

BIOLS SEMINAR SERIES

北京生命科学研究院精品讲座

报告时间：2012年8月20日（星期一）上午10:00

报告地点：中国科学院生物物理所9501会议室

报告题目：Clinical application of pluripotent stem cells.

报告人：Yang Xu, Professor. Section of Molecular Biology, University of California, San Diego.

欢迎广大科研人员和研究生光临！



Prof. Xu received his Bachelor degree of Biochemistry in 1989 from Wuhan University and received his Ph.D of Immunology in 1994 at Harvard University. After finishing his Postdoctoral fellow in MIT, he has been working in Section of Molecular Biology, University of California, San Diego, since 1997, and he was appointed Professor in 2008. Prof. Xu's lab is interested in understanding the signaling pathways involved in maintaining genetic stability in mammalian cells, particularly embryonic stem cells (ESCs). They are investigating the pathways that coordinate the DNA damage responses and self-renewal of ESCs and adult stem cells. They also focusing on the roles of tumor suppressors such as ATM and p53, which are critical to maintain genetic stability in somatic cells. Since most of the reprogramming factors have

oncogenic potential, they are investigating the genetic stability in induced pluripotent stem cells (iPSCs). In addition, they are developing strategies to address the bottlenecks that hinder the clinic development of human ESCs and iPSCs.

Prof. Xu was prized WADSWORTH Foundation faculty award (2002); DOD Breast Cancer Research Program Idea Award (2002, 2008) and DOD Prostate Cancer Research Program Idea Award (2004). He has published many papers in top-flight journals, such as *Nature*, *Nature Cell Biology*, *Nature Immunology* and *Cell Stem Cell*, etc.

Key Publications:

- 2011. The immunogenicity of the induced pluripotent stem cells. *Nature* 474: 212-215.
- 2010. Puma is required for p53-induced depletion of adult stem cells. *Nat. Cell Biol.* 12:993-8.
- 2010. Modeling disease in human ESCs using an efficient BAC-based homologous recombination system. *Cell Stem Cell* 6, 180-89.
- 2010. p53 and Stem cells: new developments and new concerns. *Trends Cell Biol.* 20: 170-5.
- 2007. p53 gain-of-function cancer mutants induce genetic instability by inactivating ATM. *Nat. Cell. Biol.* 9:573-80..
- 2006. Critical roles of the immunoglobulin heavy and kappa light chain intronic enhancers in maintaining the sequential rearrangement of immunoglobulin loci. *J. of Exp. Med.* 203:1721-32.
- 2006. DNA damage: a trigger of innate immunity but essential for adaptive immune homeostasis. *Nat Reviews Immunol.* 6:261-70.
- 2005. p53 induces differentiation of mouse embryonic stem cells by suppressing Nanog expression. *Nat. Cell Biol.* 7, 165-171.
- 2004. Functional dissection of the immunoglobulin kappa light chain intronic enhancer reveals important roles for E protein binding sites in activating VkJk rearrangement. *J. Exp. Med.* 200, 1205-1211.
- 2002. Essential roles of the kappa light chain intronic enhancer and 3' enhancer in kappa rearrangement and demethylation. *Nat Immunol.* 3:463-8.

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