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**File List**

Perc\_Coverage.csv

Perc\_Coverage\_Avg.csv

Single\_Cell.csv

Sholl\_Data.csv

**File Descriptions**

Perc\_Coverage.csv: File containing all microglia morphology data collected using percent coverage of Iba1 stain on photomicrographs taken from brain hemispheres.

1. Animal\_ID – Unique identifier for individual mice.
2. Treatment – Categorical variable denoting whether each mouse received control diet or Plx5622 (PLX) diet.
3. Coverage – The percentage of the image covered by dark pixels calculated from photomicrographs of Iba1-stained tissue converted to binary.
4. Perc\_Cov – The percent coverage converted to a decimal.

Perc\_Coverage\_Avg.csv: File containing all microglia morphology data collected using percent coverage of Iba1 stain on photomicrographs taken from brain hemispheres.

1. Animal\_ID – Unique identifier for individual mice.
2. Treatment – Categorical variable denoting whether each mouse received control diet or Plx5622 (PLX) diet.
3. Avg\_percent – The percentage of the image covered by dark pixels calculated from photomicrographs of Iba1-stained tissue converted to binary and then averaged from all slides to produce a single value per animal.
4. Perc\_Cov – The averaged percent coverage converted to a decimal.

Single\_Cell.csv: File containing all microglia morphology data collected using single cell skeletal analysis and fractal analysis of Iba1-stained microglia randomly selected and isolated from photomicrographs taken from brain hemispheres.

1. Animal\_ID – Unique identifier for individual mice.
2. Cohort – Categorical variable denoting the experimental cohort each mouse was in.
3. Treatment – Categorical variable denoting whether each mouse received control diet or Plx5622 (PLX) diet.
4. Region – Categorical variable denoting the brain region from which each photomicrograph was taken. Region 1: entorhinal cortex; region 2: primary somatosensory barrel field cortex; region 3: retrosplenial cortex.
5. FractalDimension(DB) – Continuous variable calculated with fractal analysis of a statistical measure of pattern complexity of a microglial cell (Db).
6. Lacunarity – Continuous variable calculated with fractal analysis of a geomatric measure of how the microglial cell/pattern fills space.
7. Density(pixels/area) – Continuous variable calculated with fractal analysis of the number of pixels/area occupied by the microglial cell.
8. SpanRatio – Continuous variable calculated with fractal analysis of the longest length/longest width of the microglial cell.
9. Circularity – Continuous variable calculated with fractal analysis of how circular the microglia cell was.
10. NumberOfEndpoints – Continuous variable of Iba1 microglia end points (n).
11. BranchLength(um) – Continuous variable of IBA1 microglia branch lengths (μm).
12. NumberBranches – Continuous variable of Iba1 microglia branches (n).
13. body\_area – Continuous variable of cell body area of microglia.
14. cell\_area\_C – Continuous variable of cell body area of microglia rounded to the nearest whole number.
15. body\_perimeter – Continuous variable of cell body perimeter of microglia (μm).
16. cell\_perim\_C – Continuous variable of cell body perimeter of microglia rounded to the nearest whole number (μm2).

Sholl\_Data.csv: File containing all microglia morphology data collected using Sholl analysis of Iba1-stained microglia randomly selected and isolated from photomicrographs taken from brain hemispheres.

1. Animal\_ID – Unique identifier for individual mice.
2. Cohort – Categorical variable denoting the experimental cohort each mouse was in.
3. Treatment – Categorical variable denoting whether each mouse received control diet or Plx5622 (PLX) diet.
4. Distance(um) – Continuous variable of the Sholl circle distance from the microglial cell soma (μm).
5. avg\_intersection\_n – Continuous variable of the average number of times a microglial branch intersected a Sholl circle.
6. intern\_C – Continuous variable of the average number of times a microglial branch intersected a Sholl circle rounded to the nearest whole number.