

XU LU

Assistant Professor of Biology
College of Sciences
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Education:

Graduate

1999-2004 University of Texas Health Science **Ph.D.** Biochemistry
Center at San Antonio
Advisor: Dr. Jeffrey C. Hansen
Thesis title: Molecular dissection of linker histone C-terminal domain function in chromatin.

Undergraduate

1995-1999 Peking University, China **B.S.** Biochemistry

Work Experience:

2010-present **Assistant Professor of Biology**, College of Sciences, University of Findlay,
Findlay, Ohio
Courses: Introduction to Cell and Molecular Biology; Human Genetics;
Human Genetic Lab.

2009 **Visiting Assistant Professor**, Department of Physical Sciences, Ferris State
University, Big Rapids, Michigan
Course: Biochemistry Lab.

2007-2010 **Postdoctoral Fellow**, Laboratory of Transcriptional Regulation, Van Andel
Research Institute. Mentor: Dr. Steven J. Triezenberg
Research topic: roles of chromatin structures and chromosomal proteins in human herpes simplex
virus type 1 (HSV-1) lytic infection.

2004-2007 **Postdoctoral Fellow**, Department of Biochemistry and Molecular Biology,
Colorado State University. Mentors: Drs. Karolin Luger and Jeffrey C. Hansen
Research topics: the mechanisms through which histone methylation, histone variant macroH2A
and linker histones affect chromatin packaging.

1999-2004 **Graduate Student**, Department of Biochemistry, University of Texas Health
Science at San Antonio. Advisor: Dr. Jeffrey C. Hansen
Research topics: the mechanisms through which linker histones affect chromatin packaging.

Research Interests:

Role of chromosomal proteins in human herpes simplex virus type 1 lytic infection.

Professional Journal Review Experience:

- FEBS Journal
- International Journal of Biological Macromolecules
- African Journal of Biochemistry Research
- Journal of Cell and Animal Biology

Membership in Professional Societies:

- Biophysical Society

Publications:

1. **Lu, X.** and Triezenberg, S.J. Chromatin assembly on herpes simplex virus genomes during lytic infection. *Biochim. Biophys. Acta.* 1799: 217-222.
2. **Lu, X.**, Parseghian, M.H., Hamkalo, B.A., and Hansen, J.C. (2009) Chromatin condensing functions of the linker histone C-terminal domain are mediated by specific amino acid composition and intrinsic protein disorder. *Biochemistry* 48: 164-172.
3. **Lu, X.**, Simon, M.D., Chodaparambil, J.V., Hansen, J.C., Shokat, K.M., and Luger, K. (2008) The effect of H3K79 dimethylation and H4K20 trimethylation on nucleosome and chromatin structure. *Nat. Struct. Mol. Biol.* 15: 1122-1124.
4. Chodaparambil, J.V., Barbera, A.J., **Lu, X.**, Kaye, K., Hansen, J.C., and Luger, K. (2008) A charged and contoured surface on the nucleosome regulates chromatin compaction. *Nat. Struct. Mol. Biol.* 14: 1105-1107.
5. Kan, P.-Y., **Lu, X.**, Hansen, J.C., and Hayes, J.J. (2007) The H3 tail domain mediates interactions between self-associating nucleosome arrays. *Mol. Cell Biol.* 27, 2084-2091.
6. **Lu, X.**, Klonoski, J.M., Resch, M.G., and Hansen, J.C. (2006) In vitro chromatin self-association and its relevance to genome architecture. *Biochem. Cell Biol.* 84, 411-417.
7. Hansen, J. C., **Lu, X.**, Ross, E. D. and Woody, R. W. (2006) Intrinsic protein disorder, amino acid composition, and histone terminal domains. *J. Biol. Chem.* 281, 1853-1856.
8. Widlak, P., Kalinowska, M., Parseghian, M.H., **Lu, X.**, Hansen, J.C., and Garrard, W.T. (2005) The Histone H1 C-terminal Domain Binds to the Apoptotic Nuclease, DNA Fragmentation Factor (DFF40/CAD) and Stimulates DNA Cleavage. *Biochemistry* 44, 7871-7878.
9. Zheng, C., **Lu, X.**, Hansen, J. C. and Hayes, J. J. (2005) Salt-dependent intra- and internucleosomal interactions of the H3 tail domain in a model oligonucleosomal array. *J. Biol. Chem.* 280, 33552-33557.

10. **Lu, X.**, and Hansen, J.C. (2004) Identification of specific functional subdomains within the linker histone H1° C-terminal domain. *J. Biol. Chem.* 279, 8701-8707.
11. **Lu, X.**, and Hansen, J.C. (2003) Revisiting the structure and functions of linker histone C-terminal tail domain. *Biochem. Cell Biol.* 81,173-176.

Oral Presentations:

1. **Lu, X.**, and Hansen, J.C. The linker histone C-terminal tails and intrinsic protein disorder. *West Coast Chromatin and Chromosome Conference*, Asilomar, California. December 2003.
2. **Lu, X.**, and Hansen, J.C. Stabilization of condensed chromatin by linker histone H1° C-terminal tail domain mutants. *West Coast Chromatin and Chromosome Conference*, Asilomar, California. December 2002.

Poster Presentations:

1. **Lu, X.**, and Triezenberg, S.J. Potential roles for ATR but not ATM in lytic infection by herpes simplex virus. *34th Annual International Herpesvirus Workshop*, Ithaca, New York. July 2009.
2. **Lu, X.**, and Triezenberg, S.J. Potential roles for ATR but not ATM in lytic infection by herpes simplex virus. *Transcriptional Regulation by Chromatin and RNA Polymerase II (ASBMB 2008 Meeting in Transcription)*, Granlibakken, California. October 2008.
3. **Lu, X.**, and Hansen, J.C. Amino acid composition and position relative to the globular domain are determinants of the functions of the linker histone C-terminal domain. *Regulation of Eukaryotic Transcription: From Chromatin to mRNA (Keystone Symposium)*, Taos, New Mexico. April 2006.
4. **Lu, X.**, and Hansen, J.C. Structural analysis of chromatin bound to mouse H1° C-terminal deletion mutants. *Pennsylvania State University 22nd Annual Summer Symposium in Molecular Biology*, College Station, Pennsylvania. July 2003.
5. **Lu, X.**, and Hansen, J.C. Specific subdomains in the linker histone C-terminus mediate nucleosomal DNA wrapping and chromatin condensation. *Biophysical Society 47th Annual Meeting*, San Antonio, Texas. March 2003.