Reviewer's report

Title: pGQL: A Probabilistic Graphical Query Language for Gene Expression Time Courses

Version: 1 Date: 1 July 2010

Reviewer: Simona Rossi

Reviewer's report:

The authors developed a useful and user friendly software with GUI interface by using timeboxes mapped to HMM with the aim to easily analyze time course gene expression data.

In my opinion the paper, even if interesting and well written, needs clarifications.

Major Compulsory Revisions

1) The authors should re-organize the manuscript: there are too many Methods explanation in the Results section, my opinion is that it would be easier for the reader to read a Results section followed by a Methods section with all the details now reported in the Results;

2) Figures need to be re-organized: 9 figures have been reported but only 4 of them have a legend, moreover, in figure 2,3 and 4 there are no indication of the sub-figures (a,b,c etc) as indicated in the text, so is really unclear for the reader how to combine the figure information with the main text; are figures from 5 to 9 supplementary? are they the missed 3A,B etc??? ... please clarify

Minor Essential Revisions

1) In Results-Timeboxes section, "v" have been used sometimes instead of "x", please uniform the symbols used;

2) Implementation section: "and most Unix systems", please report the list of Unix systems in which it doesn't work

3) In Testing section: ... to find all genes with early over-expression patterns.....and set the query stringency to 150 genes", why do I need to set a threshold if I want the complete list of over-expressed genes? Is it mandatory?

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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

Declaration of competing interests:
I declare that I have no competing interests