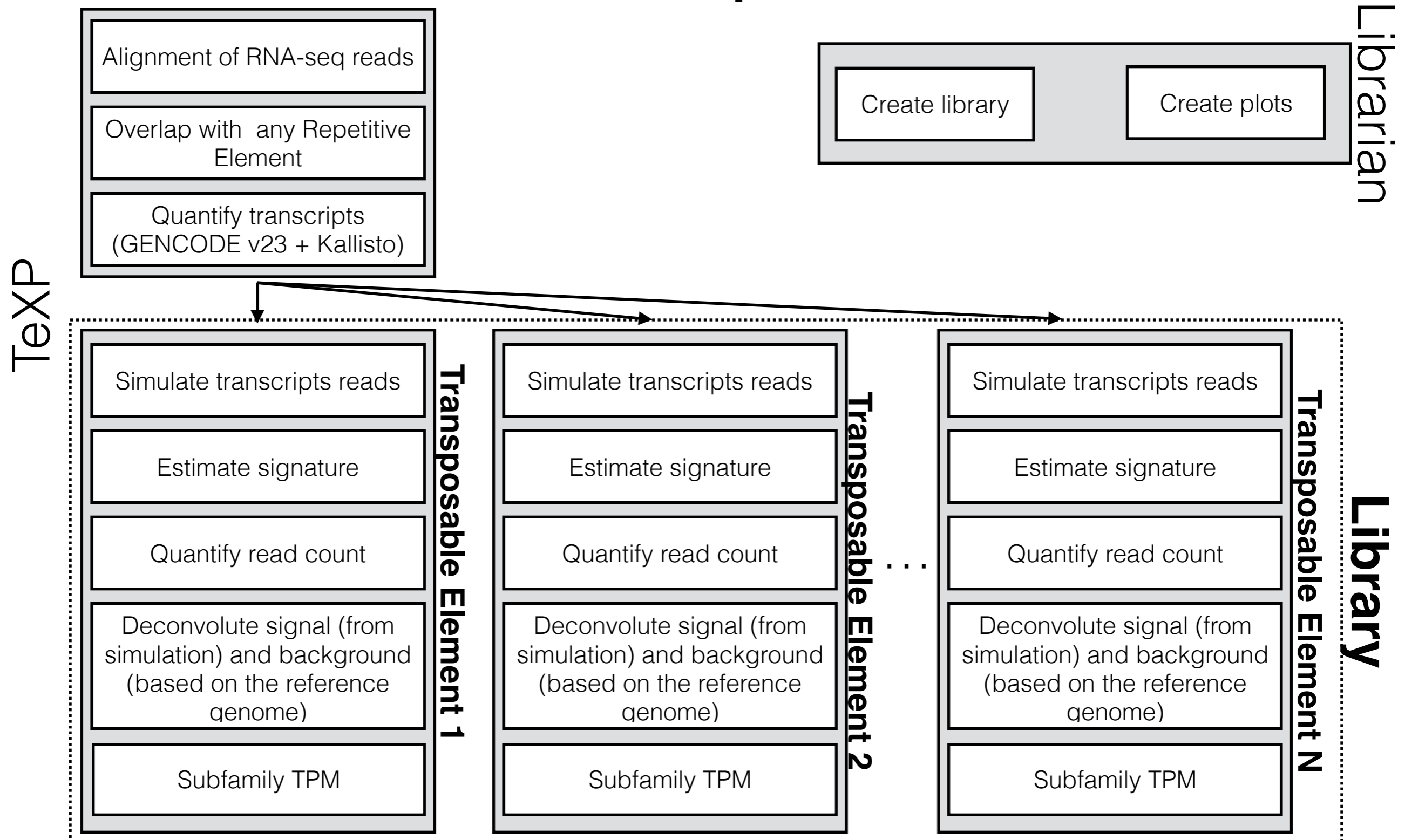


# TeXP

(Transposable element  
eXpression)

Tech 08/2015

# TeXP Pipeline

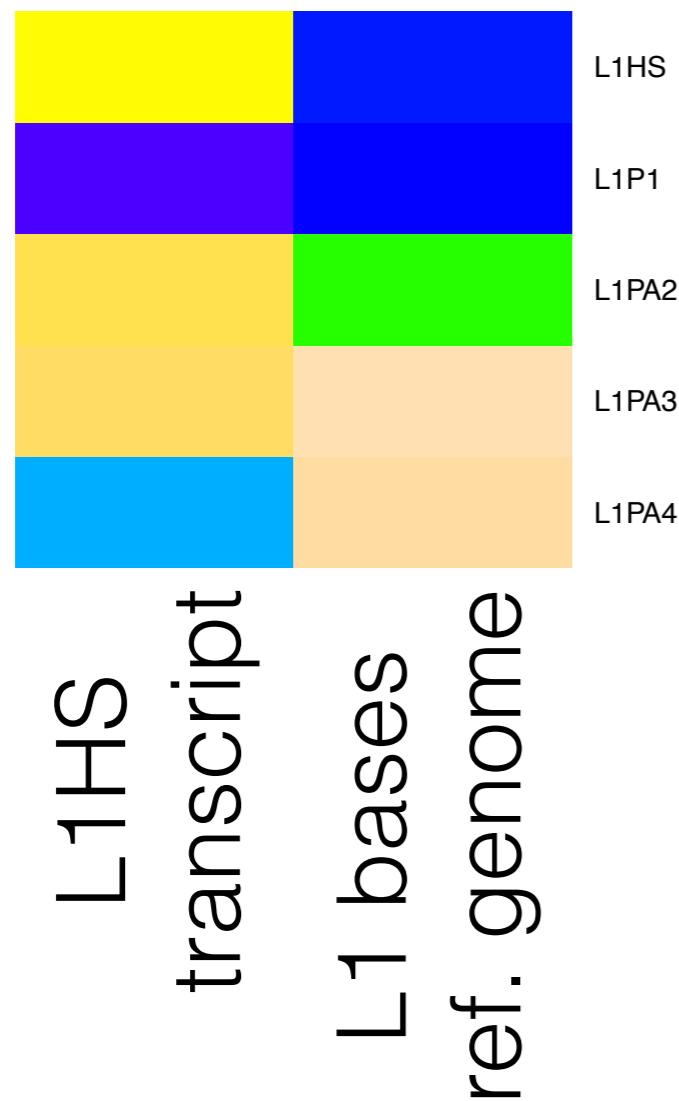
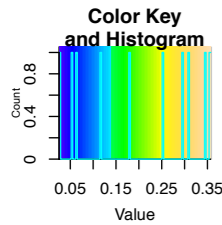


