

NAMING MICROBES

How do we classify living things? (taxonomy)

Domain, Kingdom, Phylum, Class, Order, Family, Genus, Species

How do we name living things?

Binomial nomenclature for a species name. **Carl Linnaeus** developed this naming system in the 1700's. The name includes two parts: the Genus and the species. Always capitalize the Genus, but not the species. Italicize or underline. For this class, you really just will work with Genus and species in lab and lecture.

Bacterial Examples:

- *Escherichia coli*
Escherichia is the discoverer's last name; coli means colon – normal flora of our gut; certain strains make dangerous exotoxins (for example, *E. coli O157: H7*)
- *Staphylococcus aureus*
"Cluster of spheres golden" -causes pimples, boils and rashes; can cause food-poisoning if exotoxin is ingested
- *Enterobacter aerogenes*
"Intestinal bacteria grows in air" -- normally keeps a low profile in our guts, but is strongly associated with hospital infections
- *Bacillus cereus*
"Rod cereal grain" – endospores can cause food poisoning

Shortening the names:

Once you are comfortable discussing a particular bacteria, you can abbreviate the genus, like this: *E.coli*, *S.aureus*, *E.aerogenes*, or *B.cereus*. You have to be a little careful to not forget what the genus is, though. Notice that the "E" in *E.coli* and *E.aerogenes* stand for a different genus. *S.aureus* and *S.pyogenes* also could be mixed up if you're not careful: *Staphylococcus aureus* is a different genus than *Streptococcus pyogenes*!

Viral Examples:

- *Hepatovirus hepatitis A virus* (Hepatitis A)
- *Varicellovirus herpesvirus 3* (chickenpox)

Fungal Examples:

- *Saccharomyces cerevisiae* -- used to make alcohol and bread
- *Candida albicans* -- overgrows after antibiotics, causes human yeast infections of mucus membranes

Protist Examples:

- *Giardia lamblia* – lives in mountain streams, causes diarrhea
- *Entamoeba histolytica* –lives in tropical moist areas, causes