RNA Polymerases IV and V: evolution and function

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Abstract

This is gonna be the last thing i write down

1 Introduction

Most of the known non-coding RNAs (ncRNAs) correspond to intergenic sequences or transcripts with unknown functions. In mammals, two of the increasingly known long ncRNAs are *Xist* and *Tsix* which are involved in the regulation of adjacent genes. In plants, small-interferingRNAs (siRNAs) guide the process of chromatin modifications. These ncRNAs are generated from dsRNAs precursors and processed by dicer (DCL) enzymes into 21-24 nucleotides long siRNAs before associating with Argonaute proteins (AGO).

2 RNA Polymerase IV

how it produces siRNAs and what do they bind to : AGO specific and dicer specific [2]

2.1 Subunits

2.2 The products

2.3 The function

3 RNA Polymerase V

3.1 Subunits

3.2 The products

3.3 The function

4 The paradox of epigenetic control

Need for transcription in order to transcriptionally silence the same region. [1]

5 Future outlook

References

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