

## Supplementary Information

### **An *in vivo* bioelectronic nose for possible quantitative evaluation of odor masking using M/T cell spatial response patterns**

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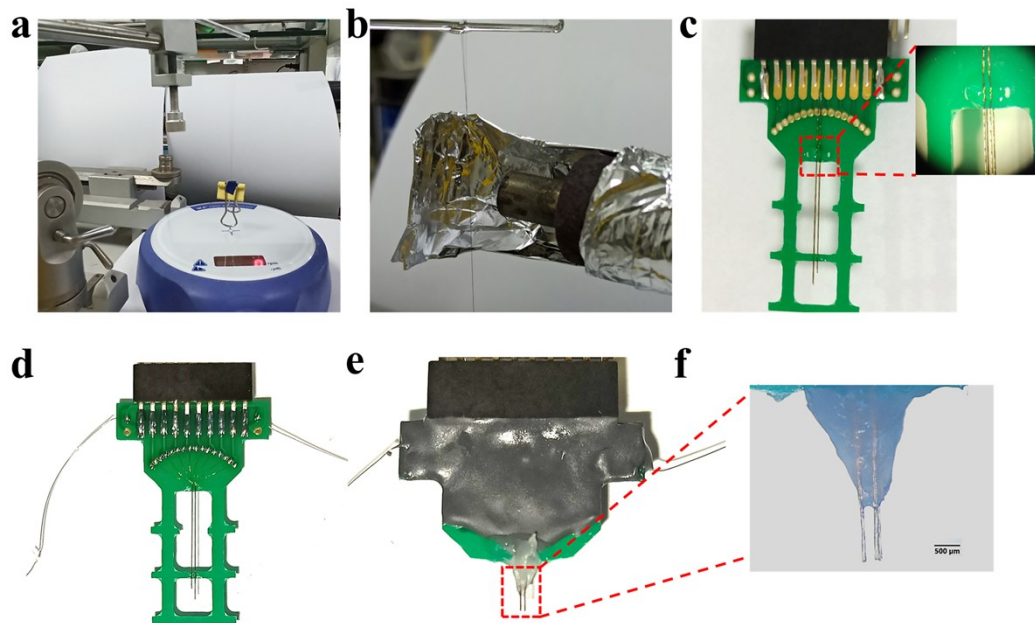
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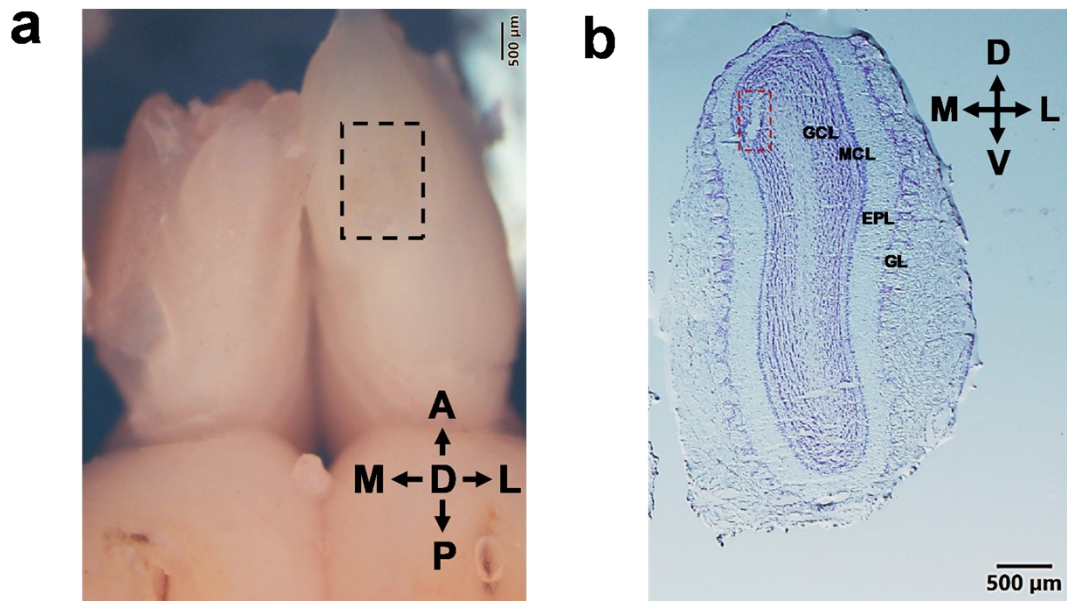
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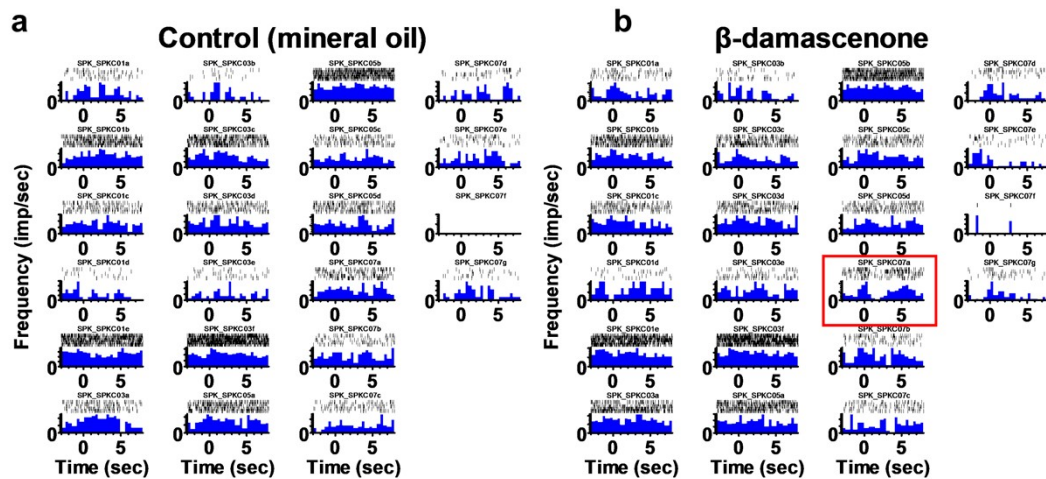
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**Figure. S1 Tetrode manufacture.** (a) Two nichrome wires were rotated above the magnetic stirrer to form a tetrode. (b) The heat gun partly melted the insulating layer of the microwires together. (c) Four tetrodes were arranged on the PCB, and the subgraph showed the detail of the arrangement. (d) Four tetrodes and two stainless steel wires as ground wires were connected to the PCB board. (e) J-B Weld gel was used to protect the microwires. (f) PEG-4000 wrapped part of tetrodes to reduce implant deformation.



**Figure. S2 Implanted sites confirmation.** (a) The area of implantation (bar = 500  $\mu$ m). The black dotted rectangle indicated the area of the cranial window. (b) Nissl staining chart of the OB slice showing the site of the electrode in the red dotted rectangle (bar = 500  $\mu$ m). A:anterior, D: dorsal, P: posterior, M: medial, L: lateral, V: ventral. GL: glomeruli layer, EPL: external plexiform layer, MCL: mitral cell layer, GCL: granular cell layer.



**Figure. S3** Response property of M/T cells to mineral oil and  $\beta$  -damascenone. PSTH of M/T cells response to mineral oil (a) and  $\beta$ -damascenone (b). The red rectangle indicated the inhibit response.