

What came first: ~~the~~ DNA or protein? ~~Discovery~~ The discovery of ribozymes and the hypothesis of the RNA world ~~has~~ gives given this question another dimension. Enzymes ~~was~~ were the only known natural catalysts to the discovery of ribozymes.

Ribozymes (also known as RNA ~~enzyme~~ enzymes or catalytic RNA) are RNA particles that catalyze ~~biochemie~~ biochemical ~~reaction~~ reactions. Thomas Cech and Sidney Altman were the first to discover ribozymes during the 1980s and later went on ~~later~~ to investigate ~~their~~ the catalytic properties. Thomas Cech found that splicing of introns in ~~a~~ ribosomal RNA in the ribosomal RNA gene in *Tetrahymena thermophila* ~~were found to~~ occurred in the absence of additional cell extracts. Sidney Altman and his colleagues ~~separated~~ discovered ~~the~~ bacterial RNase P, an enzyme responsible for changing a precursor to active tRNA. However, it was found that in addition to ~~the~~ proteins, the enzyme ~~also~~ contained RNA that could stimulate the cleavage of precursor tRNA into tRNA in the absence of the protein component. ~~Also~~ In addition, Thomas Cech ~~gave~~ reached the conclusion that the intron sequence of ~~the~~ RNA ~~can~~ could break and reform ~~phosphodiester~~ phosphodiester bonds. They won the Nobel Prize in chemistry for the same ~~thing~~ in 1989. Natural ~~ribosomes~~ ribozymes catalyze the hydrolysis of their own phosphodiester bonds. They also catalyze ~~the~~ aminotransferase activity. ~~They~~ Further, they ~~also~~ catalyze the hydrolysis of ~~the~~ other RNA. They are termed as Ribozymes ~~ribozymes~~ are so called because they ~~act~~ are as specific as enzymes ~~in terms of their~~ specificity and belong to RNA. However, they are different from enzymes because of the following reasons:

- 1) Unlike enzymes, ribozymes do not require a specific pH and temperature.

Comment [A1]: A comma is not used to separate the subject and the verb and has therefore been deleted here.

Comment [A2]: In academic writing, information should be presented with accuracy. At this instance, the term "ribosomes" refers to a cell organelle, whereas "ribozymes" refers to catalytic RNA. This typographical error has been revised for accuracy.

- 2) Ribozymes consists of nucleotides.
- 3) They do not have well-defined regions, such as active site and catalyzed catalytic sites.
- 4) They can act on a very small amounts of substances but perform a more limited set of instructionsactions.

Comment [A3]: A plural noun must be accompanied by a plural verb. Here, as the noun is "ribozymes," a plural verb has been used.

Comment [A4]: A compound modifier contains 2 or more words, which act together as one adjective and are connected by hyphens. Hyphens are used with these terms so that their meaning is understood clearly.

~~M~~A ~~any number of~~ ribozymes have been discovered till date. The discovery of naturally occurring ribozymes is increasing, along with ~~which the synthesis of~~ several artificial ribozymes ~~have also been synthesized.~~ ~~Due to~~ Because of their abilities, ribozymes have been investigated for applications as therapeutic agents and, biosensors, as well as ~~and~~ in genomics functions and discovery of genes.