

Docker : a blast example

Get a blast image

```
docker pull simonalpha/ncbi-blast-docker
```

Create a working dir

```
mkdir blast_test && cd blast_test/
```

Get data

```
curl -o sequences_COI.fasta https://data-access.cesgo.org/index.php/s/KdY6BCuClKtvfBX/download
curl -o Danio_rerio_genes_Zv9.fasta https://data-access.cesgo.org/index.php/s/1PRhWEtSK9v9wHD/download
```

First test with makeblastdb

```
docker run simonalpha/ncbi-blast-docker makeblastdb -in Danio_rerio_genes_Zv9.fasta -parse_seqids -dbtype nucl -out blastdb/zv9 -title "Zv9"
```

Failed because data are not in container, need to mount volume

Mount volume (working dir -> /data in container)

Use the option -v : -v \$(pwd):/data/

Run makeblastdb

```
docker run -v $(pwd):/data/ simonalpha/ncbi-blast-docker
```

```
makeblastdb -in /data/Danio_rerio_genes_Zv9.fasta -  
parse_seqids -dbtype nucl -out /data/blastdb/zv9 -title "Zv9"
```

A blastdb directory with results is created in your working dir

Run blastn

```
docker run -v $(pwd):/data simonalpha/ncbi-blast-docker blastn  
-query /data/sequences_COI.fasta -task megablast -db  
/data/blastdb/zv9 -outfmt 7 -out /data/megablast.out
```

The result is in your working dir