TIP SHEET

LifeQuest

Booleans and Grouping

Use AND, OR, and NOT and express order of operations by grouping with parentheses.

`dsRNA AND (virus OR viri) AND NOT siRNA`

No implicit boolean ops allowed - this is a syntax error

`dsRNA siRNA`

Phrase Search

If you want to search for a multi-word term (a "phrase") such as "polycationic peptide," place them inside of double quotes.
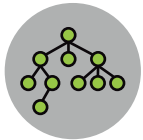
`"polycationic peptide" AND NOT (virus OR viri)`

Wildcards

The * operator matches zero or more non-space characters, so `vaccin*` matches *vaccine, vaccines, vaccinated*...

The ? operator matches exactly one character: `H1N?` matches *H1N1, H1N2*...

Try combos: `fol*ox?` matches *FOLFOX, FOLFOX4, FOLFIRINOX*

Ontologies

As you type, LQ will offer suggested ontology entries for synonym expansion. **Pro tip:** type between double quotes to get multi-word suggestions.

`zinc sulfate`

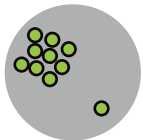will include the following phrases:

```
"zinc sulfate"
"O4SZn"
"zinc sulphate"
"ZnSO4"
"zinc sulfate anhydrous"
"zinc sulfate"
"zinc sulfate (1:1)"
"zinc(II) sulfate"
"zinc(2+) sulfate"
```

User Thesaurus

Click any ontology entry in the search box to add or remove synonyms. Be sure to put each new phrase on a new line and enclose it in double quotes.

Adding to the above list the phrase `"white vitriol"` converts the ontology term `zinc sulfate` into a blue user thesaurus entry

Proximity Search

Search for the occurrence of a set of words that are within *k* words of each other by using the kD (unordered) or kW (ordered) operator within < >.

`< glycine 8D sarcosine >`

Fuzzy Search

Place a % after a term to find terms that are within one character of it.

`"einstein"%` would match *Winstein, Eilstein, Feinstein,* and *Eistein* because each is within one edit of Einstein, but not *Einsteiniger*, which is four edits away.

Boosting

Change the order in which documents are returned (but not the set of documents itself) by increasing the relevance of specific terms via the ^k operator. Modify the value of *k* to bring relevant documents to the top.

`tamoxifen or trastuzumab^2`

makes documents that have *trastuzumab* twice as relevant as documents that have *tamoxifen*.

Hit ? for a pop-up of all available fields, then click a field to search within it.

`"carbonyl sulfide" AND Title:mycobacterium`

Carbonyl sulfide anywhere in the document, but *mycobacterium* must appear in the title.

Either the term *dsRNA* or the term *siRNA* must appear in the claims. Note the use of parenthesis to group the boolean expression and constrain it to the Claims field.

`Claims:(dsRNA OR siRNA)`

`Abstract:((dsRNA OR siRNA) AND (virus OR viri))`

A more advanced demonstration of complex boolean queries constrained to a field. The entire query is on the Abstract field.

Using a phrase search in a search constrained to the Title field. Note the use of the double quotes to tie the two words together.

`Title:"carbonyl sulfide"`

`Description:glucopyran* AND Claims:GLP?`

Searching the Description and Claims field at the same time. Note that wildcard operators are perfectly legal.

Ontologies can be used in field constrained queries, as can lists from your User Thesaurus.

`Claims:succinyl group`

`Names:< Robert 3D Langer >`

Proximity search works within field-constrained searches using the same syntax. The Names field is an aggregate field that searches Applicants, Assignees, and Inventors

Fuzzy search also works inside field-constrained queries. The field in this example aggregates the Title, Abstract, and Claims.

`Title, Abstract, Claims:metronidazole%`

`Abstract:"recombinant heparin"^3 OR protease`

`Abstract:("recombinant heparin"^3 OR protease)`

See the difference between these two boosted Abstract searches? The first allows for the term *protease* to be found anywhere in the document, while the second constrains it to the Abstract.

`Full Text:(drought tolerance OR "drought recovery"^2) AND CPC:"A01N63/00" AND Legal Status:grant%`

Date and Numeric Ranges

`Publication Date:2010•01•01`

`Publication Date:[ 1976•07•04 TO now ]`

`Filing Date:[ * TO 1990•11•22 ]`

`Nucleotide Sequence Count:[ 100 TO * ]`

Type a date in YYYYMMDD format - it autoformats to look like the above if you've done it right.

There's no limit to how complex your queries can be. In the above example, we are searching for documents in CPC Class *A01N63/00* that relate to the ontology term *drought tolerance* or the phrase *drought recovery* anywhere in the full text, with *drought recovery* being twice as relevant. The legal status of the documents should be *grant* but with the % fuzzy search operator we allow for minor misspellings of that word.

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