

# Subject ROIs using Living Image<sup>®</sup> software.

Subject ROIs can assist you with organizing data. Within Living Image software, measurement ROIs are always named in numerical order starting with "ROI1" for a particular image. This means that if there are multiple images open on the desktop and draw ROIs for each image, multiple "ROI1"s may appear in the ROI Measurements table. Furthermore, within a single image the user must always look back at the images to determine which ROI number corresponds to which animal.

One of the best ways to organize data, especially when working with high throughput studies, is to first label the separate animals using Subject ROIs.

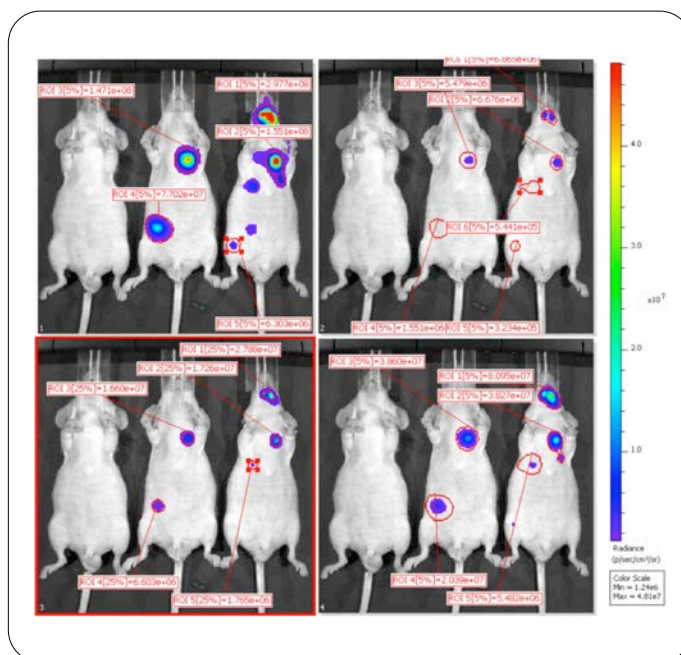
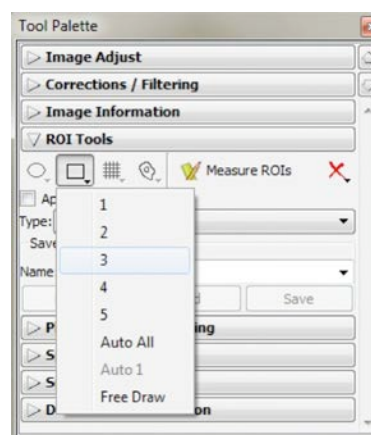
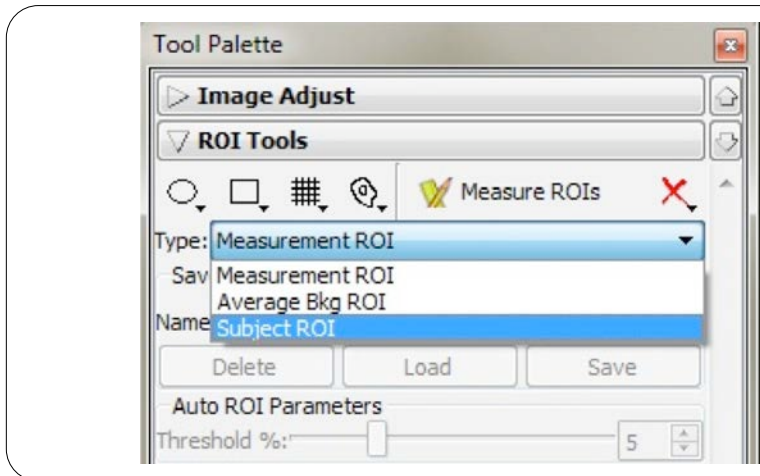


