



**FIGURE S3** Dependence of heritability and log recurrence risk ratio on  $\mu_{x,0 \rightarrow 1}$ , the epimutation rate in environment  $x$ , for Case 1 ( $\mu_{x,1 \rightarrow 0} = \mu_{y,1 \rightarrow 0} = 0.5$ ). The horizontal axis is the value of  $\mu_{x,0 \rightarrow 1}$ , and the vertical axis is either  $\ln(\lambda)$  or heritability in the left panel, and prevalence (K) in the right panel. For both panels, the other parameter values are  $\mu_{y,0 \rightarrow 1} = 0.05$ ,  $\mu_{x,1 \rightarrow 0} = \mu_{y,1 \rightarrow 0} = 0.5$ ,  $\alpha = 0$ ,  $r = 0.5$ ,  $\delta = 1$ ,  $m = 0.5$ ,  $e = 0.1$ , and  $a = 0.5$ .