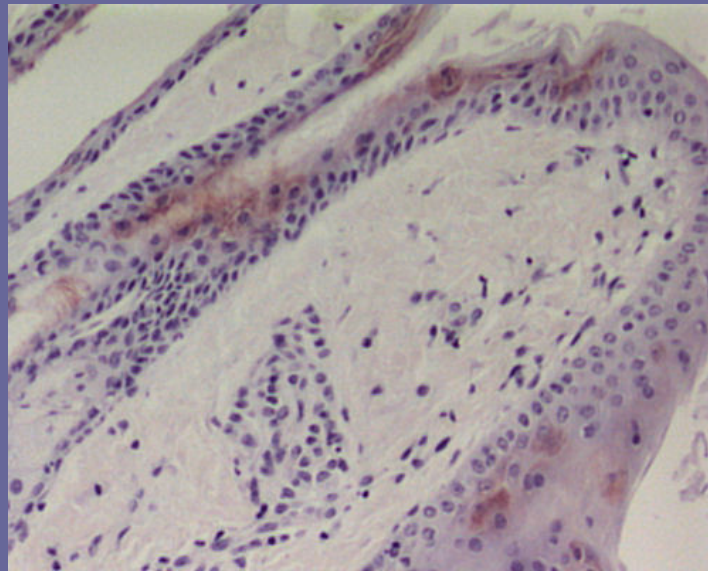


Courtesy of Dr. Mohit Baxi

Gabriel Ear

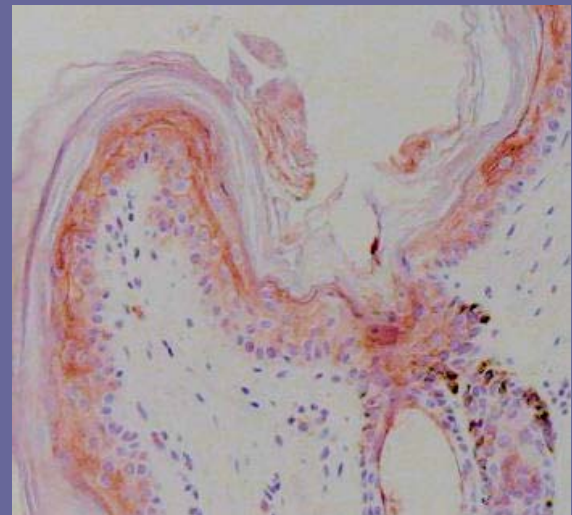
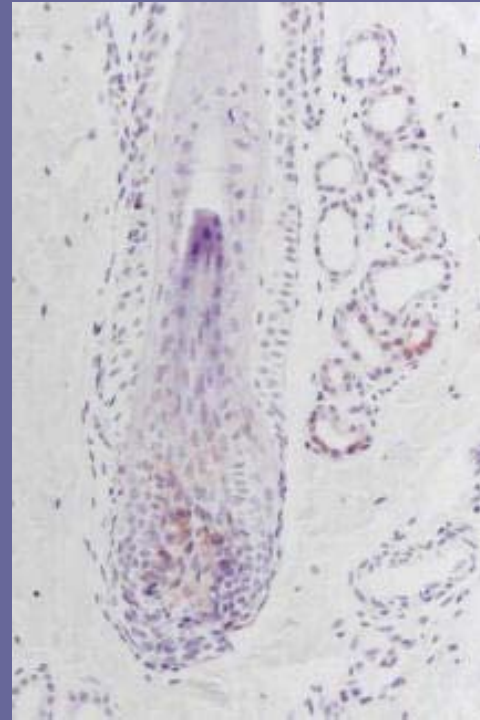