Image Number	ROI	Image Lay	Total Flux [a.u]	Avg Radia [a.u/cm²]	Stdev Rad [a.u/cm²]	Min Radia	Max Radia
JH420050630142719_001	ROI1	Overlay	2.807e+08	1.202e+07	1.904e+07	1.008e+06	6.201e+07
JH420050630142719_001	ROI2	Overlay	1.551e+08	1.343e+07	1.493e+07	2.923e+06	5.777e+07
JH420050630142719_001	ROI3	Overlay	1.471e+08	1.149e+07	1.079e+07	2.271e+06	4.527e+07
JH420050630142719_001	ROI4	Overlay	7.702e+07	4.293e+06	3.939e+06	9.661e+05	1.928e+07
JH420050630142719_001	ROI5	Overlay	6.303e+06	1.251e+06	1.038e+06	3.299e+05	6.559e+06
JH420050630142719_002	ROI1	Overlay	6.805e+06	1.534e+06	1.307e+06	2.886e+05	5.063e+06
JH420050630142719_002	ROI2	Overlay	6.676e+06	1.370e+06	1.244e+06	2.530e+05	5.007e+06
JH420050630142719_002	ROI3	Overlay	5.479e+06	8.376e+05	7.223e+05	1.391e+05	2.763e+06
JH420050630142719_002	ROI4	Overlay	1.551e+06	1.895e+05	1.702e+05	3.788e+04	7.521e+05
JH420050630142719_002	ROI5	Overlay	3.234e+05	1.274e+05	1.228e+05	2.476e+04	4.866e+05
JH420050630142719_002	ROI6	Overlay	5.441e+05	1.043e+05	1.070e+05	2.309e+04	4.535e+05
JH420050630142719_003	ROI1	Overlay	2.788e+07	9.769e+06	3.964e+06	5.301e+06	2.077e+07
JH420050630142719_003	ROI2	Overlay	1.726e+07	7.208e+06	2.963e+06	3.399e+06	1.324e+07
JH420050630142719_003	ROI3	Overlay	1.660e+07	4.599e+06	1.814e+06	2.147e+06	8.535e+06
JH420050630142719_003	ROI4	Overlay	6.803e+06	1.710e+06	6.972e+05	8.730e+05	3.484e+06
JH420050630142719_003	ROI5	Overlay	1.785e+06	8.389e+05	3.656e+05	4.089e+05	1.629e+06
JH420050630142719_004	ROI1	Overlay	1.095e+07	6.811e+06	2.282e+06	1.278e+06	1.479e+07
JH420050630142719_004	ROI2	Overlay	3.827e+07	3.995e+06	4.200e+06	9.039e+05	1.832e+07
JH420050630142719_004	ROI3	Overlay	3.860e+07	3.139e+06	2.878e+06	6.035e+05	1.200e+07
JH420050630142719_004	ROI4	Overlay	2.039e+07	1.253e+06	1.132e+06	2.805e+05	5.601e+06
JH420050630142719_004	ROI5	Overlay	5.482e+06	4.995e+05	4.976e+05	1.245e+05	2.517e+06

