

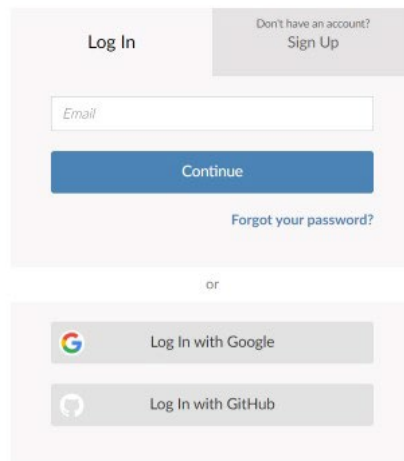
A short introduction to running R on the net (URL: rstudio.cloud).

R is a free software environment for statistical computing and graphics.

This document is a short introduction to executing and training in the drc package (Dose-Response Curve (DRC)) with pre-programmed R code on the internet. The URL: is

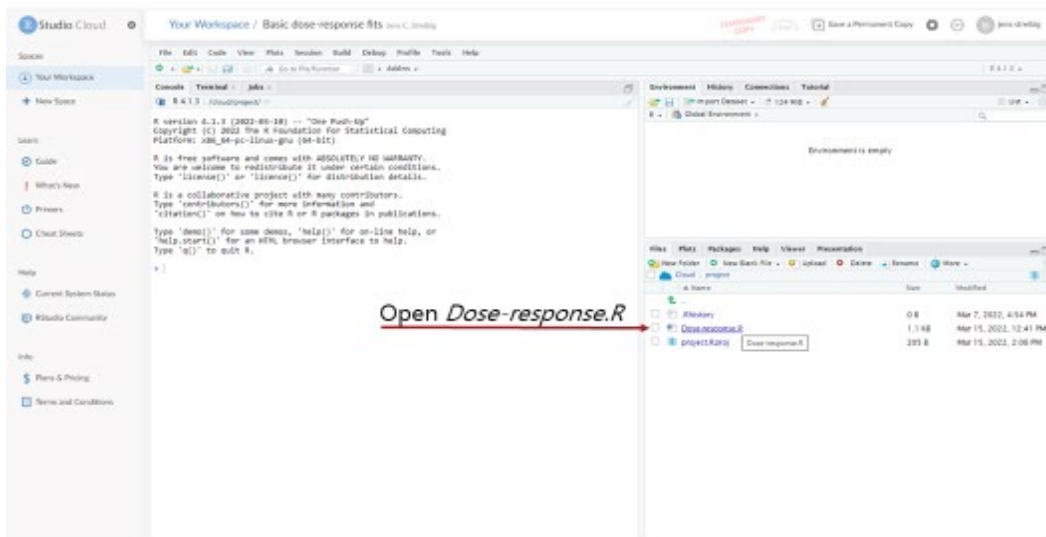
<https://rstudio.cloud/project/3498499>

The following screen may pop up.

