



# Latin Comparative Pathology Group

## The Latin Subdivision of the CL Davis Foundation

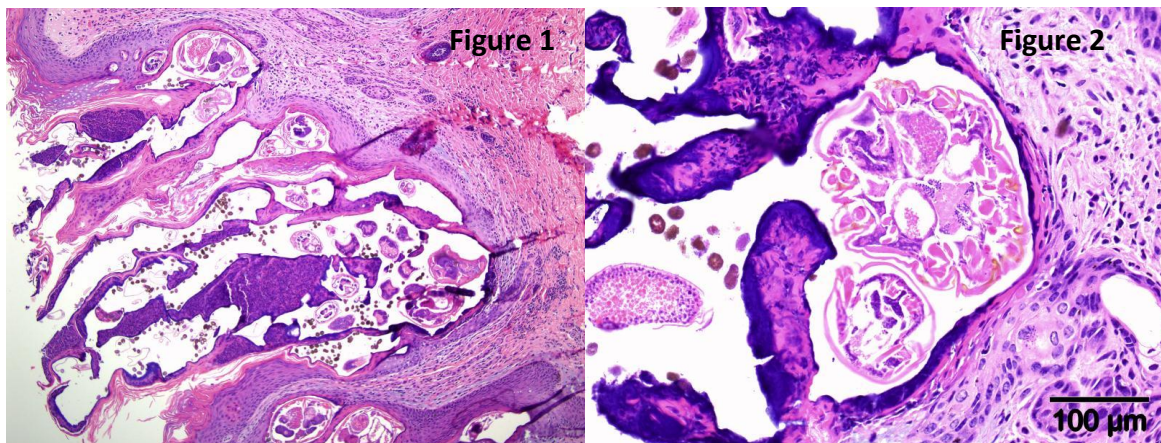
### Diagnostic Exercise

Case #: 19 Month: March Year: 2012

*Answer Sheet*

**Contributor:** Akinyi Nyaoke, California Animal Health and Food Safety Laboratory System, San Bernardino Branch, University of California Davis.

**Gross and /or microscopic image:** HE, 40 X and 100 X respectively



**Follow-up questions** [figures 1 & 2]:

#### 1. Histopathologic description

Haired skin, gray squirrel: There is focally extensive, irregular epidermal hyperplasia (acanthosis) with formation of rete pegs, spongiosis, and extensive orthokeratotic and parakeratotic hyperkeratosis. Multifocally, there is erosion and ulceration of the epidermis with serocellular crusting, intracorneal pustules, and numerous variably-sized, intracorneal and intraepidermal tunnels. The tunnels contain large numbers of oval, approximately 100-250  $\mu\text{m}$  x 150  $\mu\text{m}$  diameter mites characterized by a chitinous exoskeleton with cuticular spines, striated muscle, jointed appendages, and reproductive organs. In addition to the mites, tunnels contain abundant brown globular material (waste products) and small numbers of round to oval eggs. Along the superficial margin and in centers of some of the intracorneal pustules, there are aggregates of coccoid bacteria. There are focal hemorrhages and minimal interstitial infiltrates of lymphocytes, plasma cells and neutrophils in the superficial dermis.

## **2. Morphologic diagnosis**

Dermatitis, hyperkeratotic, focally extensive, moderate with acanthosis, intracorneal pustules, epidermal erosions and ulcerations, and numerous intralesional mites, consistent with mange.

## **3. Possible etiology**

*Notoedres* spp.

Please send your comments/questions to the whole LCPG list by hitting "reply to all".

A final document containing this material with answers and a brief discussion will be posted on the C. L. Davis website by the end of the current month ([http://www.cldavis.org/lcpg\\_english.html](http://www.cldavis.org/lcpg_english.html)).