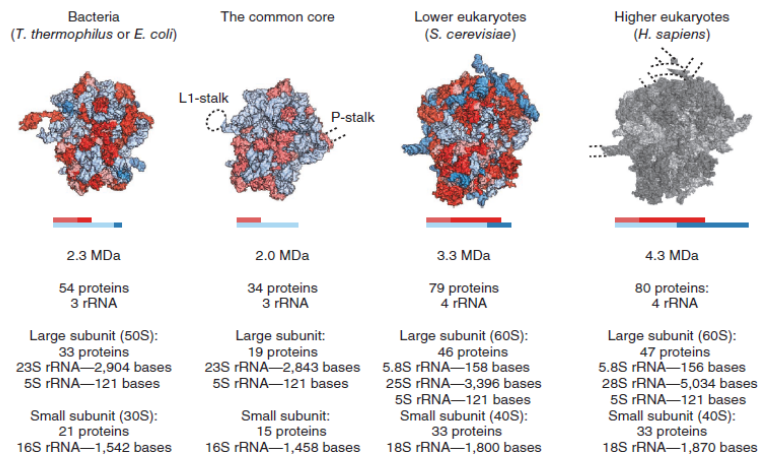


Figure 2 Composition of bacterial and eukaryotic ribosomes and the common core. Bacterial and eukaryotic ribosomes share a conserved core composed of RNA (light blue) and proteins (light red). In addition to the core, ribosomes in each domain of life contain their own set of proteins, extensions and insertions in conserved proteins (both in red), and extension segments in ribosomal RNA (blue). 5.8S and 25S–28S rRNA are both homologous to 23S rRNA in bacteria. Dashed lines around the core indicate positions of flexible stalks of the ribosomes that are usually disordered in X-ray structures. For simplicity these lines are not shown in the other structures. The 80S structure of higher eukaryotes has not yet been determined but is predicted to be highly similar to the structures of yeast and *T. thermophila* ribosomes, based on genetic analysis and cryo-EM studies. Therefore, instead of the human ribosome structure, the yeast 80S structure is shown, in gray with dashed lines indicating the positions of human-specific long rRNA expansion segments, the major distinctive feature of ribosomes from higher eukaryotes. The figure is based on X-ray and cryo-EM structures from refs. 15,20,55,82–84.



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