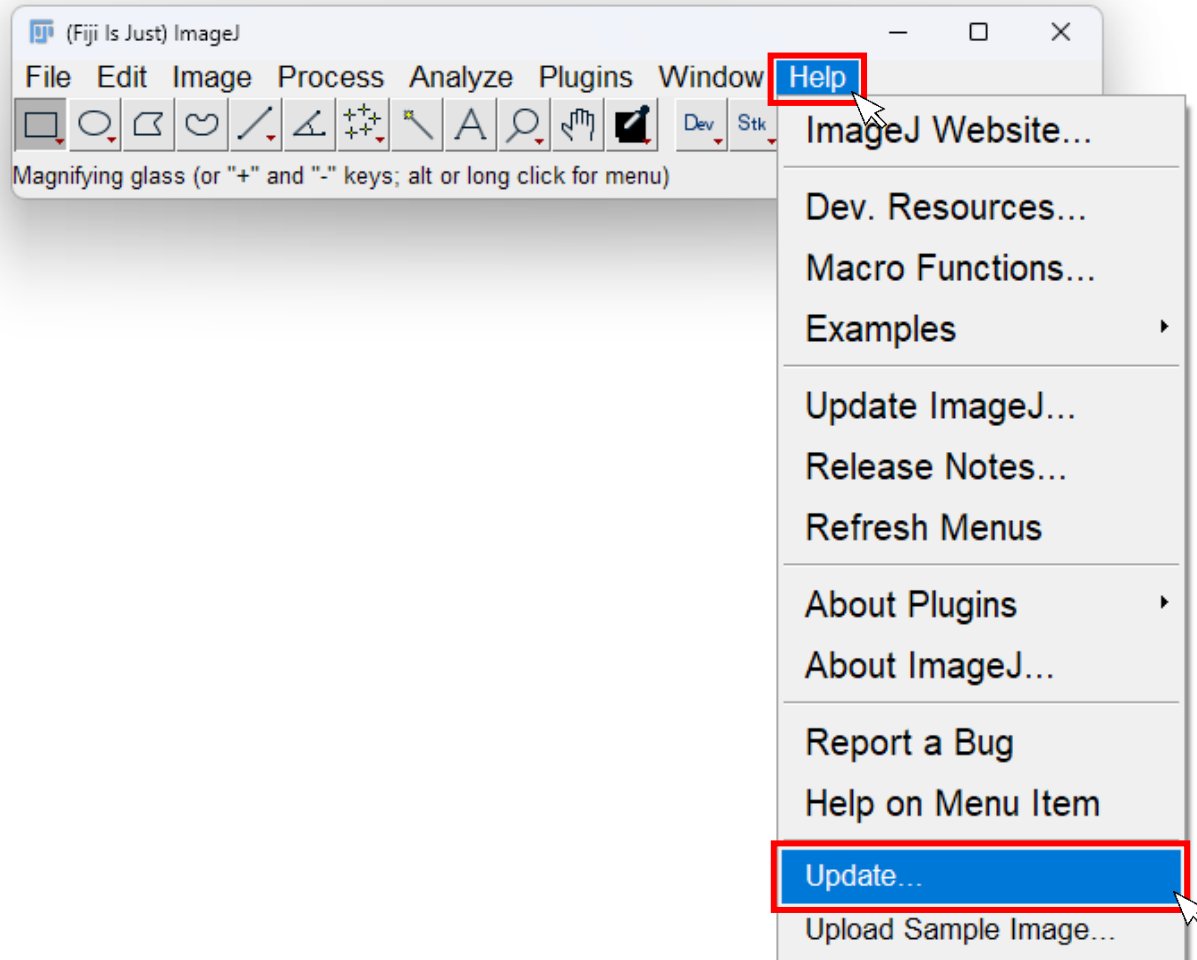


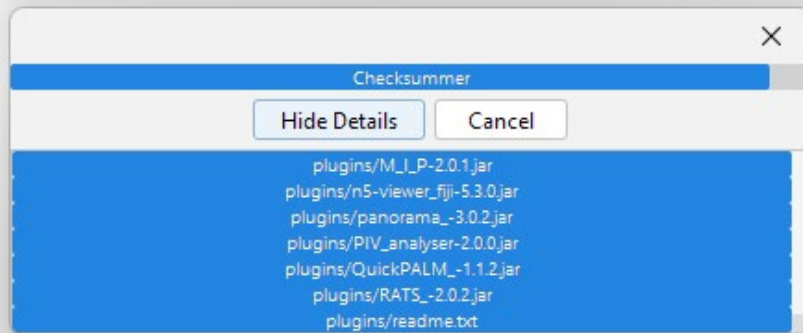
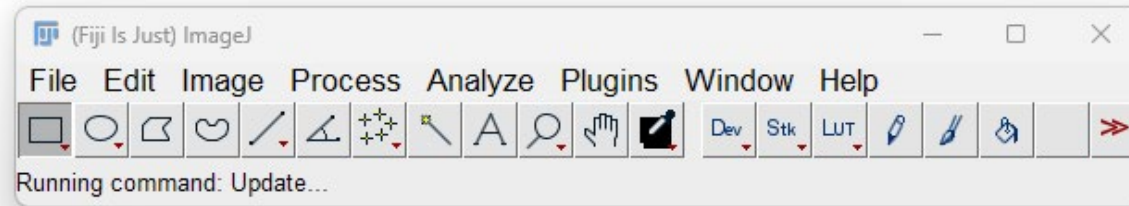
# Installation Process

# Installing ResultsToExcel (optional)



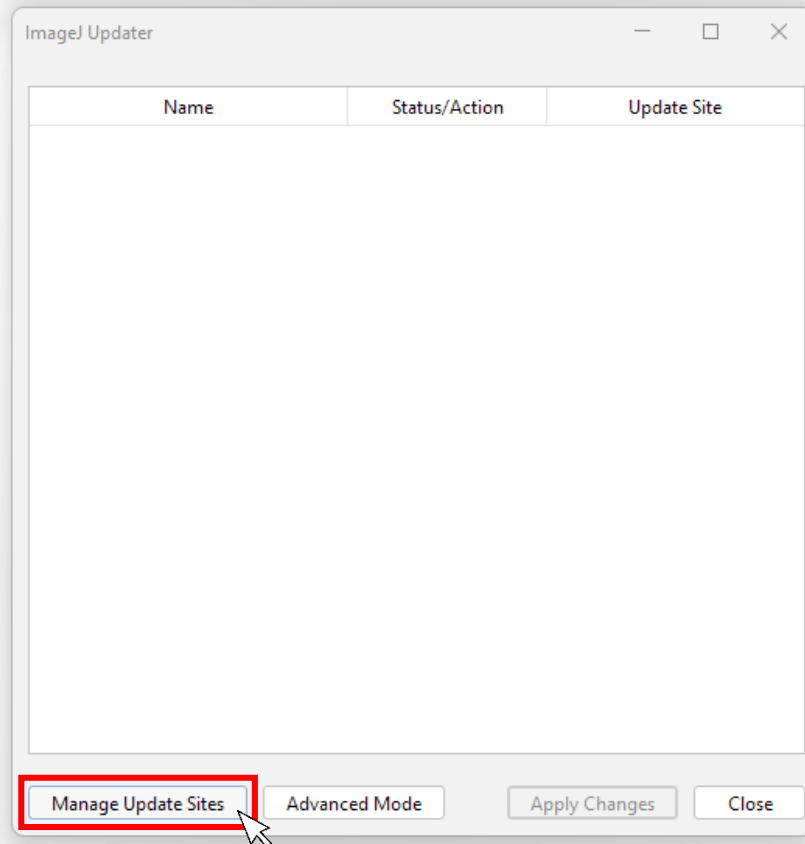
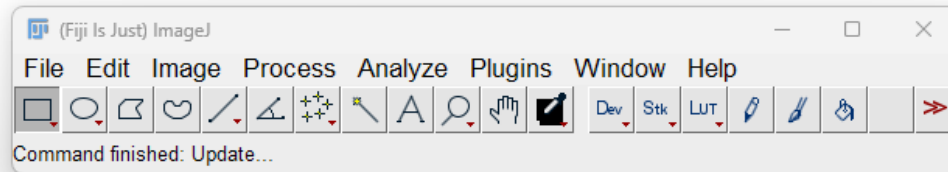
- Click on *Help* → *Update...*