Hair
follicle

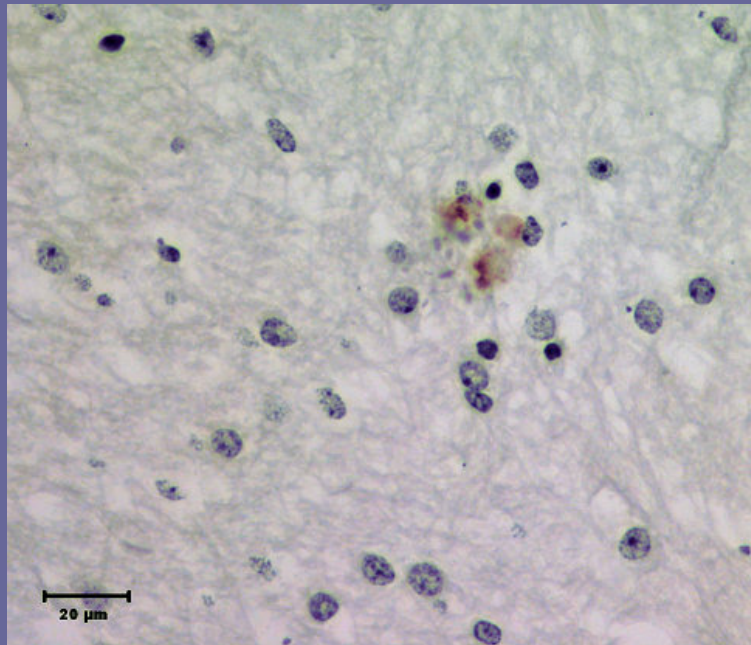


Skin

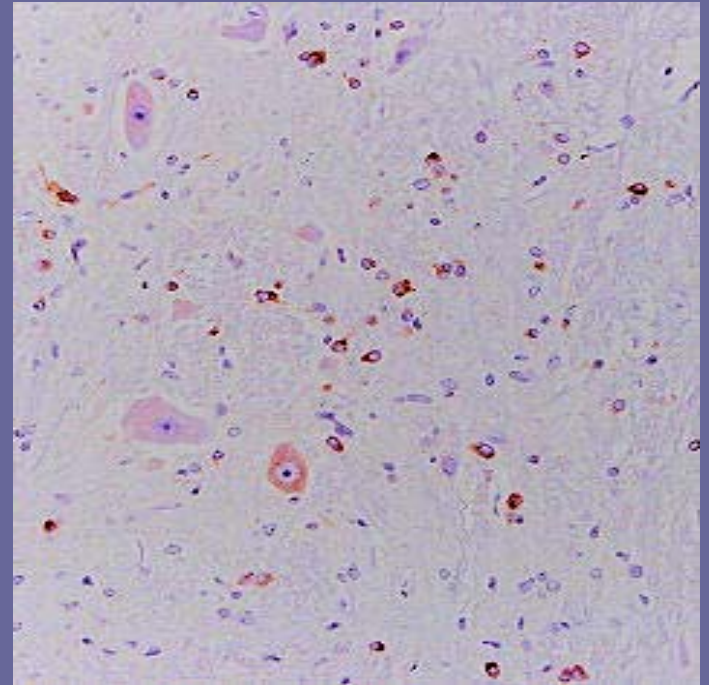
Lila Axilla



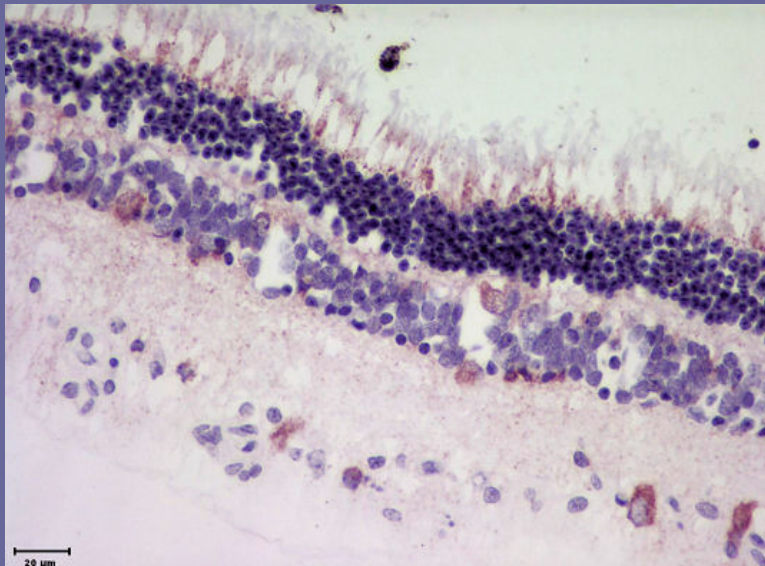
