

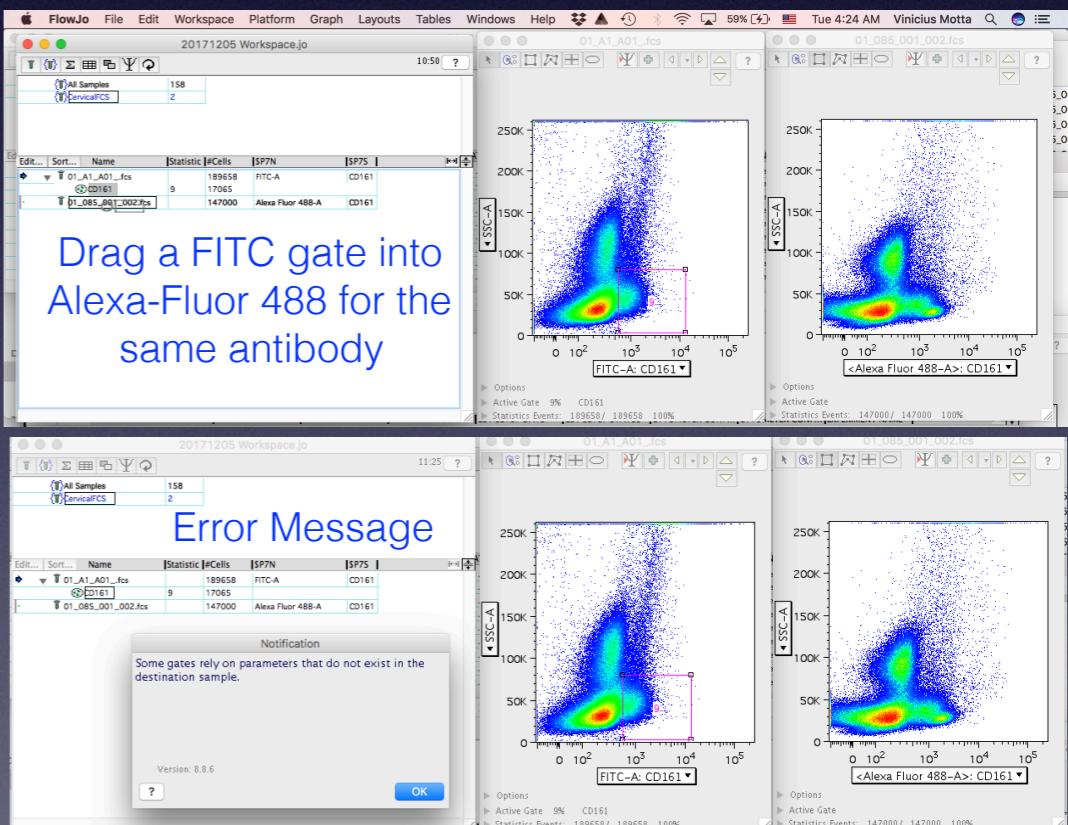
A R shiny script to
change parameter names
in .fcs files

Before you start

- ➔ You need Rstudio and R installed in your computer
 - if you need to install R and Rstudio see links:
 - <https://www.ics.uci.edu/~jutts/110/InstallingRandRStudio.pdf>
 - <https://www.rstudio.com/products/RStudio/>
- ➔ The script will run locally on your computer.

Why changing parameter names in .fcs?

- There are many reasons, for instance:
 - To choose better meaningful names for your analysis
 - The same gates or compensation matrixes can't be applied to files containing different parameters names. For instance, a CD4+ gate done on a file <FITC-A> CD4 parameter can't be dragged to another file with parameter name as <ALEXA FLUOR-488> CD4. Even in files with same antibody panel
 - This is usually the case when users use different instruments for the same project, or multi-site studies



What does the script do?

- It will re-write the parameters names and descriptions. For instance, replace Alexa-488 for FITC or CD274(ICOS) for ICOS.
- ****IMPORTANT**** no other metadata information is altered or replaced in the NEW.fcs file. Metadata for date of acquisition, operator, instrument, CST baseline and so forth of the original files are preserved.
- It works for both flow cytometry and mass cytometry files.

How to run the script

- Open RStudio
- Install shiny package if not already installed:
install.packages(shiny)
- Load package:
library(shiny)
- Run shiny application
runGitHub("ChangeNamesFCS", "vinicius.n.motta")

This is the layout of the shiny application

Change the Names of Channels and Parameters in .fcs Files

This script will only change the names of parameters and channels in the .fcs file. All the original metadata will be preserved, i.e. filename, date and time of acquisition, instrument, operator and others.

1. Please select the directory where the .fcs files are located before starting.
2. If error reload the home page to restart.
3. Although your original files will not be altered or changed, ensure you have backed up your original files.
4. A new folder (NEW_Files) will be created within the selected directory, which will contain the new .fcs files (NEW_XXXX.fcs).
5. Edit names directly on the table. You can also copy and paste from excel.

Choose input directory

Apply changes to current file only

Apply changes to all files

Note:

Apply Changes to All Files: it will only execute if files in the folder have the same number of parameters, i.e. same experimental panel

Stop application

Previous File

Next File

[1] "Choose Directory."

