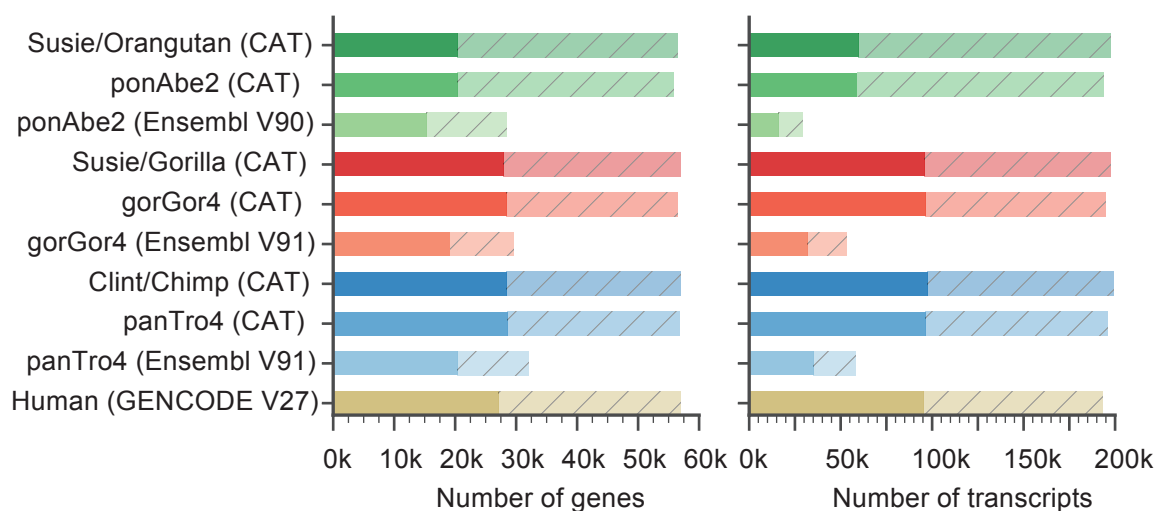## A) Isoform level accuracy compared using full length transcript sequencing of species-specific iPSC RNA

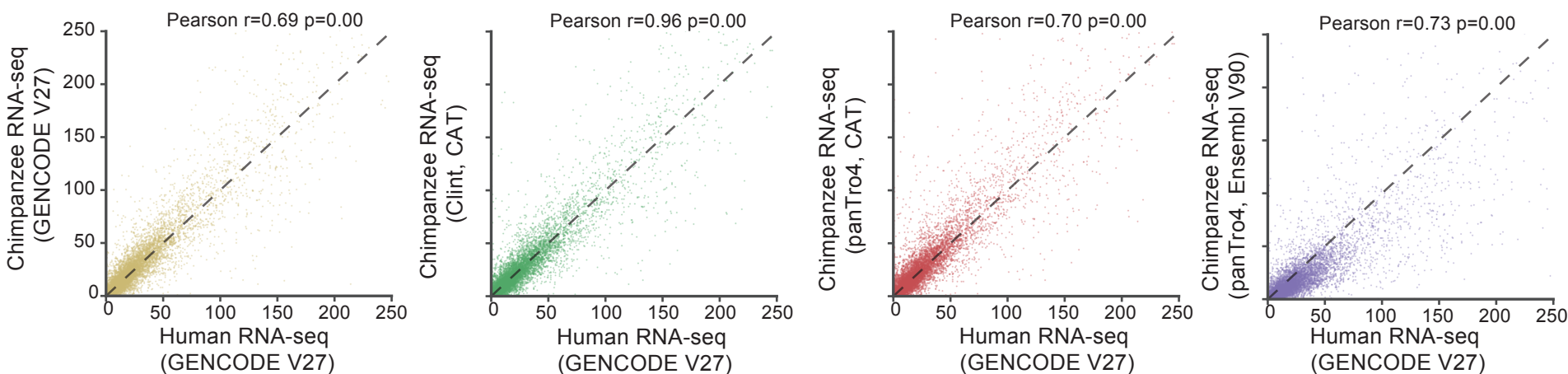|	Human (GENCODE V27)	Clint/ Chimpanzee (CAT)	Susie/ Gorilla (CAT)	Susie/ Orangutan (CAT)	panTro4 (CAT)	gorGor4 (CAT)	ponAbe2 (CAT)	panTro4 (Ensembl V91)	gorGor4 (Ensembl V91)	ponAbe2 (Ensembl V90)
Multi-exon collapsed ICE transcripts	19,271	18,863	22,383	14,377	17,455	20,046	13,102	18,665	20,046	13,102
Exactly matches annotation	14,379 (74.6%)	13,950 (74.0%)	15,137 (67.6%)	10,258 (71.4%)	11,175 (64.0%)	12,789 (63.8%)	6,857 (52.3%)	10,252 (55.0%)	10,130 (50.5%)	5,000 (38.2%)
Fuzzy matches (±8bp) annotation	15,826 (82.1%)	15,485 (82.1%)	17,201 (76.9%)	11,563 (80.4%)	12,755 (73.1%)	14,459 (72.2%)	8,303 (63.4%)	11,995 (64.3%)	11,901 (59.4%)	6,426 (49.1%)

B) Non-zero expression estimates of species-specific iPSC RNA-seq (Kallisto)

C) Incorporation of AugustusCGP and AugustusPB predictions

	Clint/ Chimp	Susie/ Gorilla	Susie/ Orangutan
AugustusPB putative novel isoform	1720	1251	1425
AugustusCGP putative novel isoform	265	192	178
AugustusPB putative paralogous loci	52	48	58
AugustusCGP putative paralogous loci	14	11	9

D) Per gene TPM comparison of different chimpanzee assembly and annotations to human

Assembly/Annotation Pair	GRCh38/GENCODE V27	Clint/CAT	panTro4/CAT	panTro4/Ensembl V90
Number of coding genes with TPM > 0.1	16,098	15,277	15,242	13,463