# Deconvolution + Transcription estimation

$$X=AS$$

$X$  = Subfamily read counts per sample  
 $A$  = Signal (Background+Simulation)

# Deconvolution + Transcription estimation



$$X=AS$$



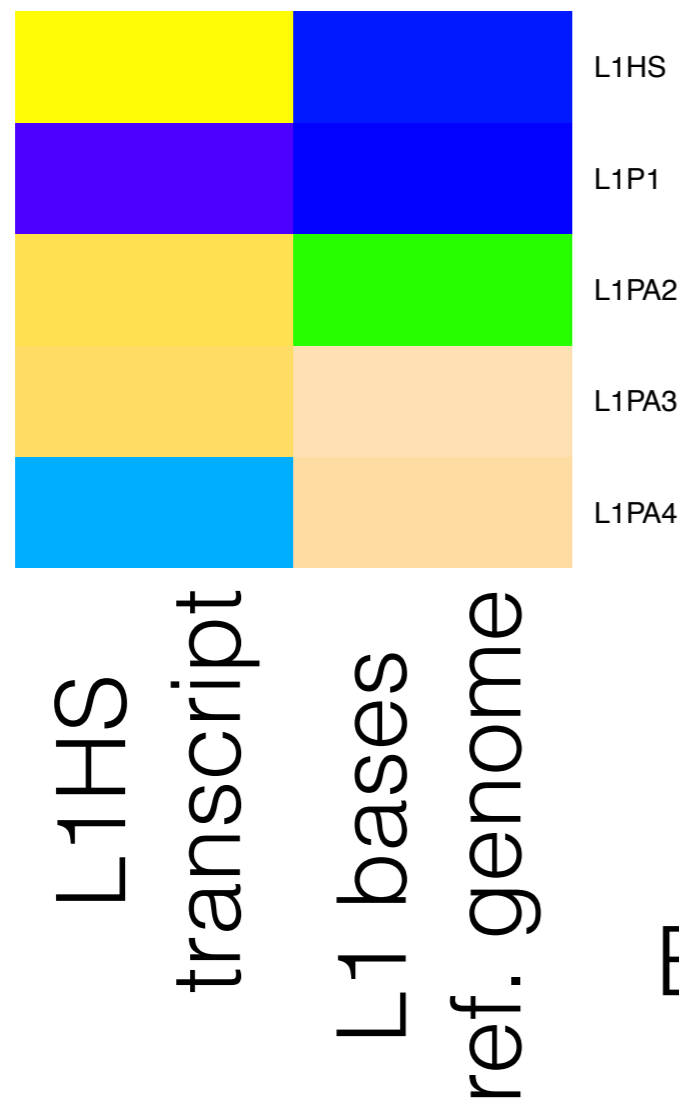
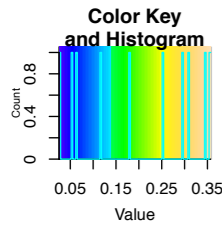
X = Subfamily read counts per sample  
A = Signal (Background+Simulation)

A can be estimated using least square with inequality and equality constrains.

$$\text{sum}(A)=1;$$

$$A_j \geq 0;$$

# Deconvolution + Transcription estimation



$$X=AS$$



X = Subfamily read counts per sample  
A = Signal (Background+Simulation)

A can be estimated using least square with inequality and equality constrains.

$$\text{sum}(A)=1;$$

$$A_j \geq 0;$$

Estimate subfamily transcription level:

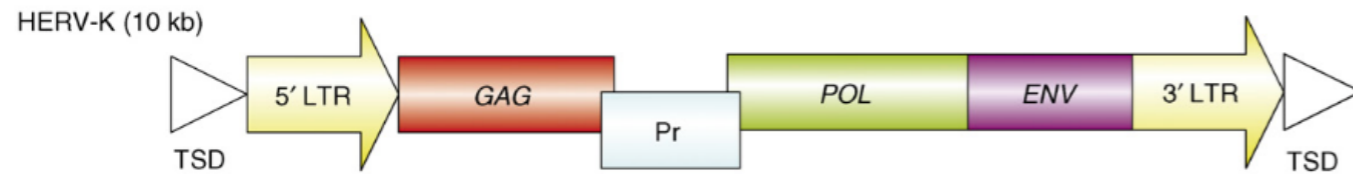
$$E_i = X_i * A_j * 1/S_{j,i}$$

i=repetitive element

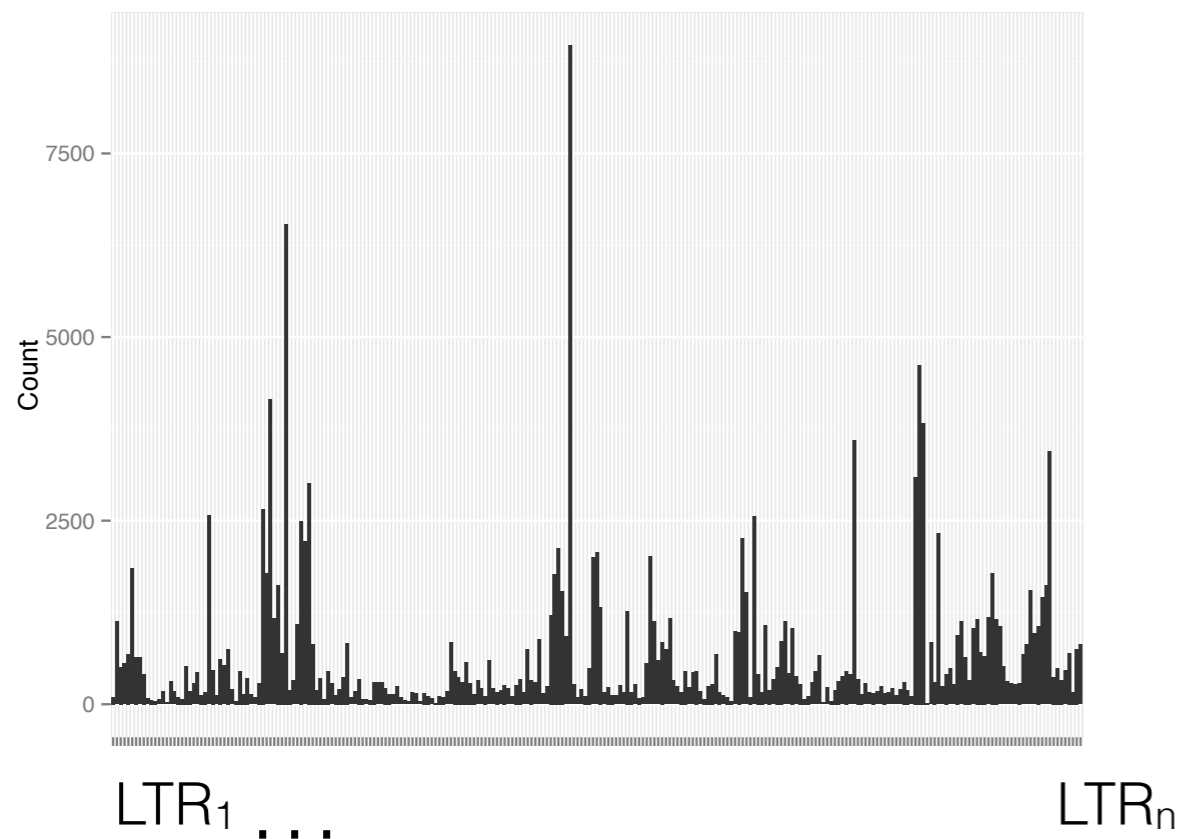
j=repetitive element transcript

# LTR

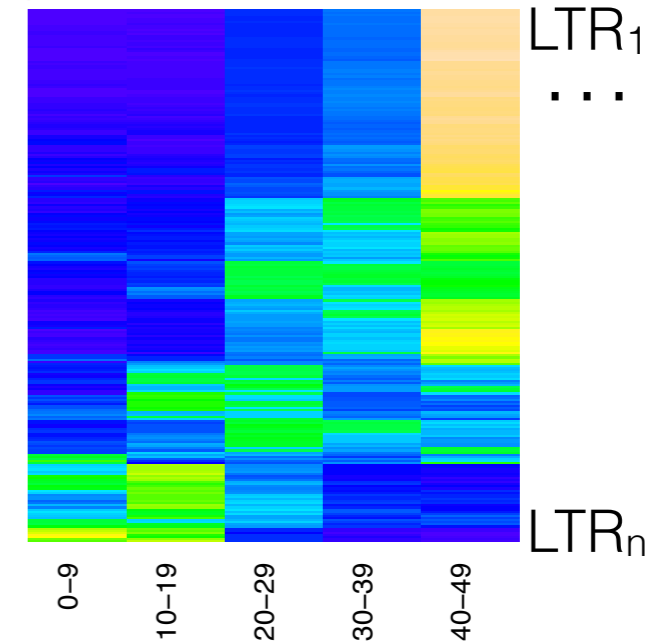
(from librarian)