This is a excel-like table. Click on the cell and type to change or copy and paste from an excel file

	.
1	

1. Click in choose input directory.
2. It will open a new window
3. Navigate to your folder containing .fcs files
4. You can not select individual files but the entire folder only

Change the Names of Channels

This script will only change the names of parameters and characters.

1. Please select the directory where the .fcs files are located below.
2. If error reload the home page to restart.
3. Although your original files will not be changed, their names will be changed.
4. A new folder (NEW_Files) will be created within the selected folder.
5. Edit names directly on the files. You can also copy and paste.



Choose input directory

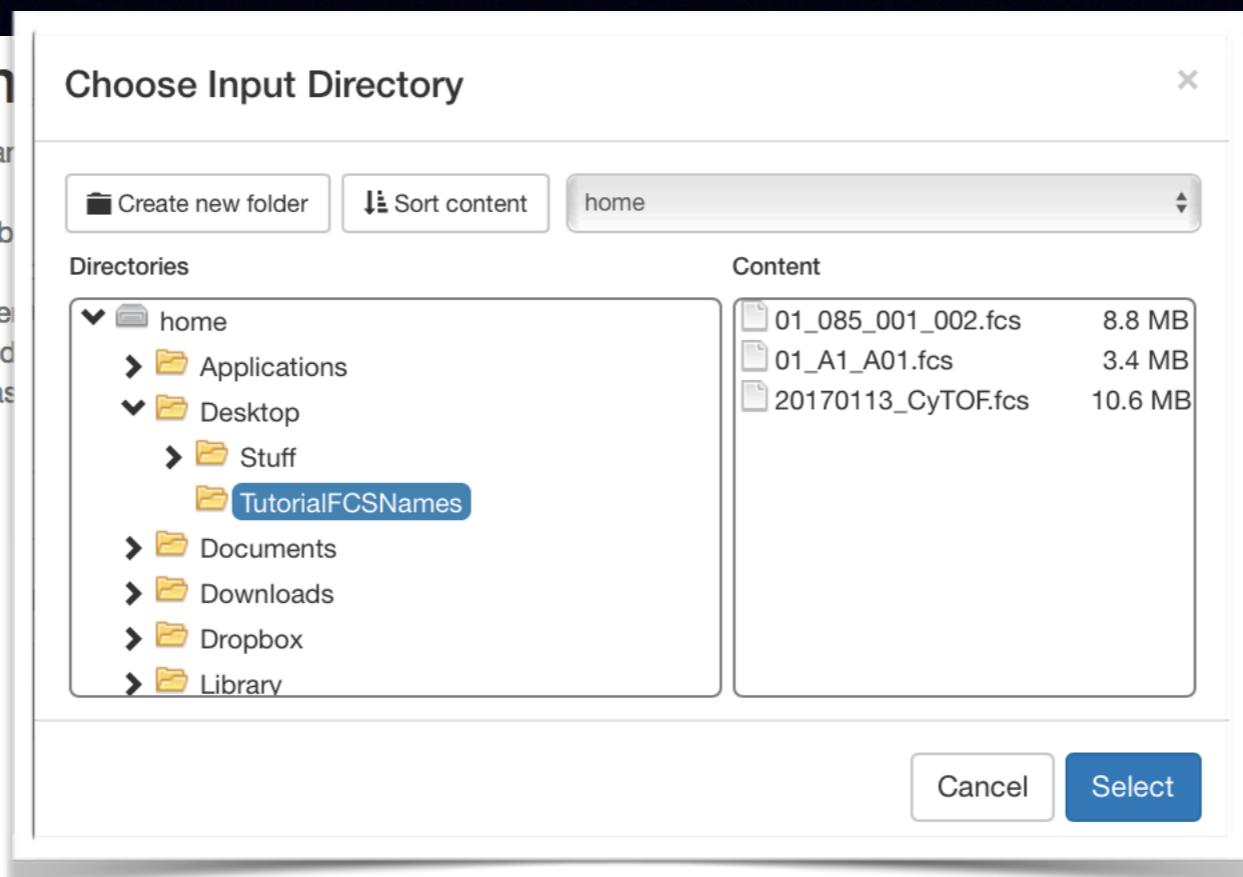
Apply changes to current file only

Apply changes to all files

Note:

Apply Changes to All Files: it will only execute if files in the folder have the same number of parameters, i.e. same experimental panel

Stop application



cquisition, instrument, operator and others.

Change the Names of Channels and Parameters in .fcs Files

This script will only change the names of parameters and channels in the .fcs file. All the original metadata will be preserved, i.e. filename, date and time of acquisition, instrument, operator and others.

1. Please select the directory where the .fcs files are located before starting.
2. If error reload the home page to restart.
3. Although your original files will not be altered or changed, ensure you have backed up your original files.
4. A new folder (NEW_Files) will be created within the selected directory, which will contain the new .fcs files (NEW_XXXXX.fcs).
5. Edit names directly on the table. You can also copy and paste from excel.

Choose input directory

Previous File

Next File

[1] "Choose Directory."

