

Problem Set 1: Library Treasure Hunt

1. Choose some topic that interests you and is at least tangentially related to molecular biology. Estimate how many articles have been written related to that topic, where the topic is the main focus of the article. The topic should be sufficiently narrow that the number does not exceed 1000.

Here's an example of a bad topic: *DNA replication*

Here's an example of a good topic: *Control of transcription during the development of facial characteristics in dogs*

Provide the topic, the number of articles, and the means by which you made the estimate.

2. You're interested in annotating phage genomes and have learned that amongst the best annotated phage genomes is that of phage T4. Most work on T4 occurred prior to 1980. Find a review article concerning phage T4 written prior to that year.

Provide a full reference to the article and the means by which you found it.

3. You've just gotten a faculty position at a college in New Jersey, and you want to make sure that there is a yearly scientific meeting for you and your students to go to in the area (a very good thing to be concerned about!). The easiest way for that to happen is for you to organize it yourself. So you want to know who in the area works on your favorite bacterium. Define "area" as New Jersey and the surrounding three states (New York, Pennsylvania, and Delaware). Define "favorite bacterium" as *Acinetobacter*. Define "works on" as published an article within the past 10 years. How many *laboratories* are there that contributed those articles?

Provide the number and the means by which you found it.

4. Find someone who has published in an area similar to his/her name. Here's an example:

Cardiac malformations and midline skeletal defects in mice lacking filamin A.
AW Hart et al (2006). *Hum Mol Genet* 15:2457-67.

Provide a reference to the article and the means by which you found it.

5. You've run across a very curious article (you might be interested in taking a look at it):

Commoner B (1968). Failure of the Watson-Crick theory as a chemical explanation of inheritance. *Nature* 220:334-340

Very strange! Has anyone has written in response to it? Find one or more articles that have (you might be interested in taking a look at them as well).

Provide the reference(s) and the means by which you found it.