**Epstein-Barr virus**

**Description:** Large, enveloped DNA virus (herpesvirus family)

**Diseases:** Infectious mononucleosis (mono)
- Latent infection in B-cells; symptoms result from proliferation, CMI response
- Also connected with cancers: B-cell lymphoma, Burkitt’s lymphoma

**Treatment:** None; also no vaccine at present

**Reservoir and spread:** Human reservoir; replicates in oral epithelium, spread by saliva
- Up to 95% of Americans test positive for exposure to this virus
- Often asymptomatic or produces mild illness

**Ebola virus**

**Description:** Filovirus: long, filamentous, enveloped RNA virus

**Diseases:** Ebola hemorrhagic fever (widespread tissue damage and hemorrhage)

**Treatment:** None; no vaccine

**Reservoir and spread:** Unknown but restricted animal reservoir
- Usually transmitted by contact with blood; also sexually
- Known to spread to humans by contact with infected monkeys

**Plasmodium falciparum** (and four other species)

**Description:** Single-celled protist
- Sporozoite, merozoite, trophozoite and gametocyte stages

**Diseases:** Malaria

**Virulence factors:** Intracellular growth and destruction of red blood cells

**Treatment:** Chloroquine; many resistant strains now known (treated with mefloquine)
- Control of insect vector with pesticide
- Vaccine research continues, but even natural immunity is poor

**Reservoir and spread:** *Anopheles* mosquito vector
- Life cycle requires both human and mosquito host