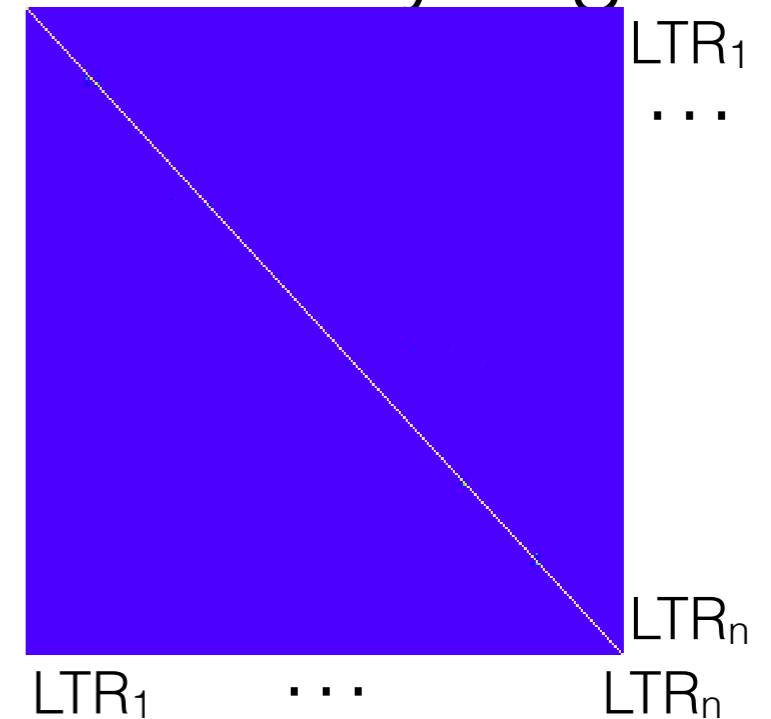
Number of bases  
of each subfamily

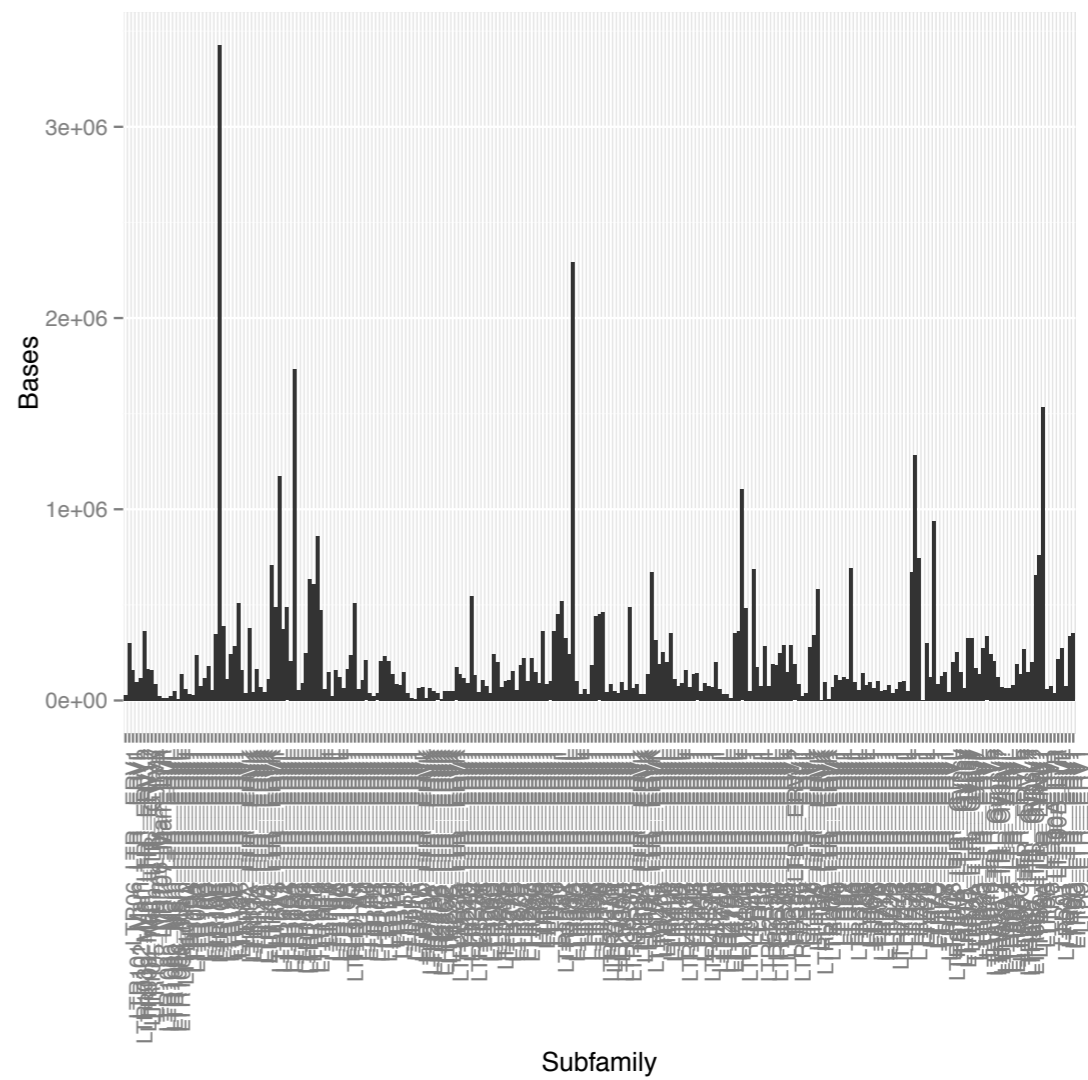