# Installing ResultsToExcel (optional)



- Let the updater run
- If necessary, restart FIJI and rerun the updater

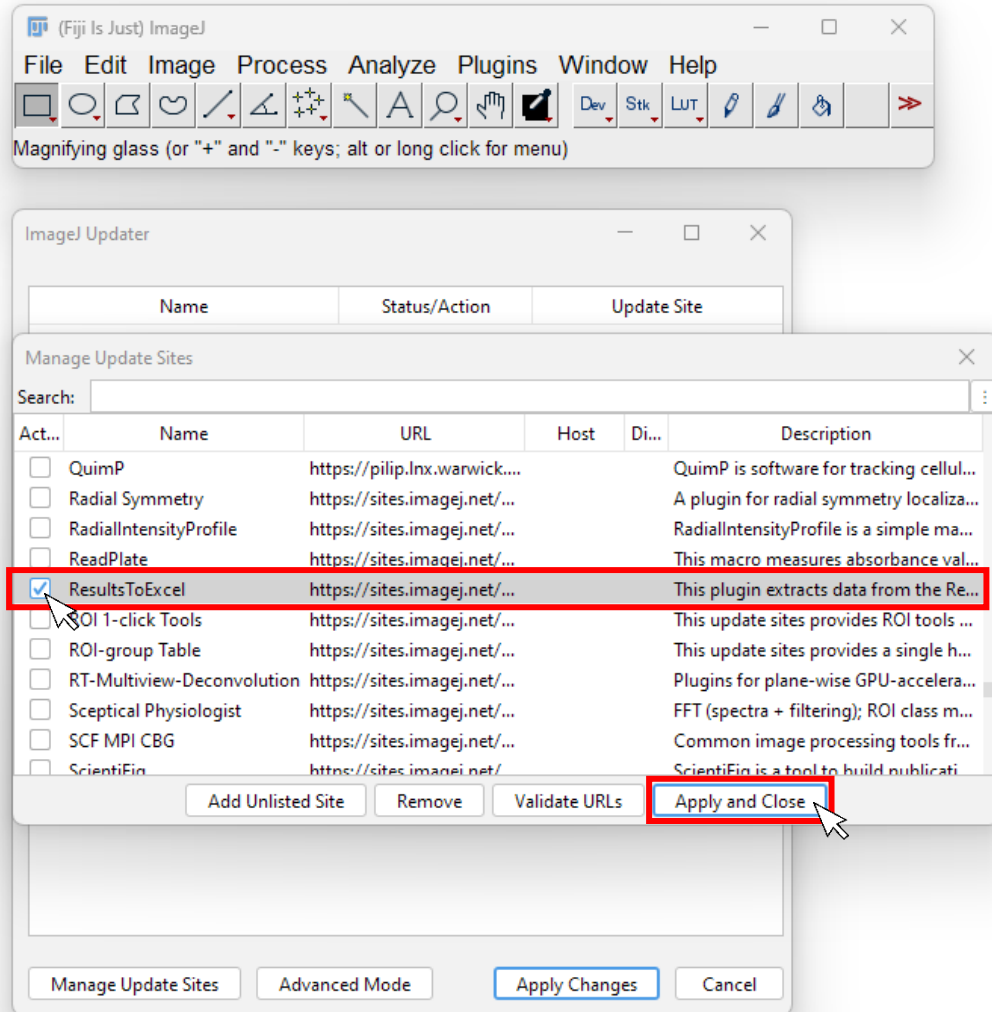
# Installing ResultsToExcel (optional)



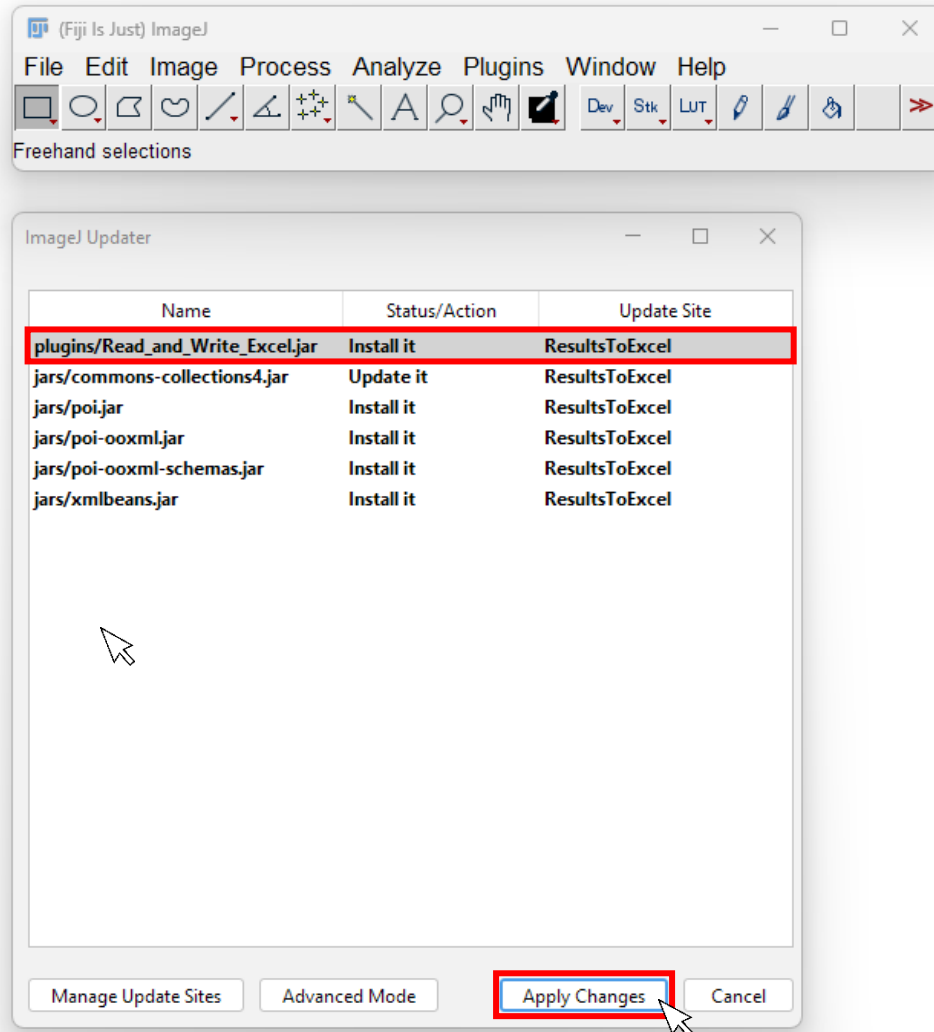
- After running, a window opens that contains the button *Manage update sites*
- Click it

