**Supplemental Figure 2**

Illustration of winner ranking score distribution for different genes (chosen randomly) in ranking Breast Cancer pathway gene ([https://www.genome.jp/kegg-bin/show_pathway?hsa05224](https://www.genome.jp/kegg-bin/show_pathway?hsa05224)) using different network randomization approaches. The left/middle/right column is for randomly...
adding/removing 5% of the edges and preserving node degree.