



**Supplementary Fig. 4.** Comparison of air temperature distributions in five representative coronal planes. The bilateral relative air temperature is shown on five representative planes from the anterior part to the posterior part. The behaviors of the air temperature fields were similar to those of the relative humidity fields. In the MMA, MMA+IMA, and MEGA models, the average temperature was maintained over 33°C in the right MS (i.e., 33.3°C, 33.1°C, and 33.0°C, respectively). However, in the EMM model, the average temperature of the right MS dropped to 31.6°C. MMA, middle meatal antrostomy; IMA, inferior meatal antrostomy; MEGA, mega-antrostomy; MS, maxillary sinus; EMM, endoscopic medial maxillectomy.