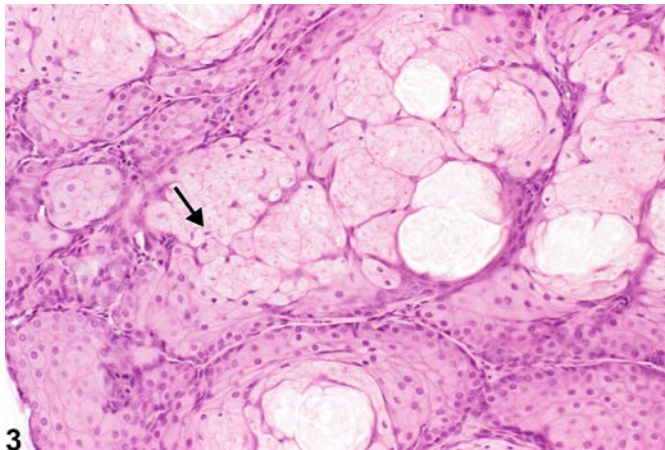
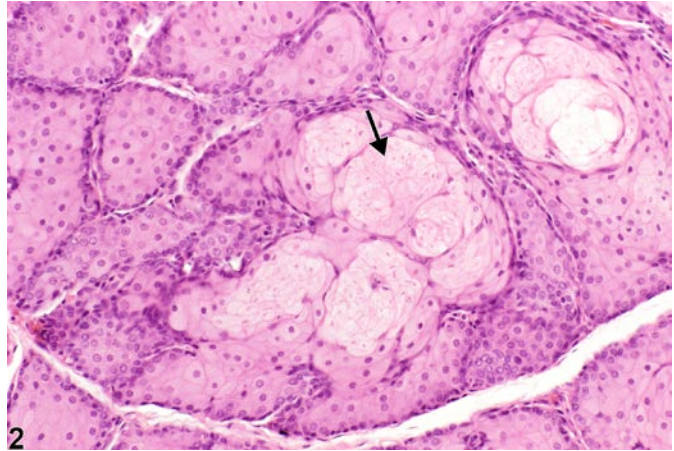
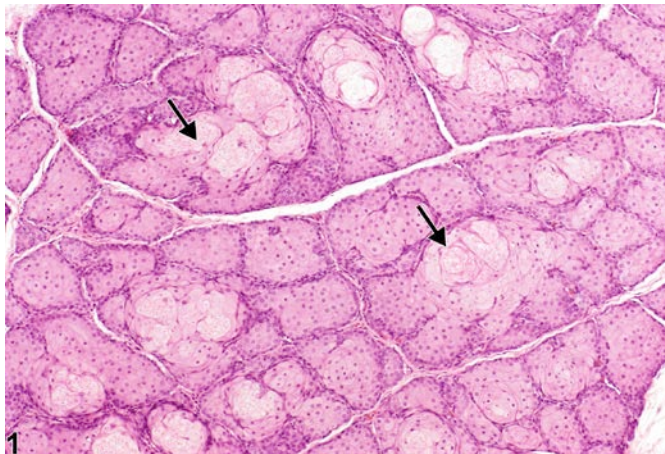




# NTP Nonneoplastic Lesion Atlas

## Zymbal's Gland – Hypertrophy



**Figure Legend:** **Figure 1** Zymbal's gland - Hypertrophy in a male F344/N rat from a chronic study. There are clusters of enlarged epithelial cells (arrows). **Figure 2** Zymbal's gland - Hypertrophy in a male F344/N rat from a chronic study (higher magnification of Figure 1). Epithelial cells are enlarged by increased amounts of pale eosinophilic, foamy or lacy cytoplasm (arrow). **Figure 3** Zymbal's gland - Hypertrophy in a female F344/N rat from a chronic study (higher magnification of Figure 1). Hypertrophic epithelial cells (arrow) are enlarged by increased amounts of pale eosinophilic, foamy or lacy cytoplasm.

**Comment:** Zymbal's gland hypertrophy (Figure 1, Figure 2, and Figure 3) is characterized by clusters of enlarged epithelial cells that may or may not be increased in number but that are enlarged by increased amounts of pale eosinophilic, foamy or lacy cytoplasm.



# NTP Nonneoplastic Lesion Atlas

## *Zymbal's Gland – Hypertrophy*

**Recommendation:** Zymbal's gland hypertrophy should be diagnosed and assigned a severity grade when present as a treatment-related effect.

### **References:**

Copeland-Haines D, Eustis SL. 1990. Specialized sebaceous glands. In: Pathology of the Fischer Rat: Reference and Atlas (Boorman GA, Eustis SL, Elwell MR, Montgomery CA, MacKenzie WF, eds). Academic Press, San Diego, CA, 279-294.

Abstract: <http://www.ncbi.nlm.nih.gov/nlmcatalog/9002563>

National Toxicology Program. 1990. NTP TR-372. Toxicology and Carcinogenesis Studies of 3,3'-Dimethoxybenzidine Dihydrochloride (CAS No. 20325-40-0) in F344/N Rats (Drinking Water Studies). NTP, Research Triangle Park, NC.

Abstract: <http://ntp.niehs.nih.gov/go/8884>

### **Author:**

Margarita M. Gruebbel, DVM, PhD, DACVP  
Senior Pathologist  
Experimental Pathology Laboratories, Inc.  
Research Triangle Park, NC