



FIGURE 19.2. Genome-wide measurements of fitness in yeast. A series of strains was constructed; in each a single gene was knocked out. The set of 5916 strains (96% of all yeast genes) were then pooled into a single population and grown for several generations on rich glucose medium. This figure shows a subset of these strains compared with wild type. Overall, only 19% of genes were essential for growth on rich glucose medium and, of those deletions that were viable, only 15% grew more slowly than the wild type. Growth rates in several other environments were also measured. For example, 62 genes caused sensitivity to high-salt concentrations when deleted, and 128 caused sensitivity to high pH.

19.2, modified from Giaever G. et al., *Nature* **418**: 387–391, © 2002 Macmillan, www.nature.com