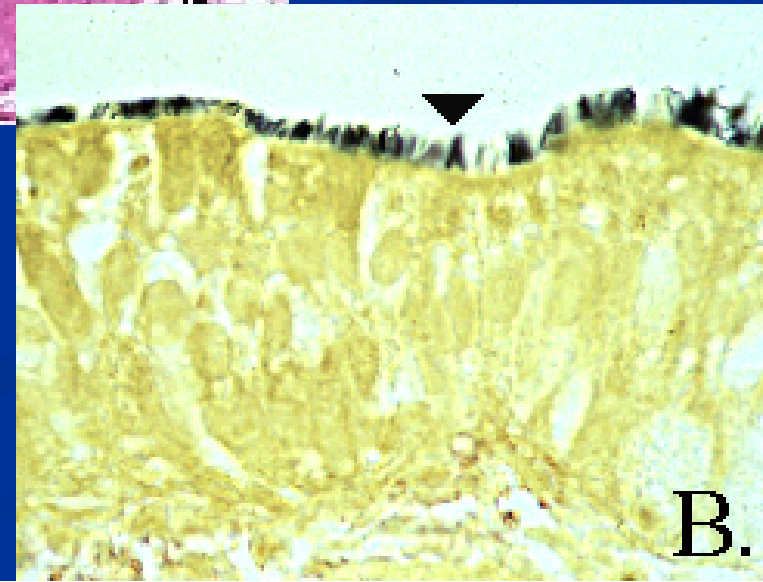
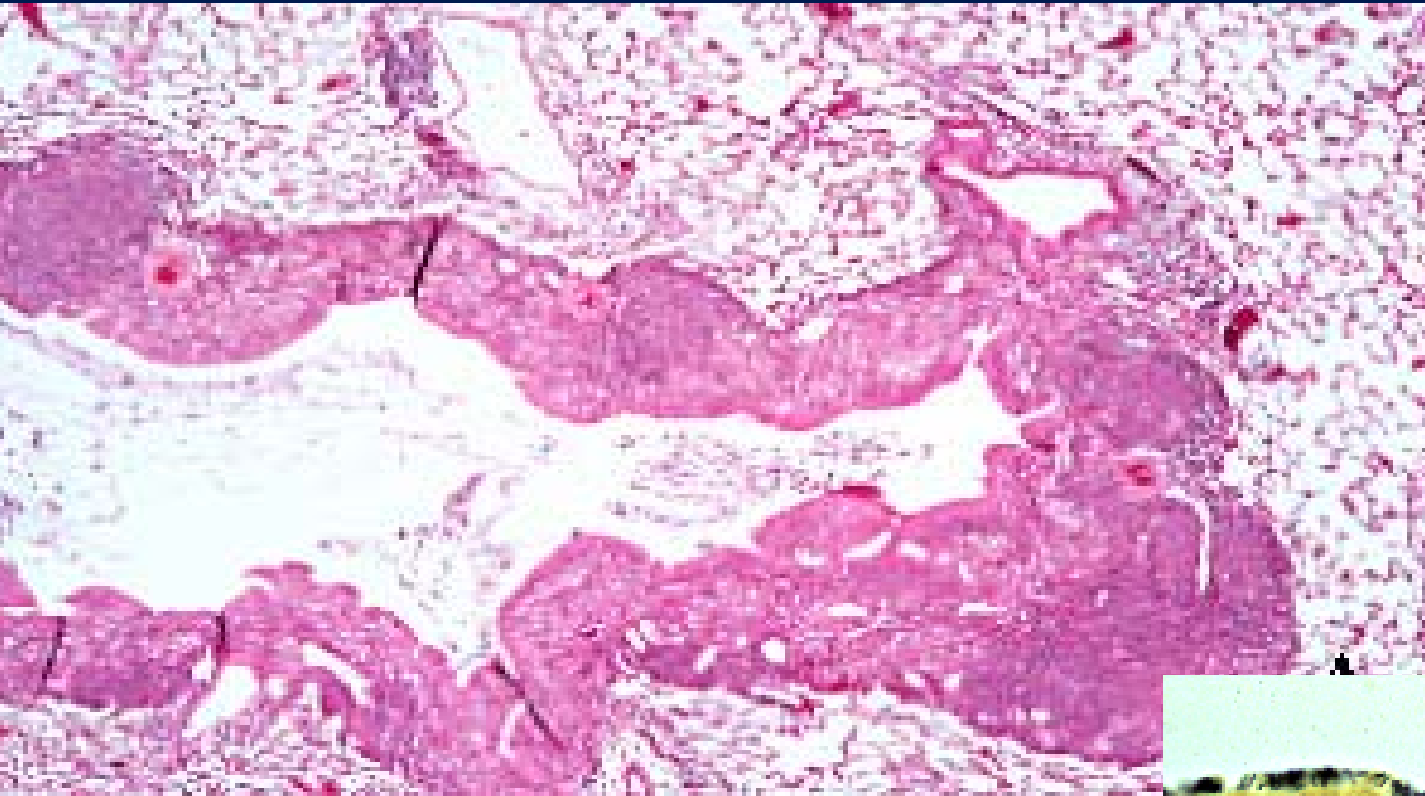


