Supplementary information S11

Tail probabilities for different priors on the effect size γ. A prior probability of association $\pi = 10^{-4}$ is assumed in these calculations so as to be comparable with Table 2 in Stephens and Balding (2009). The mixture of normals prior has the form $\gamma \sim 0.9N\left(0, 0.2^2\right) + 0.05N\left(0, 0.4^2\right) + 0.05N\left(0, 0.8^2\right)$.

	$\gamma \sim N\left(0, .2^2\right)$	$\gamma \sim N\left(0, .3^2\right)$	$\gamma \sim t\left(m = 0, s^2 = .2^2, d = 3\right)$	Mixture of normals
$P\left(|\gamma > 0.05|\right)$	8.0×10^{-5}	8.7×10^{-5}	8.2×10^{-5}	8.1×10^{-5}
$P\left(|\gamma > 0.1|\right)$	6.2×10^{-5}	7.4×10^{-5}	6.5×10^{-5}	6.4×10^{-5}
$P\left(|\gamma > 0.2|\right)$	3.2×10^{-5}	5.0×10^{-5}	3.9×10^{-5}	3.6×10^{-5}
$P\left(|\gamma > 0.4|\right)$	4.5×10^{-6}	1.8×10^{-5}	1.4×10^{-5}	8.8×10^{-6}
$P\left(|\gamma > 1|\right)$	5.7×10^{-11}	8.6×10^{-8}	1.5×10^{-6}	1.1×10^{-6}