ABOUT

Welcome to ConnExplore, an intuitive tool to visualize connectivity matrices (CM) in an anatomical space. The left visualization displays the parcellation used to create the CM, and you can navigate it by clicking on one of the brain views or by selecting specific coordinates in the *Parameters* panel. Once a specific region is selected, the right view, which can be explored in the same way, will update and show the connectivity of that region with all the others, according to the values in the CM selected. From the dropdown menus at the top of the views, it is possible to select the parcellation to use and the CM among those available for the parcellation chosen. Currently, only one parcellation and one CM are available.

Parameters interface

By working with the parameters on the left side, it is possible to customize the views independently by selecting which view to modify (Left or Right radio buttons). *Color Range* will allow you to define the scale of the colors in the colorbars, whereas *Threshold* defines the lower and upper bounds for values to appear in the visualization. *Colormap* allows you to choose from a dropdown menu the preferred colormap for each side. *Share* allows you to export the current visualization with a shareable link.

Data

Parcellations

The parcellation currently available is the automated anatomical labelling atlas, version 3.1 (AAL3, Rolls et al. 2020). It is a whole-brain parcellation with 166 anatomically labelled regions, both cortical and subcortical, which can be freely downloaded here.

Connectivity matrices

The matrix currently available is the functional connectivity relevance matrix. This matrix describes the association of all functional connections between regions of AAL3 with alcohol use disorder as described in the systematic review *"Relating functional connectivity and alcohol use disorder: A systematic review and derivation of relevance maps for regions and connections"*. The manuscript and its supplementary materials, which include the matrix itself, are published here in OSF under the license *CC-By Attribution 4.0 International.*

References

Rolls, Edmund T.; Huang, Chu-Chung; Lin, Ching-Po; Feng, Jianfeng; Joliot, Marc (2020): Automated anatomical labelling atlas 3. In: *NeuroImage,* 206, p. 116189. DOI: 10.1016/j.neuroimage.2019.116189.