



Non-Confidential Technology Disclosure

- Title:** Methods and compositions for enhancing the efficacy and specificity of single and double blunt-ended RNA duplexes.
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- Description:** In RNAi, siRNAs act as a guide to direct cleavage of their target RNA by complexing with the RISC complex. Typically, siRNAs are effective when they contain a 19 base pair duplex and 2-nucleotide, 3' single-stranded tails, making the optimal siRNA 21 nucleotides. However, this invention demonstrates the ability to manipulate specificity and efficacy in RISC-mediated cleavage. Specifically, smaller RNA species (19nt or shorter) can actively assemble into RISC complexes. These molecules can contain either single or double blunt-ends, with targeted modifications that can selectively target the desired strand to the RISC complex.
- Application:** The findings in this invention provide:
1. Methods for selectively targeting the desired strand to the RISC complex.
 2. Methods for designing small siRNA molecules with single and double blunt ends.
 3. Therapeutic or prophylactic uses of these siRNAs to modulate unwanted gene activity or protein expression.
- Advantage:** Prior to this art, none have demonstrated that small siRNAs of 19 or fewer nucleotides could effectively direct RNAi.
- Patent Status:** Patent pending
- Licensing Status:** Research Reagent Field Available to License
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