miRNA Expression and Integration with Gene Expression

This tutorial outlines how to analyze miRNA expression data in Partek Genomics Suite and outlines how miRNA expression data can be integrated with mRNA expression data from gene expression microarrays.

This tutorial illustrates how to:

- Analyze differentially expressed miRNAs
- Integrate miRNA and Gene Expression data

*Note: the workflow described below is enabled in Partek Genomics Suite version 7.0 software. Please fill out the form on Our support page to request this version or use the **Help > Check for Updates** command to check whether you have the latest released version. The screenshots shown within this tutorial may vary across platforms and across different versions of Partek Genomics Suite.*

Description of the data set

The data set for this tutorial includes miRNA from 3 human brain samples and 3 heart samples quantified using the Affymetrix GeneChip miRNA 1.0 array. The same sample set was also processed on GeneChip Human Gene 1.0 ST arrays for mRNA expression.
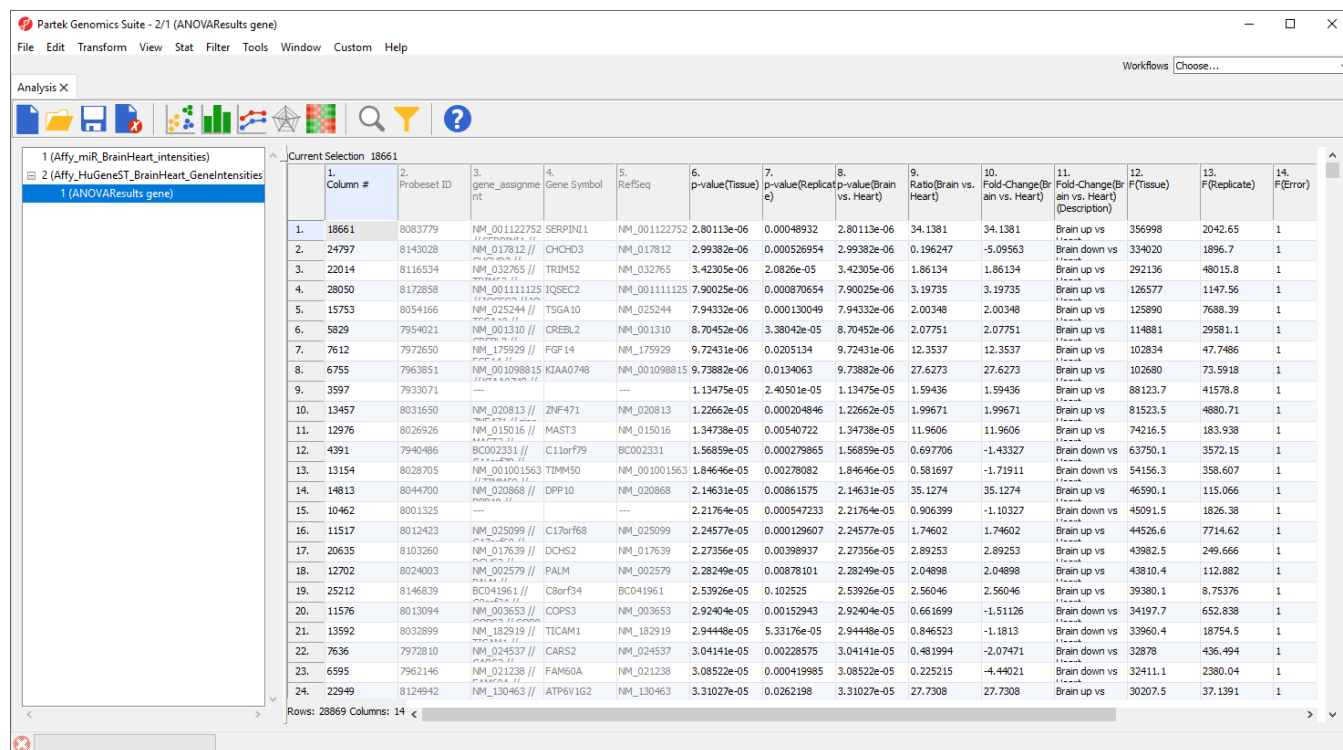
For this tutorial, the gene expression and miRNA expression studies have been analyzed and stored in Partek Genomics Suite project (ppj) format as *miRN AmRNA integration*. The project contains two Partek format files: *Affy_miR_BrainHeart_intensities.fmt* with the miRNA data and *Affy_HuGeneST_BrainHeart_GeneIntensities.fmt* with the analyzed mRNA data. There is also an ANOVA results spreadsheet open as a child spreadsheet of *Affy_HuGeneST_BrainHeart_GeneIntensities.fmt*.

- Download the miRNA Expression and Integration with Gene Expression data set and save it in an easily accessible location on your computer

We can now open the project in Partek Genomics Suite.

- Select **File**
- Select **Import**
- Select **Zipped Project...**
- Select the **miRNA_tutorial_data.zip** zipped folder

The project files will open in the *Analysis* tab (Figure 1).

Figure 1. The miRNA tutorial data set

Additional Assistance

If you need additional assistance, please visit our support page to submit a help ticket or find phone numbers for regional support.

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