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In the news

MORE SMALL RNAS

It's time to add another new member to the family of small RNAs. In four reports published in *Nature* and *Genes & Development*, the groups of Greg Hannon (Cold Spring Harbor Laboratory, USA), Toshiaki Watanabe (Kyoto University, Japan), Haifan Lin (Duke University, USA), Thomas Tuschl (Rockefeller University, USA), and Mihaela Zavolan (University of Basel, Switzerland) now identify a new class of small RNA in the mouse germline.

These newly identified 'piwi-interacting RNAs' (piRNAs) are slightly longer in size (26–31 nucleotides) than most other known small mammalian RNAs. The sequence of piRNAs is variable, although it generally starts with a uridine.

All of the groups showed that this new class of small RNAs associates with piwi proteins, which are required for spermatogenesis, but the biogenesis and function of piRNAs during spermatogenesis remains to be discovered. Lin suggested that "The complexity of piRNAs and their correspondence to different types of genomic sequences implicates their potentially diverse functions. This is another gold mine for studying gene regulation, especially that related to reproduction and inheritance." (*Genes & Development* press release, 8 June 2006). However, some researchers were reluctant to guess their function. As Tuschl explained "You can make really wild speculations, but I didn't make any of these in the paper because I'm afraid it's going to be too embarrassing later." (*news@nature.com*, 4 June 2006).

This discovery adds a new dimension to the fast-moving field of small RNAs. As Hannon said, "The message for me is that every time we understand something about this process, we open a whole new door, and we see data that makes us view this in a whole new light" (*news@nature.com*, 4 June 2006).

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