***TIP***

**Preface**：

Network calculator is a network analysis calculator that has just been made, so it has many shortcomings that need to be improved (for example, when the user enters wrong parameters, after clicking the START button, the software will automatically close instead of prompting an error Content), if you encounter situations such as non-standard frequency histograms or data errors during use, you can send me an email to let me know. My email is 2721729832@qq.com and I should be able to help you solve your problem. Problems encountered.

The following are tips on the instructions for the two modules. Please take a few minutes to read and understand them before use to prevent incorrect results from being used in the process of use.

**Module one：Network Localization Analysis**

Tip 1：In the process of importing files, if the user has already imported the total network file through the "..." button, there is no need to click the "Import" button.

Tip 2：If users want to import the built-in network file, after checking the "Using built-in network file" option, they need to click the "Import" button to import the file.

Tip 3：In the Calculation Option module, there are currently four topological analysis options. When entering the main interface, we can see that there are two check boxes before each option. It should be noted that the front check box is the option of whether to perform random sampling, and the latter is the option of analyzing the target gene set file. If you do not need to conduct random sampling experiments, you do not need to check the previous option. In particular, it should be noted that after checking the front check box, be sure to select the number of random sampling in the upper right corner, otherwise the software will automatically close.

Tip 4：The purpose of the Exporting Network Files module is to provide users with the largest sub-network files and total connection network files so that users can visualize the network. The obtained network files will be automatically saved in the current directory for users to find.

Tip 5：All edges, Mean degree, and the random sampling calculation of the Largest subnetwork module take a short time, but the random sampling calculation of the Mean shortest distance module takes a very long time. Therefore, we put the random sampling of the first three modules together for calculation. The random sampling of the Mean shortest distance module is separated separately. Therefore, we recommend that when performing random sampling calculations, you can first check the random sampling options of the first three modules, and then randomly select the Mean shortest distance module according to your needs.

Tip 6: In particular, note that when the random sampling option is checked, the software calculation time will be greatly increased. During this period, the software will enter an unresponsive state, which is not an abnormal state, so users need to wait patiently during this period. Minimize the software. When the calculation is completed, the software will return to its normal state and display the calculation result in the Result column.

Tip 7：Currently, the Version module has not yet provided relevant version updates. After the software is updated and maintained, we will upload the new version of the software to the promotional website mentioned in the paper. Users can search and download and use.

**Module two：Network overlap analysis**

Tip 1：In the process of importing files, if the user has already imported the total network file through the "..." button, there is no need to click the "Import" button.

Tip 2：If users want to import the built-in network file, after checking the "Using built-in network file" option, they need to click the "Import" button to import the file.

Tip 3：If the user wants to perform random sampling calculations, and then check the "Pvalue.." option, be sure to select the sampling times, otherwise the software will automatically close.

Tip 4： ⭐ The time required for the random sampling calculation of this module is very, very long. Therefore, the user needs to wait patiently when performing the random sampling calculation of this module. During this period, the software will enter an unresponsive state. This is not an abnormal state. The software can be minimized. When the calculation is completed, the software will return to the normal state and display the calculation result in the Result column.

The above is the instructions for the use of this software. For all the problems you find during the use, you can contact us for help. Send an email to 2721729832@qq.com, and we will help you with data analysis.