Apply changes to current file only

Apply changes to all files

Note:

Apply Changes to All Files: it will only execute if files in the folder have the same number of parameters, i.e. same experimental panel

Stop application

This is a excel-like table. Click on the cell and type to change or copy and paste from an excel file

	.
1	

AFTER SELECTING THE FOLDER, IT MAY TAKE A WHILE TO READ ALL THE FILES



Please wait...reading files

1. After reading the files, information for the first file in the folder is shown
2. Click Next or Previous file to navigate

Change the Names of Channels and Parameters in .fcs Files

This script will only change the names of parameters and channels in the .fcs file. All the original metadata will be preserved, i.e. filename, date and time of acquisition, instrument, operator and others.

1. Please select the directory where the .fcs files are located
2. If error reload the home page to restart
3. Although your original files will not be altered or modified
4. A new folder (NEW_Files) will be created within the input directory
5. Edit names directly on the table. You can also copy and paste from excel

You can navigate through the files in the folder

[Previous File](#)

[Next File](#)

Information for the current file

You are changing file: 01_085_001_002.fcs
this file is: 1 out of 3 in the folder: /Users/viniciohmotta/Desktop/TutorialFCSNames 0

[Choose input directory](#)

[Apply changes to current file only](#)

[Apply changes to all files](#)

Note:

Apply Changes to All Files: it will only execute if files in the folder have the same number of parameters, i.e. same experimental panel

[Stop application](#)

	Old.name	Old.desc	NEW.name	NEW.desc
\$P1	FSC-A		FSC-A	
\$P2	FSC-H		FSC-H	
\$P3	FSC-W		FSC-W	
\$P4	SSC-A		SSC-A	
\$P5	SSC-H		SSC-H	
\$P6	SSC-W		SSC-W	
\$P7	Alexa Fluor 488-A	CD161	Alexa Fluor 488-A	CD161
\$P8	DsRed-A	CCR6	DsRed-A	CCR6
\$P9	PE-Cy5-A	CxCR3	PE-Cy5-A	CxCR3
\$P10	PE-Cy7-A	CCR4	PE-Cy7-A	CCR4
\$P11	APC-A	CD3	APC-A	CD3
\$P12	APC-Cy7-A	CD4	APC-Cy7-A	CD4
\$P13	Pacific Blue-A	CD8	Pacific Blue-A	CD8
\$P14	AmCyan-A	LiveDead_CD14/19	AmCyan-A	LiveDead_CD14/19
\$P15	Time		Time	

Table works as an excel-like table. Select a cell and type or copy and paste from excel

Change the Names of Channels and Parameters in .fcs Files

This script will only change the names of parameters and channels in the .fcs file. All the original metadata will be preserved, i.e. filename, date and time of acquisition, instrument, operator and others.

1. Please select the directory where the .fcs files are located before starting.
2. If error reload the home page to restart.
3. Although your original files will not be altered or changed, ensure you have backed up your original files.
4. A new folder (NEW_Files) will be created within the selected directory, which will contain all the modified fcs files (NEW_XXXXX.fcs).
5. Edit names directly on the table. You can also copy and paste from excel.

Click

Previous File
Next File

Current file info changed

Choose input directory

Apply changes to current file only

Apply changes to all files

Note:

Apply Changes to All Files: it will only execute if files in the folder have the same number of parameters, i.e. same experimental panel

Stop application

Previous File

Next File

You are changing file: 01_A1_A01.fcs
this file is: 2 out of 3 in the folder: /Users/viniciohmotta/Desktop/TutorialFCSNames

This is a excel-like table. Click on the cell and type to change or copy and paste from an excel file

	Old.name	Old.desc	NEW.name	NEW.desc
\$P1	FSC-A		FSC-A	
\$P2	FSC-H		FSC-H	
\$P3	FSC-W		FSC-W	
\$P4	SSC-A		SSC-A	
\$P5	SSC-H		SSC-H	
\$P6	SSC-W		SSC-W	
\$P7	FITC-A	CD161	FITC-A	CD161
\$P8	PE-A	CCR6	PE-A	CCR6
\$P9	PerCP-Cy5-5-A	CxCR3	PerCP-Cy5-5-A	CxCR3
\$P10	PE-Cy7-A	CCR4	PE-Cy7-A	CCR4
\$P11	APC-A	CD3	APC-A	CD3
\$P12	APC-Cy7-A	CD4	APC-Cy7-A	CD4
\$P13	Pacific Blue-A	CD8	Pacific Blue-A	CD8
\$P14	AmCyan-A	LiveDead_CD14/19	AmCyan-A	LiveDead_CD14/19
\$P15	Time		Time	

1. Back to first file by clicking previous file
2. Select cell “Alexa Fluor 488-A
3. Change to “FITC-A to match second file in the folder (see previous slide)

4. A new folder (NEW_FILES) will be created within the selected directory, which will contain the new .fcs files (NEW_XXXXXX.fcs).

