***Bolinus brandaris* GPCRs (Osphradium transcriptome)**

A hmmsearch was performed on the transcriptome using the PFAM profiles for several known GPCR/Chemoreceptors families with a threshold Eval of 10E-05:

**Profile #Hits**

PF00001\_7tm\_1 (Opsins) 525

PF00002\_7tm\_2 (Adhesion/Secretin) 42

PF00003\_7tm\_3 (Glutamate) 26

PF01534 (Frizzled) 16

PF05462\_Dicty\_CAR 3

PF08395\_7tm\_7 (Chemo/gustatory) 0

PF13853\_7TM\_4 (Olfactory) 62

PF02117\_7TM\_GPCR\_Sra 0

PF10292\_7TM\_GPCR\_Srab 0

PF02175\_7TM\_GPCR\_Srb 0

PF03125\_7TM\_GPCR\_Sre 0

PF02118\_7TM\_GPCR\_Srg 3

PF10321\_7TM\_GPCR\_Srt 0

PF10322\_7TM\_GPCR\_Sru 0

PF10323\_7TM\_GPCR\_Srv 10

PF10328\_7TM\_GPCR\_Srx 51

PF03383\_7TM\_GPCR\_Srxa 0

PF10317\_7TM\_GPCR\_Srd 0

PF10318\_7TM\_GPCR\_Srh 0

PF10327\_7TM\_GPCR\_Sri 0

PF10319\_7TM\_GPCR\_Srj 0

PF10326\_7TM\_GPCR\_Srr 0

PF10316\_7TM\_GPCR\_Srbc 1

PF10320\_7TM\_GPCR\_Srsx 45

PF10324\_7TM\_GPCR\_Srw 216

PF10325\_7TM\_GPCR\_Srz 0

The total number of sequences was reduced with cd-hit (99% similarity) → 712 sequences

The cd-hit output was analyzed with DeepTMHMM to extract only the sequences (196 seq) containing all 7 TM domains → file BB\_OS\_GPCRs\_7TM\_seqs.fasta

Within this file extracted only complete transcripts (88) → BB\_OS\_GPCRs\_7TM\_complete\_seqs.fasta

Alternatevely, complete transcripts were extracted from the output of the sole search for PF00001 (Opsins, 88 seqs) and clustered with cdhit (99% similarity) → 82 sequences

These were analyzed with DeepTMHMM to extract the complete 7TMs sequences (75) → file

BB\_OS\_PF00001\_comp\_7TM\_seq.fasta

PF13853\_7tm\_4\_BB\_Os\_Ids.txt