Figure update

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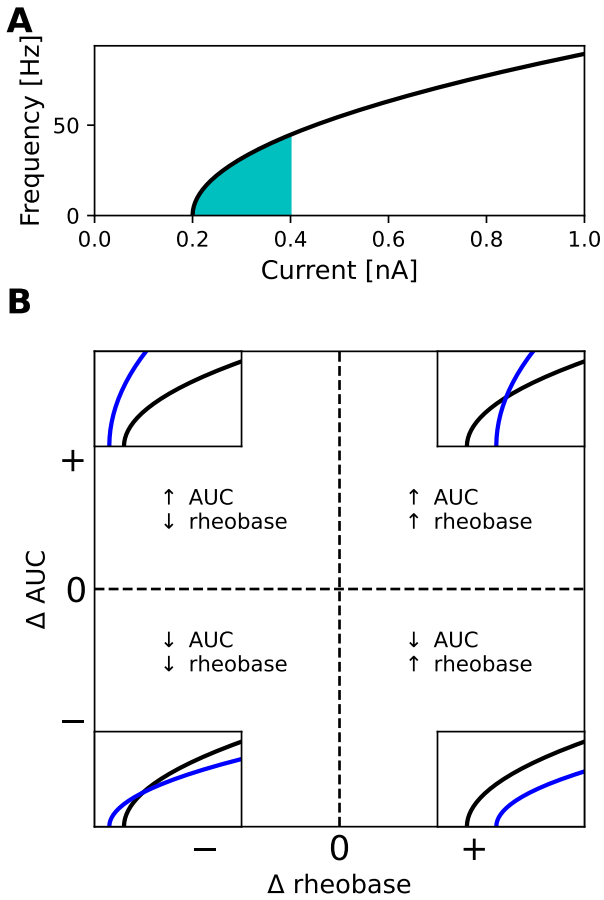
Intro to org to Beamer

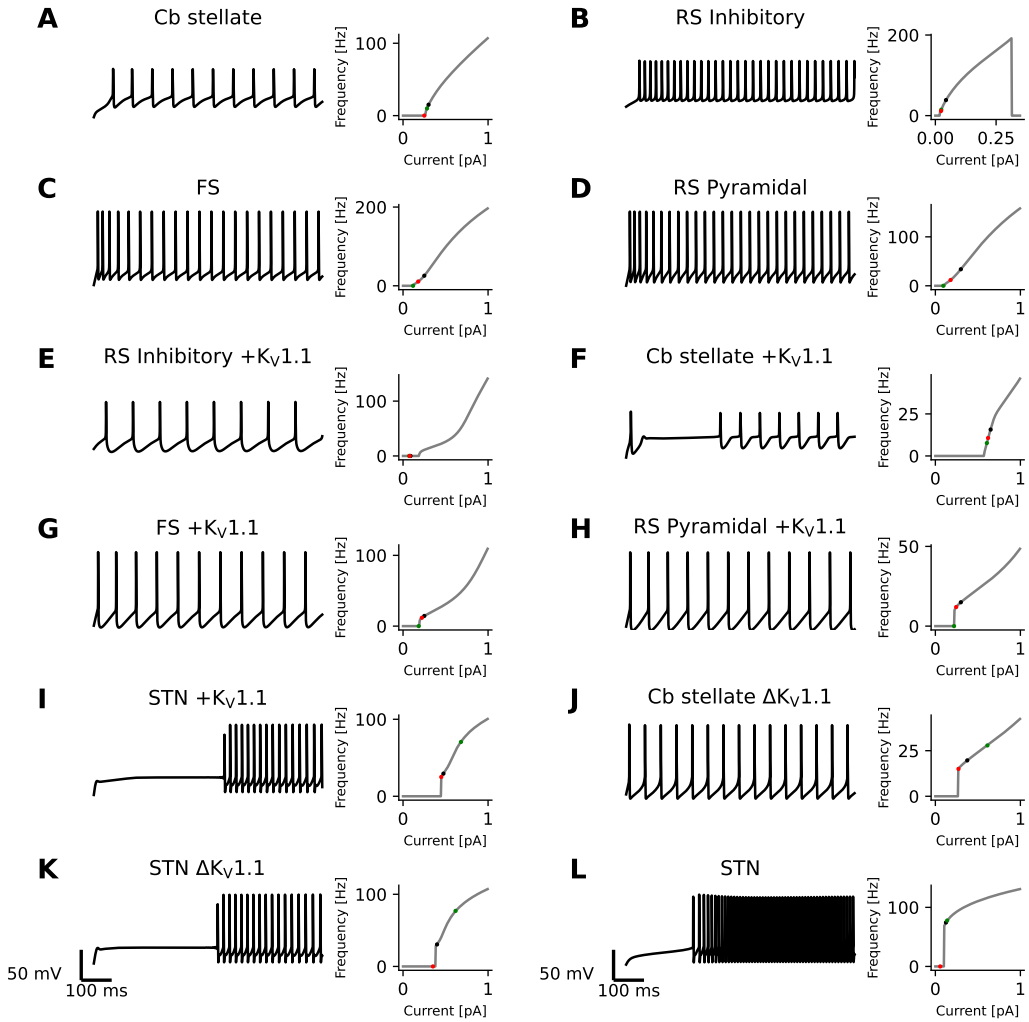
- This is not that visually appealling, but I haven't taken the time to set the colors and style to my liking in the Latex header
- I have tried to include as many examples of things I find useful as possible
  - sometimes this makes the slide not make much sense, but the example of how to do things is hopefully useful
- The only slight pain with using org for both Beamer and normal Latex pdf is:
  - you cannot have the pdf open in some pdf viewers and export to it (eg adobe)
  - I use Sumatra (`https://www.sumatrapdfreader.org/free-pdf-reader`)
    - ★ can have your pdf open in sumatra, export to it and it will update the pdf to the new exported file while open

