Abstract

In organisms, RNA interference serves as a defence mechanism against foreign nucleic acids. RNAi has a negative effect on translation, via the binding of small non-coding molecules to the complementary region of mRNA, resulting in its degradation. CRISPR, a new method of genetic engineering, is based upon modulating genetic expression via creating double-stranded breaks in target DNA, aided by a ribonucleoprotein complex, consisting of the prokaryotic endonuclease Cas9 and sgRNA. Both of the aforementioned methods can be utilised in functional analysis of proteins and the characterisation of metabolic pathways in organisms of interest. This work summarises the current state of knowledge regarding RNAi and CRISPR and their use in genome editing of parasitic protists.