



**Non-Confidential
Technology Disclosure**

Titles: Dicer interacting proteins as modulators of RNAi and related pathways

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Description: Dicer is a ribonuclease III enzyme that plays key roles in the processing of RNA precursors triggering activation of RNAi. Regulation of this enzyme is poorly understood. Drs. Mello and Duchaine have identified numerous Dicer-interacting proteins which are capable of modulating Dicer's function in RNAi. The newly discovered interacting proteins have important significance in controlling RNAi activity by affecting Dicer up-or down-regulation. These proteins can be used for identifying further interactors of Dicer and their structural and functional characteristics, for pharmaceutical intervention by modulating Dicer activities *in vivo*, and for stabilizing Dicer. Furthermore, the Dicer interacting proteins are implicated in regulating different Dicer functions such as cell division, chromosomal organization, and genomic stability.

Applications: This invention may be utilized to:

- Activate or inhibit Dicer activity.
- Purify and identify further interactors and/or interactions.
- Improve *in vitro* Dicer processing.
- Identify drug targets of Dicer interactors.
- Treat human disorders and disease through diagnostic and therapeutic applications.

Patent Status: Patent pending, # 20070031417

Licensing Status: Available to license

Dockets: UMMC 04-98

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