第55回生命科学先端研究センター学術セミナー

日時：平成22年３月31日（水）午後５時から
場所：杉谷キャンパス共同利用研究棟６階会議室
講師：Robert G. Roeder 教授
Laboratory of Biochemistry and Molecular Biology
The Rockefeller University, U.S.A.

演題：「Function of Diverse Transcriptional Coactivators in Animal Cells」

ABSTRACT

Transcriptional regulation by gene- and cell-specific DNA-binding factors underlies key events in development and in cell growth, differentiation and transformation. However, their effects on the general transcription machinery on specific target genes depend upon complex arrays of cofactors (coactivators and corepressors) that add additional layers of regulation. These cofactors include both chromatin remodeling/histone modifying factors (including various histone acetyltransferases and methyl-transferases) and factors (such as the 30-subunit Mediator complex and the TAF subunits of TFIID) that facilitate more direct communication between promoter-bound regulatory factors and the general transcription machinery. The function of selected cofactors will be discussed in relation to gene activation by tumor suppressor p53, nuclear hormone receptors and/or E-proteins.

References

1. Kim, J., Guermah, M., & Roeder, R.G. (2010) The Human PAF1 Complex Acts in Chromatin Transcription Elongation Both Independently and Cooperatively with SII/TFIIS. *Cell*, 140: 491-503.
2. Chen, W., Yang, Q., & Roeder, R.G. (2009) Dynamic interactions and cooperative functions of PGC-1alpha and MED1 in TRalpha-mediated activation of the brown-fat-specific UCP-1 gene. *Mol. Cell*, 35: 755-768.
3. Kim, J., Guermah, M., McGinty, R.K., Lee, J.S., Tang, Z., Milne, T.A., Shilatifard, A., Muir, T.W., & Roeder, R.G. (2009) RAD6-Mediated transcription-coupled H2B ubiquitylation directly stimulates H3K4 methylation in human cells. *Cell*, 137: 459-471.
4. Malik, S. & Roeder, R.G. (2008) Epigenetics? Mediator does that too! *Mol. Cell*, 31: 305-306.

※Roeder教授は真核生物のRNAポリメラーゼを同定し，in vitroでの転写再構成系を確立したことを皮切りに，また最近はクロマチン制御，p53修飾に伴う転写制御まで研究されている，世界の転写業界の第一人者です。この度，京都の国際内分泌学会にて基調講演を行ったのちに，富山にお立ち寄りいただくことになりました。エキサイティングな転写研究の講演を聴くことができると思います。皆様のご来聴をよろしくお願いいたします。

◎問い合わせ先
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