Abstract

One of RNA (ribonucleic acid) secondary structure prediction method is SCFG. However SCFG has a high reliance on grammar. This condition gives bad effect on prediction performance. This condition leads the prediction results become not optimal. Therefore, this research focuses on designing probability for every production rules of grammar so it can improve the sensitivity of grammar, especially Watson Crick grammar which commonly used in SCFG. This study constructed a system using grammatical evolution to build for every production rules of grammar with better sensitivity. The result show sensitivity is about 0.32-0.42.

Keyword: RNA secondary structure prediction, SCFG, Grammatical Evolution, sensitivity value