



**Figure S11** Simulation results for Model D in Figure 2 and sample size 1,000. Blue, red, green and black dots represent, respectively,  $M_1$ ,  $M_2$ ,  $M_3$  and  $M_4$  calls. Yellow dots (CIT plot only) represent  $M_i$  calls. Grey dots show the “no calls”. Results were computed using significance level 0.05. For the AIC, BIC and CMST methods, green dots represent true positives, and blue, red and black dots represent false positives. For the CIT test, yellow dots represent true positives and blue and red dots show false positives.