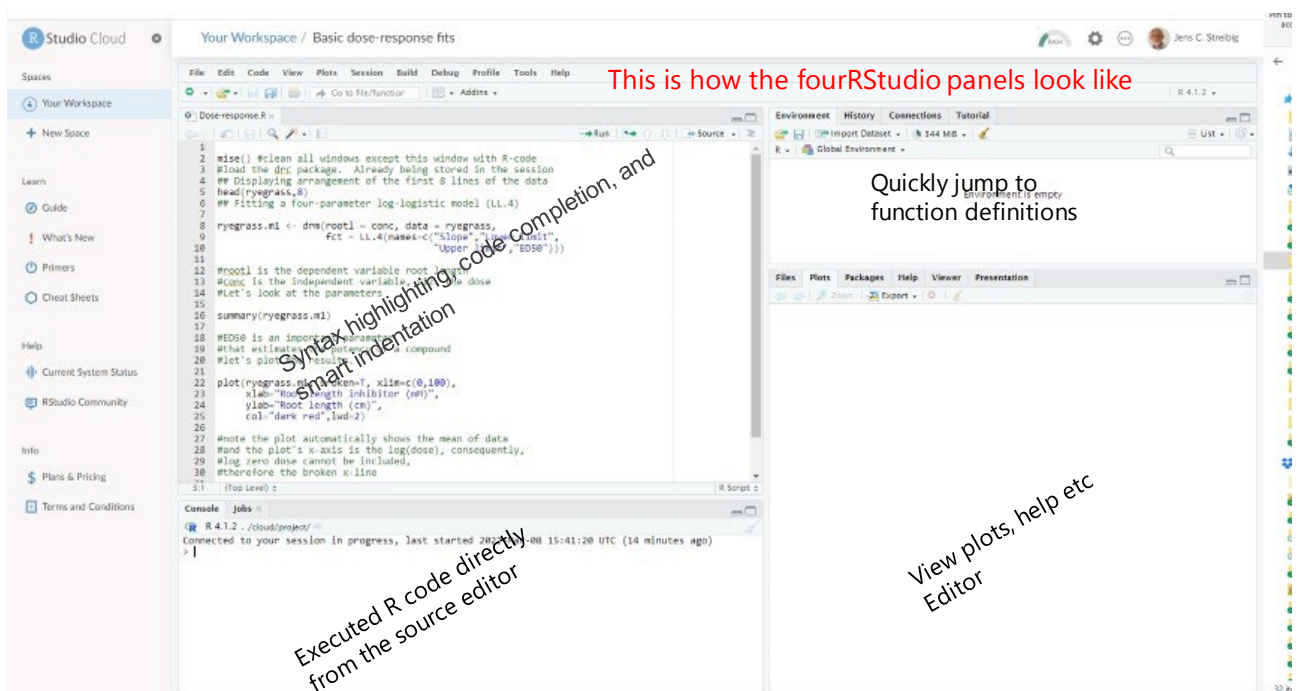


The screenshot shows the RStudio Cloud login and sign-up interface. At the top, there are two buttons: "Log In" and "Sign Up". Below the "Log In" button, there is a text input field labeled "Email". Below the input field is a blue "Continue" button. Below the "Continue" button is a link that says "Forgot your password?". Below the "Sign Up" button, there is a link that says "or". Below the "or" link, there are two buttons: "Log In with Google" and "Log In with GitHub".

You need to log in (it is free) or sign up (free too). You do not need to install any R program on your PC, and everything is readily available on the URL above with the project number.

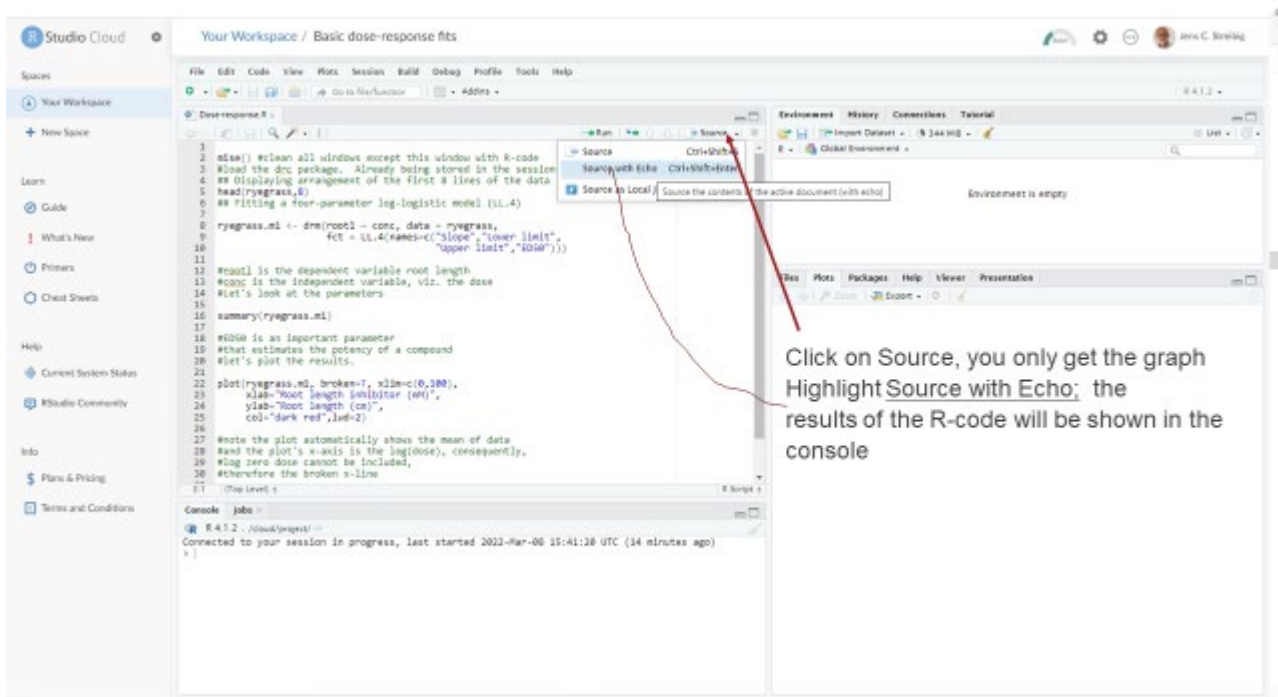


You open *Dose-response.R*, and then the next screen with the code pops up.