# Installing ResultsToExcel (optional)

- Scroll to the letter ,R' in the next window
- Tick *ResultsToExcel*
- Click *Apply and Close*

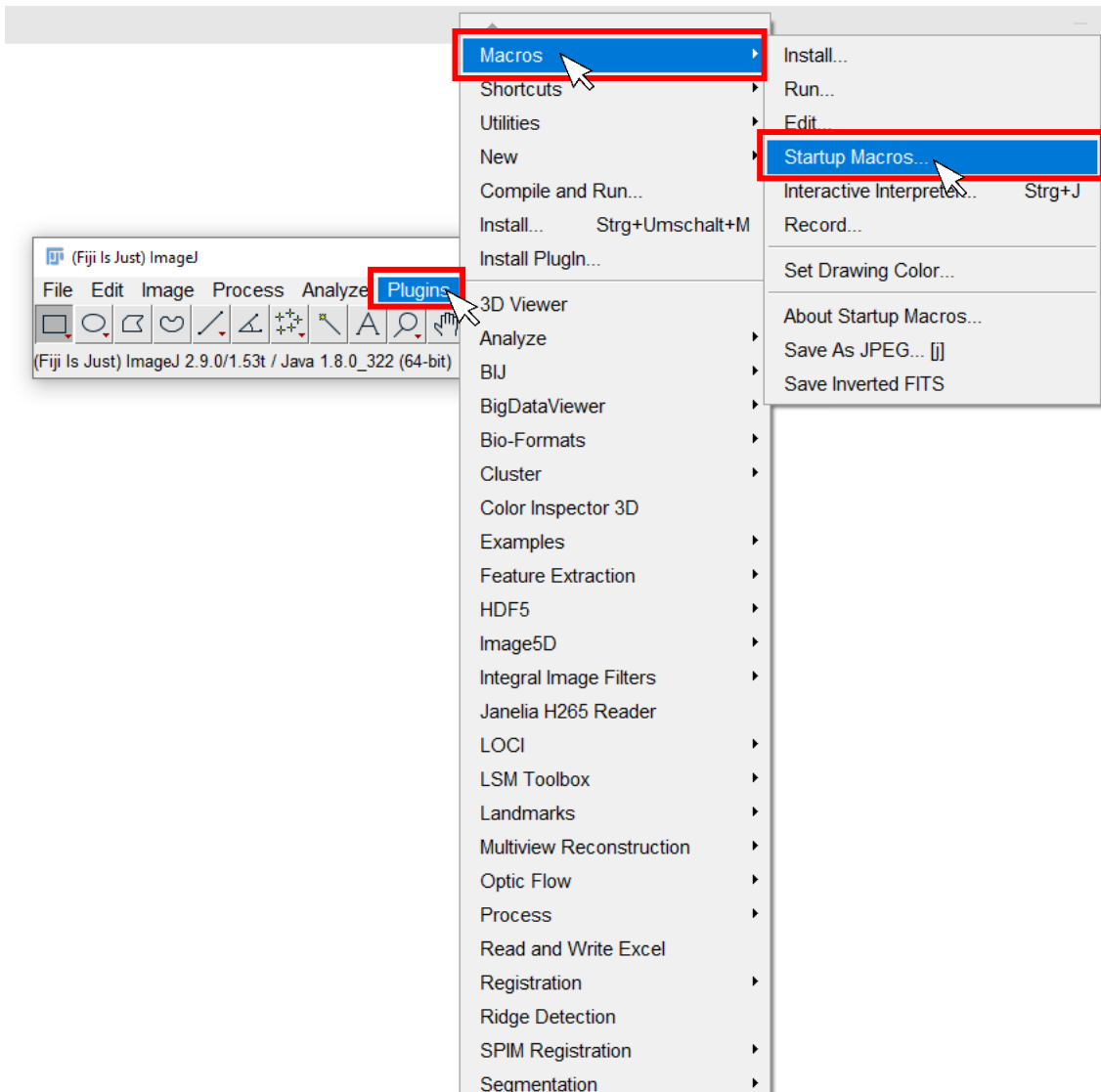


# Installing ResultsToExcel (optional)



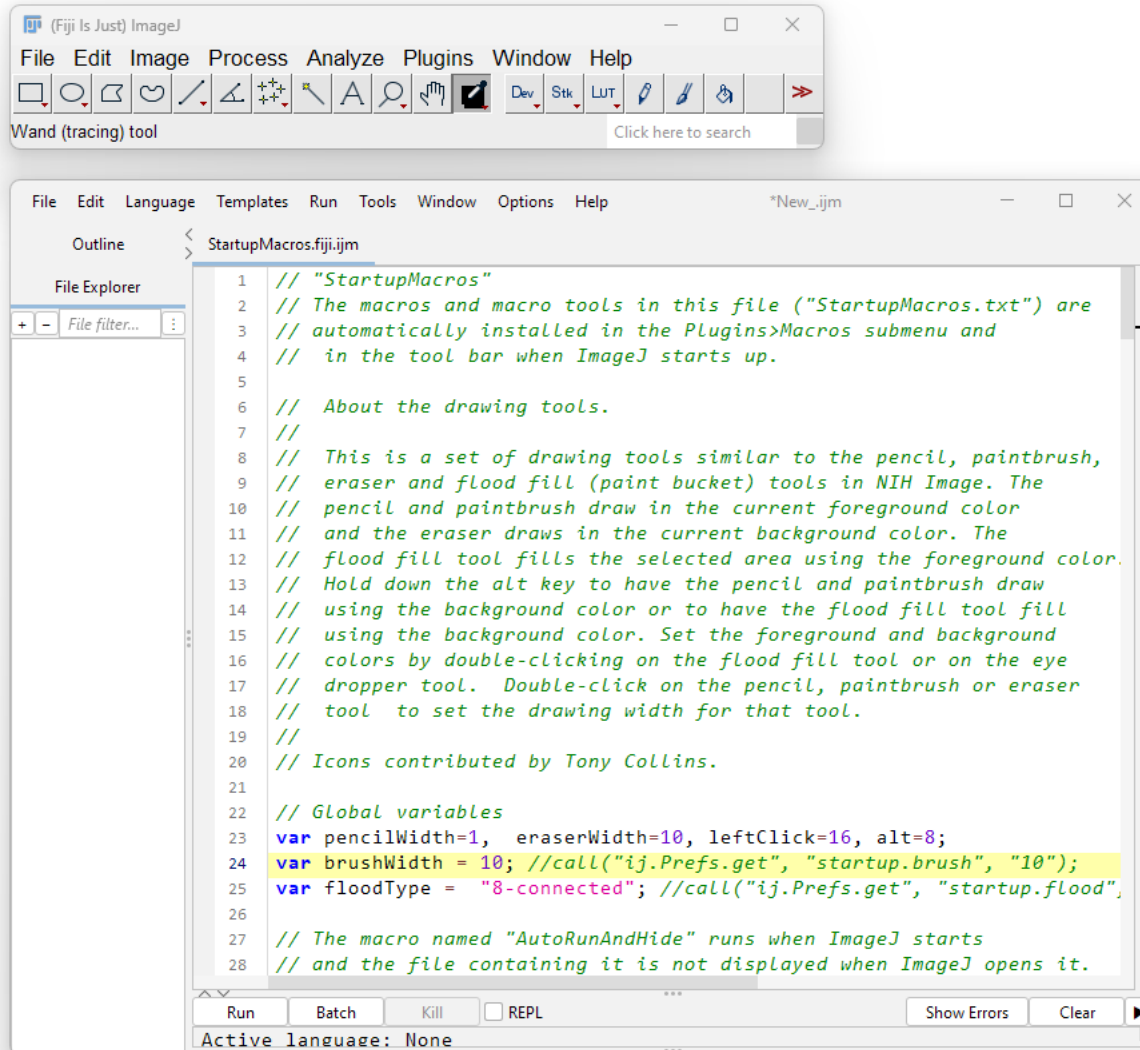
- The plugin [Read and Write Excel](#), with which results can be written to .xlsx files directly, was added as an update site and will be installed after confirming
- Complete the process by clicking *Apply changes*, and restart FIJI after the installation

