Figure 1

A. Cerebello-cerebral loops

B. Cerebellar microcircuitry

C. Experimental design

- **Acute Adult Inactivation**
  - PUP (P0-P21)
  - JUVENILE (P21-P56)
  - ADULT (>P56)
  - DREADDs injected at P56
  - Behavioral tests

- **Developmental Inactivation**
  - PUP (P0-P21)
  - JUVENILE (P21-P56)
  - ADULT (>P56)
  - DREADDs injected at P21
  - Behavioral tests

D. Expression in MLIs

E. Extracellular PC signals

F. Eyeblink conditioning

G. Eyeblink training acute

H. Re-training without CNO
Figure 2

A. Water Y-maze reversal learning

B. Y-maze learning in acute group

C. Sociability test

D. Social chamber analysis

E. Social preference (near cup)

F. Elevated plus maze assay

G. Entrance analysis

H. Open arm preference

I. Exploration time
Figure 3

A Correlations between metrics in untreated mice

B Example correlations untreated mice

C Principal components of individual behaviors in untreated mice

Y-maze reversal behavioral space

Social chamber behavioral space
A Correlations between metrics in experimental mice

B Social chamber

C Y-maze reversal

Eigenmodes of lobule VII captured by PC3
Figure 5

A) lobule VI, lobule VII, crus I, crus II

B) Acute Developmental

Mouse ID

Mouse ID

C) Fraction of crus I labelled

Fraction of crus I labelled

Fraction of lobule VI labelled

Fraction of lobule VI labelled

Linear model weights

Linear model weights

D) Linear model weights
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<tr>
<th>#</th>
<th>Measure</th>
<th>Description</th>
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<td>Full entrances to the open arms (Entr&lt;sub&gt;open&lt;/sub&gt;) relative to sum of full entrances and jittery entrances to the open arms (Entr&lt;sub&gt;open&lt;/sub&gt;)</td>
<td>(\frac{\text{Entr}<em>{\text{open}}}{\text{Entr}</em>{\text{open}} + \text{Entr}_{\text{jitter}}})</td>
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<td>Entrances into the crossroads central area</td>
<td>(\text{Entr}_{\text{central}})</td>
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<td>4</td>
<td>Exploration Time</td>
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<td>(\frac{\text{Time}<em>{\text{open}}}{\text{Time}</em>{\text{closed}} + \text{Time}_{\text{open}}})</td>
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<td>(\frac{\text{AVG}<em>{\text{NoCNO}} - \text{AVG}</em>{\text{CNO}}}{\text{AVG}_{\text{NoCNO}}})</td>
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<td>(\frac{(\text{Entr}<em>{\text{Mbs}} + \text{Entr}</em>{\text{Obs}}) - (\text{Entr}<em>{\text{test}} + \text{Entr}</em>{\text{test}})}{(\text{Entr}<em>{\text{Mbs}} + \text{Entr}</em>{\text{Obs}})})</td>
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<td>(\frac{\text{Time}<em>{\text{NearM}}}{\text{Time}</em>{\text{NearM}} + \text{Time}_{\text{Near0}}})</td>
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<td>(\frac{\text{ACQ}<em>{\text{S3}} + \text{ACQ}</em>{\text{S4}}}{2})</td>
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<td>linear regression slope of (ACQ&lt;sub&gt;S1&lt;/sub&gt;; ACQ&lt;sub&gt;S2&lt;/sub&gt;; ACQ&lt;sub&gt;S3&lt;/sub&gt;)</td>
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<td>(\frac{\text{RD}<em>{\text{S1}} + \text{RD}</em>{\text{S4}}}{2})</td>
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<td>linear regression slope of (RD&lt;sub&gt;S1&lt;/sub&gt;; RD&lt;sub&gt;S2&lt;/sub&gt;; RD&lt;sub&gt;S3&lt;/sub&gt;)</td>
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<td>(\frac{\text{RD}<em>{\text{S1}} + \text{RD}</em>{\text{S2}} + \text{RD}<em>{\text{S3}} + \text{RD}</em>{\text{S4}}}{4})</td>
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<td>Initial Reversal 2</td>
<td>Percent correct trials in reversal day 2 session 1</td>
<td>RD&lt;sub&gt;S1&lt;/sub&gt;</td>
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