Firing Characterization

- Firing is a complicated phenomenon
- How to best characterize it?
  - rheobase
  - AUC



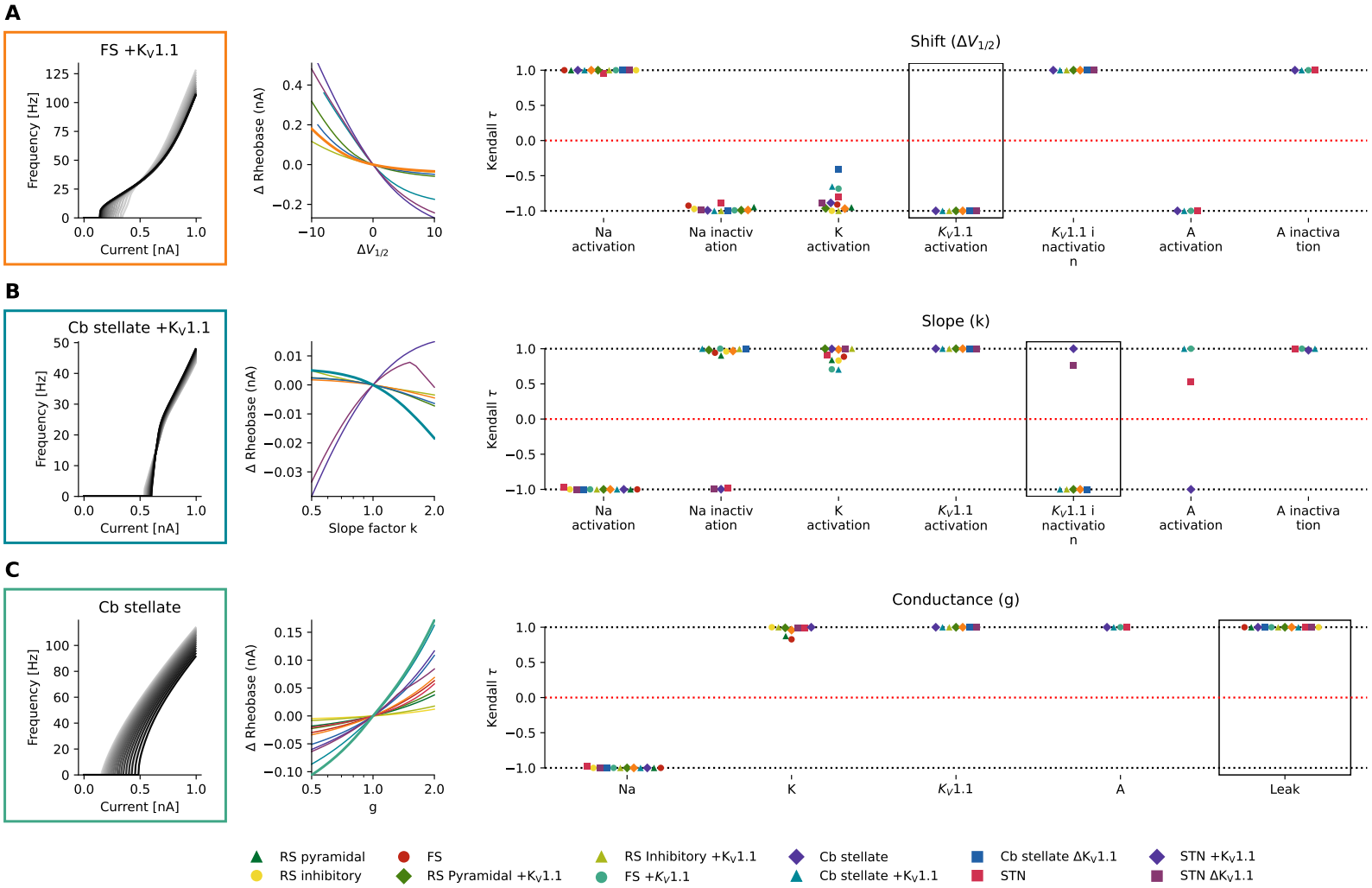
Diversity in Firing Properties of the Models



