Reviewer’s report

Title: GenDrux: A guided system for supporting prescription by gene expression-based sensitivity

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Reviewer: Jörg Hakenberg

Reviewer’s report:

The authors present GeneDruX, an online application that helps researchers find publications that discuss relationships between genes and drugs. Searches can be conducted starting with either a gene, a drug, or a disease. Each search leads to a table with titles for quick reference, and links to the PubMed citation of each article.

I don’t quite understand the ranking (sorting of results); it looks like a mixture of gene name (ascending) and impact (descending), at least for some of my queries; this should be explained in much more detail, as it largely influences the order in which a user finds -seemingly- relevant information. eUtils return results in descending order of publication date, and you’re method for re-ordering could help researchers significantly to find interesting papers. You could also provide an ordering by PubMed ID (=essentially by date), gene name, drug name, disease name, impact? The header of each column could be a clickable entry.

I tried a few searches and got results as expected; however, "Parkinson" (or spelling variations) yields no results. A search for BRCA1/BRCA2, which you use an example in Background (breast cancer) and Table 1, also returns an empty result set ("No abstracts matched your specific requirements"). Probably that is due to the pre-selection of articles, but needs explanation in the paper.

It appears that the selection of current content (8000 abstracts, from the last ten years) limits the user queries/results drastically, to the extend that for many queries, no results are returned.

What did not become clear is how you find a relationship between a gene and a drug, to select and present articles that contain at least one. Do you report any article that contains at least one gene and at least one drug? Do they have to occur in the title, or together in the same sentence? Are more sophisticated techniques used (see tools such as PolySearch, etc.)?

Where did you obtain the impact factors? If they come from Thompson-Reuters ISI, from my own experience they will contact you shortly and ask to not publish them anymore. But as you point out, journal factors might not give too much of an indication about an individual article’s impact. PLoS and other publishers started computing per-article scores, perhaps that could be a useful add-on
instead.

Check spelling of the application’s name in the paper vs website. GenDrux, GeneDRxUG?

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.