Rémy LE MEUR, PhD
29 years old
French
(615) 426-2919
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« Autonomous from gene cloning to structure solvation. Particularly interested in multidisciplinary approachs to study structure-function relationship of biological systems »

Professional Experiences - 7 years

2015-2017 : Postdoctoral Fellow in Walter Chazin Lab, Vanderbilt University, Nashville TN USA
- **Subject** : Structural Study of Multi-domain protein complexes involved in replication and DNA repair
- **Main Techniques** : NMR, XR crystallography, gene cloning, site-directed mutagenesis, protein expression and purification

2011-2015 : PhD in Bertrand Castaing and Celine Landon Labs, Orleans University, France
- **Subject** : Study of the chain exchange of histone-like protein HU from *E. coli*.
- **Main Techniques** : NMR, XR crystallography, gene cloning, Site-directed mutagenesis, protein expression and purification, EMSA

2011 : Master Training Course in Bertrand Castaing, Orleans University, France (6 months)
- **Subject** : Study of the lesion-capping loop of the Formamidopyrimidine DNA glycosylase
- **Main Techniques** : EMSA, Site-directed mutagenesis, DNA-protein co-crystallisation

2010 : Rotations at the Centre de biophysique moleculaire, Orleans France (5 months cumulated)
- **Subject 3**; Study of HU protein conformationnal change by NMR
- **Main Techniques** : ^{15}N relaxation (R_1,R_2,NOE), temperature dependant ^{15}N-HSQC
- **Subject 2**: Proteomic study of *Pinus pinaster* confronting hydric stresses
- **Main Techniques** : Zip-tip, Mass spectrometry, MS-blast
- **Subject 1**: Study of phosphomimetic mutants of the mitochondrial histone-like protein Abf2
- **Main Techniques** : Site-directed Mutagenesis, protein expression and purification, EMSA

Education

University of Orléans FRANCE

2011-2015 : PhD in Functional and Structural Biology
2009-2011 : Master's Degree in Molecular and Cellular Biology option structural biology
2006-2009 : Licence's Degree in Biochemistry, Molecular Biology and Biotechnology

Thematic schools

2013 : International School in **Biomolecular Crystallization** (ISBC , Granada, SPAIN)
2012 : EMBO course in **Molecular Dynamics** (Pasteur institute, Paris , FRANCE)
2011 : Practical formation in **liquid-state and solid-state NMR** (University of Lille, France)

Scientific Skills

Molecular biology : cloning, site-directed mutagenesis, protein expression (*E. coli*) and purification using Äkta purifier system

Biochemistry : DNA ^{32}P labeling, Protein-DNA complex analysis using EMSA

Liquid-state NMR : ^{15}N^{13}C-labeled protein expression, spectra acquisition and processing using Topspin / NMRPIPE / qMDD, Assignment using CCPNMR and structure calculation using ARIA2, relaxation(R_1, R_2, NOE), slow exchange analysis using ZZ-experiments

X-Ray Cristallography : crystallogenesis using vapor diffusion technics, data processing using XDS/CCP4/PHENIX/COOT softwares

Mass Spectrometry : Zip-tip, Ultra Thin Layer sample deposition, MALDI-TOF spectra acquisition and treatment using ultraflex software

Molecular Dynamics : Namd2/Gromacs simulation in all-atom and coarse-grained systems

Publications

Dungrawala H., Bhat KP., Glick GG., **Le Meur R**., Chazin WJ., Ding X., Sharan SK., Sathe AA., Zhao R., Cortez D. (2017) (accepted in Molecular Cell)

Le Meur R. *et al*. Structure of the *E. coli* histone like HUβ_2 protein in its native and partially disordered intermediate state. (under preparation)

Le Meur, R., Culard, F., Nadan, V., Goffinont, S., Coste, F., Guerin, M., … Castaing, B. (2015). The nucleoid-associated protein HU enhances 8-oxoguanine base excision by the formamidopyrimidine-DNA glycosylase. The Biochemical Journal, 471(1), 13–23.

Le Meur, R., Loth, K., Culard, F., Castaing, B., & Landon, C. (2015). Backbone assignment of the three dimers of HU from Escherichia coli at 293 K: EcHUα2, EcHUβ 2 and EcHUαβ. Biomolecular NMR Assignments 2015 Oct 9(2):359-63

Scientific Communications

2 oral communications *(local : 1 in French, 1 in English)*
9 posters *(1 local, 3 national, 4 international)*

2017 April 30 - June 2 : Poster at SBDR meeting (Marshall,CA, USA)
«Biophysical Characterization of the Interaction between NEIL1 and RPA in Replication-associated Base Excision Repair »
2016 March 28-30 : Poster at SBDR meeting (Berkeley, CA, USA)
«Toward Structure, Function and Dynamic study of Full Length 110 kDa Replication Protein A (RPA) by NMR »
2014 August 24-29 : Poster at ICMRBS (Dallas, TX, USA)
« Kinetic and Structural Insights into Conformational Transition of HU Homodimers : Role for Chain Swapping leading to the Heterodimer Formation »
2014 June 30 : Talk at scientific day of federation CBM-ICOA (Orléans, FRANCE)
« Kinetic and Structural Insights into Conformational Transition of HU Homodimers : Role for Chain Swapping leading to the Heterodimer Formation »
2013 October 10-11 : Poster at Biotechnocentre (Seillac, FRANCE)
« Chain exchange mecanism of HU protein dimers studied by biophysic and biochemistry methods »
2013 May 26-31 : Poster at International School Biomolecular Crystallization (Granada, SPAIN)
« Quaternary Structure Plasticity of E.coli HU proteins »
2013 May 21-24 : Poster at the 10th 3R Meeting (Giens, FRANCE)
« HU at the crossroad of the 3R : Quaternary Structure Plasticity Study)
2012 August 19-24 : Poster at ICMRBS (Lyon, FRANCE)
« Exchanging Chains in Dimers without Monomeric Step : the Transient Tetramer Model »
2012 June 13-15 : Poster at International Symposium on Antimicrobial Peptides (Lille, FRANCE)
« Enterobacteria: HU a potential therapeutic target »
2012 Mai 17-25 : Poster at EMBO course in biomolecular simulation (Paris, FRANCE)
« Chain exchange of E.coli HU protein : new features for an old protein »
2012 February 10 : Talk at NMR meeting Ile-de-France (Paris, FRANCE)
« Study of the mecanism of chains exchange of E.coli histone-like protein HU by NMR »

References

Walter Chazin, PhD (Principal Investigator) walter.j.chazin@vanderbilt.edu
Céline Landon, PhD (Team Leader) celine.landon@cnrs-orleans.fr +33238255574
Bertrand Castaing, PhD (Team Leader) bertrand.castaing@cnrs-orleans.fr +33238257843

Complementary Skills

Native French
Fluent Scientific English (writing and speaking)
Python and C programming
Working under windows or linux environnements
Driving license

Other Centers of Interrest

Travelling, Hiking, Programming, Gardening