5. Edit names directly on the table. You can also copy and paste from excel.

	Old.name	Old.desc	NEW.name	NEW.desc
\$P1	FSC-A		FSC-A	
\$P2	FSC-H		FSC-H	
\$P3	FSC-W		FSC-W	
\$P4	SSC-A		SSC-A	
\$P5	SSC-H		SSC-H	
\$P6	SSC-W		SSC-W	
\$P7	Alexa Fluor 488-A	CD161	FIT	CD161
\$P8	DsRed-A	CCR6	DsRed-A	CCR6
\$P9	PE-Cy5-A	CxCR3	PE-Cy5-A	CxCR3
\$P10	PE-Cy7-A	CCR4	PE-Cy7-A	CCR4
\$P11	APC-A	CD3	APC-A	CD3
\$P12	APC-Cy7-A	CD4	APC-Cy7-A	CD4
\$P13	Pacific Blue-A	CD8	Pacific Blue-A	CD8
\$P14	AmCyan-A	LiveDead_CD14/19	AmCyan-A	LiveDead_CD14/19
\$P15	Time		Time	

Change to FITC

This is a excel-like table. Click on the cell and type to change or copy and paste from an excel file

Click to apply changes
and advance to next file

Click to apply changes and advance to next file

Apply changes to current file only

Apply changes to all files

Note:

Apply Changes to All Files: it will only execute if files in the folder have the same number of parameters, i.e. same experimental panel

Stop application

	Old.name	Old.desc	NEW.name	NEW.desc
\$P1	FSC-A		FSC-A	
\$P2	FSC-H		FSC-H	
\$P3	FSC-W		FSC-W	
\$P4	SSC-A		SSC-A	
\$P5	SSC-H		SSC-H	
\$P6	SSC-W		SSC-W	
\$P7	Alexa Fluor 488-A	CD161	FITC	CD161
\$P8	DsRed-A	CCR6	DsRed-A	CCR6
\$P9	PE-Cy5-A	CxCR3	PE-Cy5-A	CxCR3
\$P10	PE-Cy7-A	CCR4	PE-Cy7-A	CCR4
\$P11	APC-A	CD3	APC-A	CD3
\$P12	APC-Cy7-A	CD4	APC-Cy7-A	CD4
\$P13	Pacific Blue-A	CD8	Pacific Blue-A	CD8
\$P14	AmCyan-A	LiveDead_CD14/19	AmCyan-A	LiveDead_CD14/19
\$P15	Time		Time	

Change to FITC

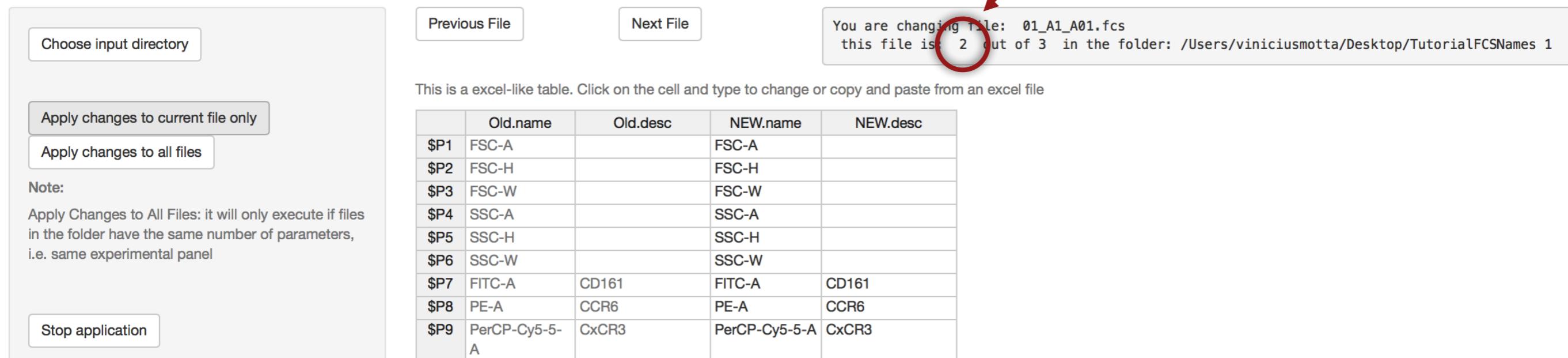
This is a excel-like table. Click on the cell and type to change or copy and paste from an excel file

Change the Names of Channels and Parameters in .fcs Files

This script will only change the names of parameters and channels in the .fcs file. All the original metadata will be preserved, i.e. filename, date and time of acquisition, instrument, operator and others.