# Installing the QuantSeg Macro



- Click *Plugins* -> *Macros* -> *Startup Macros...*

# Installing the QuantSeg Macro

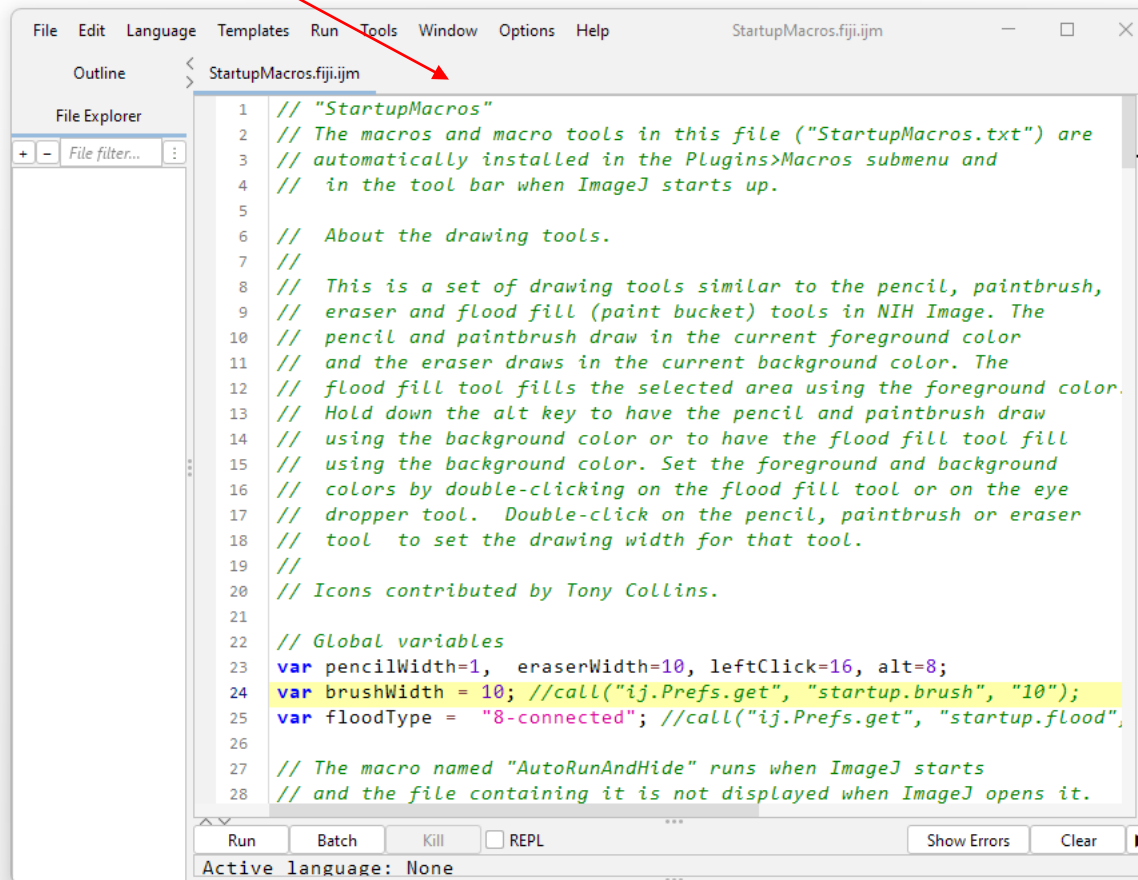


- The macro editor is opened, showing the source code of the pre-installed macros



