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## Regulation of LncRNA-MIF in c-Myc homeostasis

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c-Myc is one of the most important proto-oncogenes and is activated in over half of human cancers. However, it remains unclear how the c-Myc protein level is regulated. Here we show that lncRNA-MIF (c-myc inhibitory factor), a c-Myc-induced long non-coding RNA, acts as a competing endogenous RNA (ceRNA) for miR-586 and reduces the inhibitory effect of shared miR-586 on Fbw7, an E3 ligase for c-Myc, leading to increased Fbw7 level and subsequent c-Myc degradation. This creates an autoregulatory feedback loop between c-Myc and Fbw7 that involves both a long and a micro noncoding RNAs. Interestingly, levels of all components of this network including c-Myc, lncRNA-MIF, miR-586 and Fbw7 are found to be higher in tumor cells than in normal cells. The c-Myc-lncRNA-MIF-miR-586-Fbw7 axis represents a novel mechanism by which c-Myc homeostasis is finely regulated. Additionally, lncRNA-MIF is able to inhibit the glycolysis and tumorigenesis via suppressing c-Myc.

### Biography

Mian Wu has completed his graduation from Nanjing Normal University in 1981 (BS) and obtained his PhD degree from Columbia University, USA in 1988. He then continuously conducted his Post-doctoral research at Harvard University during 1988-1991. Thereafter, he moved to Singapore as an Assistant Professor at School of Biological Sciences of National University of Singapore. From 2000, he worked as a full Professor at University of Science and Technology of China in Hefei, Anhui. His research interests focus on molecular mechanisms for p53-regulated tumor development and regulation of non-coding RNA in tumor metabolism. He has published more than 60 research papers in international peer-reviewed journals with more than 2900 citations.

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