



Viewing Multiple Interactive Plots With **plotly** And **trelliscopejs**

For [uRos2022](#) Conference  

Jeremy Selva    

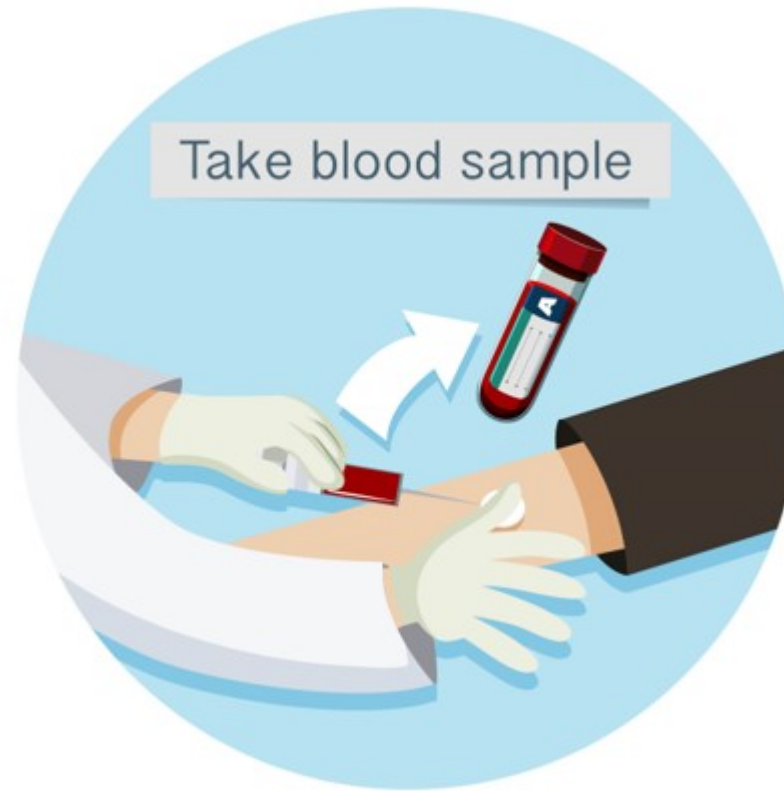
jauntyjjs.github.io/uRos2022   



Introduction to Lipids

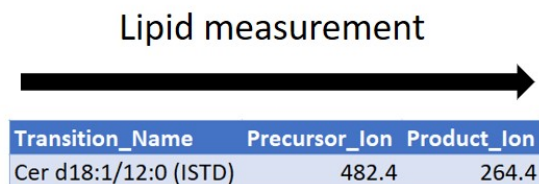
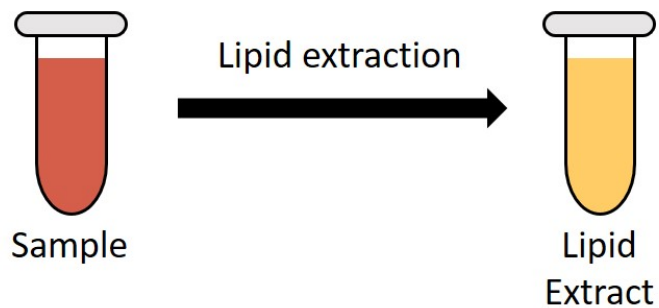
Lipids are organic compounds that are mostly insoluble in polar solvents like water.

The most common ones are cholesterol and triglycerides in blood lipid panel test.



Blood sample image from [brgfx](#)

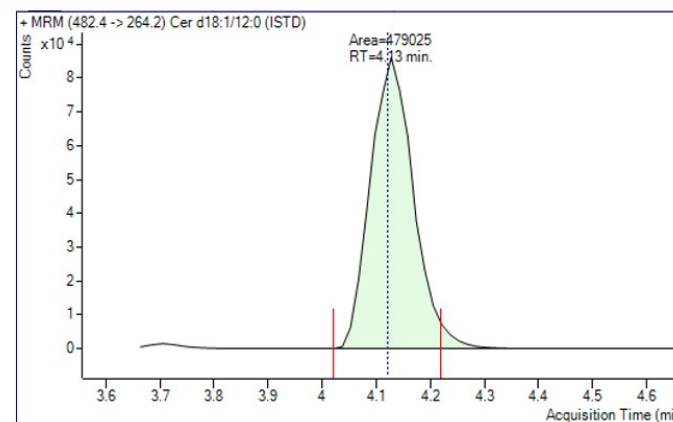
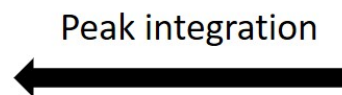
How Lipids are measured (Targeted Lipidomics)



