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Ribosome

National Cancer Institute

Source

National Cancer Institute. *Ribosome*. NCI Thesaurus. Code C13274.

Ribosomes are small organelles composed of ribosomal RNA (rRNA) and 80 some different proteins. rRNA is synthesized in the nucleolus and the ribosomal subunits are assembled there from rRNA and imported cytoplasmic made proteins. Once assembled, the subunits pass through the nuclear pores to the cytoplasm where they take part in protein synthesis. Some ribosomes are free in the cytoplasm and can be recruited to a polyribosomal structure when a messenger RNA (mRNA) strand is to be translated into a cytoplasmic protein. Other ribosomes are attached to the endoplasmic reticulum where the protein is formed within the interior to the endoplasmic reticulum. These proteins are destined for secretion, storage or incorporation into membranes.