**Supplemental Table S3: The similarity measures and defined abbreviations of all target protein data.**

| **Data of target proteins** | **Similarity measures**  | **Defined abbreviation** |
| --- | --- | --- |
| Protein sequences | Smith-Waterman algorithm | Seq\_Loc |
| Needleman Wunsch algorithm | Seq\_Glo |
| Protein-protein interactions | Inverse shortest path similarity | PPI\_ISP |
| Jaccard similarity | PPI\_Jac |
| Cosine similarity | PPI\_Cos |
| GO annotations | GOSemsim: Wang method | GO\_Wang |
| GOSemsim: Jiang Method | GO\_Jiang |
| Protein pathways | Jaccard similarity | PW\_Jac |
| Cosine similarity | PW\_Cos |