A physician has 6 patients (4 male, 2 female) that he has diagnosed with Mitochondrial Myopathies. All are missing a portion of chromosome 4 (4q28-q31). What are the potentially relevant genes might be missing in these patients? (He'd like to have the transgenic lab make knockout mice to study this.) How should he find these?

HINT: tags:

I need to set up a database for all of the researchers' publications at my school. How do I do that?

HINT: PubMed - Affiliation tag
- last name first/middle initials[author]
- OR “university name”[affiliation]

Caveat: we only have the information provided by publishers. Often only the first or corresponding author.

I need to narrow down my school's publication list to things specifically about the genetics of lung tumors. How should I do that?

HINT: MeSH - Search Builder & use the “History” with the above query
- “university name”[affiliation] AND “Lung Neoplasms / genetics”[Mesh]

Your son has to do a science fair project for his second grade class. He has to find the scientific name for his favorite animal which is, for now, the Giant Panda. How do I do that?

HINT: Taxonomy or Genomes
- “giant panda” or “giant panda”[organism]

A mouse neuroscience researcher wants to get a list of all of the genes expressed in the pineal gland. How could he find this?

HINT: UniGene - Organism & Tissue tags
- mouse[organism] AND pineal[tissue]

A biology professor needs to find some really cool 3D images of HIV-1 Reverse Transcriptase for a class to show them the biochemical structure and function of this enzyme complex (and to impress his students with his technological capability). How should he find it?

HINT: Structure - Organism & Title tags
- HIV1[organism] AND “reverse transcriptase”[title]

Your daughter has to do an AP Biology project on the genetics of some animal. She decides to start looking for information pertaining to her boxer, Fluffy, a Canis lupus familiaris. How many chromosomes does Fluffy have?

HINT: Taxonomy, Genomes or MefViewer (which is pleased out!)
- search with “dog” or “dog[organism]"

Your neighbor's Grandfather who has leukemia was just taken off oral 5-azacytidine and has been put on intravenous Vidaza. What is it and what does it do?

HINT: PubMed Health or PubChem Compound & links to PubMed
- search PubChem Compound with “5-azacytidine OR Vidaza"
- you can read the record or link to "literature"