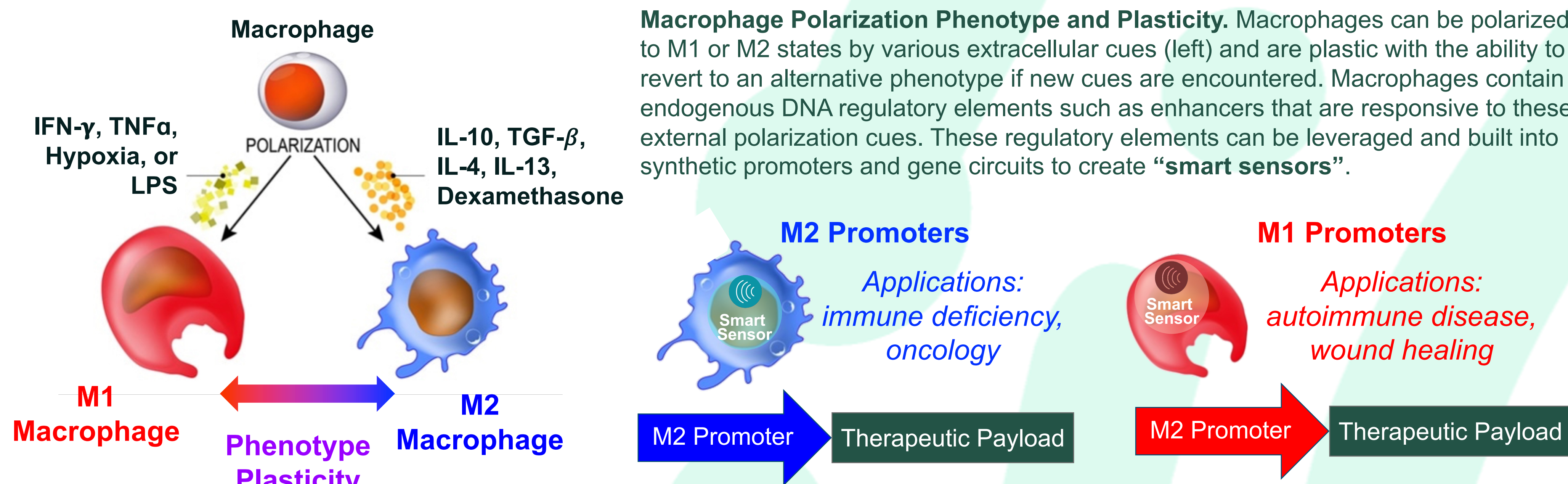


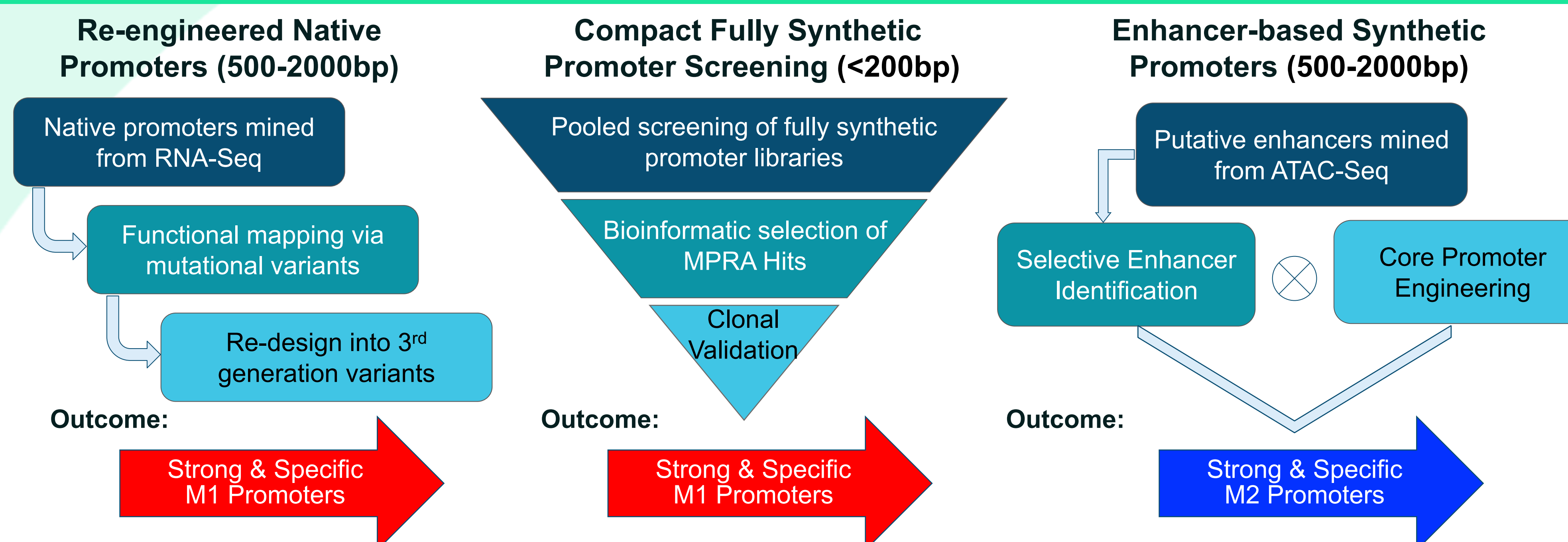
## Macrophage Polarization State Specific Promoters