# Installing the QuantSeg Macro

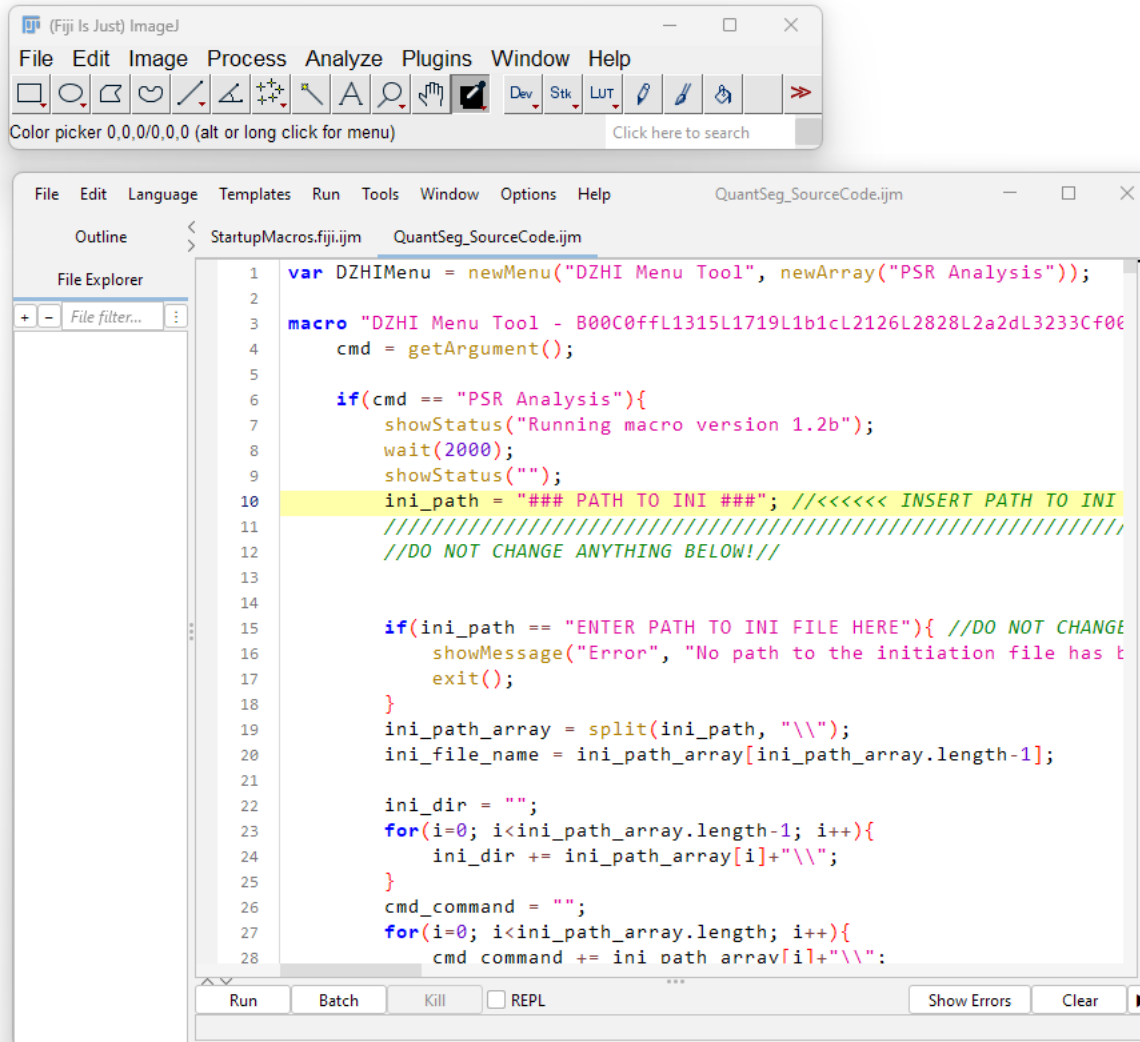
QuantSeg\_SourceCode.ijm



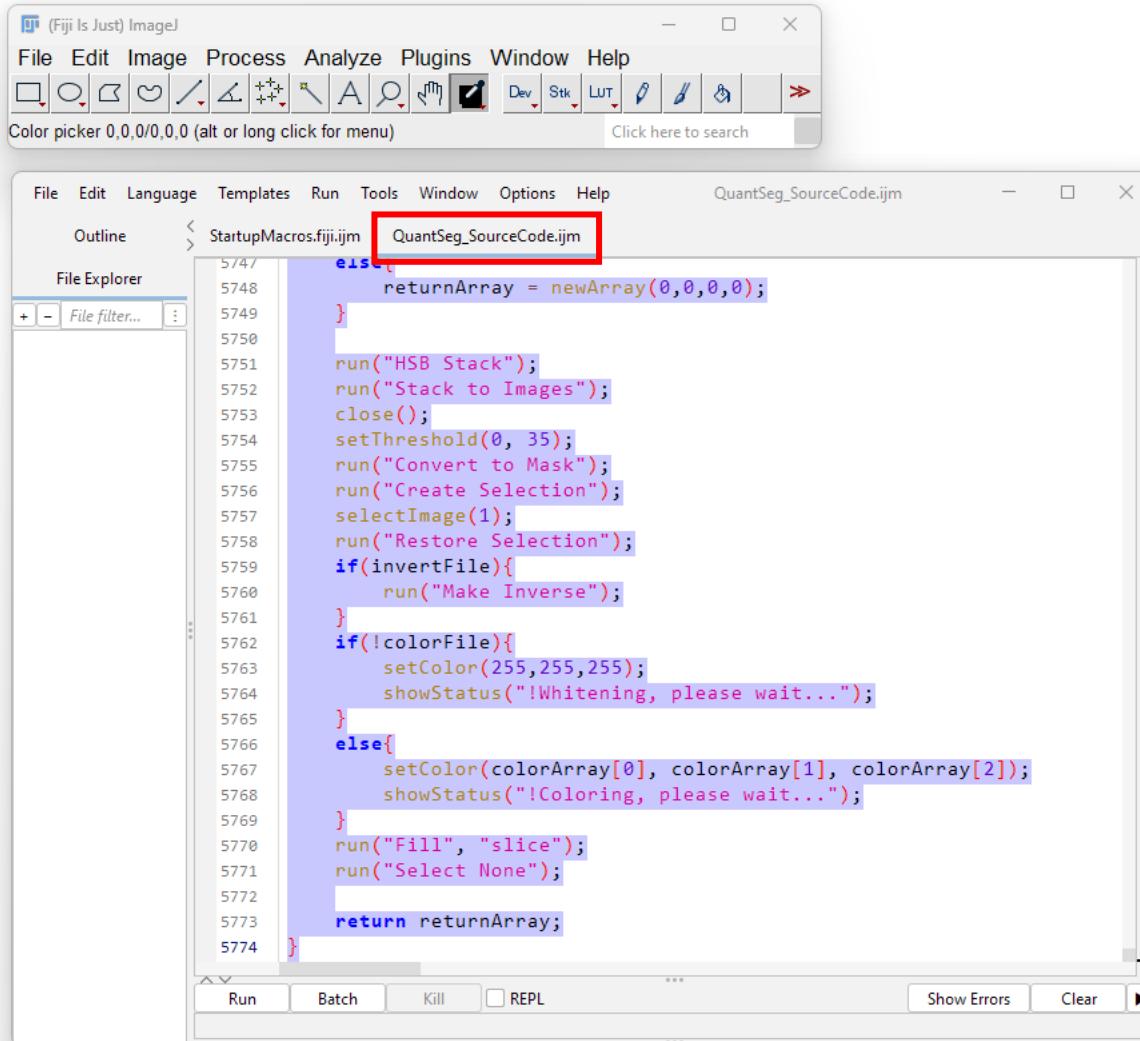
- Now, the source code to the QuantSeg Macro needs to be opened by drag & drop into the macro editor