Gabriel



Lila

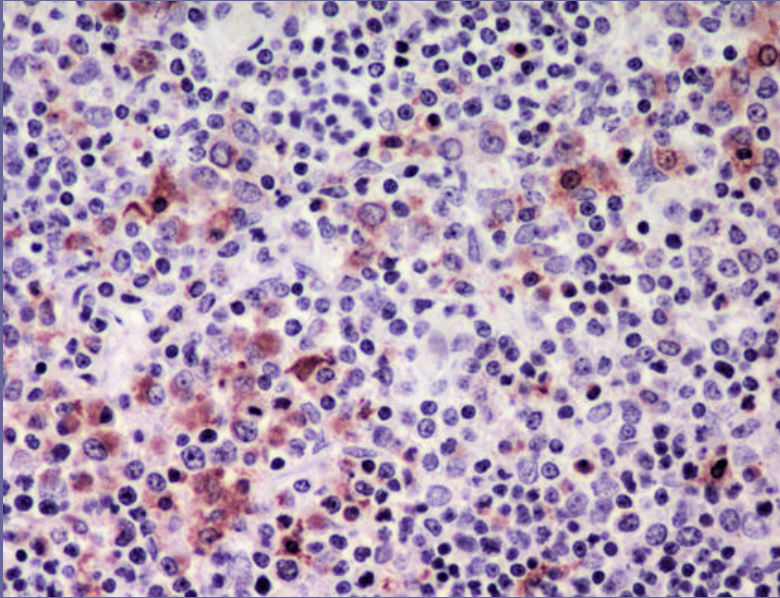


Brain



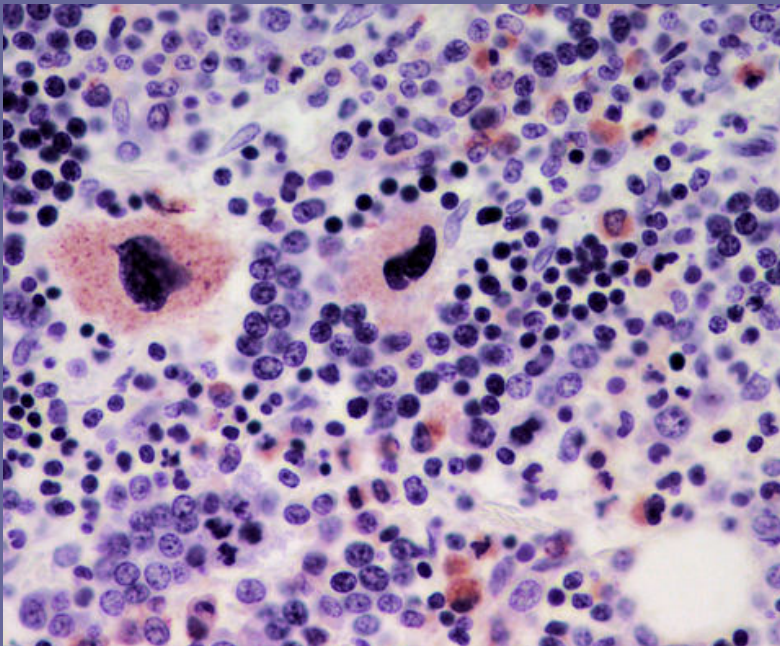
Retina

Gabriel

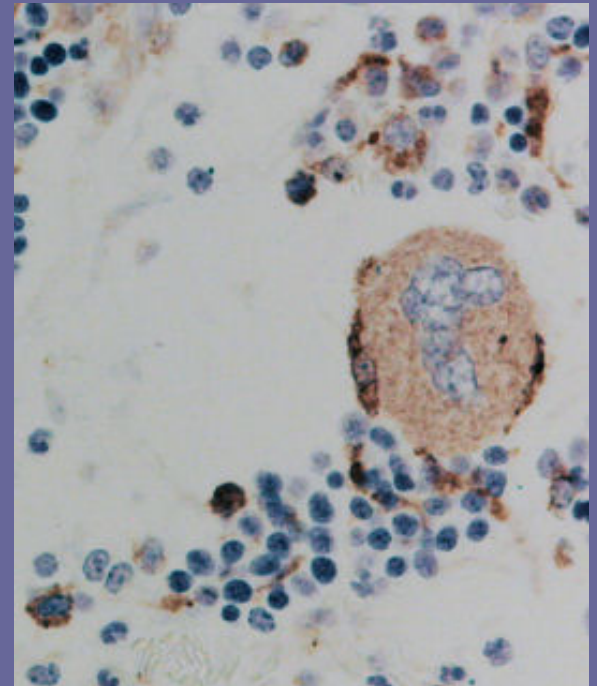


