

# 上海市生物化学与分子生物学学 2019 年青年学术论坛

## 优秀青年报告 推荐表

姓 名	范静	性 别	女
E-mail	fanjing@sibcb.ac.cn	手 机	13524919003
单位/院校	中科院生物化学与细胞生物学研究所	职 称	博士后
报告题目	<b>ALYREF links 3'-end processing to nuclear export of nonpolyadenylated mRNAs</b>		
报告摘要	<p>The RNA-binding protein ALYREF plays key roles in nuclear export and also 3'-end processing of polyadenylated mRNAs, but whether such regulation also extends to non-polyadenylated RNAs is unknown. Replication-dependent (RD)-histone mRNAs are not polyadenylated, but instead end in a stem-loop (SL) structure. Here, we demonstrate that ALYREF prevalently binds a region next to the stem loop on RD-histone mRNAs. SL-binding protein (SLBP) directly interacts with ALYREF and promotes its recruitment. ALYREF promotes histone pre-mRNA 3'-end processing by facilitating U7-snRNP recruitment through physical interaction with the U7-snRNP-specific component Lsm11. Furthermore, ALYREF, together with other components of the TREX complex, enhances histone mRNA export. Moreover, we show that 3'-end processing promotes ALYREF recruitment and histone mRNA export. Together, our results point to an important role of ALYREF in coordinating 3'-end processing and nuclear export of non-polyadenylated mRNAs.</p>		
论文发表情况 (近三年)	<p><b>Fan J</b>, Wang K, Du X, Wang JS, Chen SL, Wang YM, Shi M, Zhang L, Wu XD, Zheng DH, Wang CS, Wang LT, Tian B, Li GH, Zhou Y, Cheng H*. ALYREF links 3'-end processing to nuclear export of non-polyadenylated mRNAs. <i>EMBO J</i> (2019) DOI: 10.15252/embj.201899910 <b>IF:10.557</b></p> <p><b>Fan J#</b>, Kuai B#, Wang K#, Wang LT, Wang YM, Wu XD, Chi BK, Li GH, Cheng H*. mRNAs are sorted for export or degradation before passing through nuclear speckles. <i>Nucleic Acids Res</i> (2018) 46: 8404-8416 <b>IF:11.561</b></p> <p><b>Fan J#</b>, Kuai B#, Wu GF, Wu XD, Chi BK, Wang LT, Wang K, Shi ZB, Zhang H, Chen S, He ZS, Wang SY, Zhou ZC, Li GH*, Cheng H*. Exosome cofactor hMTR4 competes with export adaptor ALYREF to ensure balanced nuclear RNA pools for degradation and export. <i>EMBO J</i> (2017) 36: 2870-2886 <b>IF:10.557</b></p> <p>Chen SL#, Wang RJ#, Zheng DH#, Zhang H#, Chang XY, Wang K, Li WC, <b>Fan J</b>, Tian B*, Cheng H*. The mRNA export receptor NXF1 coordinates transcriptional dynamics, alternative polyadenylation, and mRNA export. <i>Mol Cell</i> (2019) pii: S1097-2765(19)30046-2. DOI: 10.1016/j.molcel.2019.01.026</p> <p>Wang JS#, Chen JY#, Wu GF#, Zhang HL#, Du X#, Chen SL, Zhang L, Wang K, <b>Fan J</b>, Gao SX, Wu XD, Zhang SX, Kuai B, Zhao P, Chi BK, Wang LT, Li GH, Wong CCL, Zhou Y*, Li JS*, Yun CH*, Cheng H*. NRDE2 negatively regulates exosome functions by inhibiting MTR4 recruitment and exosome interaction. <i>Genes Dev</i> (2019) DOI: 10.1101/gad.322602.118</p>		

请在 **2019 年 8 月 29 日** 之前提交推荐表至学会办公室 [ssbmb@sibs.ac.cn](mailto:ssbmb@sibs.ac.cn)。  
邮件主题注明：2019 年青年论坛