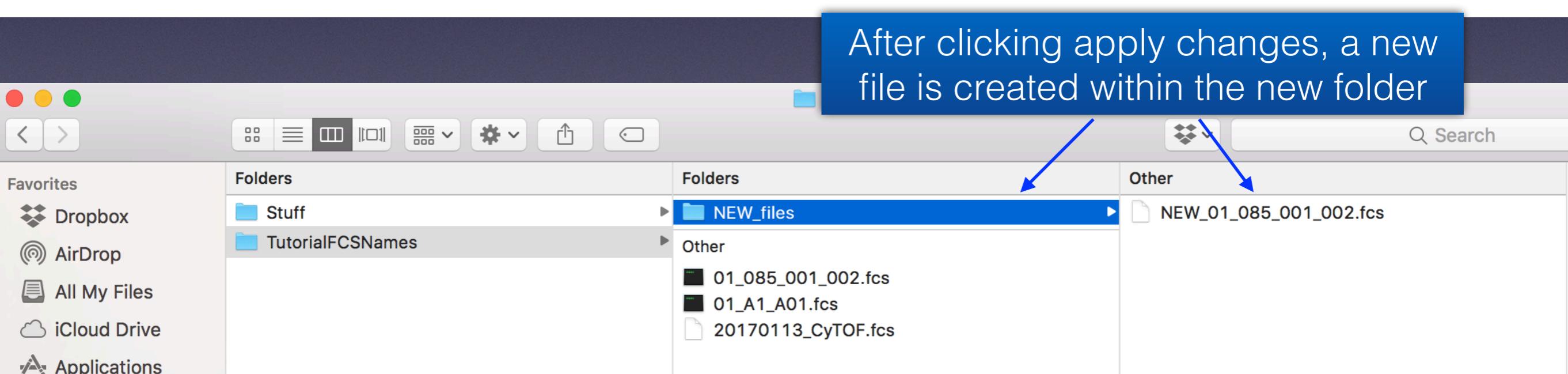
1. Please select the directory where the .fcs files are located before starting.
 2. If error reload the home page to restart.
 3. Although your original files will not be altered or changed, ensure you have backed up your original files.
 4. A new folder (NEW_Files) will be created within the selected directory, which will contain the new .fcs files (NEW_XXXXX.fcs).
 5. Edit names directly on the table. You can also copy and paste from excel.

After applying changes it goes to next file



	Old.name	Old.desc	NEW.name	NEW.desc
\$P1	FSC-A		FSC-A	
\$P2	FSC-H		FSC-H	
\$P3	FSC-W		FSC-W	
\$P4	SSC-A		SSC-A	
\$P5	SSC-H		SSC-H	
\$P6	SSC-W		SSC-W	
\$P7	FITC-A	CD161	FITC-A	CD161
\$P8	PE-A	CCR6	PE-A	CCR6
\$P9	PerCP-Cy5-5-A	CxCR3	PerCP-Cy5-5-A	CxCR3
\$P10	PE-Cy7-A	CCR4	PE-Cy7-A	CCR4
\$P11	APC-A	CD3	APC-A	CD3
\$P12	APC-Cy7-A	CD4	APC-Cy7-A	CD4
\$P13	Pacific Blue-A	CD8	Pacific Blue-A	CD8
\$P14	AmCyan-A	LiveDead_CD14/19	AmCyan-A	LiveDead_CD14/19
\$P15	Time		Time	

After clicking apply changes, a new file is created within the new folder



1. Only parameter names are changed

Metadata Preserved

20171205 Workspace.jo

41:20 ?

All Samples 160
CervicalFCS 2

Edit...	Sort...	Name	File name	#Cells	\$P7N	\$P7S	\$P8N	\$P8S	\$P9N	\$P9S	\$P10N	\$P10S	CST BASELINE DATE	CST BEADS	LOT ID	\$DATE	\$CYT
.		01_085_001_002.fcs	01_085_001_002.fcs	147000	Alexa Fluor 488-A	CD161	DsRed-A	CCR6	PE-Cy5-A	CxCR3	PE-Cy7-A	CCR4	02/19/2014 02:13:19 PM	39527	04-NOV-2014	FACSCantoll	
.		01_085_001_002.fcs	NEW_01_085_001_002.fcs	147000	FITC-A	CD161	DsRed-A	CCR6	PE-Cy5-A	CxCR3	PE-Cy7-A	CCR4	02/19/2014 02:13:19 PM	39527	04-NOV-2014	FACSCantoll	

Only the file name on the hard disk and the FITC parameter are changed

Copy and paste from excel

	A	B	C	D	E	F
1	Old names		New names			
2	Alexa Fluor 488-A	CD161	MyFITC	My_CD161		
3	DsRed-A	CCR6	MyPE	My_CCR6		
4	PE-Cy5-A	CxCR3	MyPECy5	My_CxCR3		
5	PE-Cy7-A	CCR4	MyPECy7	My_CCR4		
6	APC-A	CD3	MyAPC	My_CD3		
7	APC-Cy7-A	CD4	MyAPC-Cy7	My_CD4		
8	Pacific Blue-A	CD8	MyPB	My_CD8		
9	AmCyan-A	LiveDead_CD14/19	MyAmCyan	My_LiveDead_CD14/19		
10						

Change the Names of Channels and Parameters in .fcs Files

This software allows you to change the names of channels and parameters in .fcs files. All data will be preserved, i.e. filename, date and time of acquisition, instrument, operator and others.

- Please select the file or folder you want to change.
- If there are multiple files, you can choose to change them all at once.
- Alternatively, you can change each file individually.
- An application window will open where you can edit the names directly on the table. You can also copy and paste from excel.