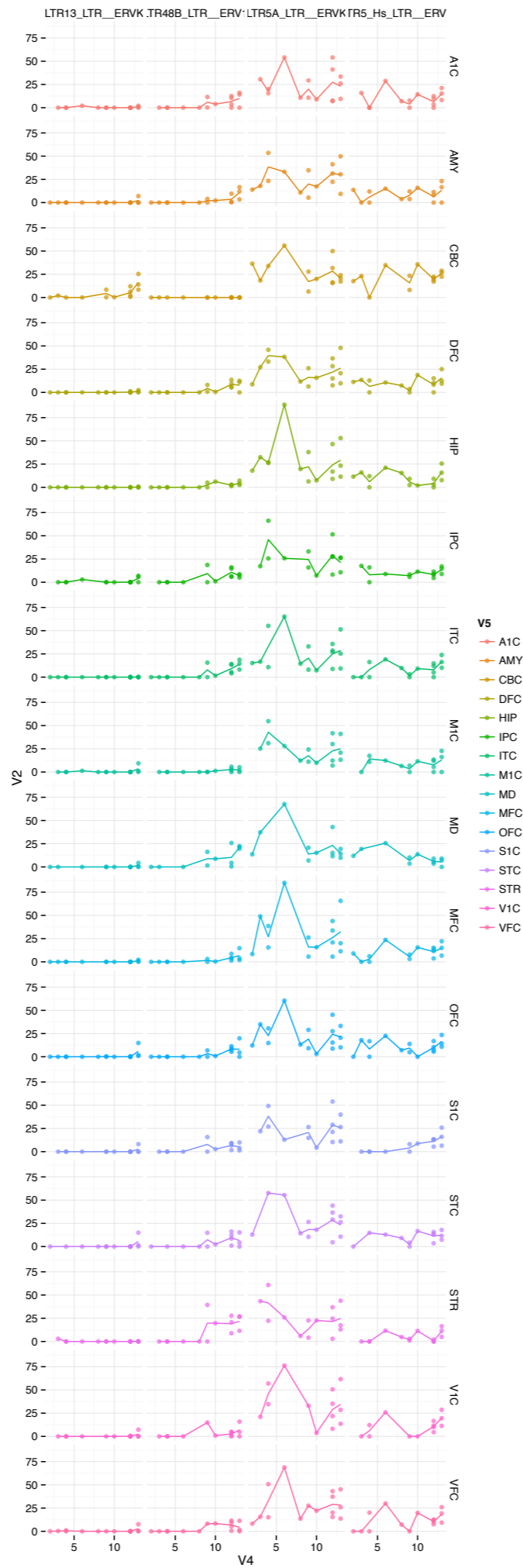
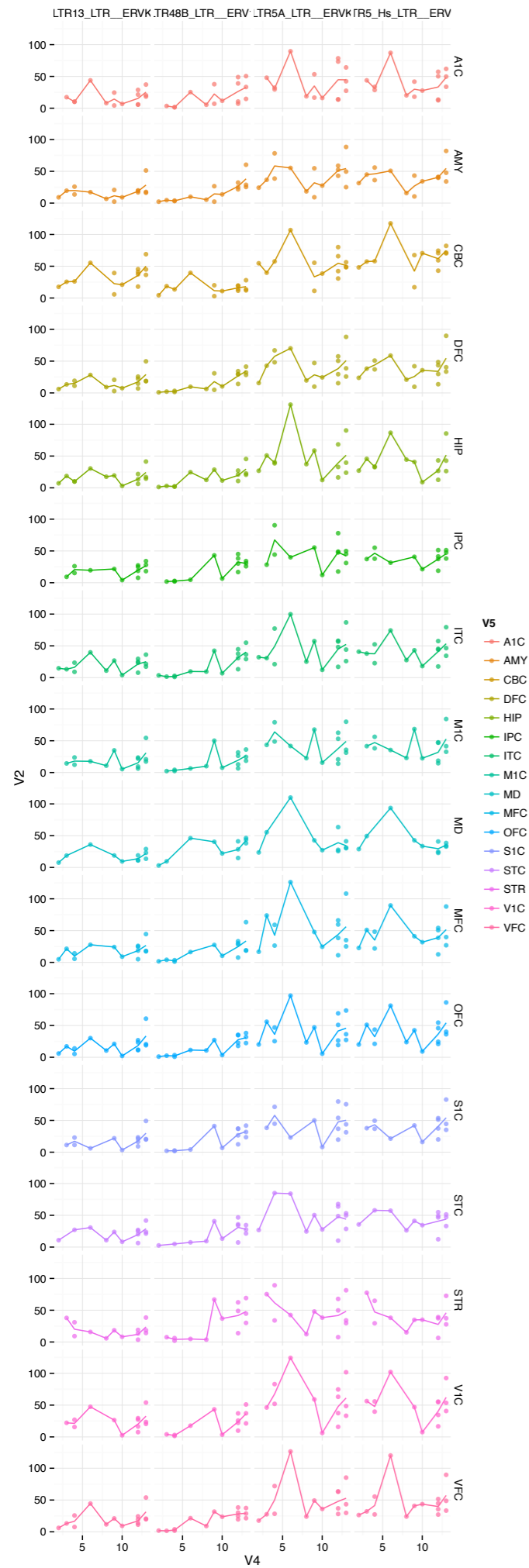


