



## Pierre FERRIER,

Group leader: Control of gene expression and recombination during lymphocyte differentiation

### Background

- 1983 MD, Montpellier University; Medical Specialty in Biochemistry, Hematology & Immunology
- 1985 Master of Advanced Studies in Immunology, Aix-Marseilles University
- 1986-1991 Postdoct ; Department of Biochemistry & Molecular Biophysics (Head: F.W. Alt), College of Physicians & Surgeons, Columbia University, New York, NY, USA
- 1991-present Group Leader at the CIML
  - Team 'Control of gene expression and recombination during lymphocyte differentiation'
  - Inserm Research Associate & Research Director, CR1 (1990), DR2 (1993), DR1 (1996)
- 1998-2000 Deputy Director of the CIML
- 2000-2004 Director of Marseilles-Nice Genopole, a regional network of labs pursuing research in Genomics
- 2001-2005 Council of Scientists, Human Frontier Science Program Organisation
- 2011-2014 Administrative Council of the French Society of Immunology (SFI)
- 2006-present Head of the Genomics & Bioinformatics Platforms at the CIML

### Awards

- OTAN Award (1985)
- Philippe Foundation Award (1986)
- Inserm Interface (2006-10)
- Inserm Prime d'Excellence (2013)

### Membership

Commission Nationale (CN2) ARC : "Génétique des Tumeurs"

## Main Achievements

Identification of Ig/TCR cis-control elements of V(D)J recombination

Description of the epigenetic landscape leading to the activation of transcription and recombination at T-lymphoid specific gene loci, including Ig and TCR loci

## Selected publications

- Bouvier, G., Watrin, F., Naspetti, M., Verthuy, C., Naquet, P. and Ferrier, P. (1996). Deletion of the mouse T-cell receptor  $\beta$  gene enhancer blocks  $\alpha\beta$  T-cell development. *Proceeding of the National Academy of Sciences USA* 93: 7877-7881.
- Mathieu N, Hempel, WM, Spicuglia S, Verthuy C & Ferrier P (2000). Chromatin remodeling by the T cell receptor (TCR)- $\beta$  gene enhancer during early T cell development: Implications for the control of TCR $\beta$  gene recombination. *Journal of Experimental Medicine* 192: 625-636.
- Spicuglia, S., Kumar, S., Yey, J.-H., Vachez, E., Chasson, L., Gorbach, S., Cautres, J. and Ferrier, P. (2002). Promoter activation by an enhancer-dependant and -independent loading of activator and co-activator complexes. *Molecular Cell* 10: 1479-1487.
- Farcot, E., Bonnet, M., Jaeger, S., Spicuglia, S., Fernandez, B. and Ferrier, P. (2010). T-cell receptor (TCR)  $\beta$  allelic exclusion in dynamical models of V(D)J recombination based on allele independence. *The Journal of Immunology* 185:1622-1632.
- Koch F, Fenouil R, Gut M, Cauchy P, Albert TK, Zacarias-Cabeza J, Spicuglia S, Lamy de la Chapelle, A, et al. (2011). Transcription initiation platforms and GTF recruitment at tissue specific enhancers and promoters. *Nature Structural & Molecular Biology* 18:956-963.
- Dadi S, Le Noir S, Payet-Bornet D, Lhermitte L, Zacarias-Cabeza J, Bergeron J, Villarese P, Vachez E, et al. (2012). TLX homeodomain oncogenes mediate T-cell maturation arrest in T-ALL via interaction with ETS1 and suppression of TCR $\alpha$  gene expression. *Cancer Cell* 21:563-576.
- Jaeger S., Fernandez B., Ferrier P. (2012). Epigenetic aspects of lymphocyte antigen receptor gene rearrangement or 'when stochasticity completes randomness'. *Immunology* 139(2):141-50.