## BulkProt -csv "path/to/queries.csv" -fields -organism\_id **BulkProt** SFFD hits to query queries.csv Uniprot (gene:"myGene") **OUERY** Protein Gene (protein\_name:"myProtein") (gene:"myGene") Entry 1 Entry 2 **FILTERED** hits to query ... Protein Gene Names Names MAIN Entry 1 hits to query Entry 2 Gene Protein Names Names Protein names Entry 1 **OUERY** DROPPED Gene names Entry 2 Uniprot hits to query (restricted to organism\_id) Protein Names Names Entry 1 Entry 2 Filter rows without a SEED gene

**Command line input:** 

## Supplementary Figure 1: The BulkProt pipeline.

A CSV-formatted file of UniProt queries is used as input to the BulkProt pipeline. Each search is queried against the UniProt database (via the Application Programming Interface) to generate a seed table per search term, containing the entries associated with that term. For each seed table, the protein and gene names are extracted and used to construct a second query, which is again queried against UniProt via the API. The resulting "main search" table will contain all of the proteins and genes associated with the initial seed table search term but will also contain irrelevant entries as a result of the unsupervised query construction. To remove these, entries in the main search table are dropped if they do not have a gene name that is present in the initial seed search table. Dropped and filtered entries are written to separate tables. The tables for all queries are concatenated to consolidate results. The final output of the BulkProt pipeline includes four CSV files: the seed table, the main table, the filtered table, and the dropped table.

Output: seed.csv, main.csv, filtered.csv, dropped.csv