

Other Considerations

- Seek information on particular strain, genetic modification of animal being examined eg Jackson labs website, pubmed
- Meaning of SPF
- Use of sentinel animals
- Serological screening – Institute of Medical and Veterinary Services (IMVS) in Adelaide

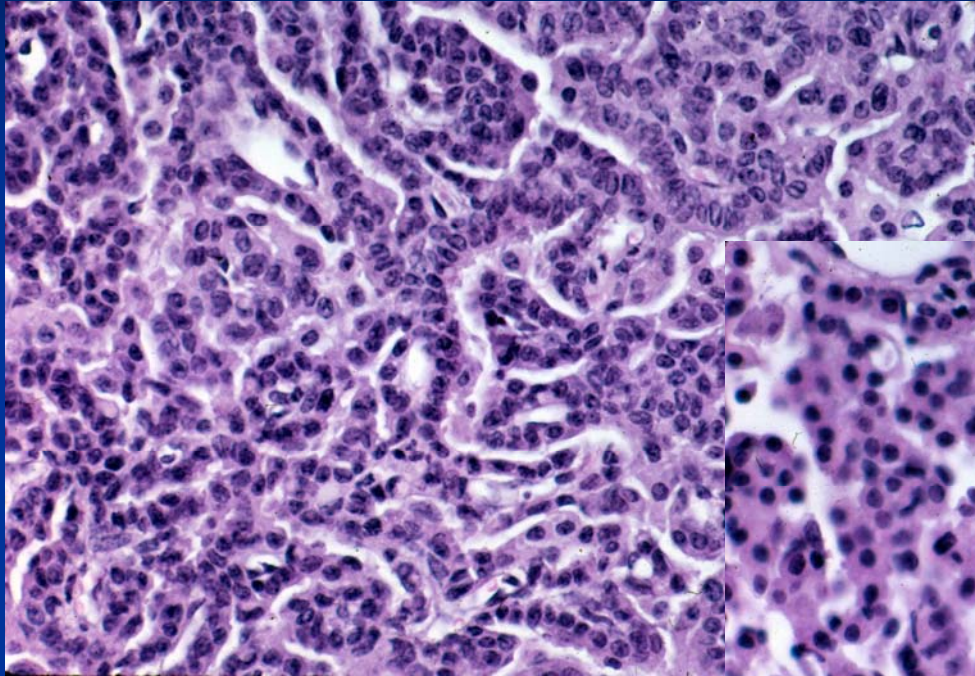
The Laboratory Mouse

- *Mus domesticus, castaneus, musculus, et al.*
- Normal features
 - Obligate nasal breathers
 - Prominent vomeronasal organs
 - Single left lung lobe, four right lobes.
 - No intrapulmonary bronchi (no cartilage)
 - Cardiac muscle extends around large pulmonary veins

