

Bogotá, March 21st, 2020

Dear Editorial Board,

We would like to submit our manuscript for your consideration for publication in Bioinformatics. The manuscript title is *MultiGWAS: A tool for GWAS analysis on tetraploid organisms by integrating the results of four GWAS software*.

Currently, the GWAS software to analyze tetraploid species is limited. One of the main challenges in the GWAS analysis is to identify real associations. A reliable method to validate the results is by replicating the study using different software. To solve this problem, we developed the MultiGWAS tool that performs GWAS analyses for tetraploid species using four software in parallel.

MultiGWAS deals with preprocessing data, running four GWAS tools in parallel, and create reports to help the user decide more intuitively the possible true or false associations. Our tool is unique in the replication among the most four popular GWAS software available because it summarizes the results in tables, Venn diagrams, SNP profiles, and Manhattan plots that allow comparing the results among the four software efficiently.

Given that GWAS is critical in the molecular marker-assisted breeding programs, we believe that the tool presented in our paper will appeal to breeders that work with tetraploid crops who subscribe to Bioinformatics.

Each of the authors confirms that this manuscript has not been previously published and is not currently under consideration by any other journal. Additionally, all authors have approved the contents of this paper and have agreed to the Bioinformatics's submission policies.

We are confident that our work will be of interest to your journal.

Thank you in advance for your consideration,

Best regards.

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