

Curriculum vitae (updated February 2017)

Pascale Lesage (Pascale.lesage@inserm.fr)

Research Director at CNRS

Inserm U944, CNRS/P7 UMR7212

ACADEMIC AND PROFESSIONAL CAREER

2011-present **Scientific Director DR2** (CNRS), team “Dynamic of retroviruses and retrotransposons” St Louis Hospital-Hematology Institute- Paris Diderot University

2008-2011 **Senior Scientist CR1** (CNRS), team “Regulation of Ty1 retrotransposition”
St Louis Hospital - Hematology Institute- Paris Diderot University
PI on the axis: “Control of Ty1 retrotransposition in yeast”

2004 **Degree to supervise research** (HDR) University of Paris-Sud

1995 – 2008 **Research scientist Junior CR2 and Senior CR1** (CNRS)
Institut de Biologie Physico-Chimique (IBPC), CNRS Paris
PI on the axis: “Control of Ty1 retrotransposition in yeast” in the team of M. Springer

1992 – 1995 **Postdoc fellow**, laboratory of Pr. Marian Carlson
Columbia University, Dept. of Genetics and Development, New York, USA

1987 – 1991 **PhD in Life Sciences**, University of Paris Sud, team of Mathias Springer, IBPC, awarded July 05th 1991

TRAINING OF HUMAN RESOURCES

6 PhD students, 3 post-doc fellows, 4 technicians

GRANTED RESEARCH IN THE LAST 5 YEARS

2016 Cancéropôle Ile-de-France
2016-2017 Fondation ARC
2014-2018 ANR NiCiTy

Prize

2016 Prix Diderot Innovation
2016 Prix Dagnan-Bouveret (French Academy of Sciences)

SPEAKER IN INTERNATIONAL CONFERENCES IN THE LAST FIVE YEARS

2015 EMBO symposium “The Mobile Genome: Genetic and Physiological Impacts of Transposable Elements”, Heidelberg, GR

2015 EMBO workshop on Nuclear Structure and Dynamics, Isle sur Sorgue, FR

2014 5th International Conference on Retroviral Integration, Asilomar, USA

2014 Keystone meeting on Mobile DNA, Santa Fe, USA

2012 International Congress on Transposable Elements (ICTE 2012), Saint Malo, FR

PATENT

“Polypeptides for engineering integrase chimeric proteins and their use in gene therapy”
February 12th 2015: European patent (EP15305217.0)
February 12th 2016: International extension (PCT/EP2016/053008)

RESEARCH MANAGEMENT EXPERIENCE IN THE LAST 5 YEARS

2012 and 2016: co-organizer: “International congress on Transposable Elements (ICTE)” Saint-Malo
2006-2016: organizer: “Mob’lle de France” 4-6 meetings/year, half a day

TRANSVERSAL TRAINING AND RESPONSIBILITIES

Jury member for 16 PhD or HDR committees and one engineer committee of the EPHE
Teaching in Magister & Master courses (ENS and Universities René-Descartes, Paris-Sud & Paris Diderot)

PARTICIPATION IN SCIENTIFIC SOCIETIES AND EVALUATION COMMITTEES

GDR “Les éléments génétiques mobiles: du mécanisme aux populations, une approche intégrative (EGM)”
Board of Directors of the SFBBM (Société Française de Biochimie et Biologie Moléculaire)

SCIENCE AND SOCIETIES

Executive committee of the Association L’arbre des connaissances, an association funded by researchers in 2004 to promote dialog between producers of science and society

MAJOR PUBLICATIONS

1. Sultana T, Zamborlini A, Cristofari G, **Lesage P.** 2017. Integration site selection by retroviruses and transposable elements in eukaryotes. **Nat Rev Genet.** *in press.* **Review.**
2. Bridier-Nahmias A, Tchalikian-Cosson A, Baller JA, Menouni R, Fayol H, Flores A, Saïb A, Werner M, Voytas DF, **Lesage P.** (2015) Retrotransposons. An RNA polymerase III subunit determines sites of retrotransposon integration. **Science.** 348(6234):585-588.
3. Curcio MJ, Lutz S, **Lesage P** (2015) The Ty1 LTR-Retrotransposon of Budding Yeast, *Saccharomyces cerevisiae*. **Microbiol Spectr.** 2015 Apr;3(2). **Mobile DNA III Book Chapter.**
4. Bridier-Nahmias A, **Lesage P.** (2012) Two large-scale analyses of Ty1 LTR-retrotransposon *de novo* insertion events indicate that Ty1 targets asymmetric nucleosomal DNA segments near the H2A/H2B interface in tRNA hotspots. **Mobile DNA.** 3(1):22-25. **Commentary.**
5. Servant G., Pinson B., Tchalikian A., Couplier F., Lemoine S., Penetier, C. Bridier-Nahmias, A. Todeschini AL., Fayol H., Daignan-Fornier B. **Lesage P.** (2012) Tye7 regulates yeast Ty1 retrotransposon sense and antisense transcription in response to adenylc nucleotides stress. **Nucleic Acid Res,** 40, 5271-5282.
6. Servant G., Penetier C and **Lesage P.** (2008) Remodeling yeast genes transcription by activating Ty1 LTR-retrotransposon under severe adenine deficiency. **Mol. Cell. Biol.** 28. 5543- 5554.
7. Todeschini, AL., Morillon, A. Springer, M. & **Lesage, P.** (2005) Severe adenine starvation activates Ty1 transcription and retrotransposition in *S. cerevisiae*. **Mol. Cell. Biol.** 25, 7459-7472.
8. **Lesage, P.** and Todeschini, AL. (2005). Happy together: The life and times of Ty retrotransposons and their host. **Cytogenet. and Genome Res. Special Issue on Transposable Elements and Genome evolution,** 110, 70-90. **Review.**
9. Sacerdot, C., Mercier, G. Todeschini, AL., Dutreix, M., Springer, M. & **Lesage P.** (2005) Impact of ionizing radiation on the life cycle of *S. cerevisiae* Ty1 retrotransposon. **Yeast** 22, 441-455.
10. Morillon, A., Bénard, L., Springer, M. & **Lesage, P.** (2002) Differential effect of chromatin and Gcn4 on the fifty-fold range of expression among individual Yeast Ty1 retrotransposons. **Mol. Cell. Biol.** 22, 2078-2088.
11. Morillon A., Springer M. & **Lesage P.** (2000) Activation of the Kss1 invasive/filamentous growth pathway induces Ty1 transcription and transposition in *S. cerevisiae*. **Mol. Cell. Biol.** 20, 5766- 5776.