# CAR Bacillus Infection



# *Corynebacterium kutscheri* (Pseudotuberculosis)

- *Prevalence*: rare (once common)
- *Diagnosis*: culture, Gram stain of lesions, serology (not used)
- *Disease*: Caseopurulent abscesses in liver, kidney, lung and other sites. Subclinical carrier state common..
- *Transmission*: direct contact
- *Duration*: chronic, but probably not latent

# *Pasteurella pneumotropica*

- Prevalence: high prevalence of infection, sporadic disease
- Diagnosis: culture, lesions
- Disease: opportunistic organism – part of normal microflora in nasopharynx and gut
  - Conjunctivitis, ophthalmitis, periorbital abscesses, otitis, pneumonia, cystitis, prepuccial gland and subcutaneous abscesses, pyometra, etc. Dermatitis in nude mice.
- Transmission: normal flora
- Duration: chronic
- Comment: emerging disease - suppurative bronchopneumonia in partially immunodeficient mice co-infected with *Pneumocystis murina*.

# Pasteurellosis - Conjunctivitis



# Other Infectious Agents

## ■ Fungi

- *Aspergillus sp.*- infrequent, but may be in outbreak form
- *Pneumocystis murina* - IMPORTANT

## ■ Parasites

- *Toxoplasma gondii* - rare

# *Aspergillus sp*

- Prevalence: rare disease
- Diagnosis: lesions, culture
- Disease: pulmonary granulomas due to *Aspergillus terreus* in immunodeficient genetically altered mice (gp91 phox null) maintained on corncob bedding.
- Transmission: inhalation from contaminated corncob bedding
- Duration: chronic
- Comment: opportunistic fungus