Spontaneous Lesions and Diseases

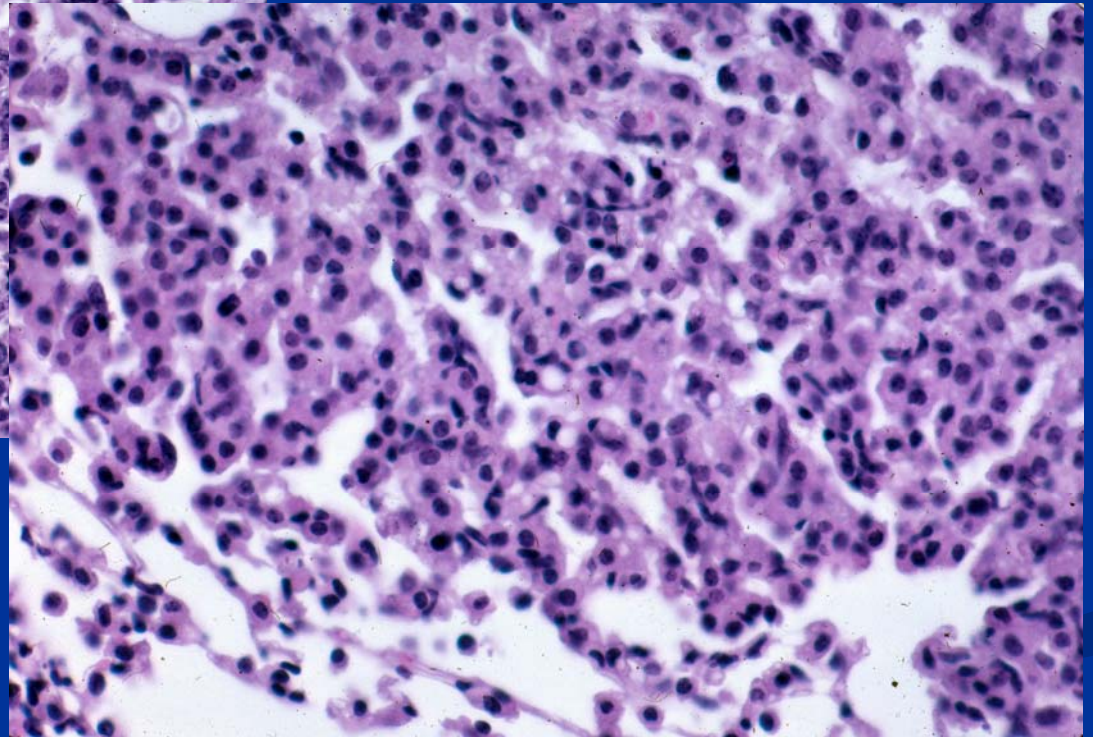
- Most are strain dependent
- Non-infectious lesions
- Neoplastic lesions
 - Bronchoalveolar adenoma or carcinoma
 - T-cell lymphoma
- Infectious diseases

