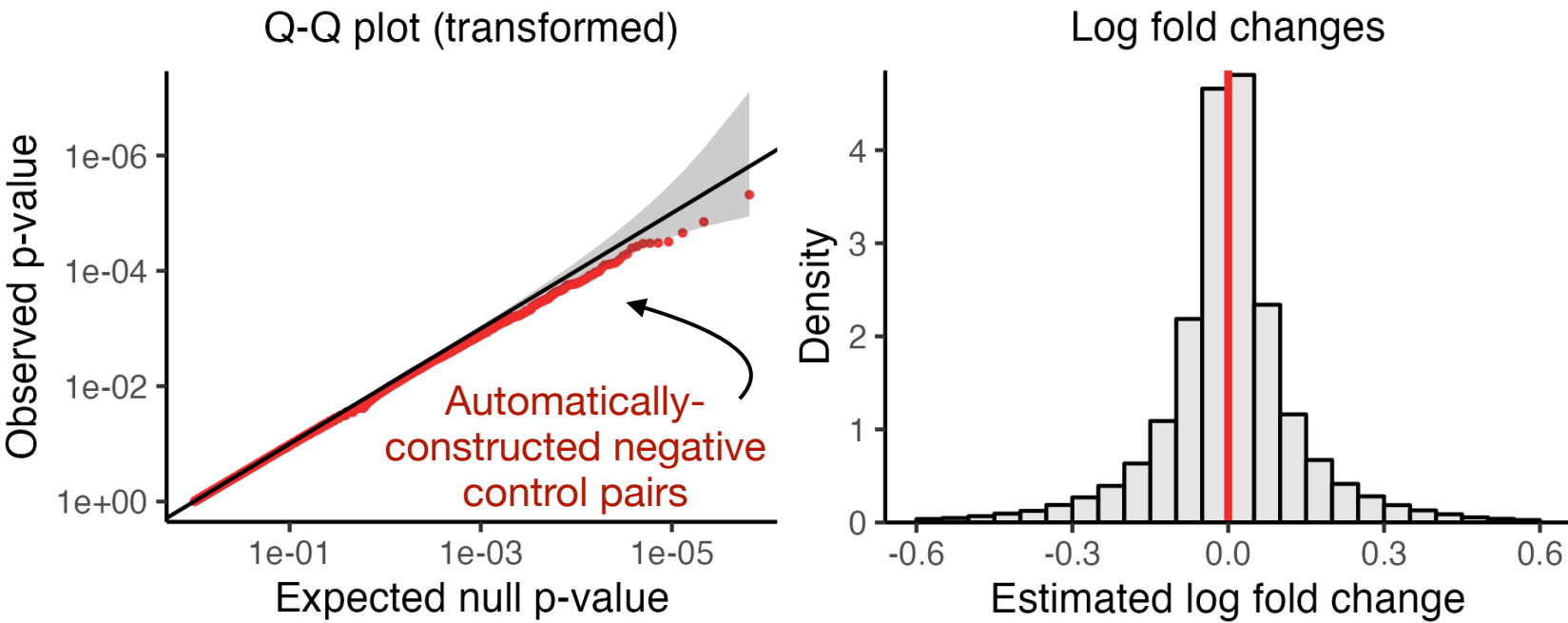
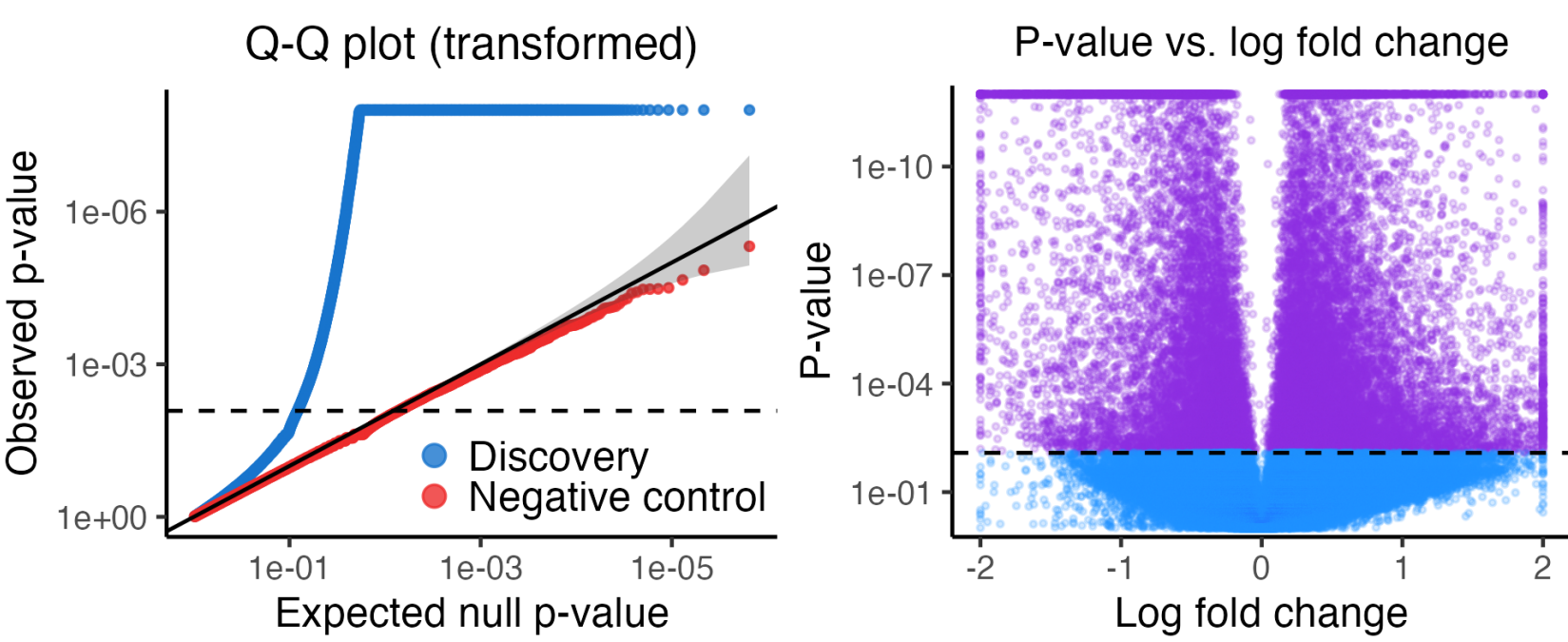


a ① Calibration check



② Discovery analysis



b Computational performance metrics*
of SCEPTRE

Dataset	Frangieh (Control)	Papalexi (gene)
Number of pairs	2.2 million	323,906
Number of cells	30,486	20,729
Calibration check run time	45 min (794 pair/s)	32 min (167 pair/s)
Calibration check peak memory	3.4 GB	2.4 GB
Discovery analysis run time	8.6 h (70 pair/s)	1.8 h (51 pair/s)
Discovery analysis peak memory	4.0 GB	2.8 GB

*Benchmarking conducted on standard laptop using one processor