### Macrophage Polarization Logic



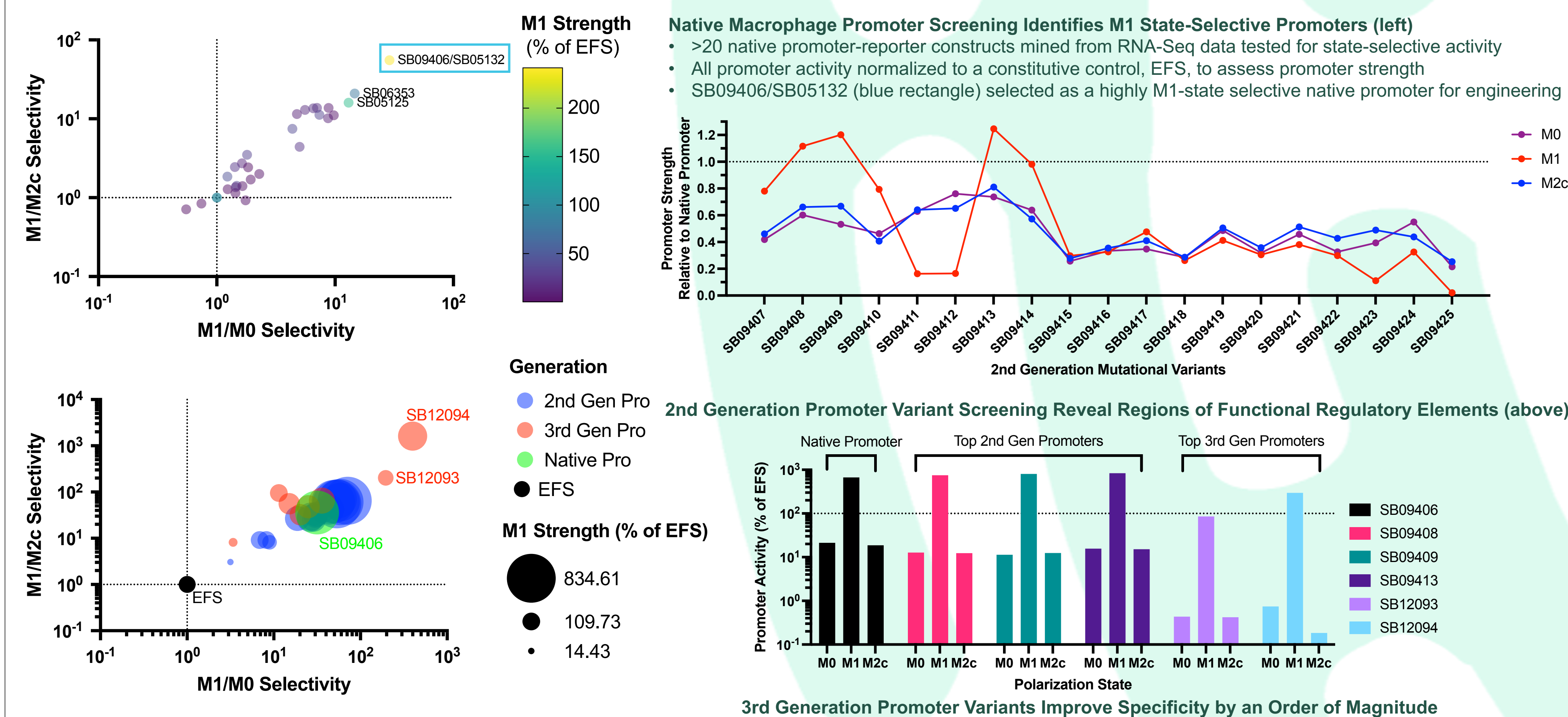
Polarization state specific promoters sense pathological states and locally control payload expression