Alignment Quality



Cross subfamily alignment

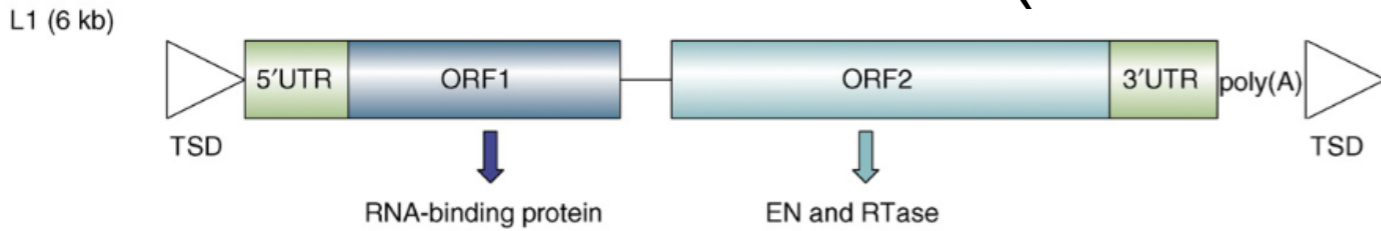




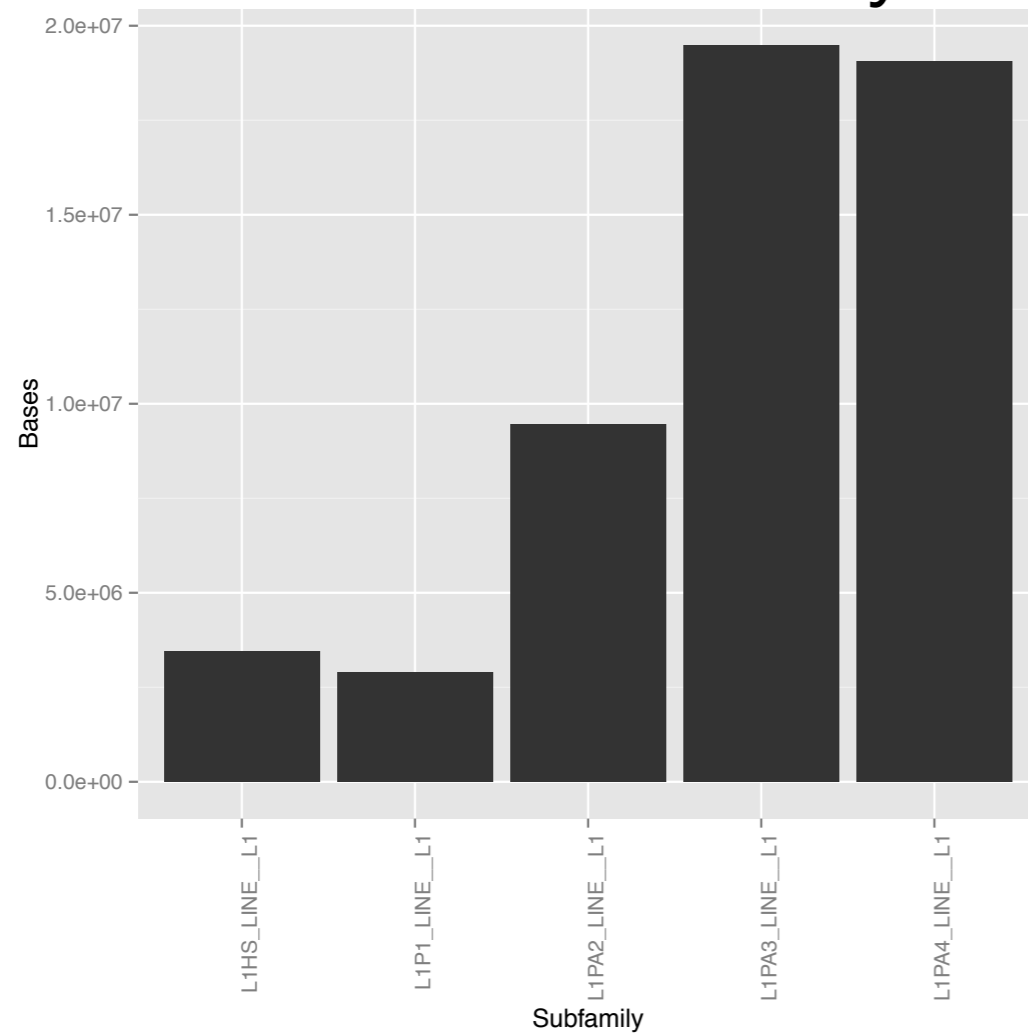
LTR  
(TeXP)

# L1HS

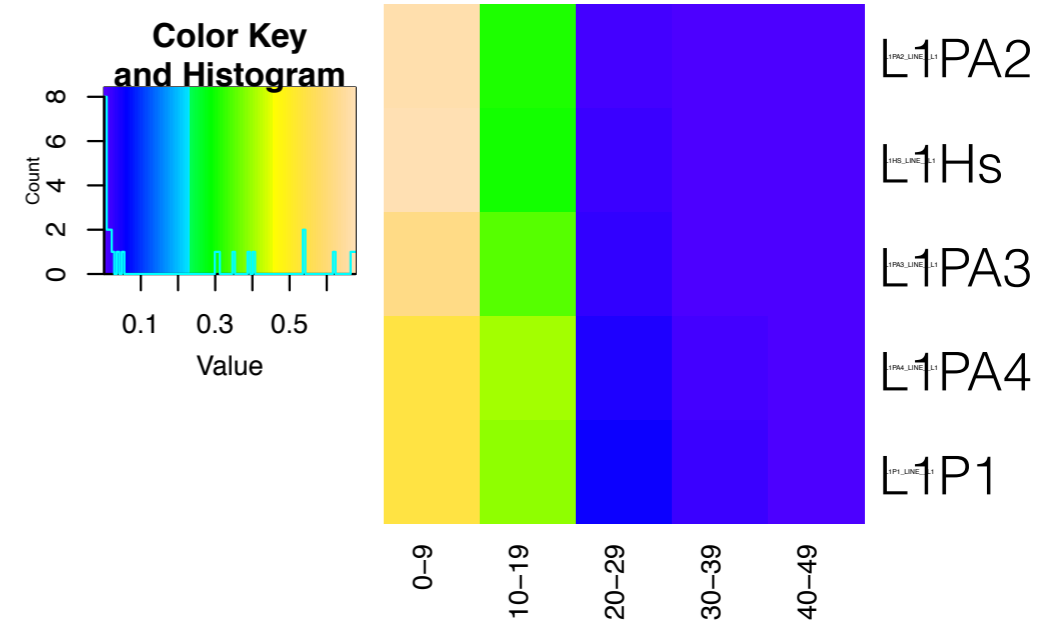
(from librarian)



