

## V. Microbial Diseases (Session 9)

### C. The Nervous System

#### a. Introduction

- 1) Anatomy & Physiology: CNS and PNS
- 2) Immunity
- 3) Normal flora
- 4) Disease: Invasion & inflammation, Toxins

#### b. Bacterial Diseases

- 1) Meningitis:  
*Neisseria meningitidis*\*, *Hemophilus influenza*\*,  
*Streptococcus pneumoniae*\*, *E. coli*
- 2) Brain Abscesses:  
*Staphylococcus aureus*\*
- 3) Neurotoxins:  
Botulism: *Clostridium botulinum*\*  
Tetanus: *Clostridium tetani*\*
- 4) Leprosy:  
*Mycobacterium leprae*
- 5) Miscellaneous agents:  
*Listeria* sp.

#### c. Viral Diseases

- 1) Encephalitis\* and Meningitis\*:  
e.g. Arboviruses
- 2) Paralytic Polio\*:  
Poliovirus - An Enterovirus
- 3) Rabies\*:  
Rabiesvirus - A Rhabdovirus
- 4) Miscellaneous agents:  
e.g. Herpesviruses, Japanese B encephalitis virus

#### d. Fungal Diseases

- 1) *Cryptococcus neoformans*

#### e. Protozoal Diseases: (Trypanosomes)

- 1) African Sleeping Sickness
- 2) Chagas Disease

#### f. Prion Diseases\*

- 1) Kuru, Creutzfeldt-Jakob Disease
- 2) BSE (Mad cow), Scrapie, CWD