

Investigating tissue-specificity of microRNAs based on experimental miRNA-target interactions and expression profiles in human cancer tissues

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Abstract

Recent studies have revealed a small non-coding RNA, microRNA (miRNA) down-regulates its mRNA targets, which is regarded as an important role in various biological processes. Many studies have devoted predicting miRNA-target interactions. These studies show that the interactions may be only functional on some specific-tissues which depend on the characteristic of a miRNA. There have been no systematic methods established in the literatures to investigate the relationship between miRNA-target interactions and tissue specificity through microarray data. In this study, we propose an algorithm to investigate tissue-specificity of miRNAs based on experimental miRNA-target interactions. The tissue-specificity result by our method is in accordance with the literatures.