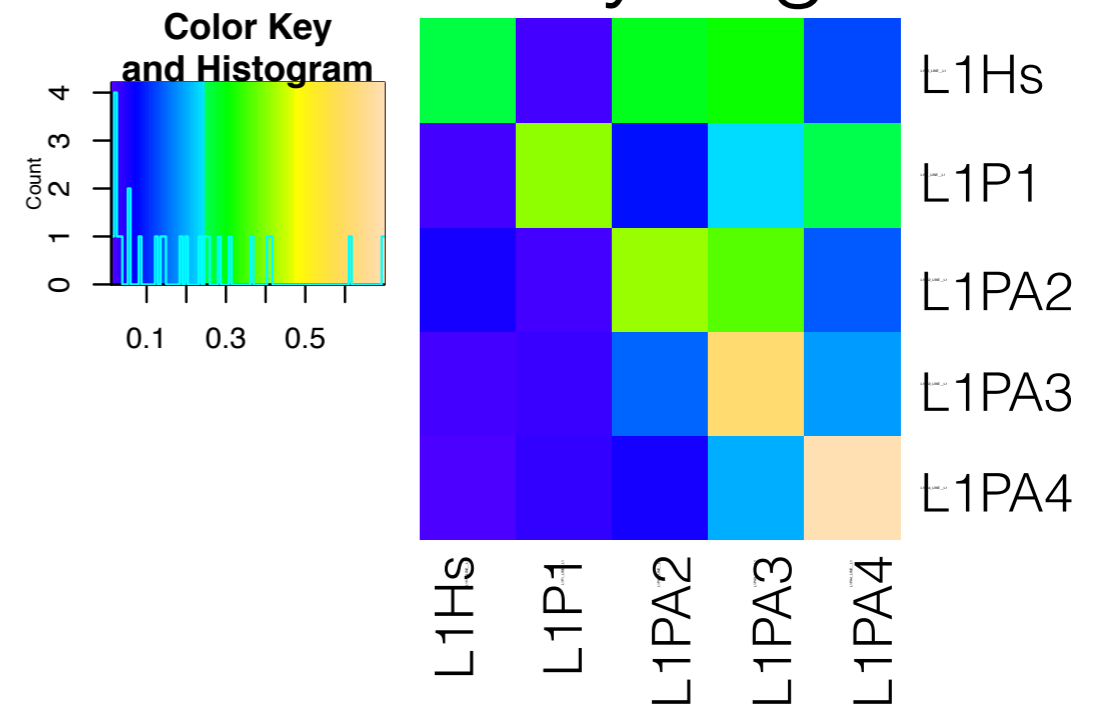
Number of bases  
of each subfamily



## Alignment Quality

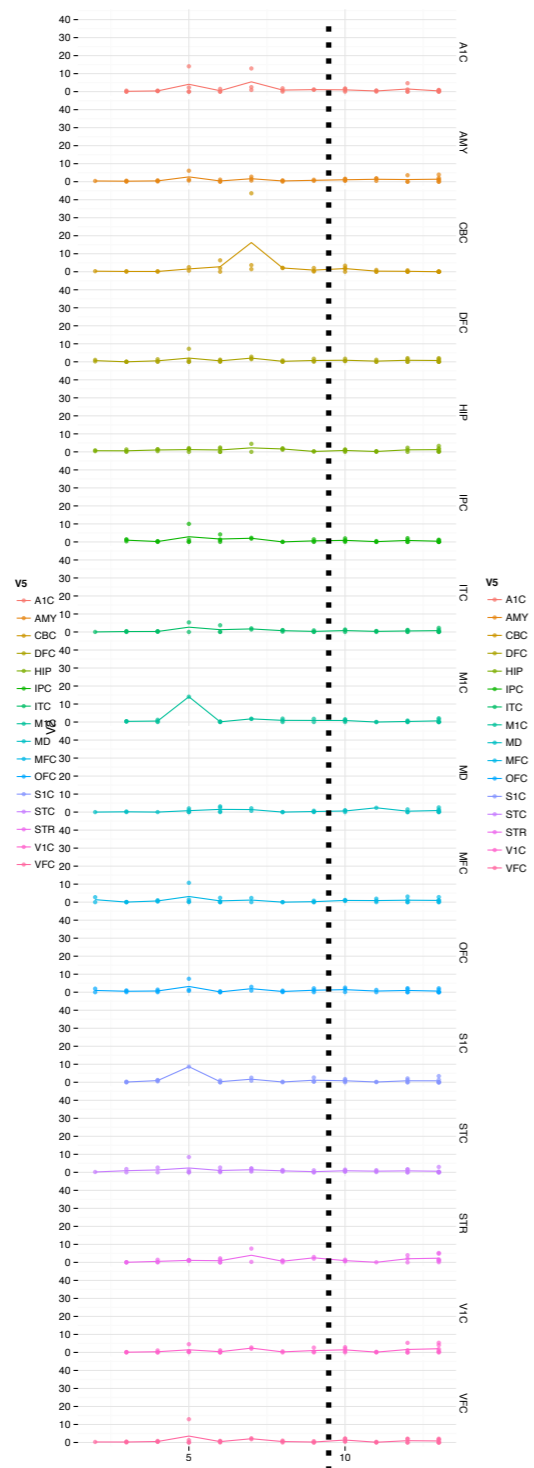
