

FIGURE 17.2. Selection on catalytic activity of a population of RNA molecules. (*A*) Secondary structure of the *Tetrahymena* ribozyme. Sites in *red* were never seen to vary during the course of the experiment. The RNA substrate is shown in *purple* (*left*). (*B*) The increase in activity over 12 generations. (*C*) The change in frequency of the nine commonly seen variants; numbers give the position in the RNA sequence, as shown in *A*. Two of these variants (258, 260) increased at first, but were later displaced by other variants that resulted in greater activity.

17.2A–C, redrawn from Lehman N. et al., *Curr. Biol.* 3: 723−734, ©1993 Elsevier, http://www.sciencedirect.com/science/journal/09609822