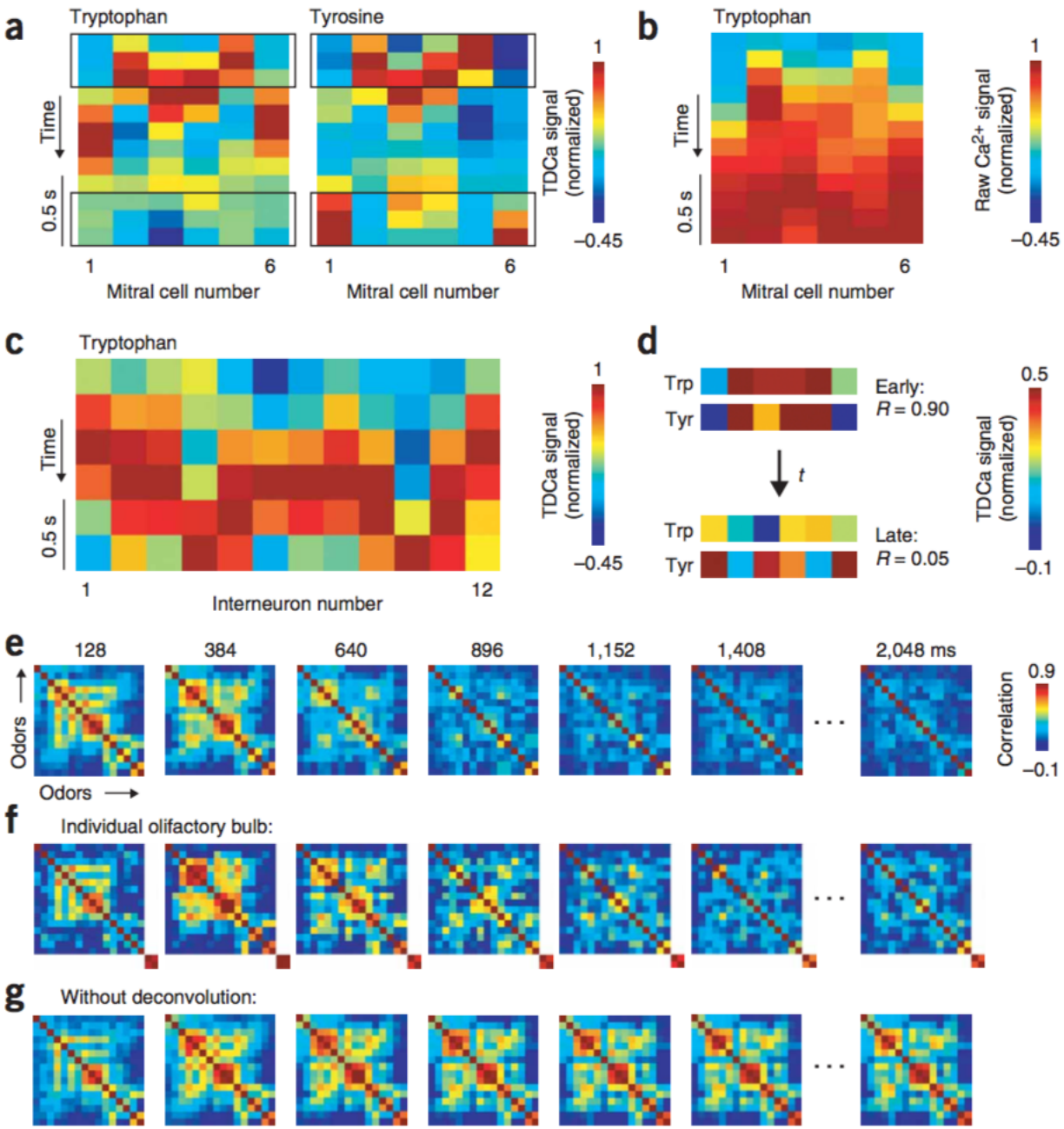


**Figure 5** | Analysis of odor-evoked activity patterns in the zebrafish olfactory bulb. (**a**) TDCa signal as a function of time, evoked by two chemically similar amino acids in six mitral cells. Signals were normalized to the maximum signal in each column. (**b**) Raw $Ca^{2+}$ signal evoked by tryptophan as a function of time. Each column normalized to the maximum. (**c**) TDCa signal evoked by tryptophan across 12 interneurons in another olfactory bulb. (**d**) Comparison of activity patterns evoked by tyrosine and tryptophan across the 6 mitral cells in **a**, averaged during the first and last three time bins (boxes in **a**). (**e**) Color-coded correlation matrices depicting the pairwise similarities between TDCa signal patterns evoked by different odors across mitral cells in successive 256-ms time windows. Clusters of high correlation coefficients indicate that groups of related odors evoked similar activity patterns. Data from 1,313 mitral cells in 9 olfactory bulbs. Order of stimuli on both axes is Glu, Asp, Gly, Ala, Ser, His, Asn, Phe, Tyr, Trp, Leu, Met, Val, Ile, Arg and Lys. (**f**) Correlation between TDCa signal patterns across 161 mitral cells in a single olfactory bulb, evoked by the same stimuli as in **e**. In addition, pixels in the lower right show correlation between patterns evoked by two repeated applications of the same stimulus (amino acid mixture). (**g**) Correlations between patterns of $Ca^{2+}$ signals without deconvolution. Same data set as in **e**.