How did the authors conduct this screen to identify genes upregulated by DNA damage? Diagram and explain the experimental rationale for how they conducted their screen. Is this a ‘positive’ or ‘negative’ selection? Why?

How could the authors have modified this experimental screen to identify genes that are downregulated (turned off) following DNA damage?

Diagram and describe how the authors estimated the location of the genes in the genome, as shown in Figure 5. Why didn’t the authors simply sequence the genomes to determine where these mucD:lac fusions inserted?