

BIOGRAPHICAL SKETCH

NAME John C. Lucchesi	POSITION TITLE Professor and Chair		
EDUCATION		YEAR	
INSTITUTION AND LOCATION	DEGREE	CONFERRED	FIELD OF STUDY
LaGrange College, LaGrange, GA	A.B.	1955	Chemistry/Biology
University of Georgia, Athens, GA	M.S.	1958	Genetics
University of California, Berkeley, CA	Ph.D.	1963	Genetics
University of Oregon	Post-Doc.	1963-65	Genetics

EMPLOYMENT:

Univ. of North Carolina at Chapel Hill, Assist. Prof. of Zoology and Genetics, 1965-68; Assoc. Prof. 1968-72;
 Professor, 1972-82; Professor of Biology and Genetics, 1982-90
 Duke University, Adjunct Professor of Genetics, 1979-1990
 Emory University, Professor of Biology and Chairman, 1990-2003
 Professor of Biology, 2003-
 Adjunct Professor of Biomedical Engineering, 2001-2004.

OTHER PROFESSIONAL ACTIVITIES:

Genetics Society of America, Program Committee, 1974-76
 Program Chairman, 1975
 Nominations Committee (Chairman), 1980-82, 1998
 Travel Committee, 1987-88
 Nominations Committee (Chairman), 1998
 Consultant, UNESCO/UNDP Project on Special Assistance to Selected Univ. departments, India, 1981
 Editorial Board, Journal of Heredity, 1981-90
 Editorial Board, Developmental Genetics, 1982-91
 Genetics Study Section, Division of Research Grants, NIH
 Member, 1979-83
 Chairman, 1987-90
 Consultant to the Board of Regents, Univ. of Louisiana, 1990-93
 Co-Chairman, Intellectual Capital Panel, Atlanta meeting of the NIH on Strategic Planning, 1992
 Member, NIH Committee on Strategic Planning, 1993
 Consultant to the Alabama Higher Education Committee, 1994-98
 Member, Biomedical Research and Research Training, NIGMS, NIH, 1995-99
 External Reviewer: Mol. Cell. & Devel. Biology Division., Univ. Alabama, Tuscaloosa, 1996
 Dept. of Biology, Southern Methodist University, 1999
 Dept. of Cell. Bioch. Mol. Biology, Univ. Tennessee, 2000
 Dept. of Biology, Univ. Michigan, Ann Arbor, 2000

Dept. of Zoology, Univ. British Columbia, Canada, 2000
 School of Biological Sciences, UC-Irvine, 2001
 Dept. of Genetics, Univ. Georgia, Athens, 2002
 Dept. of Cell. Bioch. Mol. Biology, Univ. Tennessee, 2004

PROFESSIONAL SOCIETIES:

Genetics Society of America, 1961-
 American Society for Cell Biology, 1970-
 Society for Developmental Biology, 1979-
 American Association for the Advancement of Science, 1987-
 American Society of Microbiology, 1998-

FELLOWSHIPS:

University Research Leave, Spring and Summer 1970, MaxPlanck-Institut für Biologie, Tübingen, Germany
 NIH Research Career Development Award, 1970-75
 Kenan Research Leave, Spring and Summer 1978, Department of Genetics, Univ. of California, Berkeley, CA
 University Research Leave, Spring and Summer 1984, Genetics Department, Univ. of Cambridge, England

HONORS:

Cary C. Boshamer Endowed Professorship, 1982-1990
 Senior Fellow of Churchill College, University of Cambridge, England, 1982-
 Fellow AAAS, 1988
 Frontiers of Science Lecture, Univ. Bologna, Italy, 1989
 Asa G. Candler Endowed Professorship, 1990-
 President, Genetics Society of America, 1992
 Scientific Vice-President, XVII International Congress of Genetics, 1993
 President, Drosophila Researchers Board, 1992-1995
 Chair, FlyBase Advisory Committee, 1995- 2001
 Kühn-Wettstein Commemorative Lecture, Univ. Göttingen, Germany, 1995
 The Arthur Chovnick Distinguished Lecture in Genetics, Univ. Connecticut, 1997
 Keynote Lecture, Int. Symposium on Frontiers of Genetics and Development, Bangalore, India, 1998
 Introductory Lecture, Drosophila in the New Millennium Symposium, Zürich, Switzerland, 2000

EXTRA-MURAL FUNDING:

“Gene Regulation in Drosophila: Dosage Compensation”

Principal Investigator

Agency: NIGMS

Type: RO1 (GM15691, Years 35-39, 01/01/2004 – 12/31/2007).

The long-term objective of this project is to use the sex-differentiation mechanism of dosage compensation to study the effects of chromatin remodeling on transcription regulation.

"Predoctoral training program in genetics”

Principal Investigator and Director

Agency: NIGMS

Type: T32 (GM-08490, Years 10 –15, 7/1/03 – 6/30/08).

