# Bioinformatics

# Modulo 8

*Anna Paula Pawlicka Maule*

*Nr USP 4624650*

1. Primeiro eu achei as ORFs de tamanho minimo igual a 300, no ORFfinder(Figura 1). Entao, salvei o arquivo das ORFs da Chlamydia muridarum (AE002160) e da Chlamydiacaviae (AE015925) em arquivos .fasta.

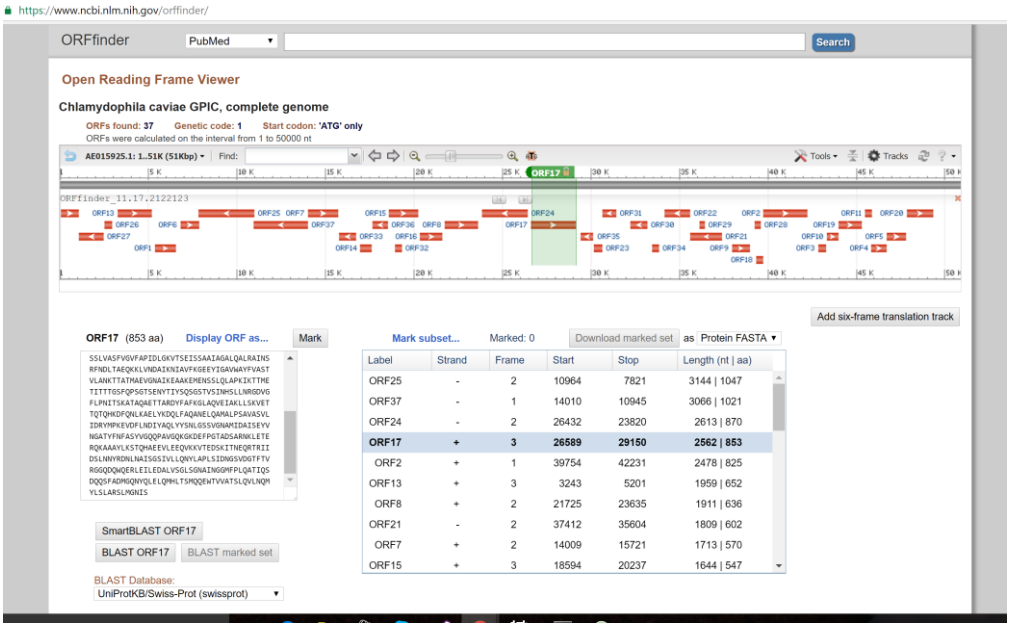



*Figura 1*

Em seguida fiz o alinhamento global(*Figura 2*) e obtive o dotplot deste alinhamento(*Figura 3*)

gi|29835126|gb|AE015925.1|:1-51000 Chlamydophila caviae GPIC, complete genome
**Sequence ID:** Query_206543 **Length:** 51000 **Number of Matches:** 1

**Range 1: 1 to 51000** Graphics Next Match Previous Match

| NW Score | Identities | Gaps | Strand |
|---|---|---|---|
| -3062 | 27923/52641(53%) | 3255/52641(6%) | Plus/Plus |

```
Query  1      CACATAGCAAAACACTCAAAGTTTTTCAGCAAAAAAGCTTGTTGAAAAAATTGTTGACCG  60
Sbjct  1      TATATA----AATACTCTA-------------------------------------------  15

Query  61     CCTGTTCACAAATAGGCATAACTTCCTGTTCTGAACAGTTTGAACAATCTGTAAACAGAG  120
Sbjct         ------------------------------------------------------------

Query  121    TTATAAACAGTTTTTTCACAACTTTTTCTCTCGAAGAAATAAAGTTATAAACATTTTCCA  180
Sbjct         ------------------------------------------------------------

Query  181    CACCACCTAAAGAAGAAGAGACTAATAAATATCTCTAAGAATCTTCTTCTGTGGGTGTGG  240
Sbjct  16     ----------------------------------------TCTTTTTCTGAAGGTGTGG  34

Query  241    AAACTTTCGATAAGTGTGAAACTTTATGACAAGACTTCCTCTACTCAAACGACCTCGAAG  300
Sbjct  35     AAAGTGTTGAAGGATTGTAAAA---ATGAGCTCATTAGCCCTGCTTCGACGTCCTCGAAG  91

Query  301    AAATCGGAAAAGTGCTGCTATTCGATCTATGATTCGAGAAACTAATATGGTTTCAAGTGA  360
Sbjct  92     GAATAGAAAAACCGCAGCTATCCGAGATTTGGTGGCTGAAACAGCTTTATTACCCCAAGA  151

Query  361    TCTAATTTGGCCTATTTTTCTTAAAGAAGGTTCAGGAATTCGAGAAGAAATACCCAGTAT  420
Sbjct  152    TTTTATCTGCCCATTTTTCGTTAAGGAAGGGAAGAATATTTGCGAGGAAATAGAAAGTCT  211
```

*Figura 2*

A sinetesia dessas duas especies e’ quase complete de acordo com a Figura 3. Que e’ o Dot-Plot.