# Installing the QuantSeg Macro

- Within the editor, a second tab is opened

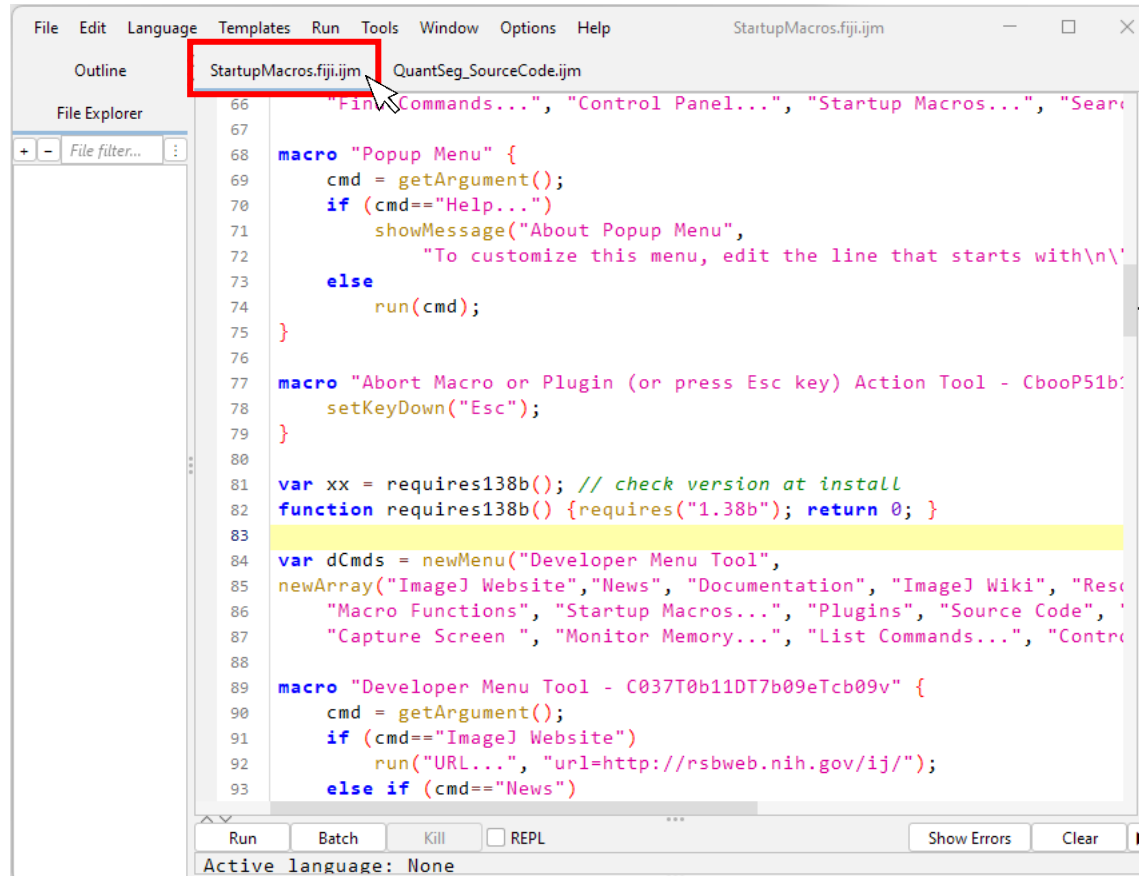


# Installing the QuantSeg Macro



- Within the QuantSeg source code, press Ctrl+A to select all of the code
- Press Ctrl+C to copy

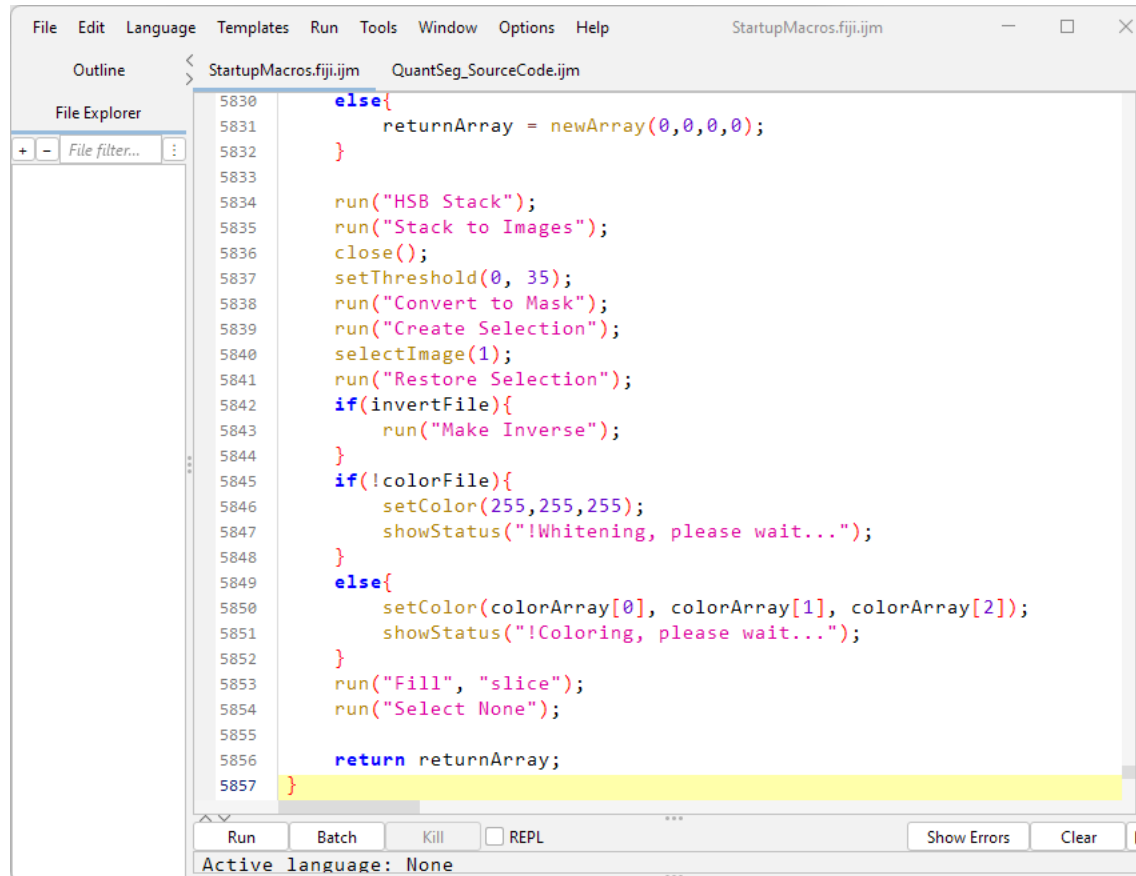
# Installing the QuantSeg Macro



- Change back to the first tab containing the pre-installed startup macros
- Scroll down to the line that says  
`var dCmds = newMenu("Developer Menu Tool",`
- Paste the contents of the clipboard *above* that line by pressing Ctrl+V

# Installing the QuantSeg Macro

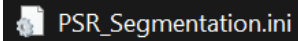
- Press Ctrl+S to save



The screenshot shows the Fiji macro editor window with the file 'StartupMacros.fiji.ijm' open. The code is a macro for processing images, with line numbers 5830 to 5857 visible on the left. The code includes comments in pink and function calls in yellow. The macro performs various image processing steps like thresholding, selection, and coloring. The bottom of the window shows a toolbar with 'Run', 'Batch', 'Kill', and 'REPL' buttons, along with 'Show Errors' and 'Clear' buttons. The active language is set to 'None'.