Sensitivy analysis: OFAT

- one factor at a time sensitivity analysis
- simulate firing responses
  - compute fI curves
    - get rheobase
    - compute AUC

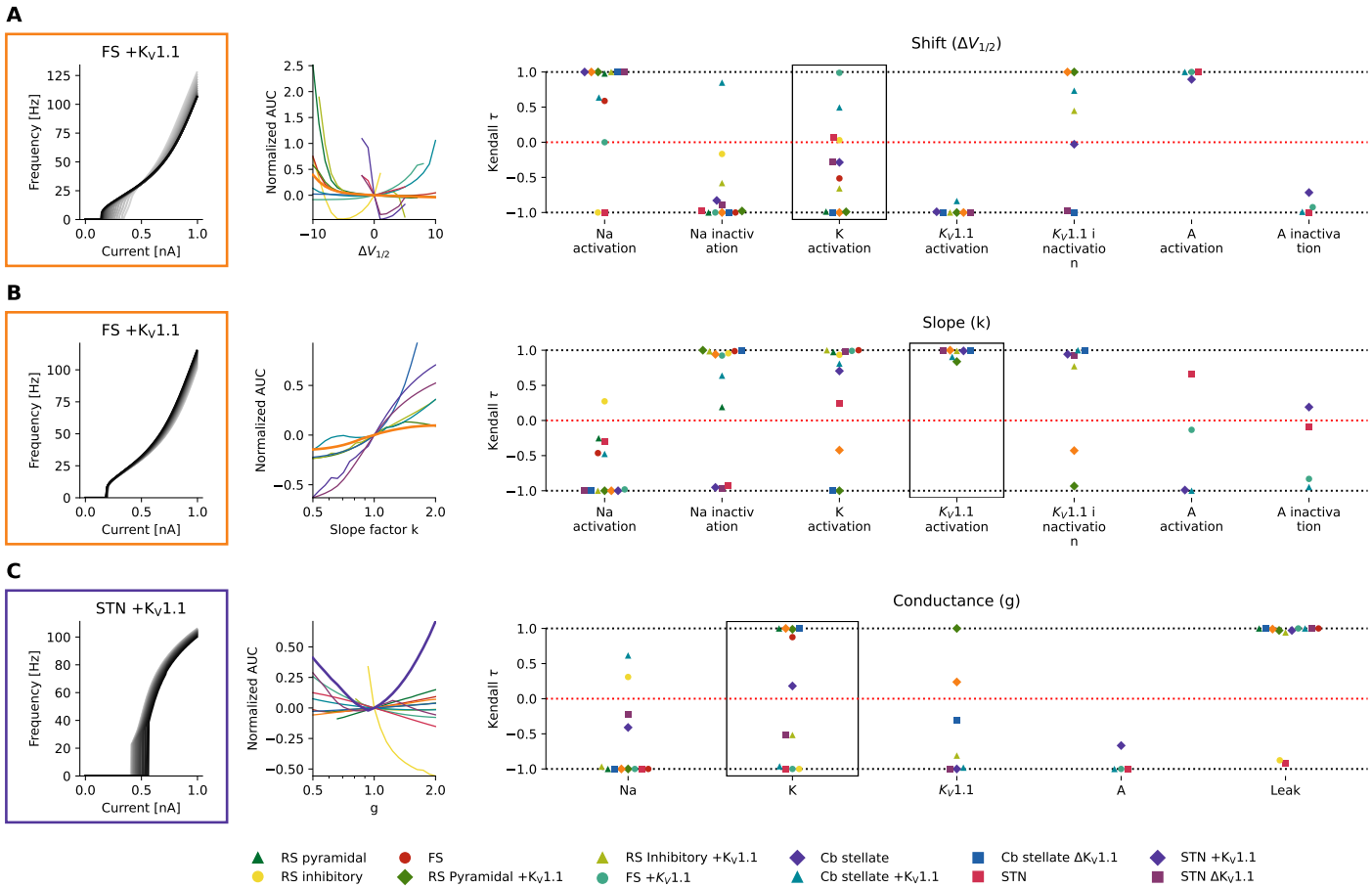
