May 7th, 2021

Dear editors,

We are resubmitting our article, “**PhenClust, a standalone tool for identifying trends within sets of biological phenotypes using semantic similarity and the Unified Medical Language System Metathesaurus”[[1]](#footnote-1)** for consideration in JAMIA Open. We initially submitted this as part of the special issue “Special Focus Issue on UMLS at 30: Current Research and Applications, Broader Impacts, Future Directions.” While we were not accepted for publication, we received helpful comments from reviewers that greatly improved the quality of the original work. We are providing a revised manuscript for your consideration as well as a detailed response to reviewer comments.

In this application note, we present a stable and reproducible release of our tool, PhenClust. We initially created PhenClust to cluster lists of disease phenotypes discovered with our network algorithm, PathFX. However, we realized that PhenClust was valuable as a standalone tool, but dissemination was limited by the requirement that users install the UMLS metathesaurus. This installation can be tricky and is easily affected by routine operating system updates. In this resubmission, we have decoupled these tools to emphasize the contribution of PhenClust specifically. This application note achieves two goals:

1. To provide a stable and reproducible release of our tool, PhenClust, through a Docker container.
2. To demonstrate use novel cases for PhenClust

To achieve these goals, we have reframed the introduction and discussion, generated new example use cases of PhenClust, and generated a new docker image with the 2020AA UMLS release. Given these changes, we believe this manuscript is much stronger and we are eager for your consideration of our application note in JAMIA Open.

Sincerely,

Jennifer L. Wilson

Stanford University

1. Previously, our publication was entitled, “Phenotype clustering, a standalone tool for identifying trends within sets of biological phenotypes using semantic similarity and the UMLS metathesaurus” [↑](#footnote-ref-1)