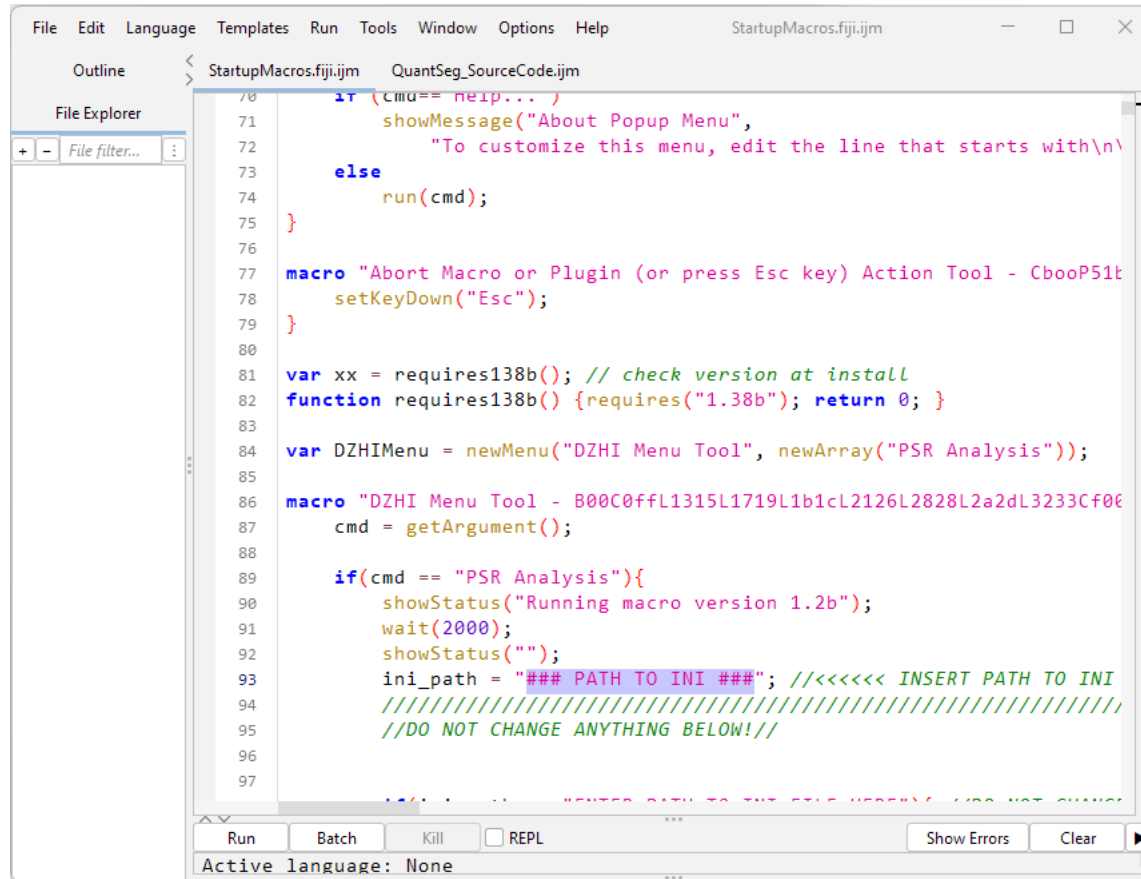
```
5830     else{
5831         returnArray = newArray(0,0,0,0);
5832     }
5833
5834     run("HSB Stack");
5835     run("Stack to Images");
5836     close();
5837     setThreshold(0, 35);
5838     run("Convert to Mask");
5839     run("Create Selection");
5840     selectImage(1);
5841     run("Restore Selection");
5842     if(invertFile){
5843         run("Make Inverse");
5844     }
5845     if(!colorFile){
5846         setColor(255,255,255);
5847         showStatus("!Whitening, please wait...");
5848     }
5849     else{
5850         setColor(colorArray[0], colorArray[1], colorArray[2]);
5851         showStatus("!Coloring, please wait...");
5852     }
5853     run("Fill", "slice");
5854     run("Select None");
5855
5856     return returnArray;
5857 }
```

# Installing the QuantSeg Macro



- The QuantSeg Macro is only functional in presence of a file called *PSR\_Segmentation.ini*
- This file contains all the possible settings and parameters and is read in every time the macro is started
- It is part of the supplementary material as *PSR\_Segmentation.txt*
- To use it, please change its file ending from *.txt* to *.ini*
- It contains a set of parameters that may serve as a starting point for analysis, but most likely will have to be adapted to the particular use case

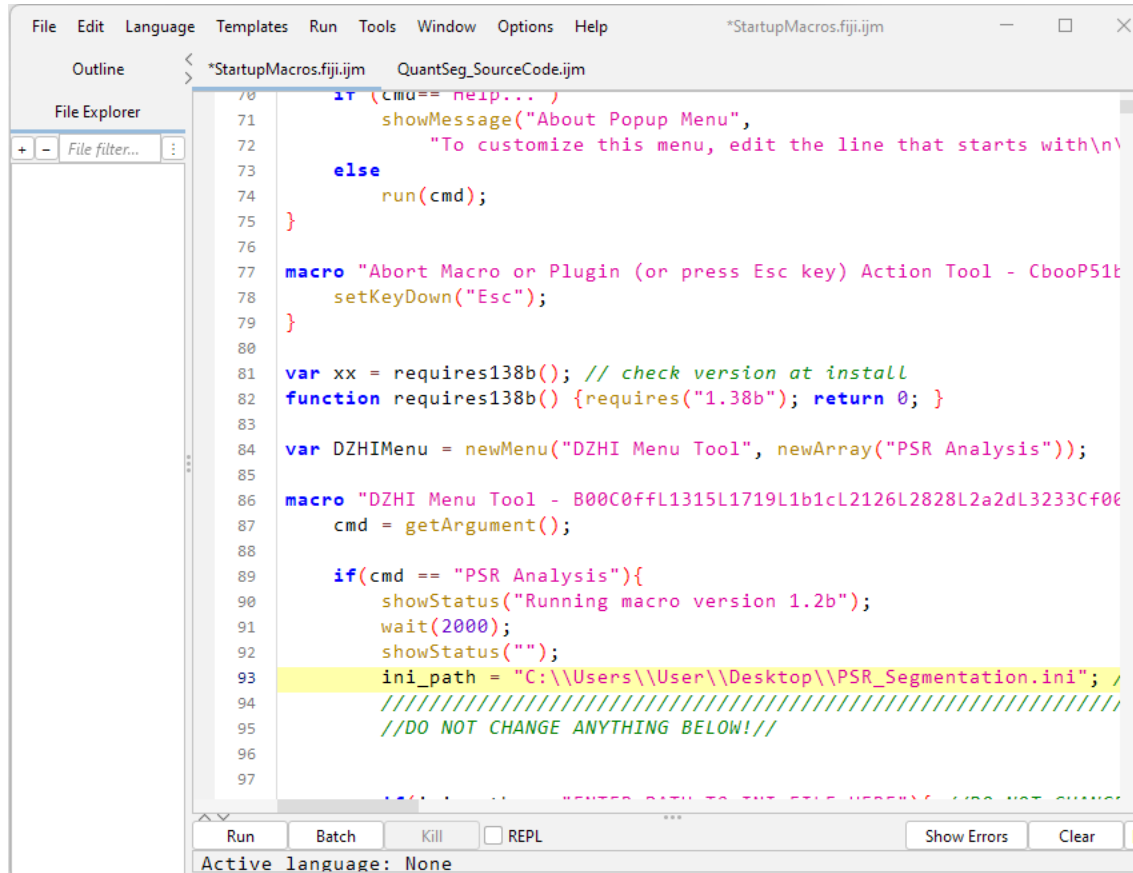
# Installing the QuantSeg Macro



```
70  if (cmd == "help...")
71      showMessage("About Popup Menu",
72                  "To customize this menu, edit the line that starts with\n\
73      else
74          run(cmd);
75  }
76
77  macro "Abort Macro or Plugin (or press Esc key) Action Tool - Cboop51b
78      setKeyDown("Esc");
79  }
80
81  var xx = requires138b(); // check version at install
82  function requires138b() {requires("1.38b"); return 0; }
83
84  var DZHIMenu = newMenu("DZHI Menu Tool", newArray("PSR Analysis"));
85
86  macro "DZHI Menu Tool - B00C0ffL1315L1719L1b1cL2126L2828L2a2dL3233Cf0E
87      cmd = getArgument();
88
89      if (cmd == "PSR Analysis"){
90          showStatus("Running macro version 1.2b");
91          wait(2000);
92          showStatus("");
93          ini_path = "### PATH TO INI ###"; //<<<<<< INSERT PATH TO INI
94          //////////////////////////////////////
95          //DO NOT CHANGE ANYTHING BELOW!//
96
97          //<<<<<< ENTERED PATH TO THE FILE HERE!// DO NOT CHANGE
```

- In order to be able to find that file, the path on the hard drive of the user's computer must be specified in the source code
- Within the macro editor, scroll to line 93 which should contain `ini_path = "### PATH TO INI ###"; [...]`
- Instead of this statement, within the quotation marks, insert the respective path to *PSR\_Segmentation.ini*

