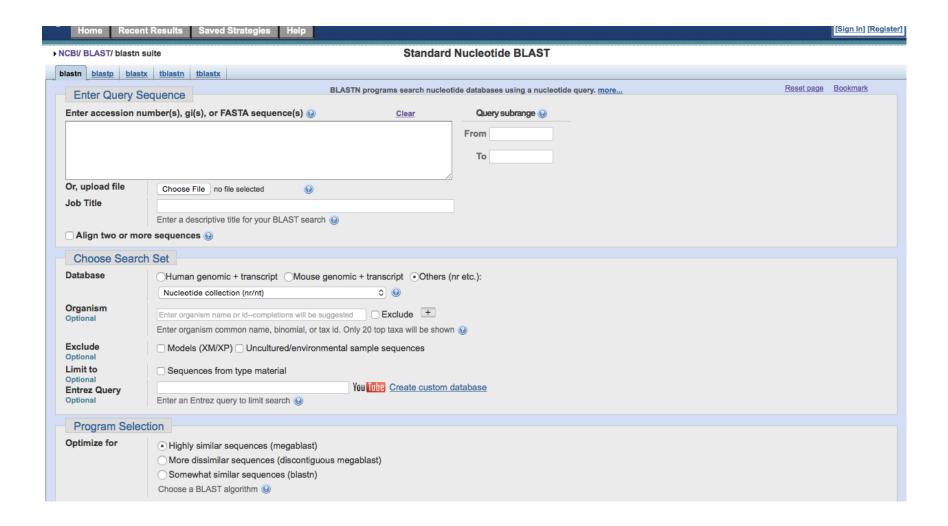# Running blast from command line

June 25, 2015
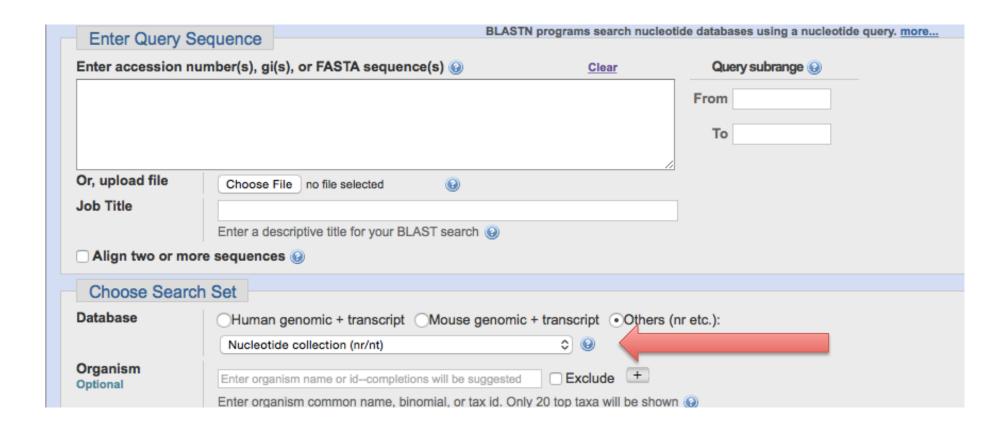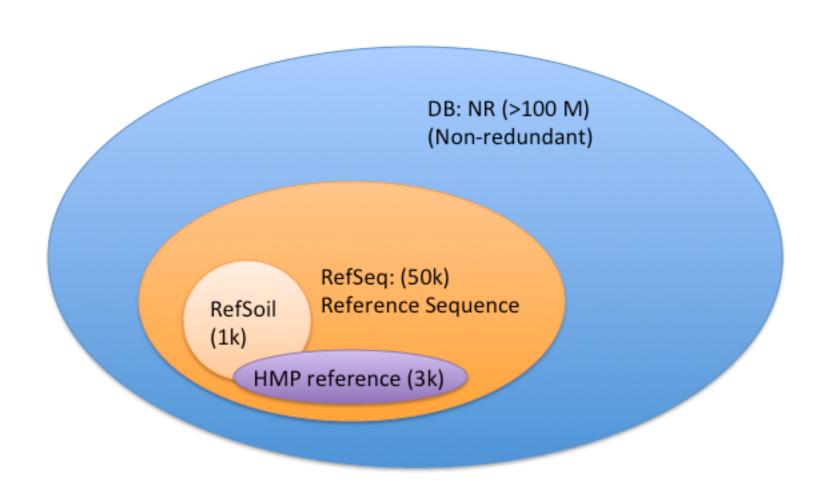
BLAST ?

Why I want to run BLAST from command line?

