



Multiple databases vs. spaces in filenames and paths

BLAST has been able to search multiple databases since 1997. The databases can be listed after the “-db” argument or in an alias file (see [cookbook entries on blastdb_aliastool](#)), separated by spaces. Many operating systems now allow spaces in filenames and directory paths, so some care is required. Basically, one should always have two sets of quotes for any path containing a space. Blastdbcmd is used as an example below, but the same rules apply to makeblastdb as well as the search programs like blastn or blastp.

To access a BLAST database containing spaces under Microsoft Windows it is necessary to use two sets of double-quotes, escaping the innermost quotes with a backslash. For example, Users\joeuser\My Documents\Downloads would be accessed by:

```
blastdbcmd -db "\"Users\joeuser\My Documents\Downloads\mydb\" " -info
```

The first backslash escapes the beginning inner quote, and the backslash following “mydb” escapes the ending inner quote.

A second database can be added to this command by including it within the outer pair of quotes:

```
blastdbcmd -db "\"Users\joeuser\My Documents\Downloads\mydb\" myotherdb" -info
```

If the second database had contained a space, it would have been necessary to surround it by quotes escaped by a backslash.

Under UNIX systems (including LINUX and Mac OS X) it is preferable to use a single quote (‘) in place of the escaped double quote:

```
blastdbcmd -db ` "path with spaces/mydb" ` -info
```

Multiple databases can also be listed within the single quotes, similar to the procedure described for Microsoft Windows.