Package 'affylmGUI'

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Title GUI for limma package with Affymetrix microarrays

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Imports limma, tcltk, affy, BiocInstaller, affyio, tkrplot, affyPLM, R2HTML, xtable, gcrma, AnnotationDbi

LazyLoad yes

Description A Graphical User Interface for analysis of Affymetrix microarray gene expression data using the affy and limma packages.

License GPL (>=2)

URL http://bioinf.wehi.edu.au/affylmGUI/

biocViews GUI, GeneExpression, Transcription, DifferentialExpression, DataImport, Bayesian, Regression, TimeCourse, Microarray, mRNAMicroarray, OneChannel, ProprietaryPlatforms, BatchEffect, MultipleComparison, Normalization, Preprocessing, QualityControl

NeedsCompilation no

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`affylmGUI` *Graphical User Interface for the limma microarray package*

Description

Graphical User Interface for Affy analysis using the limma microarray package

Usage

```
AboutaffylmGUI()
affyHelp()
affylmGUI(BigfontsForaffylmGUIpresentation=FALSE)
affylmGUIhelp()
affyPlotMA()
affyPlotMAcontrast()
ALGlimmaUsersGuide(view=TRUE)
ChooseCDF()
ChooseContrastParameterization()
chooseDir()
ChooseEbayesStatistic()
ComputeContrasts()
ComputeLinearModelFit()
CopyGraph(img)
DeleteContrastParameterization()
deleteItemFromList(list1,itemName=NULL,index=NULL)
DensityPlot()
DensityPlotAll()
evalRcode()
ExportHTMLreport()
ExportNormalizedExpressionValues()
ExportTopTable()
fixSeps(string)
generalPlotFunction(code="",WindowTitle="")
GetComponentsToExportInHTMLreport(contrastParameterizationIndex=NULL)
GetContrast(contrastParameterizationIndex)
GetContrastNamesForHeatDiagram(numContrasts=2,ContrastNames=c("Contrast 1","Contrast 2"))
GetContrastParameterizationName()
GetContrasts(NumContrasts=0)
GetDEcutoff()
GetGeneLabelsOptions()
GetJpegOrPngParams(graphFileType)
GetJpegOrPngX11Params(graphFileType)
GetlimmaDataSetName()
GetLogPLMDataChoice()
GetMultipleContrasts(contrastParameterizationIndex)
GetNormalizationMethod()
getPackageVersion(pkgName)
GetParameterizationName()
GetPlotLabels(plottitle="",xlabel="",ylabel="")
GetPlotSize()
GetPlotTitle(plottitle="")
GetPValueCutoff(p.value=0.01)
GetResidualTypeChoice()
GetRNATypesFrom.ContrastsFromDropDowns.String(string)
GetSetNames(numSets=2,set1="",set2="",set3="")
GetSlideNum(all=FALSE)
GetSlideNums()
GetWhichProbes(includeBoth=FALSE)
GetWtAreaParams()
GetWtFlagParams()
```

```
HeatDiagramDialog(parameterName)
HeatDiagramPlot()
HTMLplotUsingFunction(Caption = "", File = .HTML.file, GraphRelativeDirectory = ".", GraphAbsolute
ImageArrayPlot()
ImageQualityResidualPlot()
ImageQualityWeightPlot()
initGlobals()
IntensityHistogram()
IntensityHistogramAll()
limmaHelp()
LogOddsPlot()
NewLimmaFile()
NormalizedIntensityBoxPlot()
NormalizeNow()
nstrstr(haystack,needle)
NUSEPlotAll()
onDestroy()
onExit()
OpenALimmaFile(FileName)
OpenCDFandTargetsfiles()
OpenCDFFile()
OpenLimmaFile()
OpenTargetsFile()
PlotOptions()
QQTplot()
RawIntensityBoxPlot()
Require(pkg)
Resize(img,plotFunction)
RLEPlotAll()
RNADegradationPlotAll()
SaveAsLimmaFile()
SaveGraphAsJpeg(initialfile, plotFunction)
SaveGraphAsPDF(initialfile, plotFunction)
SaveGraphAsPNG(initialfile, plotFunction)
SaveGraphAsPostscript(initialfile, plotFunction)
SaveLimmaFile()
SetupPlotKeyBindings(tt,img)
SetupPlotMenus(tt,initialfile,plotFunction,img)
SetWD()
showChangeLog(n = 20)
showCitations()
showTopTable(...,export=FALSE)
SimplifyContrastsExpression(string)
strstr(haystack, needle)
tclArrayVar()
TclRequire(tclPkg)
topTable2(fit, coef = 1, number = 10, genelist = NULL,adjust.method = "holm", sort.by = "B")
toptable2(fit, coef = 1, number = 10, genelist = NULL, A = NULL,eb = NULL, adjust.method = "holm", s
Try(expr)
TryReadImgProcFile(expr)
UpDownOrBoth()
vennDiagramaffylmGUI(object, include = "both", names, cex = 1.5, mar = rep(1, 4), ...)
```

```
VennDiagramPlot()
ViewContrastsMatrixAsPairs(contrastsMatrix, contrastsMatrixList,contrastParameterizationIndex = N
ViewContrastsMatrixInTable(contrastsMatrixList, contrastParameterizationIndex = NULL)
ViewExistingContrastParameterization()
ViewRNATargets()
```

