Content-based comments:

1. Extended Figure 3 and associated discussion: the “regional pattern” portion of the (highlighted) discussion on Pg. 5 of the main manuscript is unclear to me. “These three analyses showed no or only slight variations, depending on the cell type, in the ratios of major cell types across the homologous regions that do not clearly explain, either in the magnitude or regional pattern, the global species transcriptome differences we observed, indicating that the widespread difference in gene expression between human, chimpanzee, and macaque are not likely due to changes in the proportion of neuronal vs non-neuronal cells.” There is no clear quantification of the data in Extended Figures 3e and 3f, yet these data are used to make the claim that the regional pattern is unable to explain away the interspecies differences. It would help to clarify this statement in a more quantitative manner. Also, the discussion for the global pattern was relegated to the caption to the figure. It might help to move that to the main text.
2. Also related to Extended Figure 3 and the discussion on Pg. 5 of the main manuscript: “There were no obvious differences in within-species variation across all the analyzed brain regions, suggesting that the regional pattern of differences in inter-species DEX genes are not likely to be caused by technical bias.” Given the non-uniform pattern of within-species variation across all analyzed brain regions, it is unclear as to how the unique within-species regional patterns could explain away technical bias. It would help to quantify/clarify this.
3. Pg. 6 of main manuscript: “…while only 3 genes were significantly DEX (H > C = M or H < C = M) exclusively in all eleven NCX areas.” Is “significantly DEX” defined somewhere in the “Methods”? Or does this sentence itself define “significantly DEX”?
4. Pg. 6 of main manuscript: “…which exhibited a non-statistical trend (Fig. 1c and Extended Fig. 4f)” Clarify what “non-statistical” means
5. TH+ discussion straddling pages 11 and 12: Pg. 11 “Similarly, TH+ interneurons were also found in all analyzed monkey species and orangutan (Fig. 4j and Extended Fig. 10b).” and Pg. 12 “…and indicating that TH expression and TH+ interneurons are absent from the cortex of all non-human African apes.” I think the intention is to specify that TH+ was found in the STR in all species, but not in the cortex? If so, it would help to explicitly mention the STR in the first sentence.

Stylistic comments:

1. Extended Figures 6 b, d, f: some graphical overlap in the “au” and “bp” numbers
2. A few minor typos