

Bruno Faivre (Engineer, collège de France)

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RESEARCH INTERESTS

- **Molecular biology**
- **Biochemistry**
- **Microbiology**

PREVIOUS RESEARCH ACTIVITIES

- **2014:** Bellaïche Group, **Curie Institute**, development of *Drosophila melanogaster* genome editing methods for labeling.
- **2013:** Carlier Group, **Laboratory of Enzymology and Structural Biochemistry (LEBS)**, study of regulating proteins involved in control of actin cytoskeleton assembly in focal adhesions.
- **2011:** Gorochov Group, **Pitié-salpêtrière Hospital**, elaboration of combinatorial banks of antibody fragments (ScFv: single Chain Variable fragment). Establishment and management of a PBMC (Peripheral blood mononuclear cell) bank from autoimmune disease patients.
- **2010:** Carlier Group, **Laboratory of Enzymology and Structural Biochemistry (LEBS)**, study of regulating proteins involved in control of actin cytoskeleton assembly in focal adhesions.
- **2007:** Van Tilbeurg Group, **Biochemistry and Biophysics Molecular and Cellular Institute**, Engineer on Structural Genomic platform: cloning, proteins expression, purification, and characterization.
- **2006:** **bioMérieux S.A.**, R&D molecular diagnosis department, NASBA multiplex (Nucleic Acid Sequence Based Amplification) feasibility for *Candida* species detection and identification. (Master 2, project).

PUBLICATIONS

2021

- Dihydrouridine synthesis in tRNAs is under reductive evolution in Mollicutes. Bruno Faivre, Murielle Lombard, Soufyan Fakroun, Chau-Duy-Tam Vo, Catherine Goyenvalle, Vincent Guérineau, Ludovic Pecqueur, Marc Fontecave, Valérie De Crécy-Lagard, Damien Brégeon & Djemel Hamdane, **RNA Biology**, 2021, DOI: 10.1080/15476286.2021.1899653.

2020

- The O₂-independent pathway of ubiquinone biosynthesis is essential for denitrification in *Pseudomonas aeruginosa*. Vo, CDT, Michaud, J, Elsen, S, Faivre, B, Bouveret, E, Barras, F, Fontecave, M, Pierrel, F, LOMBARD, M, Pelosi, L. *J Biol Chem.* 2020, doi: 10.1074/jbc.RA120.013748.
- Structural and functional characterization of 4-Hydroxyphenylacetate 3-hydroxylase from *Escherichia coli*. Deng, Y, Faivre, B, Back, O, LOMBARD, M, Pecqueur, L, Fontecave, M. *ChemBioChem.* 2020, doi: 10.1002/cbic.201900277.

2019

- Pelosi L, Vo CD, Abby SS, Loiseau L, Rascalou B, Hajj Chehade M, Faivre B, Goussé M, Chenal C, Touati N, Binet L, Cornu D, Fyfe CD, Fontecave M, Barras F, Lombard M, Pierrel F, Ubiquinone Biosynthesis over the Entire O₂ Range: Characterization of a Conserved O₂-Independent Pathway, *mBio*, 2019, 10, e01319-19, doi: 10.1128/mBio.01319-19.

2018

- Caserta G, Papini C, Adamska-Venkatesh A, Pecqueur L, Sommer C, Reijerse E, Lubitz W, Gauquelin C, Meynial-Salles I, Pramanik D, Artero V, Atta M, Del Barrio M, Faivre B, Fourmond V, Léger C, Fontecave M. Engineering an [FeFe]-Hydrogenase: Do Accessory Clusters Influence O₂ Resistance and Catalytic Bias?, *The Journal of the American Chemical Society*, 2018.

2017

- Corina Ciobanasu, Bruno Faivre and Christophe Le Clainche, Talin activation allows its association with integrin and actin filament barbed ends, *The Journal of Biological Chemistry*, 2017.

2017

- Loiseau L., Fyfe C., Aussel L., Hajj Chehade .3, Hernández SB., Faivre B., Hamdane D., Mellot- Draznieks C., Rascalou B., Pelosi L., Velours C., Cornu D., Lombard M., Casadesús J., Pierrel F., Fontecave M., Barras F., The UbiK protein is an accessory factor necessary for bacterial ubiquinone (UQ) biosynthesis and forms a complex with the UQ biogenesis factor UbiJ, *The Journal of Biological Chemistry* 2017 Jul 14;292(28):11937-11950. doi: 10.1074/jbc.M117.789164.

2015

- Corina Ciobanasu, Bruno Faivre and Christophe Le Clainche, A Reconstituting actomyosin-dependent mechanosensitive protein complexes in vitro, *Nature Protocols*, 2015 Jan;10(1):75-89. doi: 10.1038/nprot.2014.200.

2014

- Corina Ciobanasu, Bruno Faivre and Christophe Le Clainche, Actomyosin-dependent formation of the mechanosensitive talin–vinculin complex reinforces actin anchoring, *Nature Communications*, 5: 3095, 2014, DOI: 10.1038/ncomms4095.

2013

- Corina Ciobanasu, Bruno Faivre and Christophe Le Clainche, Integrating actin dynamics, mechanotransduction and integrin activation: the multiple functions of actin binding proteins in focal adhesions, **European Journal of Cell Biology**, 92(10-11), 2013, 339-348.

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2012

- Corina Ciobanasu, Bruno Faivre, and Christophe Le Clainche, Actin Dynamics Associated with Focal Adhesions, **International Journal of Cell Biology**, vol. 2012, Article ID 941292, 9 pages, 2012. doi:10.1155/2012/941292.