



中国科学院生物物理研究所

贝时璋讲座

Novel nucleic acids in cell proliferation and differentiation: microDNAs, tRFs and lncRNAs

报告人: Prof. Anindya Dutta

报告时间: 2016年11月7日 (周一) 上午10:00

报告地点: 生物物理所9501会议室

邀请人: 许瑞明 研究员

主持人: 李国红 研究员



报告人简介

Dr. Dutta is the Harry F. Byrd Professor and Chair of Biochemistry and Molecular Genetics and Professor of Pathology at the University of Virginia School of Medicine. He has trained at Christian Medical College, Vellore (M.B.B.S.), Rockefeller University (Ph.D.) , Cold Spring Harbor Laboratory (Postdoctoral training under the supervision of Dr. Bruce Stillman) and Brigham and Women's Hospital, Harvard Medical School (Residency in Pathology). He was Asst. and Assoc. Professor of Pathology at BWH before moving to UVA. His research interests cover genomic instability in cancer cells and noncoding RNAs in differentiation and cancer. His laboratory identified many of the replication initiation proteins and hundreds of origins of replication in human chromosomes, discovered a major mechanism by which human cells prevent over-replication of their DNA, and identified a novel class of circular DNA present in normal mammalian cells. His laboratory has also discovered many microRNAs that inhibit cell proliferation and promote differentiation during the conversion of muscle stem cells to mature muscle and microRNAs that contribute to the phenotypes of advanced prostate cancer.

代表成果:

1. Shibata Y, Kumar P, Layer R, Willcox S, Gagan JR, Griffith JD, **Dutta A**. Extrachromosomal MicroDNAs and Chromosomal Microdeletions in Normal Tissues. *Science*. 2012; 336:82-6. F1000 citation.
2. Dey BK, Pfeifer K, and **Dutta A**. The H19 long non-coding RNA gives rise to microRNAs miR-675-3p and -5p to promote skeletal muscle differentiation and regeneration. *Genes & Development*. 2014; 28:491-501. 3.
3. Im JS, Keaton M, Lee KY, Kumar P, Park J and **Dutta A**. ATR checkpoint kinase and CRL1 β TRCP collaborate to degrade ASF1a and thus repress genes overlapping with clusters of stalled replication forks. *Genes & Development*. 2014; 28:875-87.
4. Lee KY, Im JS, Shibata E, Park JH, Handa N, Kowalczykowski S and **Dutta A**. MCM8-9 complex promotes resection of double-strand break ends by Mre11-Rad50-Nbs1 complex. *Nature Communications*. 2015; 6:7744.