Thymus

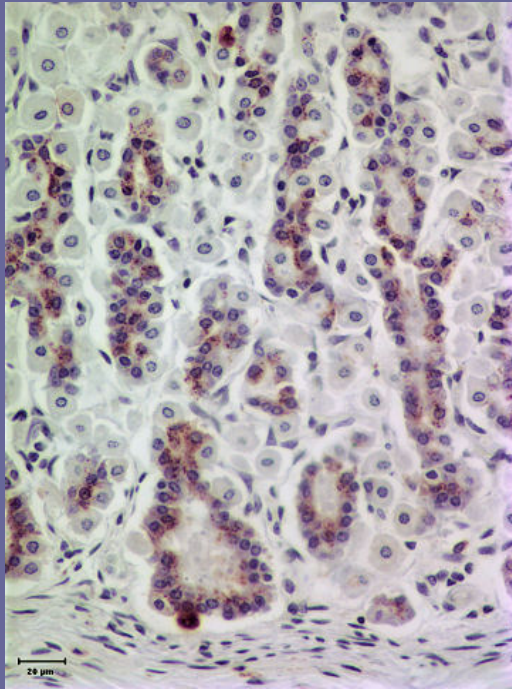
Lila



**Bone
Marrow**

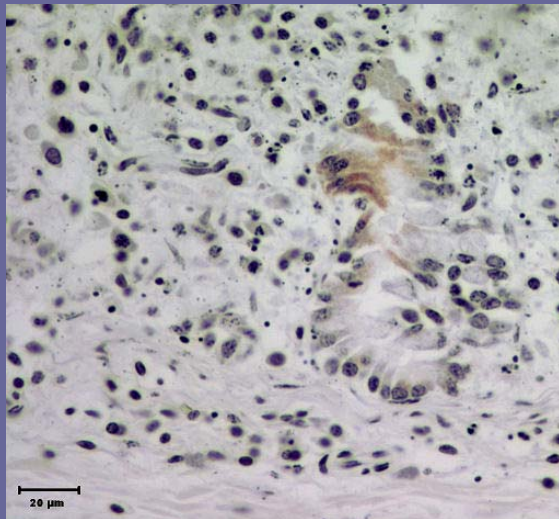
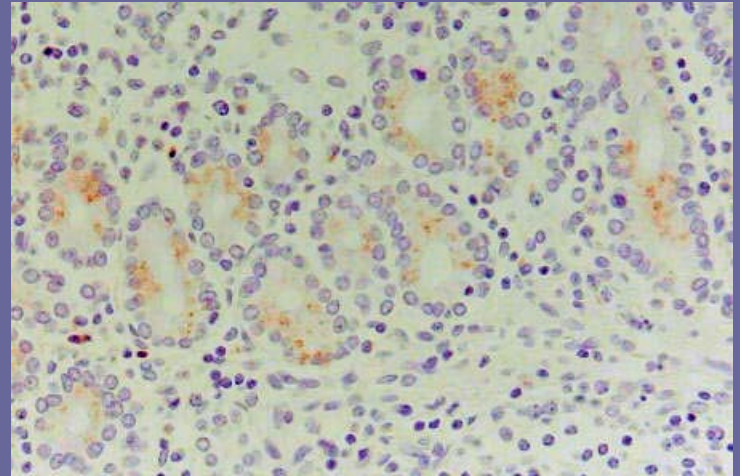