Liquid Chromatography/Mass Spectrometry

Sample_Name	Cer d18:1/12:0 (ISTD)
Sample 01	479025
Sample 02	570275
Sample 03	374854
Sample 04	319491
Sample 05	231691

Peak Area Data

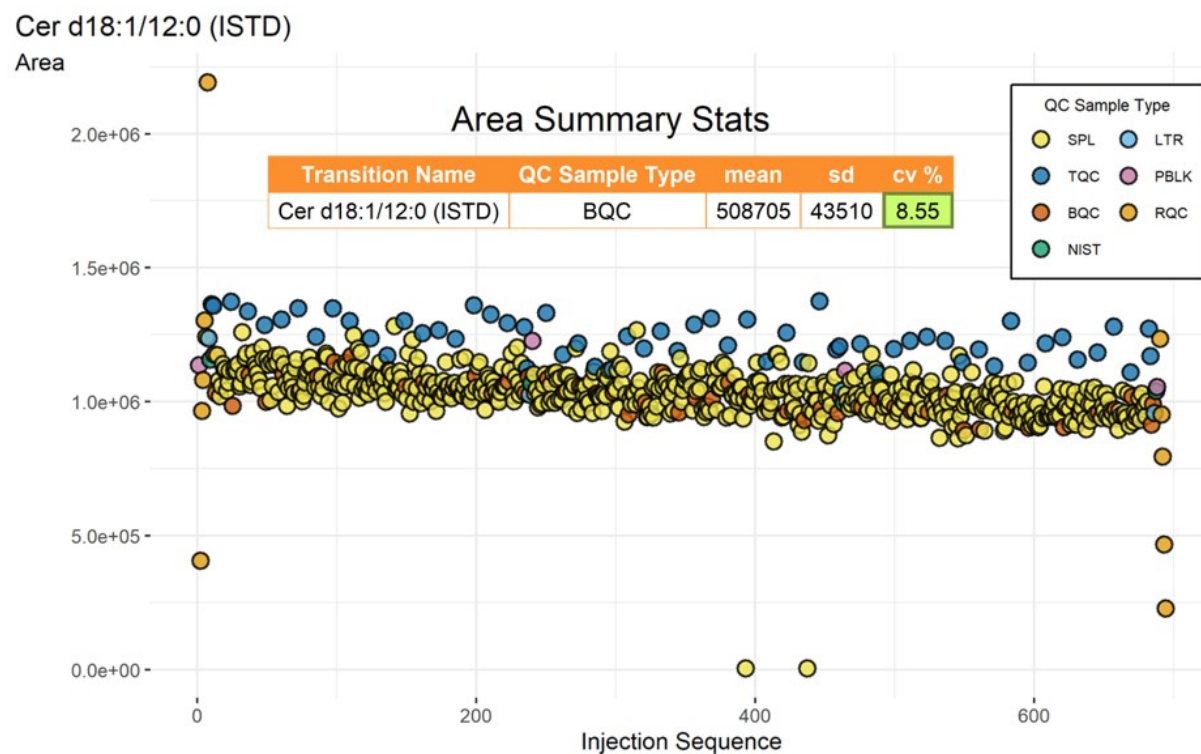


Quality Control (QC) Samples

QC samples helps to check the severity of variation from external sources such as contaminant ions.

We want to keep molecules that gives a low variation on the QC samples.

Plots are exported as pages in a pdf file.

