nature

SUPPLEMENTARY INFORMATION

https://doi.org/10.1038/s41586-019-1053-2

In the format provided by the authors and unedited.

# Chemosensory modulation of neural circuits for sodium appetite

Sangjun Lee[1], Vineet Augustine[1], Yuan Zhao[1], Haruka Ebisu[1], Brittany Ho[1], Dong Kong[2] & Yuki Oka[1]*

[1]Division of Biology and Biological Engineering, California Institute of Technology, Pasadena, CA, USA. [2]Department of Neuroscience, Tufts University School of Medicine, Boston, MA, USA.
*e-mail: yoka@caltech.edu

**Supplementary Information - Table 1: Statistics**

| Figure Number | Sample size (n = mice otherwise stated) | Test | P value |
|---|---|---|---|
| 1a; Control vs - Sodium | 5,5 | Kruskal-Wallis test (Dunn's multiple comparisons test) | 0.0015 |
| 1e; Empty vs NaCl | 4,10 | Kruskal-Wallis test (Dunn's multiple comparisons test) | 0.0204 |
| 1e; Water vs NaCl | 10,10 | Kruskal-Wallis test (Dunn's multiple comparisons test) | 0.0002 |
| 1f Total bout duration (s); - Sodium vs - Light | 4,8 | Kruskal-Wallis test (Dunn's multiple comparisons test) | 0.0038 |
| 1f Total bout duration (s); - Light vs + Light | 8,8 | Kruskal-Wallis test (Dunn's multiple comparisons test) | 0.0031 |
| 1f # of bout; - Sodium vs - Light | 4,8 | Kruskal-Wallis test (Dunn's multiple comparisons test) | 0.0018 |
| 1f # of bout; - Light vs + Light | 8,8 | Kruskal-Wallis test (Dunn's multiple comparisons test) | 0.0046 |
| 1g; Non-stim vs co-stim | 8,8 | Friedman test (Dunn's multiple comparisons test) | 0.0009 |
| 1h; - Light vs + Light | 7,7 | two-tailed Wilcoxon test | 0.0156 |
| 2a, Session 1; eYFP vs ChR2 | 8,10 | two-way repeated measure ANOVA (Sidak's multiple comparisons test) | 0.0016 |
| 2a, Session 2; eYFP vs ChR2 | 8,10 | two-way repeated measure ANOVA (Sidak's multiple comparisons test) | 0.0117 |
| 2a, Session 3; eYFP vs ChR2 | 8,10 | two-way repeated measure ANOVA (Sidak's multiple comparisons test) | <0.0001 |
| 2b, ChR2; +light vs -light | 6,6 | two-tailed Wilcoxon test | 0.0313 |
| 3c left; water vs 0.06M NaCl | 8,7 | Kruskal-Wallis test (Dunn's multiple comparisons test) | 0.0041 |
| 3c left; water vs 0.15M NaCl | 8,7 | Kruskal-Wallis test (Dunn's multiple comparisons test) | 0.0088 |
| 3c left; water vs 0.5 M NaCl | 8,7 | Kruskal-Wallis test (Dunn's multiple comparisons test) | 0.0016 |
| 3d; KCl vs NaCl | 9,9 | two-tailed Wilcoxon test | 0.0039 |
| 3e; + Ami vs - Ami | 9,9 | two-tailed Wilcoxon test | 0.0039 |
| 4b left; Control vs NaCl Oral | 7,7 | Friedman test (Dunn's multiple comparisons test) | 0.0323 |
| 4b middle; Control vs Water IG | 8,8 | Kruskal-Wallis test (Dunn's multiple comparisons test) | 0.0221 |
| 4b middle; Control vs Water oral | 8,6 | Kruskal-Wallis test (Dunn's multiple comparisons test) | 0.0003 |
| 4b right; Control vs Glucose IG | 8,8 | two-tailed Wilcoxon test | 0.0078 |
| 4e left; NaCl IG vs NaCl Oral | 7,7 | Friedman test (Dunn's multiple comparisons test) | 0.0113 |
| 4e left; Water IG vs NaCl Oral | 7,7 | Friedman test (Dunn's multiple comparisons test) | 0.0214 |
| 4e left; Air IG vs NaCl Oral | 7,7 | Friedman test (Dunn's multiple comparisons test) | 0.0057 |
| 5b left; + Casp3 vs - Casp3 | 18, 8 | two-tailed Mann-Whitney test | <0.0001 |
| 5b right; + Casp3 vs - Casp3 | 18, 8 | two-tailed Mann-Whitney test | <0.0001 |
| 5f; + Ami vs - Ami | 7,7 | two-tailed Wilcoxon test | 0.0469 |

| | | | |
|---|---|---|---|
| Extended Data 1b -Water; Water vs 0.5M NaCl | 9,9 | two-tailed Wilcoxon test | 0.0039 |
| Extended Data 1b -Sodium; Water vs 0.5M NaCl | 9,9 | two-tailed Wilcoxon test | 0.0039 |
| Extended Data 2a left, 0.06 M NaCl; eYFP vs ChR2 | 5,4 | two-tailed Mann-Whitney test | 0.0159 |
| Extended Data 2a right, 0.15 M NaCl; eYFP vs ChR2 | 5,4 | two-tailed Mann-Whitney test | 0.0159 |
| Extended Data 2c left, KCl; NaCl vs KCl | 9,9 | Friedman test (Dunn's multiple comparisons test) | 0.0044 |
| Extended Data 2c left, KCl; KCl vs NaCl | 9,9 | Friedman test (Dunn's multiple comparisons test) | 0.0019 |
| Extended Data 2c right, Ami; - Ami vs + Ami | 8,8 | Friedman test (Dunn's multiple comparisons test) | 0.0009 |
| Extended Data 2c right, Ami; - Ami vs + Ami | 8,8 | Friedman test (Dunn's multiple comparisons test) | 0.0248 |
| Extended Data 3g left, - Sodium; Vehicle vs CNO | 9,9 | two-tailed Wilcoxon test | 0.0078 |
| Extended Data 4c; - Light vs + Light of Session 4 | 6,6 | two-tailed Wilcoxon test | 0.0313 |
| Extended Data 5d right, NaCl; eYFP vs GCaMP6s | 7,7 | two-tailed Mann-Whitney test | 0.007 |
| Extended Data 5d right, Empty; eYFP vs GCaMP6s | 4,4 | two-tailed Mann-Whitney test | 0.0286 |
| Extended Data 5e left, KCl; KCl vs NaCl | 9,9 | two-tailed Wilcoxon test | 0.0039 |
| Extended Data 5e left, Ami; + Ami vs - Ami | 9,9 | two-tailed Wilcoxon test | 0.0273 |
| Extended Data 6b; - Light vs + Light | 6,6 | two-tailed Mann-Whitney test | 0.0065 |