### Promoter Discovery Strategies

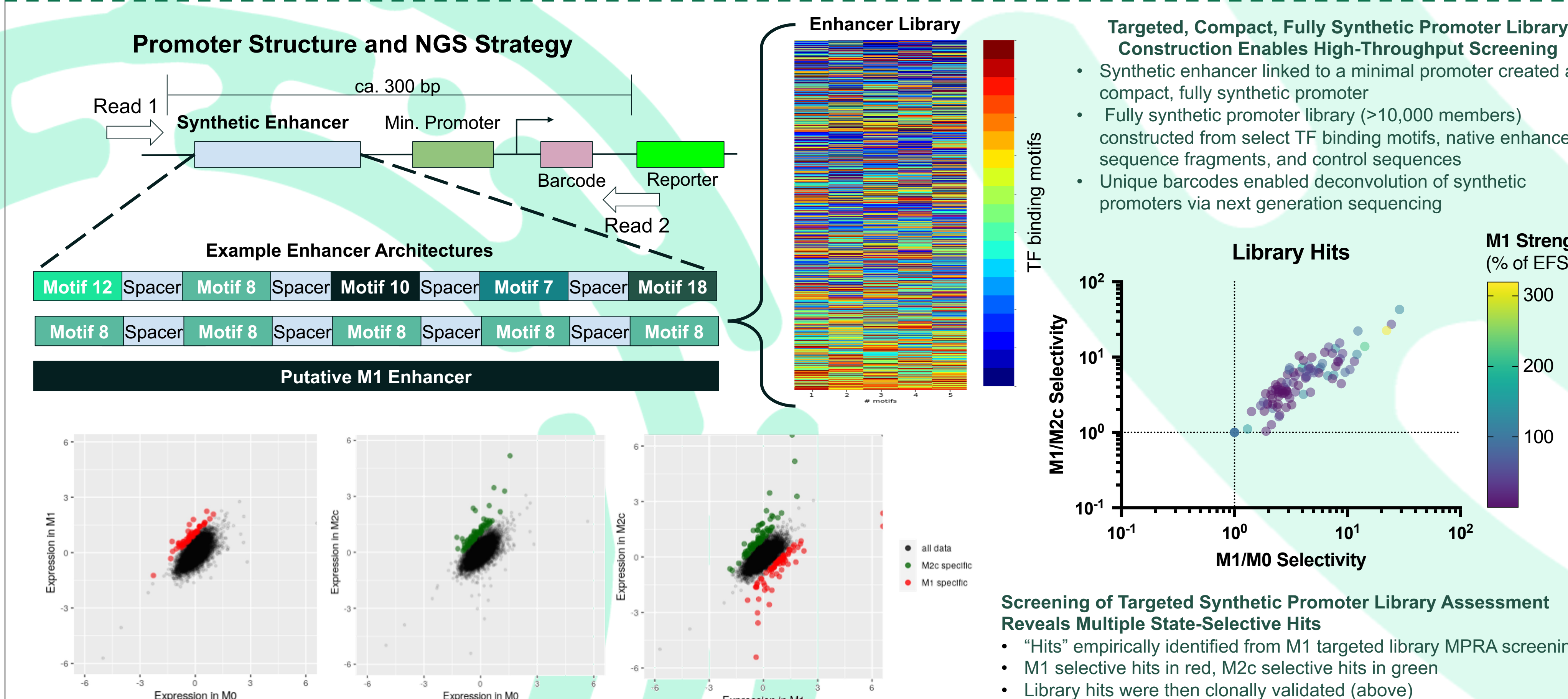


Successful discovery of state-specific “sensors” from three parallel promoter discovery strategies

