



Figure S7: Comparison of the Receiver Operating Characteristics (ROC) curves based on the XtX statistics estimated under three different parameterizations of the core model: i)  $\rho = 1$ ; ii)  $\Omega = \Omega^{\text{sim}}$  ( $\Omega = \widehat{\Omega}_{\text{HSA}}^{\text{bpas}}$  for SpaH data and  $\Omega = \widehat{\Omega}_{\text{BTA}}^{\text{bpas}}$  for SpaB data) and iii)  $\Omega = \Omega^{\text{benv}}$  ( $\Omega = \widehat{\Omega}_{\text{HSA}}^{\text{benv}}$  for SpaH data and  $\Omega = \widehat{\Omega}_{\text{BTA}}^{\text{benv}}$  for SpaB data). For a given scenario (SpaH and SpaB), results from the ten replicates are combined. In addition, the resulting AUC (Area Under the Curve) are indicated in the legend.