MIC 128C: POTENTIAL EMERGING INFECTIOUS DISEASE TOPICS

KINGDOM: MONERA	
BACTERIA	**DISEASES**
Bartonella spp.	Carrion's Disease, Trench Fever, Cat Scratch Disease, Bacillary Angiomatosis, Endocarditis
Borrelia burgdorferi	Lyme Disease
*Chlamydia trachomatis******	Urethritis, Cervicitis, Pelvic Inflammatory Disease
*Clostridium difficile******	Pseudomembranous colitis
Ehrlichia spp.	Ehrlichiosis
Escherichia coli O157:H7	Hemorrhagic colitis; Thrombocytopenia; Hemolytic uremic syndrome
Non-O157 Shiga toxin-producing *Escherichia coli* (STEC)	Same as above
Helicobacter pylori	Peptic Ulcer Disease, Gastric Cancer and Gastric Lymphoma
*Legionella pneumophila******	Legionnaire's Disease
*Listeria monocytogenes******	Listeriosis
Mycobacterium tuberculosis	Tuberculosis
Nontuberculosis mycobacteria, including: *Mycobacterium avium* complex *Mycobacterium genavense* *Mycobacterium ulcerans*	 Tuberculosis-like disease Wasting Disease Buruli Ulcer
Neisseria meningitidis	Epidemic meningitis
Streptococcus pyogenes (Group A streptococci)	Severe Invasive Group A Streptococcal Disease; Necrotizing fasciitis, Toxic shock syndrome
Vibrio cholerae	Cholera
Vibrio parahaemolyticus ***	Gastroenteritis
*Vibrio vulnificus****	Cellulitis; fatal bacteremia
Yersinia pestis	Plague
*** = These emerging pathogens are not featured prominently in the books **on reserve** in the Life Science Library. Check with the librarian to see if other books about these important emerging pathogens are available.	

<u>BACTERIA (CON'T)- SPECIAL TOPICS</u>	
A. <u>ANTIBIOTIC RESISTANCE IN</u>:	
THE HOSPITAL (NOSOCOMIAL INFECTIONS)	
1. *Enterobacter cloacae* and *Klebsiella Pneumoniae* (ESBL)	Resistance to "extended-spectrum B Lactamases" (ESBL)
2. *Pseudomonas aeruginosa*	Aminoglycoside resistance
3. *Enterococcus* spp. (VRE)	Vancomycin-resistant enterococci (VRE)
4. *Staphylococcus aureus* (MRSA)	Methicillin (or multiply drug) resistant *Stapylococcus aureus*) (MRSA)
5. *Staphylococcus aureus* (VISA/ GISA)	*S. aureus* that show high level resistance to methicillin plus intermediate resistance to vancomycin: Vancomycin Intermediate Resistant *S. aureus* (VISA) or Glycopeptide Intermediate Resistant *S. aureus* (GISA)
THE COMMUNITY	
1. *Streptococcus pneumoniae*	Resistance to penicillin and other antibiotics
2. *Neisseria gonorrhoeae******	Resistance to quinolones
3. *Mycobacterium tuberculosis*	Multi-drug resistance
THE FARM	
1. *Salmonella typhimurium* DT104	Gastroenteritis
2. *Campylobacter jejuni*	Campylobacteriosis, enteritis
B. <u>EMERGING INFECTIONS IN THE NEWLY INDEPENDENT STATES OF THE FORMER SOVIET UNION</u>:	
1. *Corynebacterium diptheriae*	Epidemic Diptheria
2. *Treponema pallidum* ***	Epidemic Syphilis

KINGDOM: PROTISTA	
PROTOZOA	**DISEASES**
Babesia microti	Babesiosis
Cryptosporidium spp.	Cryptosporidiosis
Cyclospora spp.	Enteritis
Giardia lamblia (G.duodenalis)	Giardiasis
Isospora belli	Enteritis
Microsporidia	Microsporidiosis
Plasmodium spp. (resistance to antimalarial drugs)	Malaria
AMOEBAE	
Naegleria fowleri	Primary Amebic Meningoencephalitis
Acanthamoeba spp.	Granulomatous Amebic Encephalitis (GAE) and Acanthamoeba Keratitis
ALGAE	
*Pfiesteria piscicida**** -"The Cell from Hell"	Pain, narcosis, disorientation, nausea, fatigue, vomiting, memory loss, immune failure and personality changes
KINGDOM : FUNGI	
YEASTS	
Azole–resistant *Candida albicans*	Candidiasis
Azole-resistant non-albicans *Candida* spp.	Disseminated infections in immunocompromised hosts
Trichosporon beigelii	(same as above)
Cryptococcus neoformans	Cryptococcosis
MOLDS	
Fusarium spp. (hyaline molds)	Fusariosis
Zygomycetes (hyaline molds)	Zygomycosis
Pseudallescheria boydii (dematiaceous mold)	Mycetomas, pneumonias, and disseminated infections
Scedosporium prolificans (dematiaceous Mold)	Disseminated infections in immunocompromised hosts
DIMORPHIC FUNGI	
Coccidioides immitis	Coccidioidomycosis
Histoplasma capsulatum	Histoplasmosis
Penicillium marneffei	Penicilliosis

VIRUSES:	DISEASES
Arenaviruses: Guanarito virus Junin virus Lassa virus Machupo Sabia virus	 Venezuelan hemorrhagic fever Argentine hemorrhagic fever Lassa fever Bolivian hemorrhagic fever Brazilian hemorrhagic fever
Bunyaviruses: Crimean-Congo hemorrhagic fever virus Rift Valley fever virus Hantaviruses, including: Hantaan virus Sin Nombre virus	 Crimean Congo hemorrhagic fever Rift Valley fever Korean hemorrhagic fever Hantavirus Pulmonary Syndrome
Cytomegalovirus	Congenital and perinatal infections; severe disease in immunocompromised hosts
Flaviviruses: Dengue virus Yellow fever virus	 Dengue hemorrhagic fever, dengue shock syndrome Yellow fever
Equine morbillivirus virus	Fatal, systemic disease in horses and humans
Filoviruses: Ebola virus Marburg virus	 Ebola hemorrhagic fever Marburg hemorrhagic fever
Genital Papillomavirus	Genital and nongenital warts; cervical cancers and other malignant genital tumors
Hepatitis Viruses: Hepatitis A **(Picornavirus)** Hepatitis B **(Hepadnavirus)** Hepatitis C **(Flavivirus)** Hepatitis D **(Deltavirus)** Hepatitis E **(Calcivirus)**	 Hepatitis A Hepatitis B Hepatitis C Hepatitis D Hepatitis E
Herpes simplex viruses type 1 and 2 (HSV-1 and HSV-2) (resistance to acyclovir)	Gingivostomatitis, Herpes genitalis, perinatal disseminated diseae

VIRUSES (con't):	**DISEASES**
Human herpesvirus 6 (HHV-6)***	Exanthem subitum (sixth disease or roseola infantum)
Human herpesvirus 8 (HHV-8)	Karposi's Sarcoma
Human immunodeficiency viruses: (HIV-1 and HIV-2) (multi-drug resistant)	Acquired Immunodeficiency Syndrome
Human T-cell lymphotropic viruses (HTLV-I and HTLV II)***	Leukemias and lymphoma
Influenza viruses	Influenza
Rabies virus	Rabies
Venezuelan equine encephalitis viruses	Encephalitis
PRIONS:	New-variant Creutzfeldt-Jakob disease (transmissible spongiform encephalopathy in humans) ***