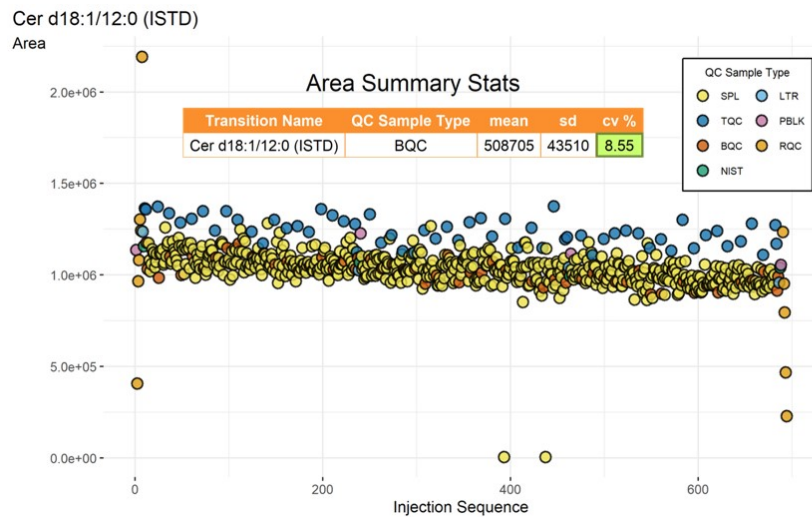


Motivation for using **plotly** and **trelliscopejs**

Today's targeted lipidomics workflow can measure up to a few hundred molecules.

This gives a pdf file of over 500 pages.

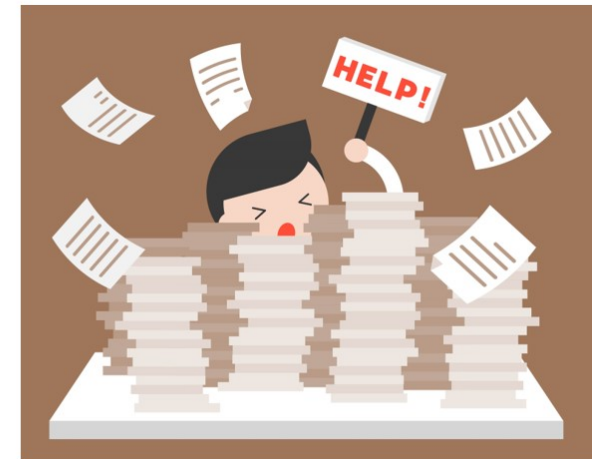
Looking at these static plot individually to gain insights is tedious.



> 500



> 500 Pages

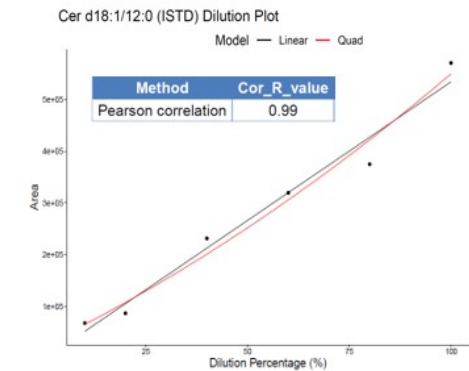
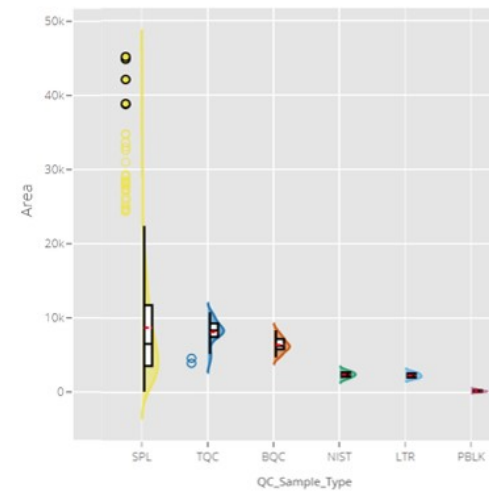
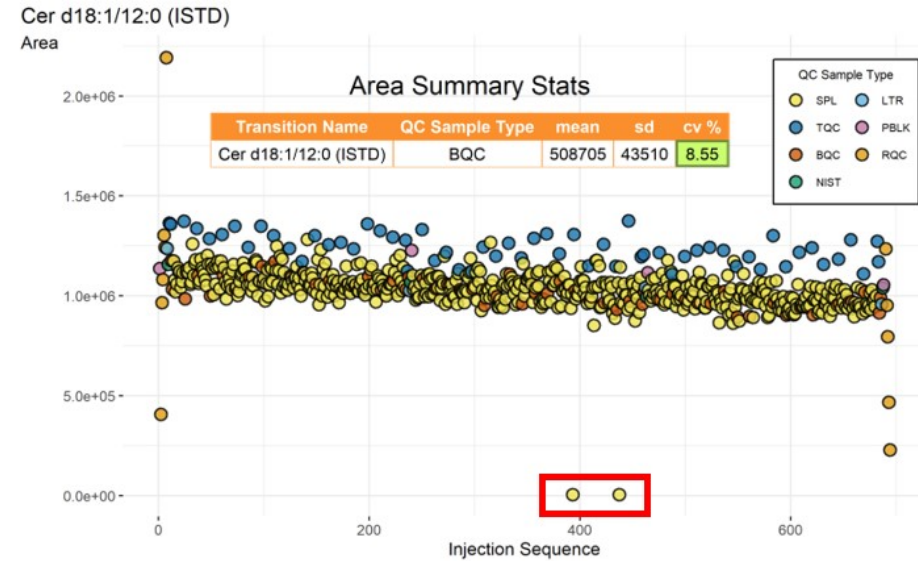


