

# More accurate testing via parametric bootstrap

- P-values for MEME/FEL etc are derived from asymptotic approximations (large N)
- Can result both in improved power and lower rates of false positives
- Not clear how well these hold for smaller and low-divergence datasets
- Can use a **much slower** simulation based method to derive more accurate p-values at each site

# FEL on internal branches of Spike finds most selected sites

**CAUTION: A VERY TIME CONSUMING ANALYSIS (SEVERAL HOURS)**

```
hyphy fel --alignment spike.fas --tree spike.tree --branches Internal --output  
Spike-pbs.FEL.json --resample 100
```