Rheobase sensitivity Analysis



Koch et al. 2022

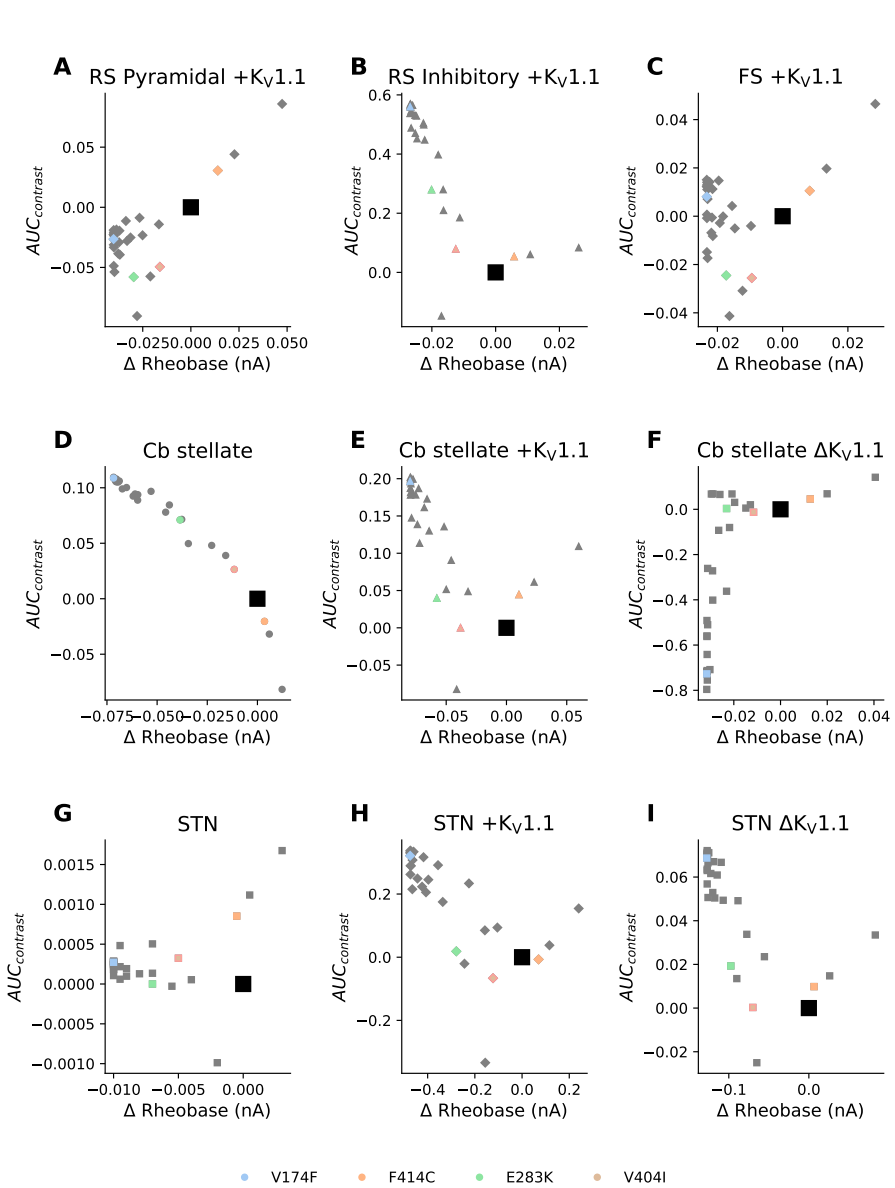
AUC Sensitivity Analysis

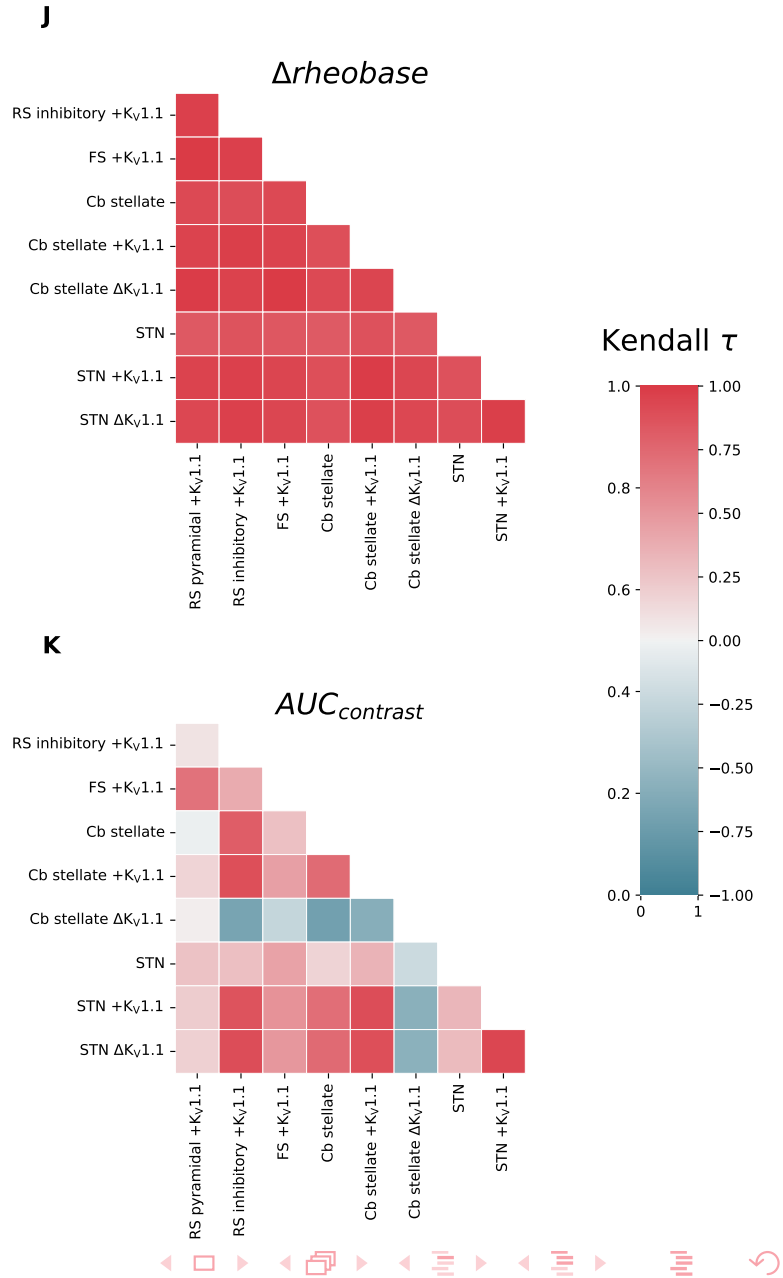
- AUC = area under the curve



