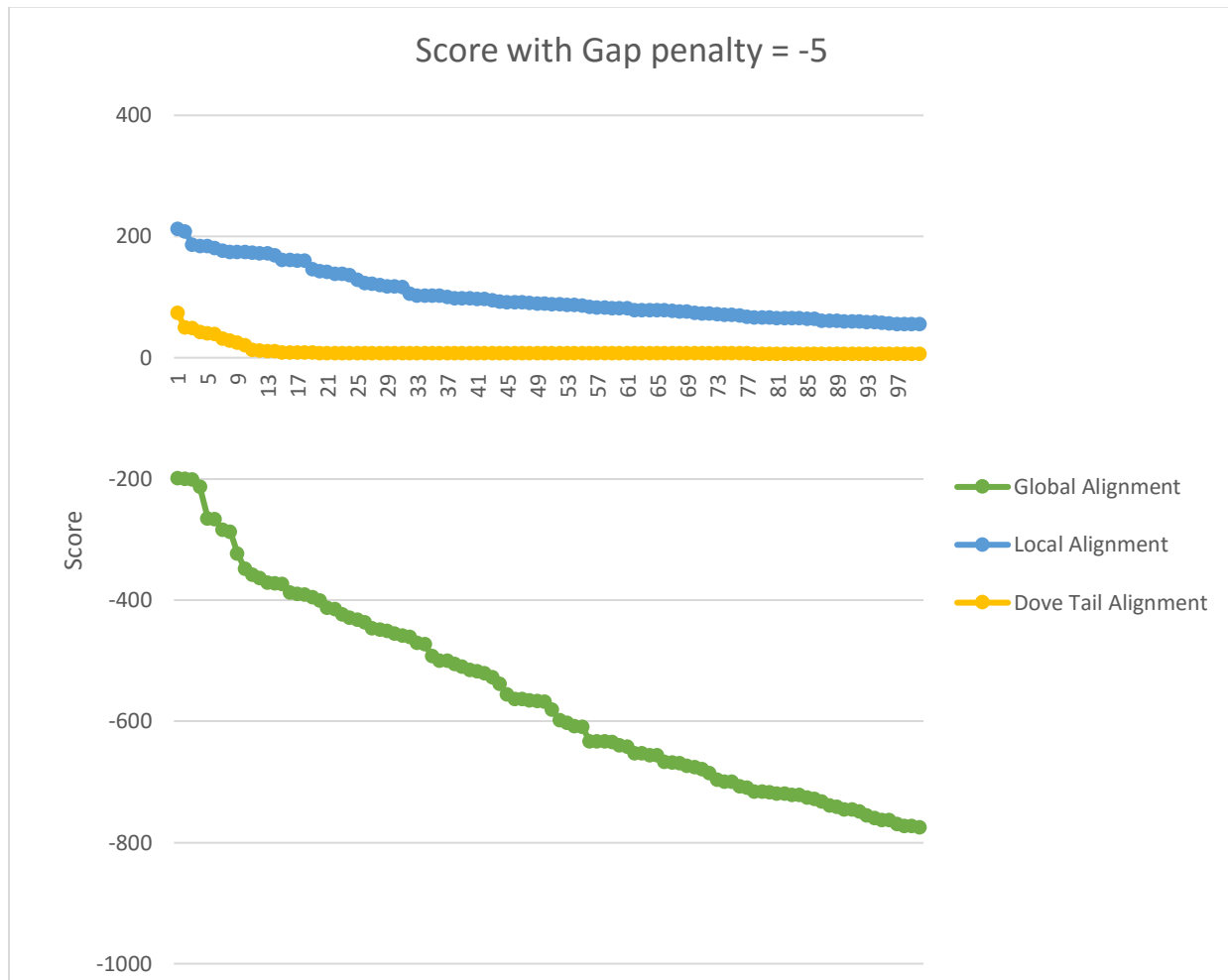# BIOINFORMATICS
PROJECT REPORT
Moulik Agarwal - 39826794

1. SCORES OF TOP 100 RESULTS FOR EACH STRATEGY

The above figure represents the top 100 score of all the 3 method:

1) Global Alignment
2) Local Alignment
3) Dove Tail Alignment

The highest values of score each of the strategy is, Global alignment = -200, Local alignment = 212 and for Dove tail alignment = 73. For Dove tail and Local alignment, the top 100 values tend to converge to around the same approximate value while that of global alignment has great difference.

2. RUNNING TIME OF EACH QUERY VS EACH ALIGNMENT METHOD

The graphs below shows the running of each query against all the database values for each of the 3 different alignment strategies. The running time of Dove tail alignment strategy is comparatively less against all other startegies. The test query file containes 20 query which were aligned with all the queries in the database and thus the running was calculated for each strategy.

The running time for each query is measured in milliseconds (ms). The max running time for local alignment ~ 30s while that of Global alignment is ~29s and for Dove Tail alignment is ~ 29s, for the query length of 7148. The lowest running time is found for Global and Dove Tail alignment for sequence of length 525 with running time as ~ 2s. We do observe that with increase in query size, the running time of the strategy also increases which is the expected behavior as well.

Running time with Gap penalty = -5

Running Time (ms) with Gap penalty = -5