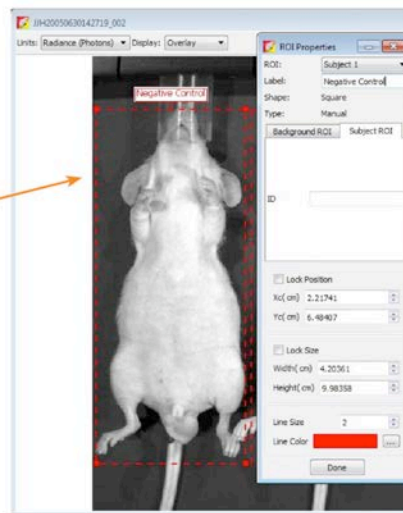
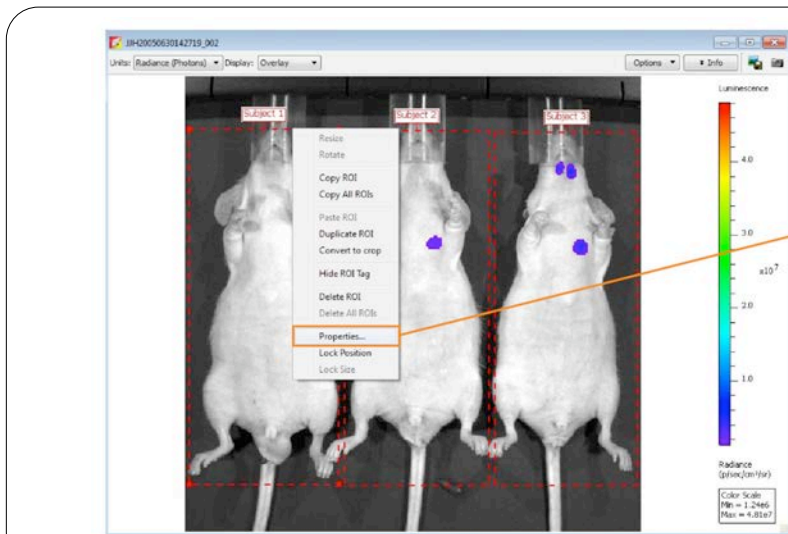
Notice the Type dropdown box under ROI Tools in the Tool Palette. Typically the user will draw Measurement ROIs in order to quantify the data by recording a value for Total Flux.

In cases with multiple mice, it is advantageous to visibly separate these mice in the image - this can be accomplished with a Subject ROI.

Subject ROIs are drawn only as squares. The user will only have one choice for shape.

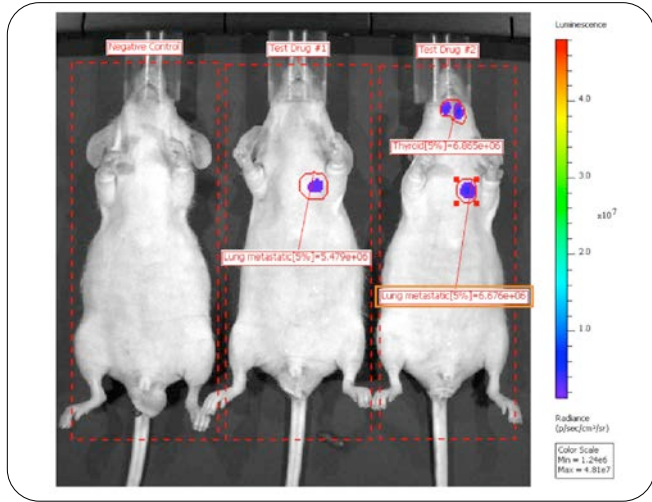


Stretch the Subject ROI to include the entire animal. Double-click the ROI border to open the ROI Properties. Within the ROI Properties, is the option to change the color, size and label of your Subject ROI.

