



Supplementary Fig. 2. Beta diversity of VJ combinations in IGL (A), IGH (B), TCRA (C), and TCR (D). Lower level of similarity is observed between chronic obstructive pulmonary disease (COPD) samples compared with normal (NOR) samples. NOR samples are more similar to each other than to COPD samples. p -values were calculated after 1,000 permutations.