### M1 Promoter Discovery

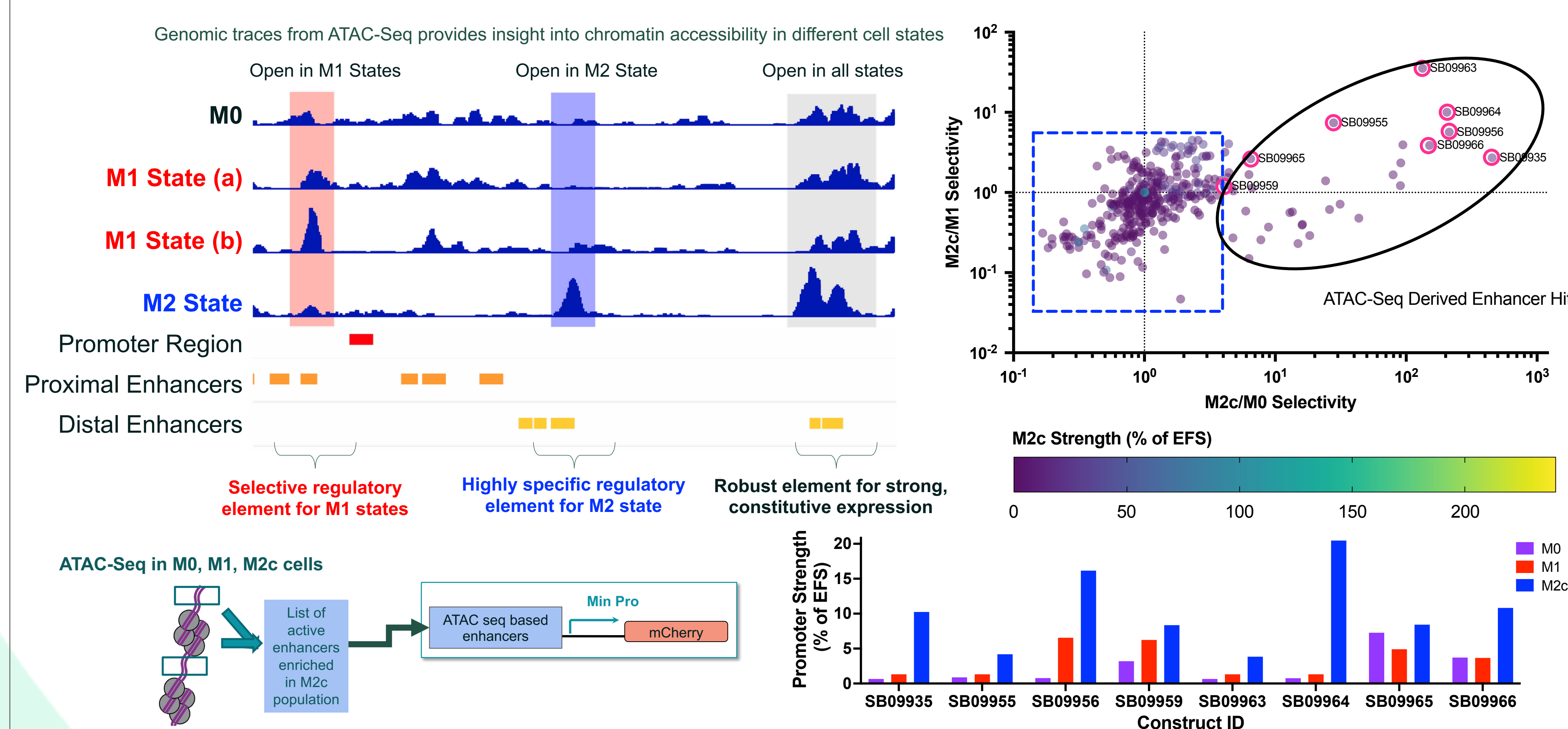


Native promoter engineering into synthetic variants improves strength and specificity of M1-specific promoters



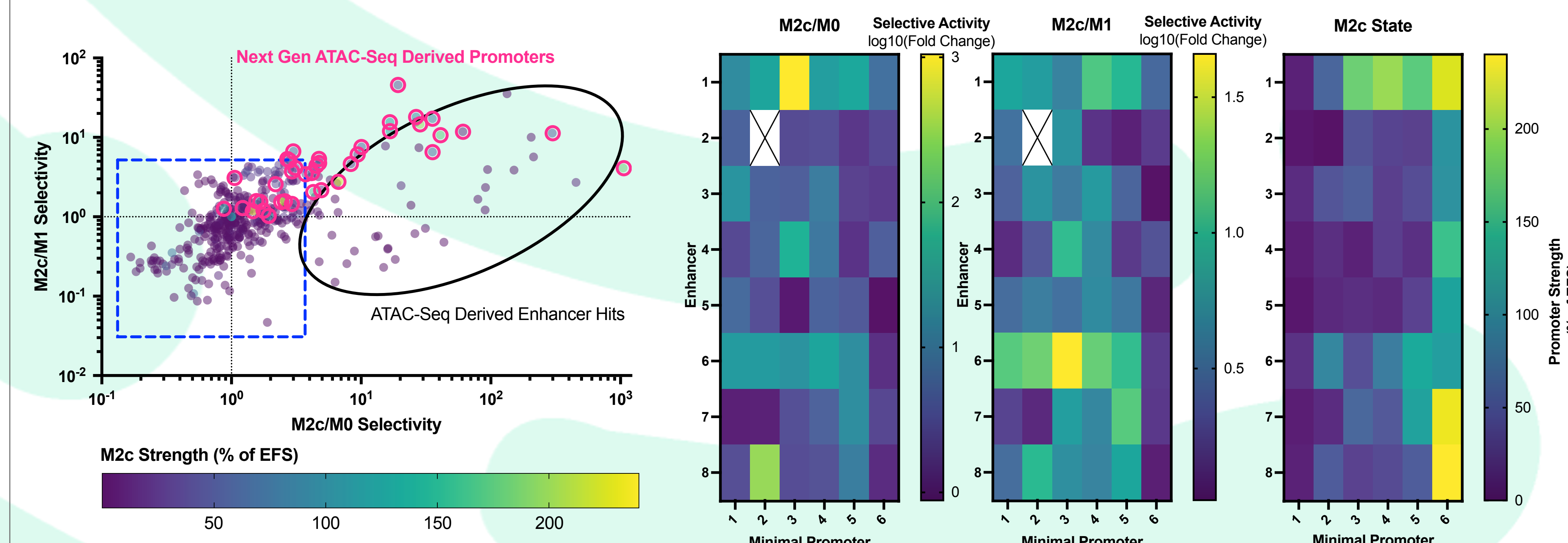
Fully synthetic promoter library hits are as strong and M1-selective as native promoters

### M2 Promoter Discovery



Our bioinformatics pipeline enables potent genomic loci selection with high M2c state selective activity

Top eight enhancer-derived promoters (pink circles above) were re-engineered into next generation promoters by swapping out the original minimal promoter (min Pro 1) for five new variable minimal promoters (pink circles below). All other promoter candidates screened are in dashed blue square.



Core promoter engineering increases both strength and specificity of M2c-state specific promoters