Images by [Amonrat Rungreangfangsai](#)

Motivation for using **plotly** and **trelliscopejs**

Out of > 500 molecules,

- Can I have more info about the outlying samples in the red box ?
- How many Ceramides have BQC CV over 20% ?
- Can you plot the same data as a Raincloud Plot ?



Motivation for using **plotly** and **trelliscopejs**

Shiny was considered but

- Lack expertises to maintain a secure web server to run **Shiny** applications.
- Cannot expect collaborators/managers to install/run R packages and code to rebuild the **Shiny** application just to view the results.

Use **plotly** to make plots interactive.

Use **trelliscopejs** to explore interactive plots in an effective way and results distribution.



Name	Date modified	Type	Size
appfiles	1/8/2022 7:27 PM	File folder	
lib	2/8/2022 5:01 PM	File folder	
index.html	2/8/2022 5:01 PM	Chrome HTML Do...	1 KB



Dilution_Plot_Folder.zip	3/8/2022 5:48 PM	Compressed (zipp...	3,405 KB
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Select a Display to Open

no thumbnail

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Dilution_Plot

750 panels, 2022-08-07 15:45

Injection_Sequence_Plot

750 panels, 2022-08-07 15:48

CLOSE

Guidelines

A walk through example using Quarto is created on the below [GitHub page](#).

JauntyJJS / Trelliscopejs_In_Quarto_Example (Public)

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About

Source code for a Quarto report using Plotly and Trelliscopejs

[jauntyjjs.github.io/Trelliscopejs_In_Quart...](#)

Readme 4 stars 1 watching 0 forks

Releases 3

Version 1.0.2 (Latest) 9 days ago + 2 releases

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- Package References
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Quarto Report Example With Plotly and Trelliscopejs

AUTHOR
Jeremy Selva

</> Code

Show All Code

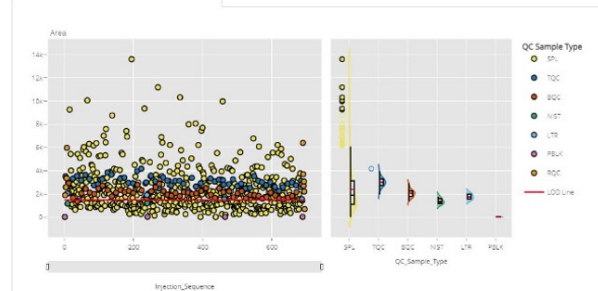
Hide All Code

View Source

Introduction

Here is a report showing how to create injection sequence plot and dilution plot using [plotly](#) for each transition.

Injection Sequence Plot Dilution Plot



Injection Sequence Plot

Walk through page in [@](#) [📄](#)

[jauntyjjs.github.io/uRos2022](#) [@](#) [📄](#) [📄](#)

Examples

Exported examples are found under the [Releases](#) section in the below [GitHub page](#).

JauntyJJS / Trelliscopejs_In_Quarto_Example Public

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Version 1.0.2 Latest 9 days ago + 2 releases

Version 1.0.2 Latest

Assets 7

Asset	Size	Time
data.zip	4.46 MB	9 days ago
Dilution_Plot_Folder.zip	3.33 MB	9 days ago
docs.zip	52.4 MB	9 days ago
Injection_Sequence_Plot_Folder.zip	50.7 MB	9 days ago
Quarto_Example.zip	58.7 MB	9 days ago
Source code (zip)		9 days ago
Source code (tar.gz)		9 days ago

Walk through GitHub page in

References

trelliscopejs Examples

- [Pokemon and TrelliscopeJS](#)
- [The Mountain Goats with trelliscopejs](#)

trelliscopejs Presentation

- [rstudio::conf 2017](#)
 - [Slides](#)
- [useR! 2022](#)
 - See talk at around 54.55
 - [Slides](#)

Thank you and enjoy the conference...



Images by [Amonrat Rungreangfangsai](#)