

# Dr. Ludovic Pecqueur

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### RESEARCH INTERESTS

- Protein structure and function
- X-ray crystallography
- Oxygen sensitive systems

### Selected Publications

#### 2020

- Zhou, J. *et al.* Structural evidence for a [4Fe-5S] intermediate in the non-redox desulfuration of thiouracil. *Angew. Chem. Int. Ed Engl.* (2020) doi:10.1002/anie.202011211.
- Deng, Y. *et al.* Structural and Functional Characterization of 4-Hydroxyphenylacetate 3-Hydroxylase from *Escherichia coli*. *Chembiochem Eur. J. Chem. Biol.* **21**, 163–170 (2020).

#### 2019

- Valencia-Gallardo, C. *et al.* Shigella IpaA Binding to Talin Stimulates Filopodial Capture and Cell Adhesion. *Cell Rep.* **26**, 921-932.e6 (2019).
- Bou-Nader, C. *et al.* Conformational Stability Adaptation of a Double-Stranded RNA-Binding Domain to Transfer RNA Ligand. *Biochemistry* **58**, 2463–2473 (2019).
- Bou-Nader, C. *et al.* Molecular basis for transfer RNA recognition by the double-stranded RNA-binding domain of human dihydrouridine synthase 2. *Nucleic Acids Res.* **47**, 3117–3126 (2019).

#### 2018

- Caserta, G. *et al.* Engineering an [FeFe]-Hydrogenase: Do Accessory Clusters Influence O<sub>2</sub> Resistance and Catalytic Bias? *J. Am. Chem. Soc.* **140**, 5516–5526 (2018).
- Bou-Nader, C., Brégeon, D., Pecqueur, L., Fontecave, M. & Hamdane, D. Electrostatic Potential in the tRNA Binding Evolution of Dihydrouridine Synthases. *Biochemistry* (2018). doi:10.1021/acs.biochem.8b00584

#### 2017

- Caserta, G. *et al.* Structural and functional characterization of the hydrogenase-maturation HydF protein. *Nat. Chem. Biol.* **13**, 779–784 (2017).
- Bou-Nader, C. *et al.* Power of protein/tRNA functional assembly against aberrant aggregation. *Phys. Chem. Chem. Phys.* (2017). doi:10.1039/C7CP05599D

#### 2016

- Rajasekar, K. V. *et al.* The anti-sigma factor RsrA responds to oxidative stress by reburying its hydrophobic core. *Nat. Commun.* **7**, 12194 (2016).
- Caserta, G. *et al.* Chemical assembly of multiple metal cofactors: The heterologously expressed multidomain [FeFe]-hydrogenase from *Megasphaera elsdenii*. *Biochim. Biophys. Acta* **1857**, 1734–1740 (2016).
- Ahmad, S. *et al.* Destabilizing an interacting motif strengthens the association of a designed ankyrin repeat protein with tubulin. *Sci. Rep.* **6**, 28922 (2016).