Gabriel

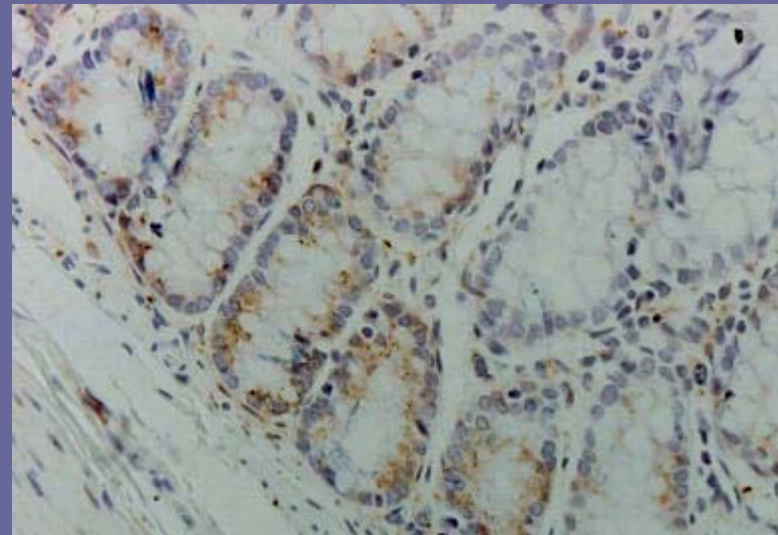


Compartment 3
Stomach

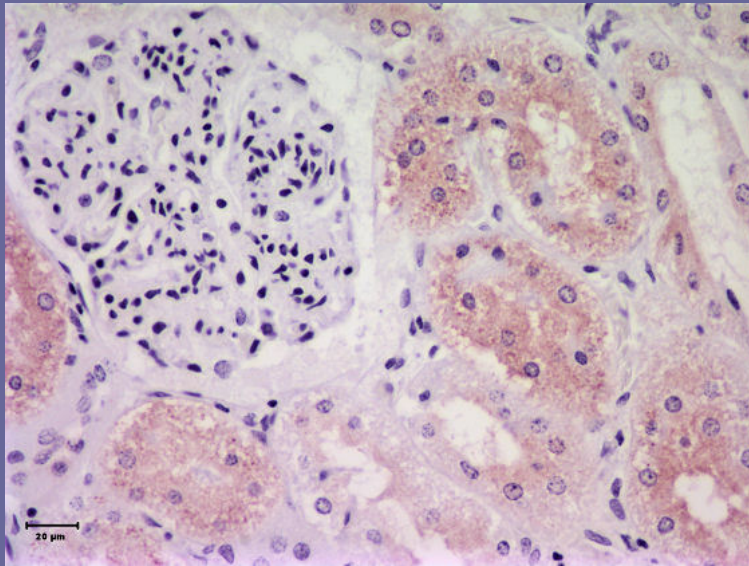
Lila



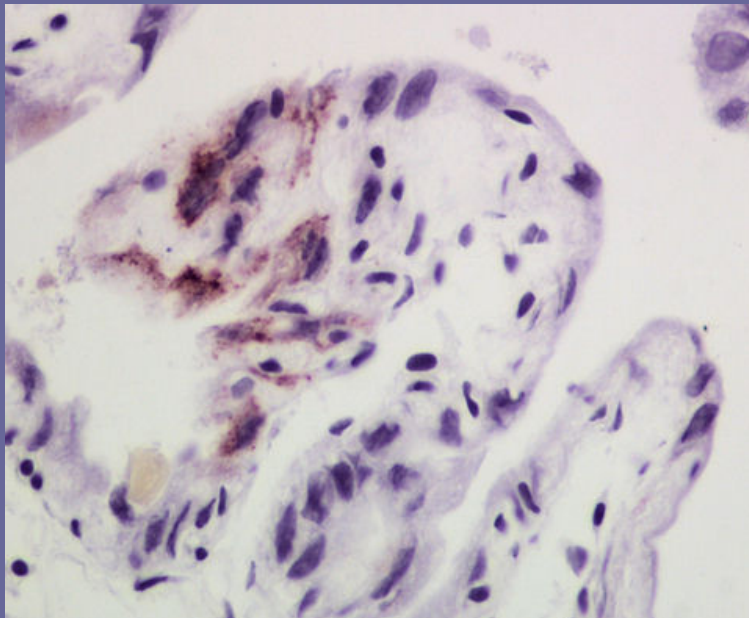
Colon



Gabriel