You can apply to current file or all files in the folder

Paste

Choose input directory

Apply changes to current file only

Apply changes to all files

Note:
Apply Changes to All Files: it will only execute if files in the folder have the same number of parameters, i.e. same experimental panel

Stop application

	Old.name	Old.desc	NEW.name	NEW.desc
\$P1	FSC-A		FSC-A	
\$P2	FSC-H		FSC-H	
\$P3	FSC-W		FSC-W	
\$P4	SSC-A		SSC-A	
\$P5	SSC-H		SSC-H	
\$P6	SSC-W		SSC-W	
\$P7	Alexa Fluor 488-A	CD161	MyFITC	My_CD161
\$P8	DsRed-A	CCR6	MyPE	My_CCR6
\$P9	PE-Cy5-A	CxCR3	MyPECy5	My_CxCR3
\$P10	PE-Cy7-A	CCR4	MyPECy7	My_CCR4
\$P11	APC-A	CD3	MyAPC	My_CD3
\$P12	APC-Cy7-A	CD4	MyAPC-Cy7	My_CD4
\$P13	Pacific Blue-A	CD8	MyPB	My_CD8
\$P14	AmCyan-A	LiveDead_CD14/19	MyAmCyan	My_LiveDead_CD14/19
\$P15	Time		Time	

IMPORTANT

All your files need to have the same number of parameters (\$P1...\$Pn) to

use “**Apply changes to all files**”.

Otherwise there will be an error and you will need to reload (refresh) the browser

Change the Names of Channels and Parameters in .fcs Files

This script will only change the names of parameters and channels in the .fcs file. All the original metadata will be preserved, i.e. filename, date and time of acquisition, instrument,

1. Please select the directory where the .fcs files are located before starting.
2. If error reload the home page to restart.
3. Although your original files will not be altered or changed, ensure you have backed up your original files.
4. A new folder (NEW_Files) will be created within the selected directory, which will contain the new .fcs files (NEW_XXXX.fcs).
5. Edit names directly on the table. You can also copy and paste from excel.

Finished changing all the files

Choose input directory

Apply changes to current file only

Apply changes to all files

Note:

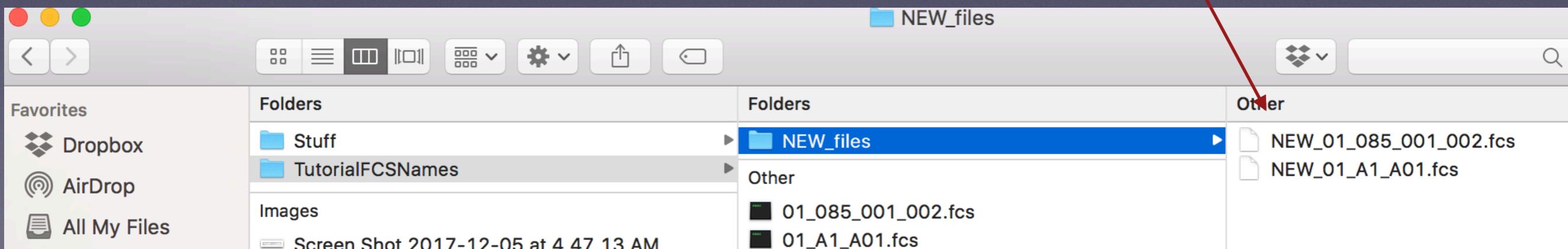
Apply Changes to All Files: it will only execute if files in the folder have the same number of parameters, i.e. same experimental panel

Stop application

Previous File Next File [1] "Files processed."

This is a excel-like table. Click on the cell and type to change or copy and paste from an excel file

1	Job is done. All your files have been written
2	Stop Application, Close window; or
3	Load a new directory



Comparison of the NEW_Files with the original files

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59:25 ?

Edit...	Sort...	Name	File name	#Cells	SP7N	SP7S	SP8N	SP8S	SP9N	SP9S	SP10N	SP10S	CST BASELINE DATE	CST BEADS LOT ID	SDATE	SCYT	#	
		T 01_A1_A01.fcs	New	NEW_01_A1_A01.fcs	55821	MyFITC	My_CD161	MyPE	My_CCR6	MyPECy5	My_CxCR3	MyPECy7	My_CCR4	03/26/2014 11:29:47 AM		39527	27-JUN-2014	FACSCantoll
		T 01_A1_A01.fcs		01_A1_A01.fcs	55821	FITC-A	CD161	PE-A	CCR6	PerCP-Cy5-5-A	CxCR3	PE-Cy7-A	CCR4	03/26/2014 11:29:47 AM		39527	27-JUN-2014	FACSCantoll
		T 01_085_001_002.fcs	New	NEW_01_085_001_002.fcs	147000	MyFITC	My_CD161	MyPE	My_CCR6	MyPECy5	My_CxCR3	MyPECy7	My_CCR4	02/19/2014 02:13:19 PM		39527	04-NOV-2014	FACSCantoll
		T 01_085_001_002.fcs		01_085_001_002.fcs	147000	Alexa Fluor 488-A	CD161	DsRed-A	CCR6	PE-Cy5-A	CxCR3	PE-Cy7-A	CCR4	02/19/2014 02:13:19 PM		39527	04-NOV-2014	FACSCantoll

Apply NEW names to CyTOF Files

Choose input directory

Previous File

Next File

You are changing file: export_20170113_100ul_100_01_1_CD3.fcs
this file is: 3 out of 3 in the folder: /Users/viniciohmotta/Desktop/TutorialFCSNames 2

Apply changes to current file only

Apply changes to all files

Note:

Apply Changes to All Files: it will only execute if files in the folder have the same number of parameters, i.e. same experimental panel

Stop application

This is a excel-like table. Click on the cell and type to change or copy and paste from an excel file