# *Pneumocystis murina* sp. nov

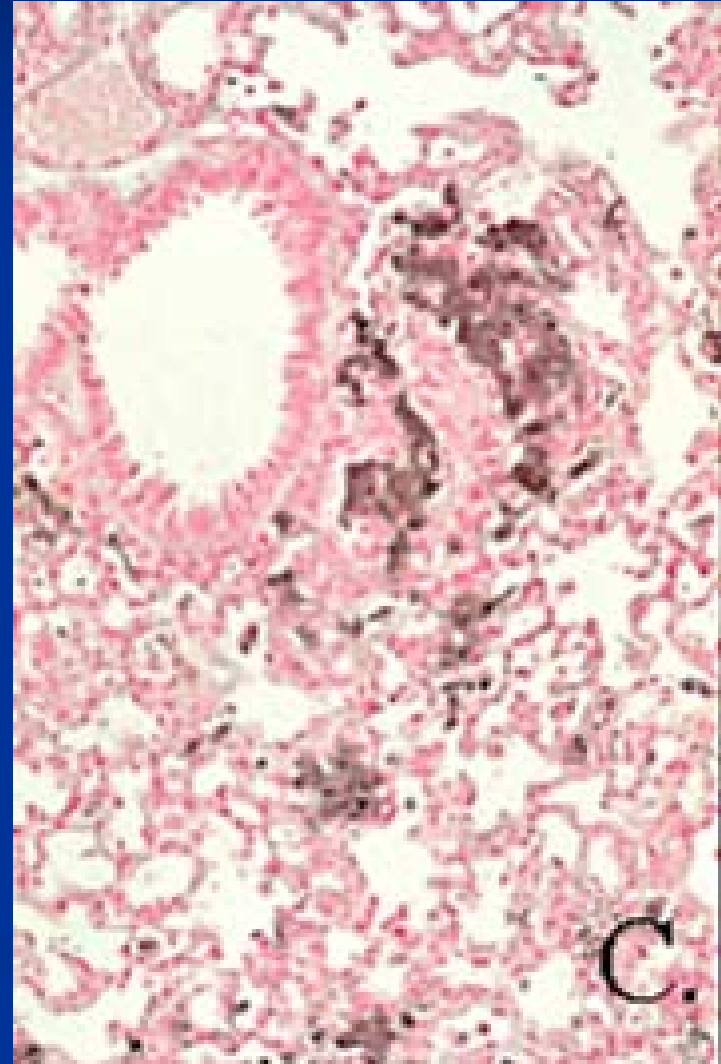
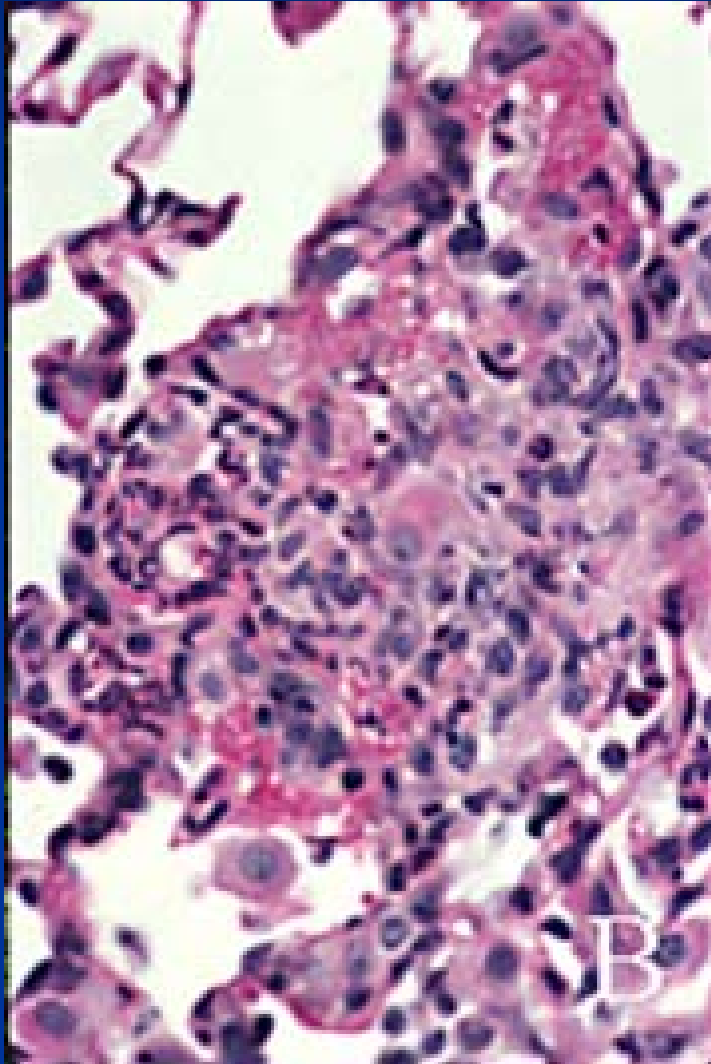
- Prevalence: high rate infection; disease rate low, except in immunodeficient mice
- Diagnosis: silver stain of organisms (differentiate from debris in macrophages) in histopath sections, may need PCR
- Disease: serious if immunologically deficient/steroids/low protein diet
- Lesion: lungs firm, pale, mottled and do not collapse – same as other species
- Histopathology: granular material in alveoli
- Transmission: contact aerosol. Immunocompetents as carriers
- Duration: chronic
- Mouse, rat, human *Pneumocystis* sp differ genetically, based upon 18S rRNA gene sequence. Human agent is now *P. jirovecii*; rat agents are *P. carinii* and *P. wakefieldiae*.

# *Pneumocystis muris*





*Pneumocystis muris*  
(H& E, silver stain)



# *Toxoplasma gondii*

- Prevalence: rare
- Diagnosis: histology, PAS-positive organisms in muscle and heart.
- Disease: usually subclinical.
- Lesions: interstitial pneumonia with involvement of other organs
- Transmission: orofecal (cat feces containing oocysts). Also cannibalism and vertical (in utero) transmission.
- Duration: chronic