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RNA interference (RNAi) has become a widely used experimental tool for targeted gene silencing. In the August 10 *Science*, Scott Hammond and colleagues from the Cold Spring Harbor Laboratory report the isolation of an RNAi effector nuclease from *Drosophila* cells (*Science* 2001, **293**:1146-1150). They performed a biochemical purification of RISC (RNA-induced silencing complex), a 500 kD ribonucleoprotein complex with sequence-specific nuclease activity, from cultured *Drosophila* S2 cells. Microsequencing of one of the protein components of the complex revealed a sequence homologous to *rde-1*, a member of the *Argonaute* gene family involved in RNAi in *Caenorhabditis elegans*. Hammond *et al.* named their gene *Argonaute2* (*AGO2*). AGO2-specific antibodies detected a 130 kD protein in the RISC complex. Disruption of the *AGO2* gene by RNAi reduced the cells ability to perform gene silencing induced by double-stranded RNA. This study provides a molecular link between genetic and biochemical observations and will aid understanding of the mechanisms of RNAi.

References

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