Arguments

BigfontsForaffylmGUIpresentation	affylmGUI:arg1:If set to TRUE, larger fonts are used. However, some font sizes are not controlled by affylmGUI and so must be adjusted in the operating system, e.g. in the Control Panel in Windows under Display, Appearance.
...	HTMLplotUsingFunction:arg14:and:showTopTable:arg1:and:toptable2:arg9:and:vennDiagramaffyln
Align	HTMLplotUsingFunction:arg8
all	GetSlideNum:arg1
BG	HTMLplotUsingFunction:arg12
Caption	HTMLplotUsingFunction:arg1
code	generalPlotFunction: arg1: a code
ContrastNames	GetContrastNamesForHeatDiagram:arg2
contrastParameterizationIndex	GetComponentsToExportInHTMLreport:arg1:and:contrastParameterizationIndex:arg1:and:GetContr
export	showTopTable:arg2
expr	Try:arg1:and:TryReadImgProcFile:arg1
File	HTMLplotUsingFunction:arg2
FileName	OpenALimmaFile:arg1
GraphAbsoluteDirectory	HTMLplotUsingFunction:arg4
GraphBorder	HTMLplotUsingFunction:arg7
GraphFileName	HTMLplotUsingFunction:arg5
graphFileType	GetJpegOrPngParams:arg1:and:GetJpegOrPngX11Params:arg1
GraphRelativeDirectory	HTMLplotUsingFunction:arg3
GraphSaveAs	HTMLplotUsingFunction:arg6
haystack	nstrstr:arg1:and:strstr:arg1
Height	HTMLplotUsingFunction:arg11
img	Resize:arg1:and:SetupPlotMenus:arg4:and:CopyGraph:arg1:and:SetupPlotKeyBindings:arg2
includeBoth	GetWhichProbes:arg1
index	deleteItemFromList:arg3:an index
initialfile	SetupPlotMenus:arg2:and:SaveGraphAsJpeg:arg1:and:SaveGraphAsPDF:arg1:and:SaveGraphAsPN
itemName	deleteItemFromList:arg2:an item name
list1	deleteItemFromList:arg1:a list
needle	nstrstr:arg2:and:strstr:arg2
NumContrasts	GetContrasts:arg1
numContrasts	GetContrastNamesForHeatDiagram:arg1

numSets	GetSetNames:arg1
p.value	GetPValueCutoff:arg1:A p-value cutoff.
parameterName	HeatDiagramDialog:arg1
pkgName	getPackageVersion:arg1
pkg	Require:arg1
plotFunction	Resize:arg2:and:HTMLplotUsingFunction:arg9:and:SetupPlotMenus:arg3:and:SaveGraphAsJpeg:ar
plottitle	GetPlotLabels:arg1:and:GetPlotTitle:arg1
res	HTMLplotUsingFunction:arg13
set1	GetSetNames:arg2
set2	GetSetNames:arg3
set3	GetSetNames:arg4
string	fixSeps:arg1:A character string:and:GetRNATypesFrom.ContrastsFromDropDowns.String:arg1:and:
tclPkg	TclRequire:arg1
tt	SetupPlotMenus:arg1:and:SetupPlotKeyBindings:arg1
view	ALGlimmaUsersGuide:arg1:A boolean determinig if the users'd guide will be viewed
Width	HTMLplotUsingFunction:arg10
WindowTitle	generalPlotFunction: arg2: a title
xlabel	GetPlotLabels:arg2
ylabel	GetPlotLabels:arg3
fit	topTable2:arg1:and:toptable2:arg1
coef	topTable2:arg2:and:toptable2:arg2
number	topTable2:arg3:and:toptable2:arg3
genelist	topTable2:arg4:and:toptable2:arg4
A	toptable2:arg5
eb	toptable2:arg6
adjust.method	topTable2:arg5:and:toptable2:arg7
sort.by	topTable2:arg6:and:toptable2:arg8
object	vennDiagramaffylmGUI:arg1
include	vennDiagramaffylmGUI:arg2
names	vennDiagramaffylmGUI:arg3
cex	vennDiagramaffylmGUI:arg4
mar	vennDiagramaffylmGUI:arg5
contrastsMatrix	ViewContrastsMatrixAsPairs:arg1
contrastsMatrixList	ViewContrastsMatrixAsPairs:arg2:and:ViewContrastsMatrixInTable:arg1
n	showChangeLog:arg1
PointSize	HTMLplotUsingFunction:arg12

Details

This function launches a Graphical User Interface for the limma package by Gordon Smyth. The GUI uses Tk widgets (via the R TclTk interface by Peter Dalgaard) in order to provide a simple interface to the limma functions for linear modelling of microarrays and identification of differentially expressed genes.

Author(s)

James Wettenhall

ALGchangeLog *affylmGUI Change Log*

Description

Write as text the most recent changes from the affylmGUI package changelog.

Usage

```
ALGchangeLog(n=20)
```

Arguments

n	integer, number of lines to write of changelog.

Value

No value is produced, but a number of lines of text are written to standard output.

Author(s)

Gordon Smyth

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