



R&D Engineer
molecular and cellular biology

CAREER

CELLULAR
DEVELOPMENT

Paris
2020 - current



Engineer – Collège de France, CIRB

Evolution and development of germ cells (Dr J.R Huynh)

- Responsible of the team's molecular and cellular projects
- Development of genetic and molecular tools in drosophila fly and medaka fish
- Establish the molecular and cellular mechanisms involved in the germ cells development of *Drosophila melanogaster* model

GENOME STABILITY
AND CANCER

Paris
2018 – 2019
(18 months)



Engineer – Curie institute

DNA recombination, replication and genome stability (Dr Sarah Lambert)

- Investigate molecular interaction occurring at replication forks and understand how these mechanisms trigger genome instability
- Define specific factors involved in reversed replication fork in fission yeast *Schizosaccharomyces pombe*

Paris
2015 - 2018
(30 months)



Homologous recombination and cancer (Dr Aura Carreira)

- Functional and cellular study of missense mutations in BRCA2 gene in order to optimize genetic diagnosis for breast cancer patients
- Investigate genome instability and breast cancer risk in a heterozygous context BRCA2 999del5 and 6174delT using the CRISPR-Cas9 system
- Production of mutated CRISPR-Cas9 clones for the MYCBP2 gene and for the Enhancer14433 regulatory region, identified through global genome analysis

VIROLOGY AND
INFECTION

London
2009 - 2015



Research assistant – MRC NIMR/CRICK

Infection and replication of retroviruses (Dr Kate Bishop)

- Investigate the early stages of retrovirus life cycle by functional analysis of the viral protein p12
- Degradation analysis of the restriction factor SAMHD1 by the viral protein Vpx
- Detection of the retrovirus Xenotropic-MLV related virus (XMRV) in patients suffering from prostate cancer or with chronic fatigue syndrome (supervised by Dr Harriet Groom)
- Generation of stable cell line by ShRNA retrovirus transduction to knockdown clathrin protein (supervised by Dr Mirella Nader)

PUBLICATIONS

Molecular Cell
under review

Audoynaud C, Ait Saada A, Fernández Varela P, Gesnik A, Boucherit V et al, Lambert S
RNA:DNA hybrids from Okazaki fragment are cis-regulators of Ku function in safeguarding
replication fork integrity

Science
2022

Mathieu J, Michel-Hissier P, Boucherit V, Huynh JR
Deubiquitinase USP8 targets ESCRT-III to promote incomplete cytokinesis and clonal
multicellularity

Nature Communication 2020	Kramarz K, Schirmeisen K, Boucherit V , et al, Lambert S The nuclear pore primes recombination-dependent DNA synthesis at arrested forks by promoting SUMO removal
Nature Communication 2020	Ehlén A, [...], Boucherit V , et al, Carreira A Proper chromosome alignment depends on BRCA2 phosphorylation by PLK1
Cell Host Microbe 2015	Schwefel D, Boucherit VC , et al, Bishop K Molecular determinants for divergent restriction factor recognition in the HIV-2/SIV accessory protein Vpx
Plos Pathogens 2014	Wight DJ, Boucherit VC , et al, Bishop K The N-terminus of murine leukaemia virus p12 protein is required for mature core stability
Nature 2013	Schwefel D, Groom HC, Boucherit VC , et al, Bishop K Structural basis of lentiviral subversion of a cellular protein degradation pathway
Retrovirology 2012	Boucherit VC [†] , Wight DJ [†] , et al, Bishop K ([†] co-premier auteur) The gammaretroviral p12 protein has multiple domains that function during the early stages of replication
Retrovirology 2010	Groom HC, Boucherit VC , et al, Bishop K Absence of xenotropic murine leukaemia virus-related virus in UK patients with chronic fatigue syndrome

EDUCATION

2006 Paris XI University	Bachelor GMGB (Génétique Microbiologie Génie Biotechnologie) Internship : Généthon, Paris Evry – Gene therapy and epidermolysis bullosa (Dr L Millot)
2005 Angers University	DUT - Technical University Degree (Biology and Biochemistry) Internship : GEIHP, Angers – Respiratory infections and cystic fibrosis (Dr P Licznar)

TECHNICAL SKILLS

Cellular Biology	Many types of cellular culture (bacteria, human and animal cells, yeast), virus production, cells transfection and transduction, drosophila dissection, CRISPR-Cas9 and TALEN systems implementation
Molecular Biology	cloning, plasmid preparation, Site-Directed-Mutagenesis, SLIC, DNA/RNA extraction, system CRISPR-Cas9 design, NGS analyse, PCR, qPCR, ChIP, 1D/2D gels
Immunology/Biochemistry	protein purification, protein separation by ultracentrifugation of sucrose gradient, westernblot, antibody purification from hybridoma cells, flow cytometry, RT Elisa, immunoprecipitation, immunofluorescence/microscopy
Laboratory expertise	Trained for laboratory level 2 and 3, and radioactivity ; day-to-day lab management (maintain of lab stock and organisation) ; project management, data collection and analysis, results presentation
Language and computing	French : mother tongue, Fluent english Proficient with Mac and PC, Microsoft Office, scientific programs (NCBI, UCSC genome, Lasergene, Serial cloner, crispr.mit, GraphPad Prism, FlowJo, ImageJ and ImageQuant)