ABSTRACT

Provided is a method for deaminating targeted cytosine in a target RNA of a cell. The method comprises: introducing, into the cell, a modified adenosine deaminase protein or a catalytic domain thereof, or a construct expressing the modified adenosine deaminase protein or the catalytic domain thereof, and a construct comprising an arRNA oligonucleotide that recruits the modified adenosine deaminase protein or the catalytic domain thereof to the target RNA or expressing arRNA. Further provided are an engineered composition or system for RNA editing, and a use of treating a disease by using the engineered composition or system to correct a T-C mutation.