# Installing the QuantSeg Macro



The screenshot shows the QuantSeg macro editor with the file `*StartupMacros.fiji.ijm` open. The code is as follows:

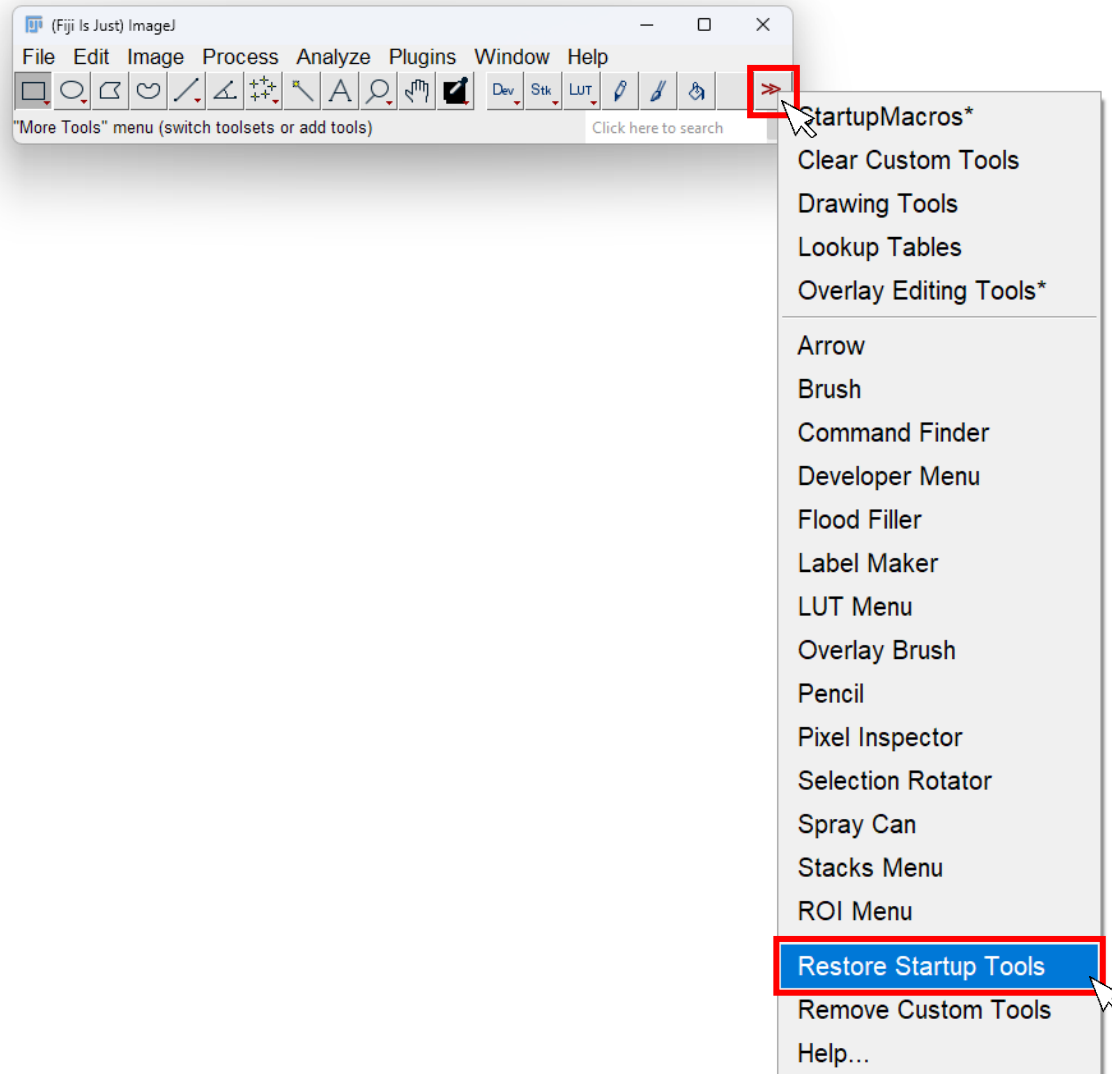
```
70 if (cmd == "help...")
71     showMessage("About Popup Menu",
72         "To customize this menu, edit the line that starts with\n"
73     else
74         run(cmd);
75 }
76
77 macro "Abort Macro or Plugin (or press Esc key) Action Tool - Cboop51k
78     setKeyDown("Esc");
79 }
80
81 var xx = requires138b(); // check version at install
82 function requires138b() {requires("1.38b"); return 0; }
83
84 var DZHI Menu = newMenu("DZHI Menu Tool", newArray("PSR Analysis"));
85
86 macro "DZHI Menu Tool - B00C0ffL1315L1719L1b1cL2126L2828L2a2dL3233Cf06
87     cmd = getArgument();
88
89     if(cmd == "PSR Analysis"){
90         showStatus("Running macro version 1.2b");
91         wait(2000);
92         showStatus("");
93         ini_path = "C:\\Users\\User\\Desktop\\PSR_Segmentation.ini"; //
94         //////////////////////////////////////////
95         //DO NOT CHANGE ANYTHING BELOW!//
96
97         //DO NOT CHANGE ANYTHING BELOW!//
```

The line `ini_path = "C:\\Users\\User\\Desktop\\PSR_Segmentation.ini"; //` is highlighted in yellow. The bottom of the window shows the 'Run' button and the 'Active language: None' status.

- No forward slashes (/) or single backslashes (\) may be used as separating characters! Only double backslashes (\\) are recognized, otherwise the path can't be read
- After entering, the path must be colored pink. If not, either the quotation marks or the separation characters are incorrect.
- The line must be terminated with a semicolon (;)
- After, save by pressing Ctrl+S
- Finally, close the macro editor

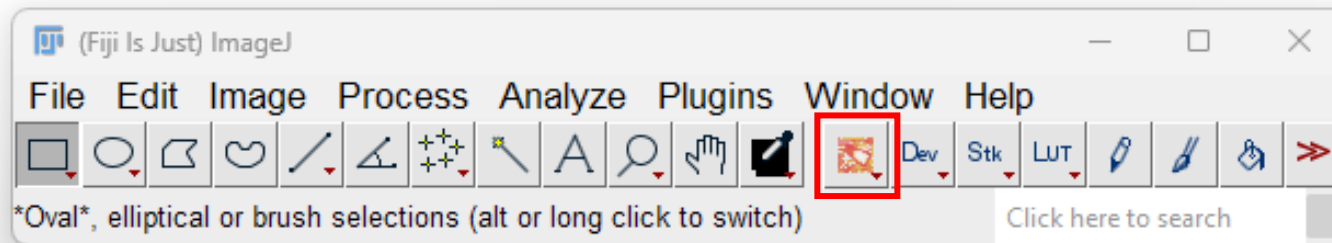


# Installing the QuantSeg Macro



- Finally, click on the two red arrow heads (>>) in the right upper corner of the FIJI main window
- Then, in order to load in the altered startup macros, click *Restore Startup Tools*

# Installing the QuantSeg Macro



- When everything has worked, a new button is added to the FIJI toolbar
- The steps up until here have to be done only once
- Regular FIJI software updates usually are not a problem as they do not change the file containing the startup macros