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[\[Molecular Biology\] Academia Sinica Scientists Discover Structural Basis of RNase T in Stable RNA 3'-end Maturation](#)

[Molecular Biology] Academia Sinica Scientists Discover Structural Basis of RNase T in Stable RNA 3'-end Maturation ([Chinese Version](#))

Academia Sinica News (2011/03/09) The research team in the Institute of Molecular Biology in Academia Sinica has revealed the structural basis for RNase T in stable RNA 3'-end maturation. This work was carried out in the laboratory of the Research Fellow Dr. Hanna S. YUAN, and Dr. Yu-Yuan HSIAO has performed most of the work. RNA maturation relies on various exonucleases to remove nucleotides successively from the 5'- or 3'-end of nucleic acids. However, little is known regarding the molecular basis for substrate selection and cleavage preference of exonucleases. Using RNase T as a model system, the research team dissects the structural basis of its substrate specificity and derives the general principles of the final 3'-end trimming process made by RNase T in stable RNA maturation. These results provide a working mechanism for the DEDD family exonucleases, dysfunction of some these enzymes linking directly to human diseases. This work has been published in Nature Chemical Biology, and supported by the National Science Council, National Tsing Hua University (Yu-Yuan HSIAO), National Synchrotron Radiation Research Center and Academia Sinica.

Reference:

[Academia Sinica News 2011/03/09](#)

[National Science Council International Cooperation Sci-Tech Newsbrief](#)

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