

# Package ‘affylmGUI’

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**Title** GUI for limma package with Affymetrix microarrays

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**Imports** grDevices, graphics, stats, utils, tcltk, tkrplot, limma, affy, affyio, affyPLM, gcrma, BiocGenerics, BiocInstaller, R2HTML, xtable

**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*

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## Description

Graphical User Interface for Affy analysis using the limma microarray package

**Usage**

```
AboutaffyIbmGUI()
affyHelp()
affyIbmGUI(BigfontsForaffyIbmGUIpresentation=FALSE)
affyIbmGUIhelp()
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 = ".", GraphAbsoluteDirectory = ".")
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()
vennDiagramaffyImGUI(object, include = "both", names, cex = 1.5, mar = rep(1, 4), ...)

```

```

VennDiagramPlot()
ViewContrastsMatrixAsPairs(contrastsMatrix, contrastsMatrixList, contrastParameterizationIndex = 1)
ViewContrastsMatrixInTable(contrastsMatrixList, contrastParameterizationIndex = NULL)
ViewExistingContrastParameterization()
ViewRNATargets()

```

### Arguments

```

BigfontsForaffyImGUIpresentation
    affyImGUI:arg1: If set to TRUE, larger fonts are used. However, some font sizes
    are not controlled by affyImGUI and so must be adjusted in the operating sys-
    tem, e.g. in the Control Panel in Windows under Display, Appearance.
...
HTMLplotUsingFunction:arg14:and:showTopTable:arg1:and:toptable2:arg9:and:vennDiagramaffyImGUI
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:GetContrastNames:arg1
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:SaveGraphAsPNG:arg1
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	vennDiagramaffyImGUI:arg1
include	vennDiagramaffyImGUI:arg2
names	vennDiagramaffyImGUI:arg3
cex	vennDiagramaffyImGUI:arg4
mar	vennDiagramaffyImGUI: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

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ALGchangeLog

*affylmGUI Change Log*

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**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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