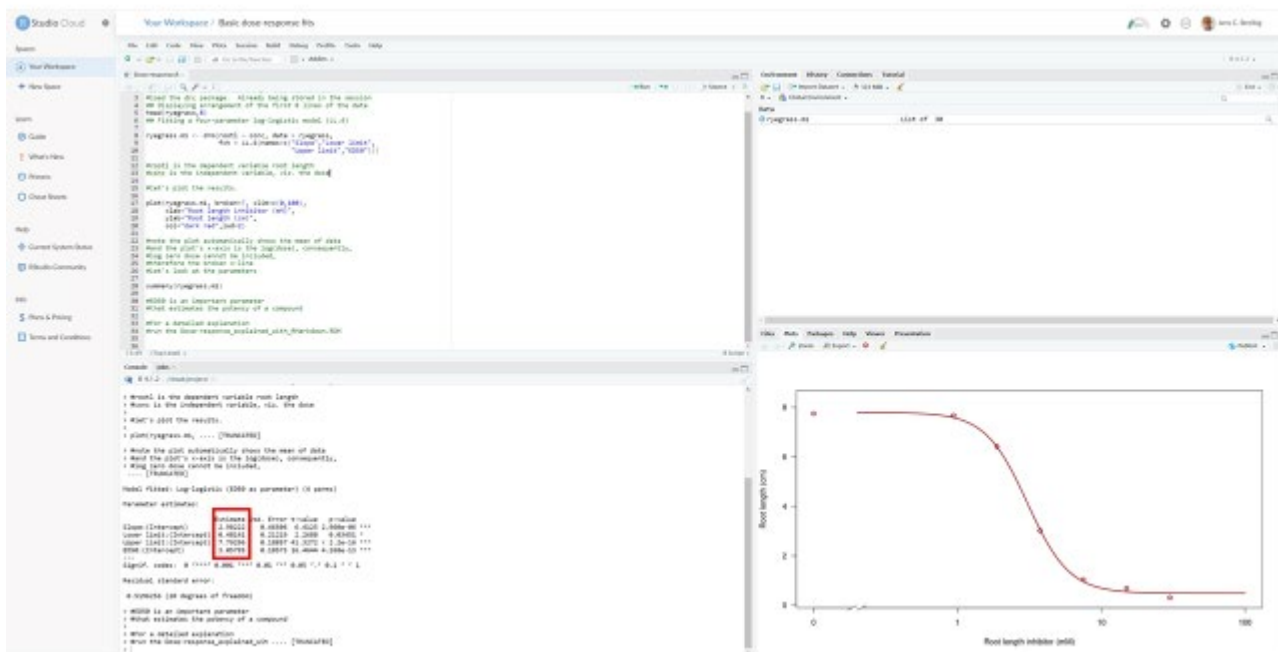
You see the four RStudio panels. The first one contains the R-code for a single dose-response curve with data already in the system. See later how to upload new data.

To execute the R-code, you do as shown below.



