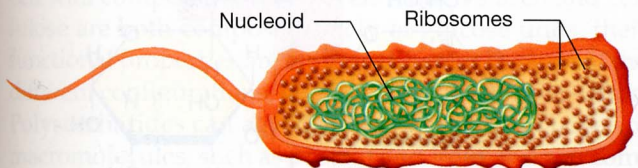
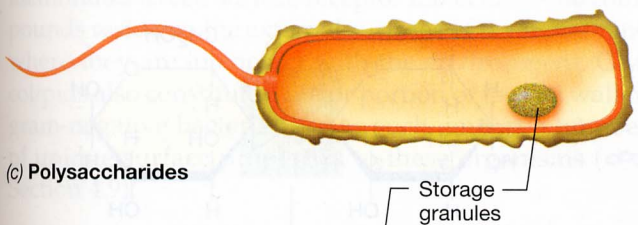


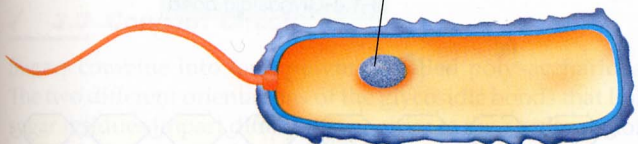
(a) **Proteins**



(b) **Nucleic Acids**



(c) **Polysaccharides**



(d) **Lipids**

Figure 3.3 The locations of macromolecules in the cell. (a) *Proteins* (brown) are found throughout the cell both as parts of cell structures and as enzymes. The flagellum is a structure involved in swimming motility. (b) *Nucleic acids*. DNA (green) is found in the nucleoid of prokaryotic cells and in the nucleus of eukaryotic cells. RNA (orange) is found in the cytoplasm (mRNA, tRNA) and in ribosomes (rRNA). (c) *Polysaccharides* (yellow) are located in the cell wall and occasionally in internal storage granules. (d) *Lipids* (blue) are found in the cytoplasmic membrane, the cell wall, and in storage granules. Note the color-coding scheme used here; these same colors will be used to depict these macromolecules throughout this book. For DNA, see also the legend to Figure 3.11.