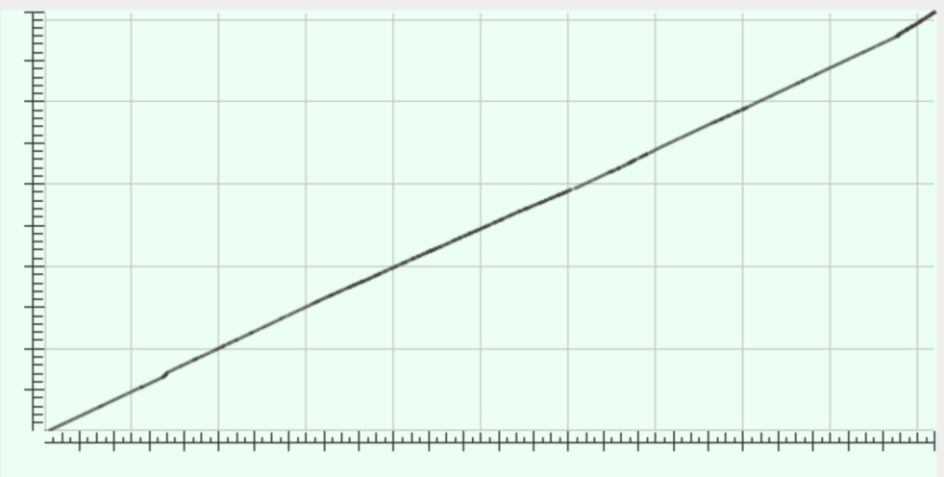
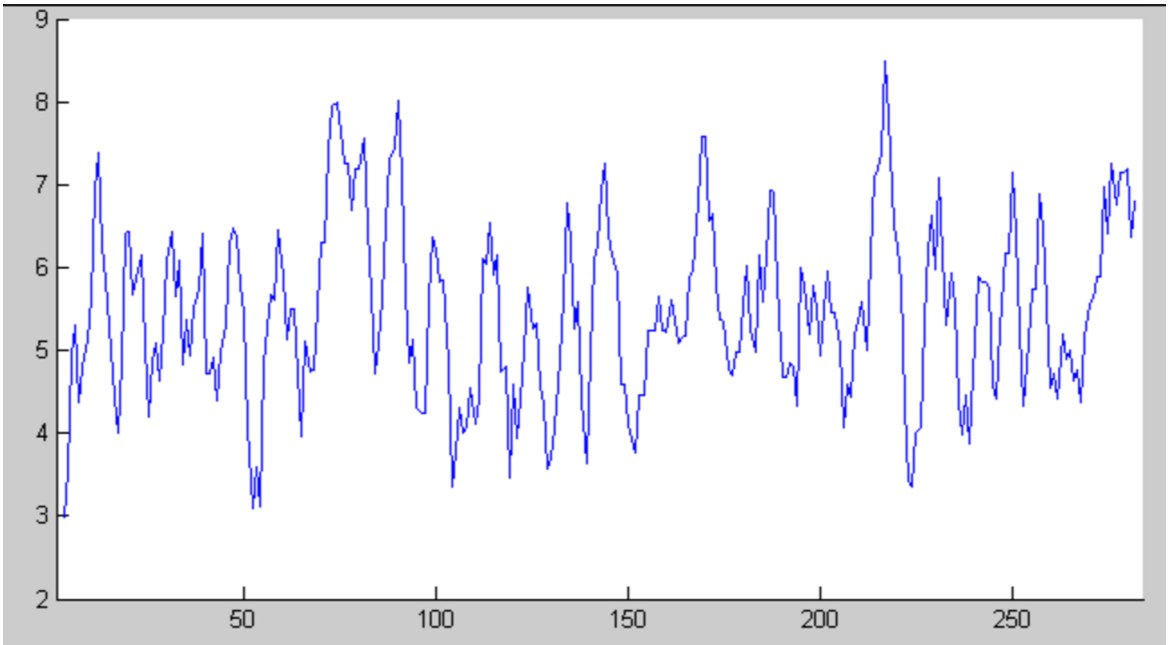


*Figura 3*

2.