Broncho-alveolar Lung Tumor Types

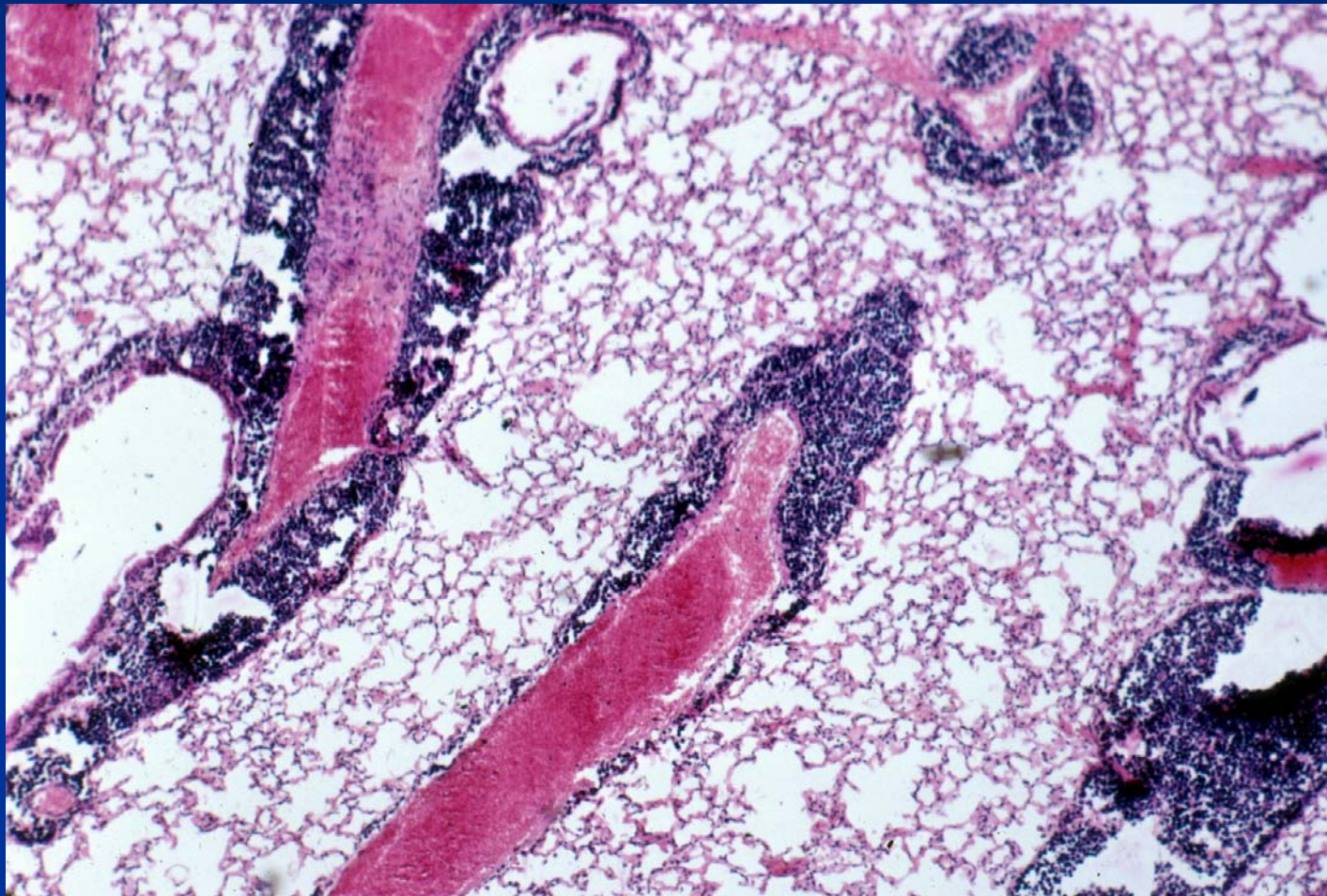


Clara Cell

Type II Cell



T-cell Lymphoma



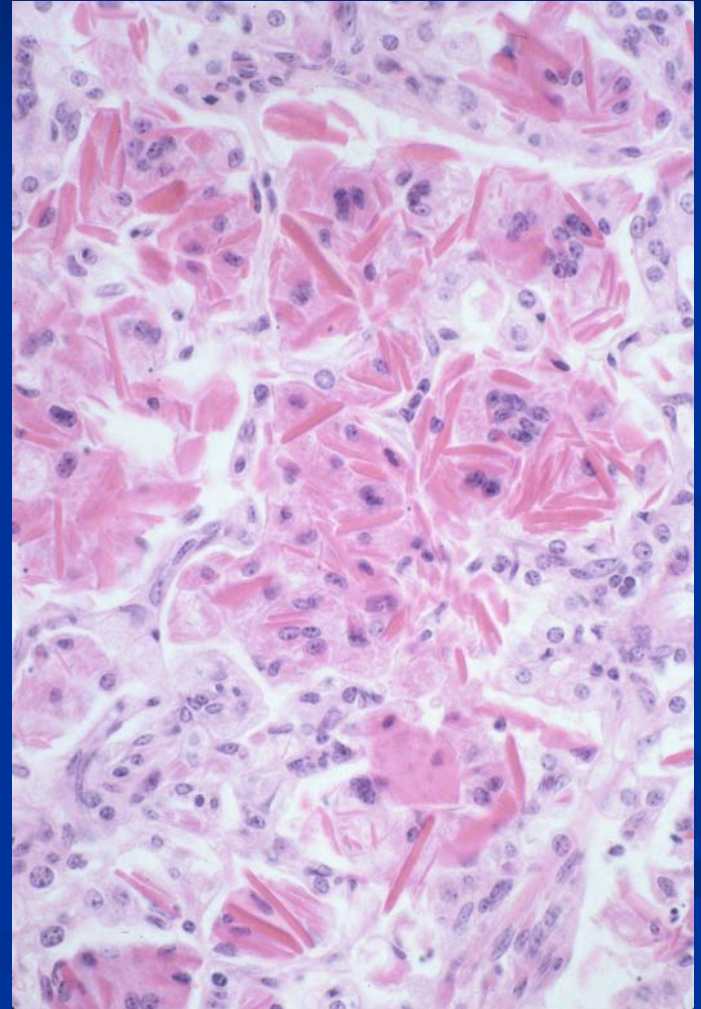
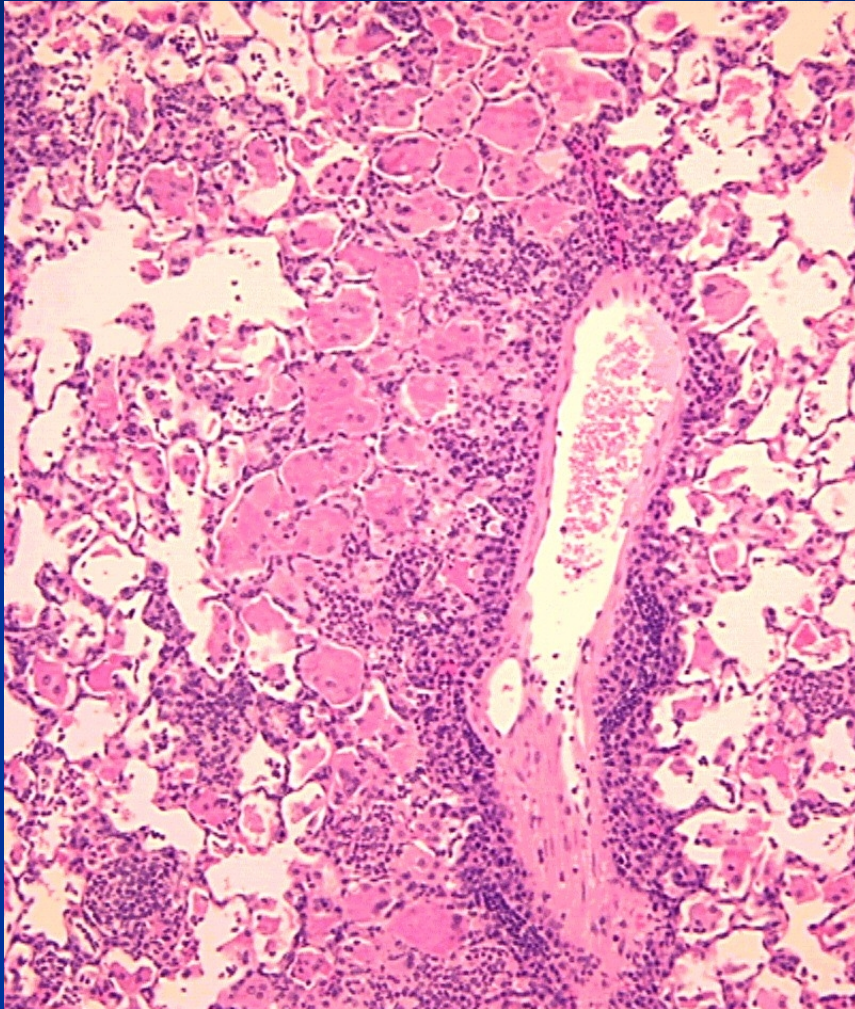
Noninfectious Lesions/Diseases

- Eosinophilic secretory inclusions (hyalinosis) in respiratory epithelium (B6, 129) – nasal, etc
- Acidophilic macrophage pneumonia (crystalline inclusions and deposits) in B6, motheaten (B6 mutant) and 129 mice – probably all
- Nasal obstruction - bedding
- Inhalation pneumonia - bedding, food

Acidophilic Macrophage Pneumonia

- Crystals in macrophages, epithelial cells, and alveoli
- Few inflammatory cells
- Somewhat strain specific e.g., 129 strain, moth eaten mice, and GEMS on 129 background.
- Crystals form endogenously - Ym1 (T-lymphocyte derived eosinophil chemotactic factor)
- Crystals also in nose, liver, stomach, and pancreas

Acidophilic Macrophage Pneumonia



Non-infectious Lesions

- Alveolar lipoproteinosis/proteinosis
- Alveolar emphysema/Enlarged air spaces
- Psommoma bodies/Alveolar microlithiasis (adult mutant *nackt* mice)
- Senile amyloidosis (SAM1 mice, ApoA2c allele)
- Lymphoid foci
- Chronic passive congestion
- Intraalveolar pigmented macrophages
- Alveolar histiocytosis

Chronic Passive Congestion