- I can choose any database
- Automation :
  - Use output file in downstream program eg. R
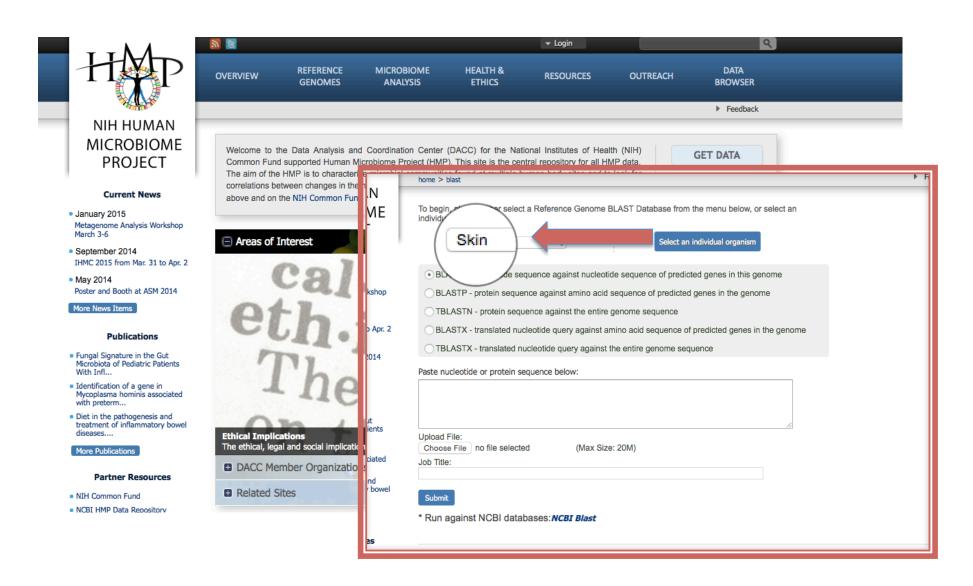 - BLAST can be a part of your code
- Speed

Web interface

Compare Database (DB)

DB: NR (>100 M)
(Non-redundant)

RefSeq: (50k)
Reference Sequence

RefSoil
(1k)

HMP reference (3k)

HMP: A good example of curated DB

Use meta-seq data as a DB

DataBase

Your Isolates or gene of interest

OTUs of Soil sample   OTUs of Water sample

```
> My Baby
GGAGAGTTTGATCCTGGCTCAGGACGAACGCTGGCGGCGTGCCTAACACATGCAAGTCGAACGGTCCAGT
GTCTAACACCGAGTGTTTAAGGAGCAGATAAGTGGATGACAGCGAGAGCGCGAAGAATGAGCGCTCCACG
CATTCAATAAGTGTCAACACAGCTTCTGGAATGCTGGGTGTTAGATGCTGGATAGTGGCGGACGGGTGAG
TAACGCGTGGATAACCTACCTGCTAGACCGGGACAACCCTTGGAAACGAGGGCTAATACCGGATGAGCTT
AATTAGTGGCATCACTGATTAAGGAAAGATGGCCTCTGAAAATGCTATCGTTAGTAGATGGATCCGCGTC
TGATTAGCTAGTTGGTGGGGTAAAGGCCTACCAAGGCGACGATCAGTAGCCGGCCTGAGAGGGTGAACGG
CCACACTGGGACTGAGACACGGCCCAGACTCCTACGGGAGGCAGCAGTGGGGAATCTTCCGCAATGGACG
AAAGTCTGACGGAGCAACGCCGCGTGTACGACGAAGGCCTTCGGGTTGTAAAGTACTGTCTTCAGGGACG
AACGGTAAGTATGTAAATAATGTACTTACATGACGGTACCTGAGGAGGAAGCCCCGGCTAACTACGTGCC
AGCAGCCGCGGTAATACGTAGGGGGCAAGCGTTGTCCGGAATCATTGGGCGTAAAGGGCGCGTAGGCGGA
TACTTAAGTCTGGTGTGAAAACCTAGGGCTCAACCCTGGGACTGCATCGGAAACTGGGTATCTTGAGGAC
AGGAGAGGAAAGTGGAATTCCACGTGTAGCGGTGAAATGCGTAGATATGTGGAGGAACACCAGTGGCGAA
GGCGACTTTCTGGACTGTAACTGACGCTGAGGCGCGAAAGCGTGGGGAGCAAACAGGATTAGATACCCTG
GTAGTCCACGCCGTAAACGATGAGTGCTAGGTGTAGAGGGTATCGACCCCTTCTGTGCCGCAGTTAACAC
ACTAAGCACTCCGCCTGGGGAGTACGGCCGCAAGGTTGAAACTCAAAGGAATTGACGGGGGCCCGCACAA
GCGGTGGAGCATGTGGTTTAATTCGACGCAACGCGAAGAACCTTACCAAGGCTTGACATCCATAGAATCT
TTGGGAAACCAGAGAGTGCCCTTCGGGGAGCTATGAGACAGGTGGTGCATGGTTGTCGTCAGCTCGTGTC
GTGAGATGTTGGGTTAAGTCCCGCAACGAGCGCAACCCCTATGTTTAGTTGCTAACGCGTAATGGTGAGC
ACTCTAGACAGACTGCCGGTGACAAACCGGAGGAAGGTGGGGATGACGTCAAATCATCATGCCCCTTATG
TCTTGGGCTACACACGTGCTACAATGGCCAGTACAGACGGAAGCGAAGCTGTGAGGTGAAGCCAATCCGA
GAAAGCTGGTCTCAGTTCGGATTGTTCTCTGCAACTCGAGAACATGAAGTCGGAATCGCTAGTAATCGCA
GGTCAGCATACTGCGGTGAATACGTTCCCGGGCCTTGTACACACCGCCCGTCACACCACGAAAGTCTGCA
ACACCCGAAGCCGGTGAGGTAACCCGAAAGGGAGCTAGCCGTCGAAGGTGGGGCCGATGATTGGGGTGAA
GTCGTAACAAGGTAGCCGTATCGGAAGGTGCGGCTGGATCACCT
```

Presence / Absence
Abundance (OTU table)