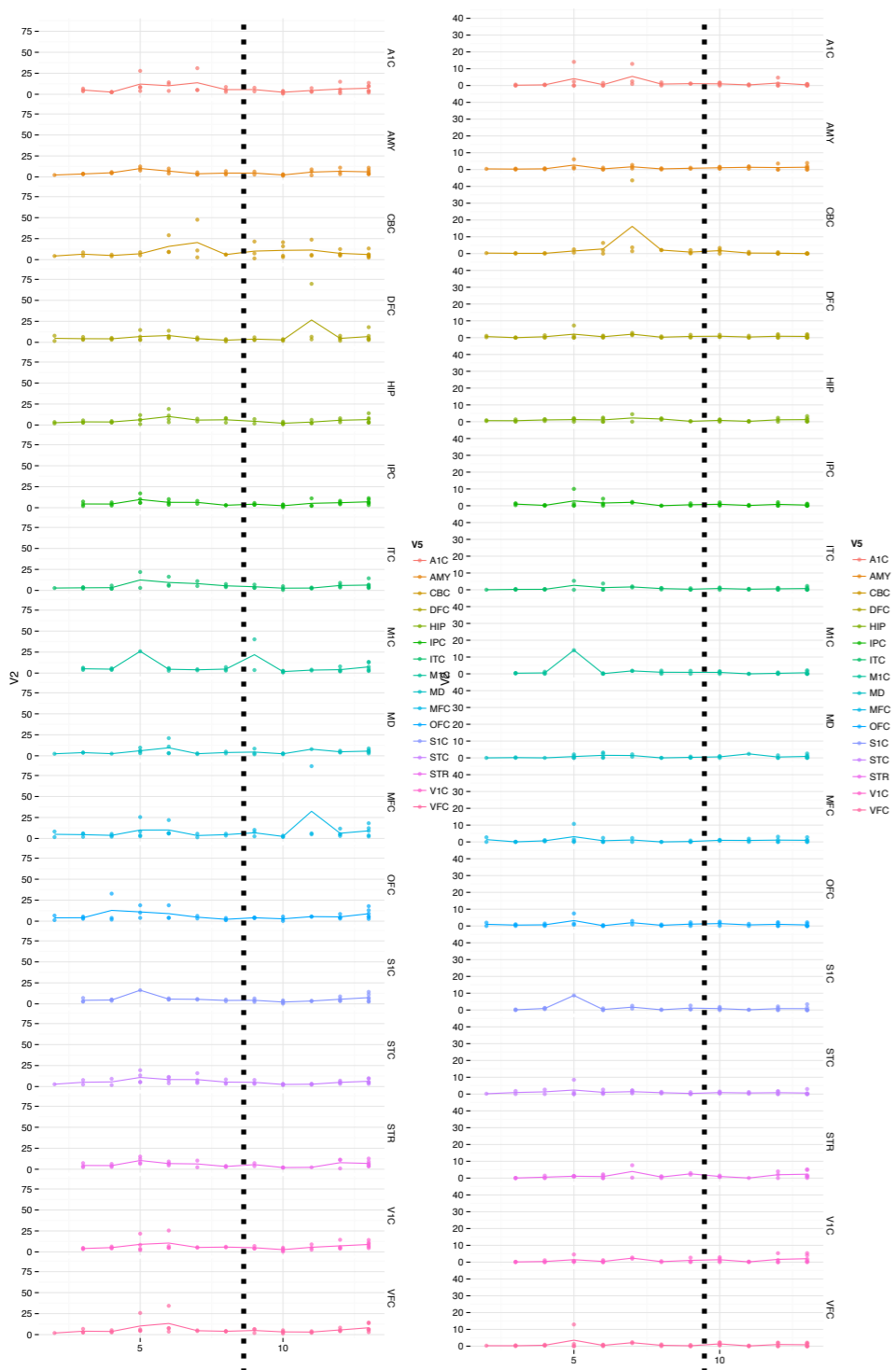


## Cross subfamily alignment

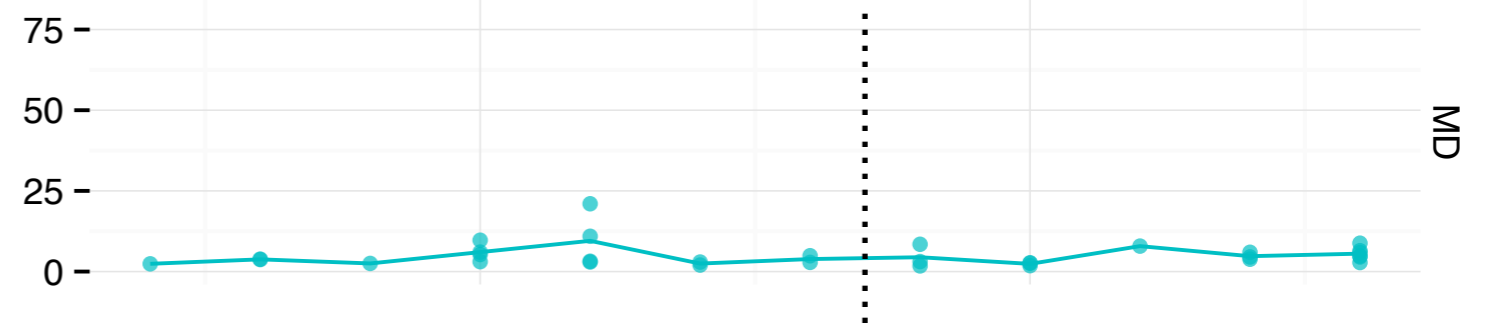




# L1HS



Naive



TeXP Correction

