

Accepted Manuscript

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PII: S0378-1119(18)30489-X
DOI: [doi:10.1016/j.gene.2018.05.012](https://doi.org/10.1016/j.gene.2018.05.012)
Reference: GENE 42823
To appear in: *Gene*
Received date: 24 December 2017
Revised date: 26 April 2018
Accepted date: 2 May 2018

Please cite this article as: Juntao Li, Yanyan Wang, Tao Jiang, Huimin Xiao, Xuekun Song , Grouped gene selection and multi-classification of acute leukemia via new regularized multinomial regression. The address for the corresponding author was captured as affiliation for all authors. Please check if appropriate. *Gene*(2017), doi:[10.1016/j.gene.2018.05.012](https://doi.org/10.1016/j.gene.2018.05.012)

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**Grouped Gene Selection and Multi-classification of Acute Leukemia via New
Regularized Multinomial Regression**

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Abstract

Diagnosing acute leukemia is the necessary prerequisite to treating it. Multi-classification on the gene expression data of acute leukemia is help for diagnosing it which contains B-cell acute lymphoblastic leukemia (BALL), T-cell acute lymphoblastic leukemia (TALL) and acute myeloid leukemia (AML). However, selecting cancer-causing genes is a challenging problem in performing multi-classification. In this paper, weighted gene co-expression networks are employed to

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