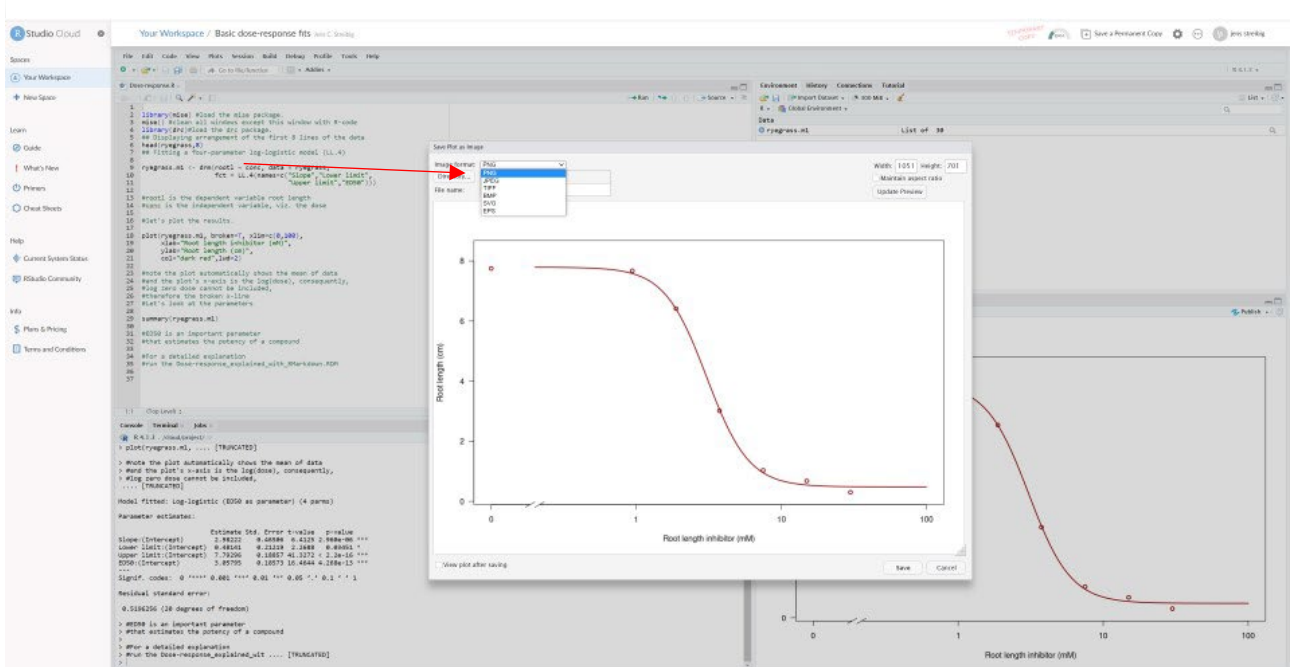
And the results are now in the bottom left and right panels. Below you can see the parameters. ED50 describes the potency of the compound. The graph to the right is the regression fit, and the points are mean responses per dose. To get more information on the regression parameters, consult the URL

<https://rstats4ag.org/dose-response-curves.html#one-dose-response-curve>

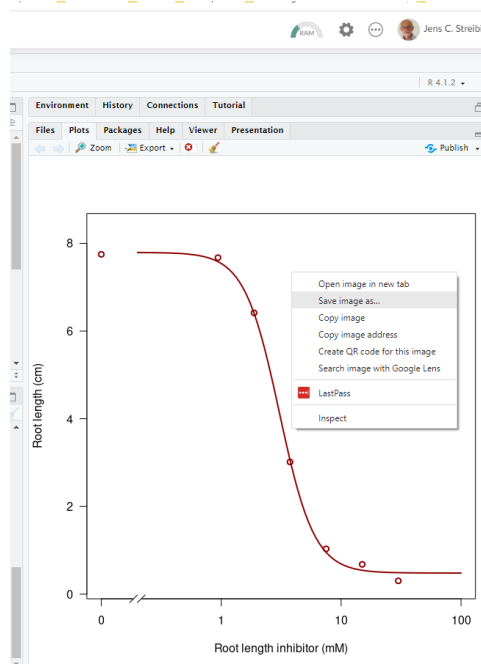


If you want to export the results, you can mark the console text (right bottom panel), copy it, and save it somewhere, e.g., in Word.

The graph can be saved in different formats and names instead of the default “plot1” name.



After choosing the graph format, you probably want to export your graph to your PC. You right-click as seen below. Choose to save and give the graph a proper name.



If you want to know more about fitting dose-response curves, look at the URL
<https://rstats4ag.org/dose-response-curves.html#one-dose-response-curve>

If you find dose response analysis interesting, you can look at the open-source paper
“Dose-Response Analysis Using R.” ‘
<https://rstudio.cloud/project/3498499>

To make it more concrete, look at the supplement to this above paper, “Five illustrative examples of dose-response modeling.” See URL
<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0146021#sec022>

If this demonstration has vetted your interest, you can learn to import data from your experiments.
“How to import data to The Rstudio cloud, see URL.
<https://www.youtube.com/watch?v=FSiDrIOAjgo>

You can get further information by studying the URL

<https://www.youtube.com/watch?v=gCZ7oueZw6Q&list=PL9HYL-VRX0oSn7tBLDiSt4Vnyk3yB6ipA&index=2>

Tuesday, 4/08/2022

Have fun

Jens

In doubt, contact jcs@plen.ku.dk.