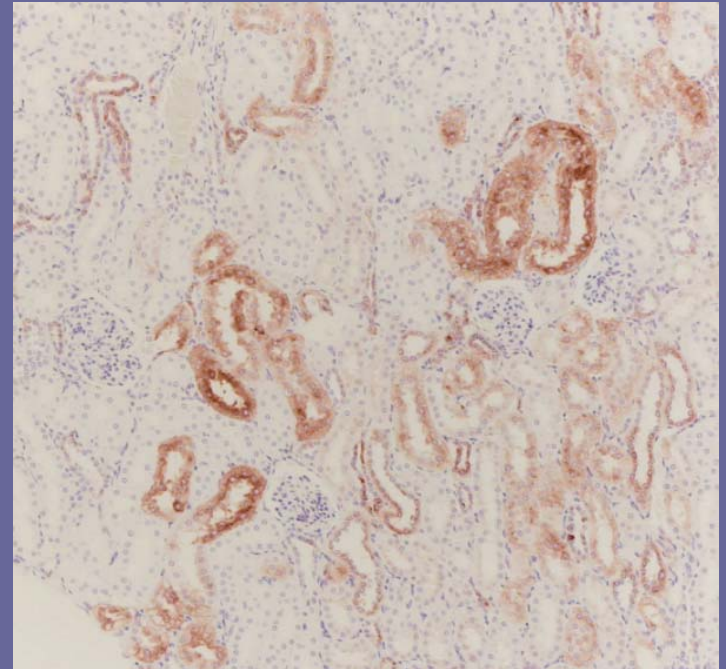


Kidney



Chorioallantoic membrane
placenta

Lila



Need to update recommendations for testing before next alpaca birthing season (1 vs 16 or 39 BVDV PI)