	Old.name	Old.desc	NEW.name	NEW.desc
\$P1	BCKG190Di	190BCKG	BCKG190Di	190BCKG
\$P2	Ba138Di	138Ba	Ba138Di	138Ba
\$P3	Bi209Di	209Bi_I-A_I-E	Bi209Di	209Bi_I-A_I-E
\$P4	Ce140Di	140Ce_Beads	Ce140Di	140Ce_Beads
\$P5	Center		Center	
\$P6	Cs133Di	133Cs	Cs133Di	133Cs
\$P7	Dy162Di	162Dy_Ly-6C	Dy162Di	162Dy_Ly-6C
\$P8	Er168Di	168Er_CD8a	Er168Di	168Er_CD8a
\$P9	Er170Di	170Er_CD161_NK1.1_	Er170Di	170Er_CD161_NK1.1_
\$P10	Eu151Di	151Eu_CD25_IL-2R_	Eu151Di	151Eu_CD25_IL-2R_
\$P11	Eu153Di	153Eu_CD274_PD-L1_	Eu153Di	153Eu_CD274_PD-L1_
\$P12	Event_length		Event_length	
\$P13	Gd156Di	156Gd	Gd156Di	156Gd
\$P14	Gd160Di	160Gd_CD62L_L-selectin_	Gd160Di	160Gd_CD62L_L-selectin_
\$P15	Ho165Di	165Ho	Ho165Di	165Ho
\$P16	I127Di	127I	I127Di	127I
\$P17	Ir191Di	191Ir	Ir191Di	191Ir
\$P18	Ir193Di	193Ir	Ir193Di	193Ir
\$P19	Lu175Di	175Lu	Lu175Di	175Lu
\$P20	Nd142Di	142Nd_CD11c	Nd142Di	142Nd_CD11c
\$P21	Nd145Di	145Nd_CD69	Nd145Di	145Nd_CD69
\$P22	Nd146Di	146Nd_F4_80	Nd146Di	146Nd_F4_80
\$P23	Nd148Di	148Nd_CD11b_Mac-1_	Nd148Di	148Nd_CD11b_Mac-1_
\$P24	Offset		Offset	
\$P25	Pb208Di	208Pb	Pb208Di	208Pb
\$P26	Pd102Di	102Pd	Pd102Di	102Pd
\$P27	Pd104Di	104Pd	Pd104Di	104Pd
\$P28	Pd105Di	105Pd	Pd105Di	105Pd
\$P29	Pd106Di	106Pd	Pd106Di	106Pd
\$P30	Pd108Di	108Pd	Pd108Di	108Pd
\$P31	Pd110Di	110Pd	Pd110Di	110Pd

Copy and Paste from Excel

A	B	C	D	E
Old names		New names		
BCKG190Di	190BCKG	BCKG190Di	190BCKG	
Ba138Di	138Ba	Ba138Di	138Ba	
Bi209Di	209Bi_I-A_I-E	Bi209Di	Class_II	
Ce140Di	140Ce_Beads	Ce140Di	Beads	
Center	NA	Center		
Cs133Di	133Cs	Cs133Di		
Dy162Di	162Dy_Ly-6C	Dy162Di	Ly-6C	
Er168Di	168Er_CD8a	Er168Di	CD8a	
Er170Di	170Er_CD161_NK1.1_	Er170Di	NK1.1	
Eu151Di	151Eu_CD25_IL-2R_	Eu151Di	CD25	
Eu153Di	153Eu_CD274_PD-L1_	Eu153Di	PD-L1	
Event_length	NA	Event_length		
Gd156Di	156Gd	Gd156Di		
Gd160Di	160Gd_CD62L_L-selectin_	Gd160Di	CD62L	
Ho165Di	165Ho	Ho165Di		
I127Di	127I	I127Di		
Ir191Di	191Ir	Ir191Di		
Ir193Di	193Ir	Ir193Di		
Lu175Di	175Lu	Lu175Di		
Nd142Di	142Nd_CD11c	Nd142Di	CD11c	
Nd145Di	145Nd_CD69	Nd145Di	CD69	
Nd146Di	146Nd_F4_80	Nd146Di	F480	
Nd148Di	148Nd_CD11b_Mac-1_	Nd148Di	CD11b	
Offset	NA	Offset		
Pb208Di	208Pb	Pb208Di		
Pd102Di	102Pd	Pd102Di		
Pd104Di	104Pd	Pd104Di		
Pd105Di	105Pd	Pd105Di		
Pd106Di	106Pd	Pd106Di		

1. Please select the directory where the .fcs files are located before starting.
 2. If error reload the home page to restart.
 3. Although your original files will not be altered or changed, ensure you have backed up your original files.
 4. A new folder (NEW_Files) will be created within the selected directory, which will contain the new .fcs files (NEW_XXXXX.fcs).
 5. Edit the table and click the 'Next File' button to apply changes to all files.

You can apply to current file or all files in the folder

Apply changes to current file only
Apply changes to all files

Note:
Apply Changes to All Files: it will only execute if files in the folder have the same number of parameters, i.e. same experimental panel

Stop application

This is a excel-like table. Click on the cell and type to change or copy and paste from an excel file.

