# Discovering information and developing rigor and validity in literature searches at doctoral level

## Exercise One: PICO

You are a vet caring for an adult cat diagnosed with chronic kidney disease. You are curious as to whether the maintenance diet of the cat (fed a wet maintenance diet rather than dry maintenance diet) has played a part in the risk of developing CKD.

#### Complete a PICO for your question

|  |  |
| --- | --- |
| Population/problem |  |
| Intervention/indicator |  |
| Comparator |  |
| Outcome |  |

#### How would your PICO translate into a search question?

#### How would you translate your question into a search strategy?

## Exercise Two: Text mining

You are a life scientist investigating the cellular and molecular responses of Aspergillus fumigatus to the antifungal drug caspofungin.

Load-up PubMed PubReMiner (<http://hgserver2.amc.nl/cgi-bin/miner/miner2.cgi>).

Search for caspofungin across all fields and with an abstract limit of 5000.

#### What insights can we learn from the number of articles published per year?

#### Where might you chose to read, or publish in, on this topic?

#### What authors might you follow or seek out their work?

#### Are there any particular keywords or MeSH headings you would incorporate into a search strategy as a result of this search?

## Exercise Three: Guided hands-on searching: Embase

Go to [www.gla.ac.uk/library](http://www.gla.ac.uk/library). On the Library search box, click ‘Databases’ > ‘Databases by name’. Type in Embase. Connect to ‘Embase (Ovid)’. Login with your GUID and password. Select ‘Embase 1947-Present, Updated daily’.

We will use our veterinary search from earlier:

(cat OR cats OR feline\*)

AND

(chronic renal failure OR chronic renal disease OR chronic renal insufficiency OR chronic kidney insufficiency OR chronic kidney failure OR chronic kidney disease)

AND

(diet\* OR food\* OR feed)

1. Search for cat (ensure you have Map Term to Subject Heading ticked)
2. Click on the hyperlinked subject heading ‘cat’, this will allow you to see the tree structure of the thesaurus, with broader and narrower terms (the narrower the term, the more specific the terms become)
3. Click the Explode box next to cat
4. Tick to include all Subheadings
5. Click Continue
6. In the search box type (cat OR cats OR feline\*).tw
7. Click Search
8. Tick search box 1 and 2
9. Click OR
10. Repeat steps 1-9 for chronic renal failure
11. Repeat the thesaurus search for ‘diet’
12. Now search for ‘food’ in the thesaurus. ***Do you notice any more applicable thesaurus terms?***
13. Click animal food. ***Would you explode this subject heading or not?***
14. Now search for ‘feed’ in the thesaurus. ***Are there any applicable terms to add?***
15. Type (diet\* OR food\* OR feed).tw in the search box
16. Click Search
17. Tick boxes 7 and 8
18. Click OR
19. Click Expand to see your whole search.
20. Click boxes 3, 6 and 9
21. Click AND

## Exercise Four: Guided hands-on searching: BIOSIS Previews

Go to [www.gla.ac.uk/library](http://www.gla.ac.uk/library). On the Library search box, click ‘Databases’ > ‘Databases by name’. Type in Biosis Previews. Select Biosis Previews.

We are going to search for the dsDNA virus myoviridae

1. Select Taxonomic Data from the drop-down list (default is Topic)
2. Click Select from List
3. Click the plus symbol next to Microorganisms > Viruses > dsDNA Viruses
4. Click Add next to Myoviridae
5. Click OK at the bottom of the screen
6. Click Search
7. Click the white search button on the top-left
8. Search for myoviridae in the Topic field
9. Click on the Search History button on the top-menu
10. Combine Sets #1 and #2 with OR. ***Do you notice a difference in how the indexing and keywords work in Web of Science compared to the Ovid platform?***
11. Return to the results screen by clicking on the number of results in search set #3

## Exercise Five: Citation searching

1. Change Sort by: to Times Cited. ***What does this tell you about papers in this field?***
2. On the left-hand menu, tick the Highly Cited in Field box. ***The results change. Why do you think this is?***

Citation analysis is a useful tool in seeing the interconnected nature of papers. The database Scopus also provides the same function and is a much larger database than Web of Science Core Collection.