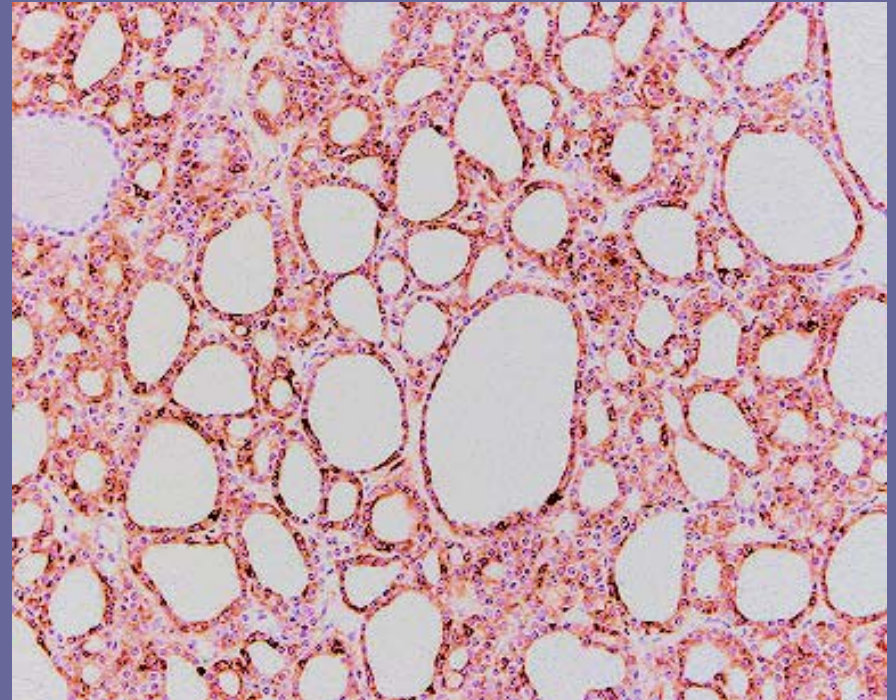
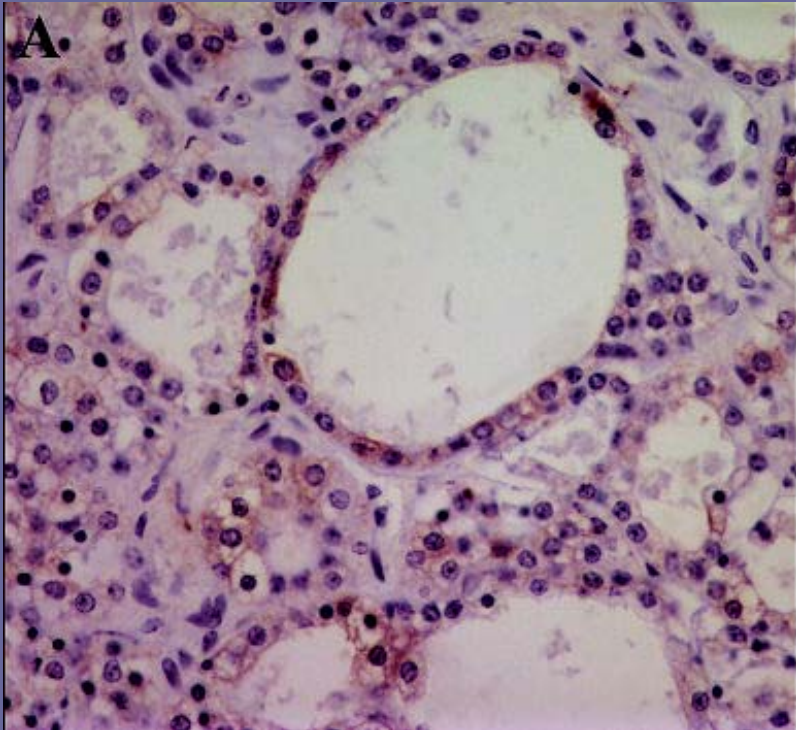
- Test/specimen to identify BVDV **PI** cria?
 - VI +/+ buffy coat
 - RT-PCR + buffy coat
 - IHC + placenta
 - IHC +/+ haired skin
 - Ag ELISA +/+ serum, + haired skin
 - Multiple tests on low birth weight cria?
 - Vaccination? – assessment of herd exposure
-
- Cerebellar Hypoplasia?
 - Mucosal Disease?



Thyroid gland

Gabriel

Lila



Herd History PI Cria1