RECENT PUBLICATIONS:

- Koonin, E. V., S. Zhou, and J. C. Lucchesi 1995 The chromo superfamily: new members, duplication of the chromo domain and possible role in delivering transcription regulators to chromatin. *Nucl. Acids Res.* 23: 4229-4233.
- McDowell, K., A. Hilfiker, and J. C. Lucchesi 1996 Dosage compensation in *Drosophila*: the X-chromosome binding of MSL-1 and MSL-2 in female embryos is prevented by the early expression of the Sxl gene. *Mech. Devel.*, 57: 113-119.
- Lucchesi, J. C. 1996 Dosage compensation in *Drosophila* and the “complex” world of transcriptional regulation. *BioEssays*, 18: 541-557.
- Digilio, F. A., A. Pannuti, J. C. Lucchesi, M. Furia, and L. C. Polito 1996 Tosca: a *Drosophila* gene encoding a nuclease specifically expressed in the female germline. *Devel. Biol.* 178: 90-100.
- Hilfiker, A., D. Hilfiker-Kleiner, A. Pannuti, and J. C. Lucchesi 1997 *mof*, a putative acetyl transferase gene related to the Tip60 and MOZ human genes and to the SAS genes of yeast, is required for dosage compensation in *Drosophila*. *EMBO J.* 16: 2054-2060.
- Gu, W., P. Szauter, and J.C. Lucchesi 1998. Targeting of MOF, a putative histone acetyl transferase to the X Chromosome in of *Drosophila melanogaster*. *Dev. Genet.* 22: 56-64.
- Smith, E., A. Eisen, W. Gu, M. Sattah, A. Pannuti, J. Zhou, R.G. Cook, J.C. Lucchesi and C.D. Allis, 1998 ESA1 is a histone acetyl transferase that is essential for growth in yeast. *Proc. Nat Acad. Sci., USA* 95: 3561-3565.
- Eisen, A., M. Sattah, T. Gazitt, K/ Neal, P. Szauter, and J.C. Lucchesi. 1998. A Novel of DEAD-box RNA helicase exhibits high sequence conservation from yeast to humans and localizes to the cytoplasm in *Drosophila*. *Biophys. Biochem Acta*, 1398: 131-136.
- Lucchesi, J.C. 1998. Dosage compensation in flies and worms: the ups and downs of X chromosome regulation. *Curr. Opin. Genet. Devel.* 8: 179-184.
- Eisen, A., and J.C. Lucchesi. 1998. Unraveling the role of helicases in transcription. *BioEssays* 20.8: 634-641.
- Neal, K.C., Pannuti, A., Smith, E.R. and J. C. Lucchesi. 1999. A new human member of the MYST family of histone acetyl transferases with high sequence similarity to *Drosophila* MOF. *Biophys. Biochim. Acta* 1490: 170-174.

- Smith, E., A. Pannuti, W. Gu, A. Steuernagel, R.G. Cook, C. D. Allis and J. C. Lucchesi. 2000. The Drosophila MSL complex acetylates histone H4 at lysine 16, a chromatin modification linked to dosage compensation. *Mol. Cell. Biol.* 20: 312-318.
- Gu, W., Pannuti, A. and J. C. Lucchesi 2000 Targeting the Chromatin-remodeling MSL complex of Drosophila to its sites of action on the X chromosome requires both acetyl transferase and ATPase activities. *EMBO J.* 19: 5202-5211.
- Pannuti, A., and J. C. Lucchesi 2000 Recycle to remodel: evolution of dosage compensation complexes. *Curr. Opin. Genet. Devel.* 10: 644-650.
- Eisen, A., Utley, R.T., Nourani, A., Allard, S., Schmidt, P., Lane, W.S., Lucchesi, J.C., and J. Cote 2001 The yeast NuA4 and Drosophila MSL complexes contain homologous subunits important for transcriptional regulation. *J Biol. Chem.* 276: 3484-3491.
- Vogt, S., G. Schneider, A. Steuernagel, J. Lucchesi, E. Schultze, R. Rudolph, and G. Schmahl 2001 X-ray microscopic studies of the Drosophila dosage compensation complex. *J. Struct. Biol.* 132 : 123-132.
- Smith, E.R., Allis, C.D., and J. C. Lucchesi 2001 Linking global histone acetylation to the transcription enhancement of X-Chromosomal genes in drosophila males. *J Biol Chem*, 276: 31483-31486.
- Pardo, P.S., Leing, J.K., Lucchesi, J.C., and O. Pereire-Smith 2002 MRG15 a novel chromodomain protein is present in distinct multiprotein complexes involved in transcription activation. *J. Biol. Chem.*, in press.
- Sass, G.L., Pannuti, A., and J.C. Lucchesi 2003 Male-specific lethal complex of Drosophila targets activated regions of the X chromosome for chromatin remodeling. *Proc. Nat. Acad. Sci. USA*, 100:8287-8291.
- Jin, P., Zarnescu, D.C., Zhang, F., Pearson, C.E., Lucchesi, J.C., Moses, K., and S.T. Warren 2003 RNA-mediated neurodegeneration caused by the fragile X premutation rCGG repeats in Drosophila. *Neuron*, 39:739-747.
- Lucchesi, J.C. 2004. Reproduction and Development: Dosage Compensation. In: *Comprehensive Molecular Insect Science*, L.I. Gilbert, K. Iatrou, and S.S. Gill, editors, pp. 237-245 (Elsevier/Pergamon).
- Gupta, A., G.G. Sharma, C.S.H. Young, M. Agarwal, E. R. Smith, J.C. Lucchesi, K.K. Khanna, T. Ludwig, and T.K. Pandita. 2005. Involvement of human MOF in ATM function. *Molec. Cell. Biol.*, 25:5292-5305.
- Smith E.R., R. Huang, C. Cayrou, W. S. Lane, J. Cote, and J. C. Lucchesi 2005 A human complex related to the Drosophila MSL complex is responsible for the majority of histone H4 acetylation at lysine 16. *Molec., Cell* 25: 9175-9188.
- Lucchesi, J.C., Kelly, W.G. and B. Panning 2005 Chromatin remodeling in dosage compensation. *Ann. Rev. Genetics* 39: 615-651.