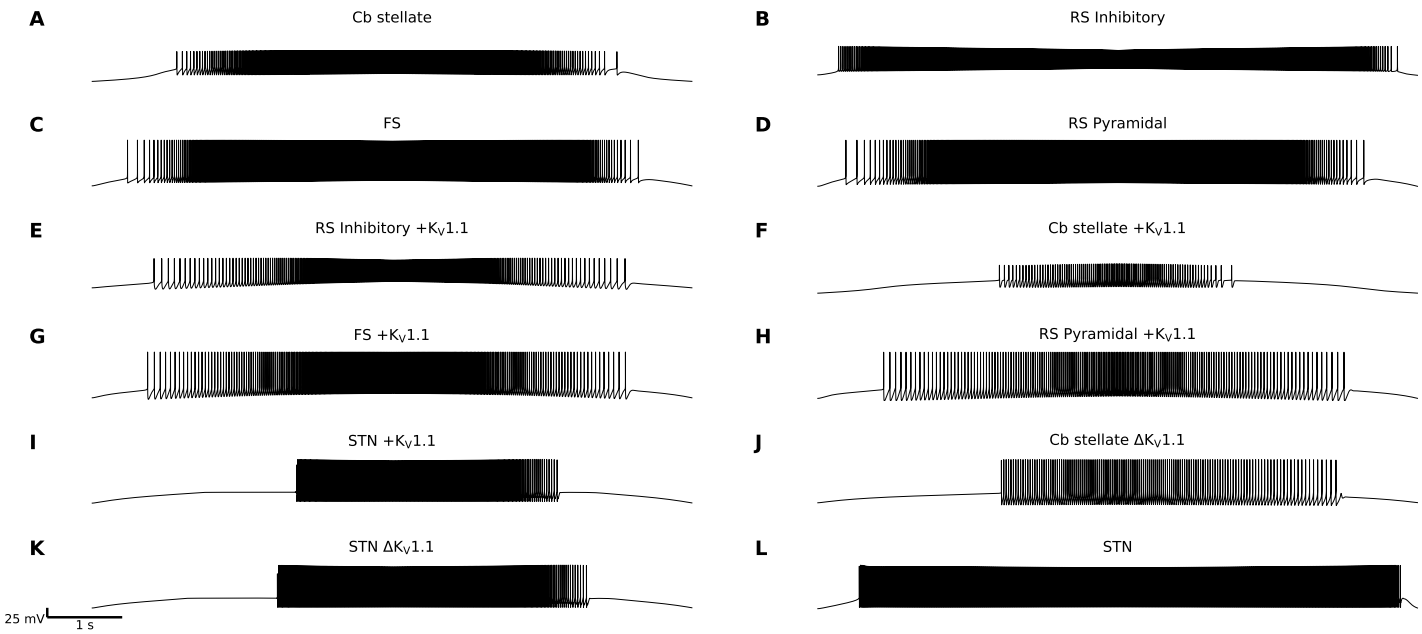
- AUC over the initial non-zero fI curve is a proxy for slope

$K_V1.1$ Mutations





Ramp Firing


A
Cb stellate
B
RS Inhibitory
C
FS
D
RS Pyramidal
E
RS Inhibitory +K_v1.1
F
Cb stellate +K_v1.1
G
FS +K_v1.1
H
RS Pyramidal +K_v1.1
I
STN +K_v1.1
J
Cb stellate ΔK_v1.1
K
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