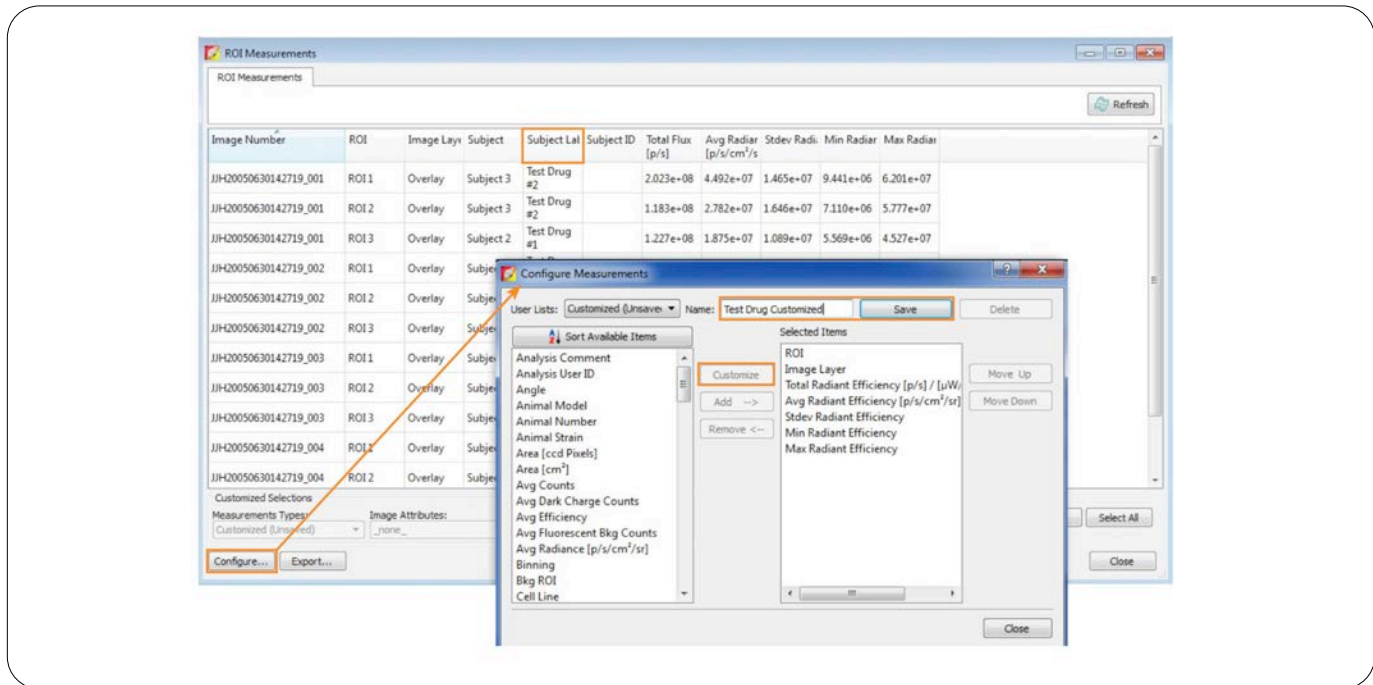


**Note:** This should be the first step as any subsequent Measurement ROI that is drawn inside the Subject ROI will automatically be linked to that Subject ROI. If the Subject ROI is drawn as the last step, it is necessary to manually link all individual Measurement ROIs through the ROI Properties window.

There is an option to further organize your ROIs in the ROI Measurements table by double-clicking the borders of any Measurement ROI and entering an ROI Label.



By selecting Measure ROIs in the ROI Tools section of the Tool Palette, a table will generate that displays the measurement information for all ROIs drawn in the sequence. Subject Labels are shown as a default setting. If however, the user would like to simplify the table, or add to the information shown, for example, the user wants to see the ROI Labels, it is necessary to configure the table. Click the Configure tab on the bottom left-hand corner of the ROI Measurements window and click Customize in the Configure Measurements window to adjust the format to display the data columns desired. Available items for display in the ROI Measurements table are listed on the left hand side of the Configure Measurements window. Not only can the ROI Label be displayed but all the user defined labels are entered in the Edit Image Labels window as well as image acquisition information such as acquisition Date and Time. Save the customized format by typing a name in the "Name" field and choosing "Save".



Sort the data alphabetically or numerically either ascending or descending by clicking the column header. The example to the left has been sorted by Subject Label. Additionally, the data can be reordered by drag-and-dropping the columns left or right into the desired arrangement. By clicking Select All and Copy on the bottom right hand corner of the window, the data can be pasted directly into Microsoft® Excel® or any other spreadsheet analysis program.

The saved Measurements Table can be reloaded at any time while using the User account through the Measurements Type dropdown menu.

