Medical Xpress

A new application allows online statistical analysis of gene-expression data

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The journal *Computers in Biology and Medicine* has published an article on the new IT application BootstRatio, created by IDIBELL researchers. The application allows online statistical analysis of data from gene expression. It is accessible through http://regstattools.net/br and any scientist is already to use it.

Researchers at the Human Molecular Genetics group at IDIBELL, led by Dr. Virginia Nunes, had a problem to provide signification to the results of statistical analyses of gene expression data. Most of the statistical calculations which are done to compare gene expression data assume a normal distribution of data and this distribution is not always real.

Together with Ramon Clèries, statistician at IDIBELL's Cancer Prevention and Control group, Dr. Nunes decided to work on a statistical analysis using resampling techniques that allows to generate a hypothetical distribution of the data without any initial distribution and exposing the data in a comprehensible language to the scientist.

That was the beginning of BootstRatio, which can be accessed from a remote server. "After the researcher enters the data, in a few time the program sends the results via email in a comprehensible language to the scientist," explains Miguel Lopez de Heredia, CIBERER researcher at the Human Molecular Genetics group at IDIBELL. "Statisticians and biologists sometimes speak different languages. This new tool allows a biological interpretation of the results of statistical analysis. "

Dr. Clèries explains that the application BootstRatio "is very easy to use and it doesn't require statistical expertise."

More information: Clèries R., Galvez J., Espino M., Ribes J., Nunes V. and López de Heredia M. BootsRatio: A web-based stsatistical analysis of fold-change in qPCR and RT-qPCR data using resampling methods. Computers in Biology and Medicine 42 (2012) 438-445. doi: 10.1016/j.compbiomed.2011.12-012

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