	Old.name	Old.desc	NEW.name	NEW.desc
\$P1	BCKG190Di	190BCKG	BCKG190Di	190BCKG
\$P2	Ba138Di	138Ba	Ba138Di	138Ba
\$P3	Bi209Di	209Bi_I-A_I-E	Bi209Di	Class_II
\$P4	Ce140Di	140Ce_Beads	Ce140Di	Beads
\$P5	Center		Center	
\$P6	Cs133Di	133Cs	Cs133Di	
\$P7	Dy162Di	162Dy_Ly-6C	Dy162Di	Ly-6C
\$P8	Er168Di	168Er_CD8a	Er168Di	CD8a
\$P9	Er170Di	170Er_CD161_NK1.1_	Er170Di	NK1.1
\$P10	Eu151Di	151Eu_CD25_IL-2R_	Eu151Di	CD25
\$P11	Eu153Di	153Eu_CD274_PD-L1_	Eu153Di	PD-L1
\$P12	Event_length		Event_length	
\$P13	Gd156Di	156Gd	Gd156Di	
\$P14	Gd160Di	160Gd_CD62L_L-selectin_	Gd160Di	CD62L
\$P15	Ho165Di	165Ho	Ho165Di	
\$P16	I127Di	127I	I127Di	
\$P17	Ir191Di	191Ir	Ir191Di	
\$P18	Ir193Di	193Ir	Ir193Di	
\$P19	Lu175Di	175Lu	Lu175Di	
\$P20	Nd142Di	142Nd_CD11c	Nd142Di	CD11c
\$P21	Nd145Di	145Nd_CD69	Nd145Di	CD69
\$P22	Nd146Di	146Nd_F4_80	Nd146Di	F480
\$P23	Nd148Di	148Nd_CD11b_Mac-1_	Nd148Di	CD11b

New Names in the CyTOF Files

20171205 Workspace.jo 1:28:20 ?

	All Samples	166
	CervicalFCS	2
Edit...	Sort...	Name
		File name #Cells \$P7N \$P7S \$P8N \$P8S \$P9N \$P9S \$P10N \$P10S \$DATE \$CYT
export_20170113_100ul_100_01_1_CD3.fcs	NEW_export_20170113#15CB43A.fcs	52849 Dy162Di Ly-6C Er168Di CD8a Er170Di NK1.1 Eu151Di CD25 13-Jan-2017 DVSSCIENCES-CYTOF-6.5.351
export_20170113_100ul_100_01_1_CD3.fcs	20170113_CyTOF.fcs	52849 Dy162Di 162Dy_Ly-6C Er168Di 168Er_CD8a Er170Di 170Er_CD161__NK1.1_ Eu151Di 151Eu_CD25__IL-2R_ 13-Jan-2017 DVSSCIENCES-CYTOF-6.5.351

BCKG190Di: 190BCKG
 ✓ Ba138Di: 138Ba
 Bi209Di: 209Bi_I-A_I-E
 Ce140Di: 140Ce_Beads
 Center
 Cs133Di: 133Cs
 Dy162Di: 162Dy_Ly-6C
 Er168Di: 168Er_CD8a
 Er170Di: 170Er_CD161__NK1.1_
 Eu151Di: 151Eu_CD25__IL-2R_
 Eu153Di: 153Eu_CD274__PD-L1_
 Event_length
 Gd156Di: 156Gd
 Gd160Di: 160Gd_CD62L__L-selectin_
 Ho165Di: 165Ho
 I127Di: 127I
 Ir191Di: 191Ir
 Ir193Di: 193Ir
 Lu175Di: 175Lu
Nd142Di: 142Nd_CD11c
 Nd145Di: 145Nd_CD69
 Nd146Di: 146Nd_F4_80
 Nd148Di: 148Nd_CD11b_Mac-1_
 Offset
 Pb208Di: 208Pb
 Pd102Di: 102Pd
 Pd104Di: 104Pd
 Pd105Di: 105Pd
 Pd106Di: 106Pd
 Pd108Di: 108Pd

Old names

BCKG190Di: 190BCKG
 ✓ Ba138Di: 138Ba
 Bi209Di: Class_II
 Ce140Di: Beads
 Center
 Cs133Di
 Dy162Di: Ly-6C
 Er168Di: CD8a
 Er170Di: NK1.1
 Eu151Di: CD25
 Eu153Di: PD-L1
 Event_length
 Gd156Di
 Gd160Di: CD62L
 Ho165Di
 I127Di
 Ir191Di
 Ir193Di
 Lu175Di
Nd142Di: CD11c
 Nd145Di: CD69
 Nd146Di: F480
 Nd148Di: CD11b
 Offset
 Pb208Di
 Pd102Di
 Pd104Di
 Pd105Di
 Pd106Di

New names



Final Notes

- If you make changes and navigate through files with next and previous buttons, the changes will not be displayed because the script will always read the original .fcs file.
- To see the changes you need to open the NEW_files in flowJo or other software
- You can make as many changes as you want in the web browser shiny App (it will always show original file data), the NEW_files will be re-written as you click “apply changes”
- Always use original files to edit. The script does not work well if you load NEW_files and try to re-edit. Open original files and make changes. It will re-write the files in the NEW_files folder