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RESEARCH INTERESTS

- Metalloenzymes
- Iron sulfur cluster
- Redox biology
- Biophysics and structural biology

SUMMARY

I am a protein biochemist with a strong focus on metalloproteins. During my PhD, I studied the assembly mechanism of iron-sulfur cluster, an essential metallofactor in living organisms. I expressed and purified the proteins involved in this process and reconstituted *in-vitro* the iron-sulfur machinery. I have used a wide range of biochemical, kinetic, spectroscopic, biophysical and structural approaches to elucidate the mechanism of iron-sulfur cluster assembly. My current research is focused on a [4Fe4S]-dependent sulfuration MnmA enzymes involved in genetic translation.

PUBLICATIONS

2022

Srouf B.*, **Gervason S.***, Hoock M. H., Monfort B., Want K., Larkem D., Trabelsi N., Landrot G., Zitolo A., Fonda E., Etienne E., Gerbaud G., Müller C. S., Oltmanns J., Gordon J. B., Yadav V., Kleczewska M., Jelen M., Toledano M. B., Dutkiewicz R., Goldberg D. P., Schünemann V., Guigliarelli B., Burlat B., Sizun C., D'Autréaux B. Iron insertion at the assembly site of the ISCU scaffold protein is a conserved process initiating Fe–S cluster biosynthesis. *Journal of the American Chemical Society*. 144, 38, 17496–17515

Monfort B., Want K., **Gervason S.**, D'Autréaux B. Recent advances in the elucidation of frataxin biochemical function open novel perspectives for the treatment of Friedreich's Ataxia. *Frontiers in Neuroscience*. 16:838335

2021

Gervason S., Srour B., D'Autréaux B. A fast and ratiometric method for quantification of cysteine-bound persulfides based on alkylation and gel-shift assays. *Methods in Molecular Biology*. 2353, 191-205.

2020

Srour B., **Gervason S.**, Monfort B., D'Autréaux B. Mechanism of iron–sulfur cluster assembly: in the intimacy of iron and sulfur encounter. *Inorganics*. 8 :55.

2019

Gervason S., Larkem D., Ben Mansour A., Botzanowki T., Müller C. S., Pecqueur L., Le Pavec G., Delaunay-Moisan A., Brun O., Agramunt J., Grandas A., Fontecave M., Schünemann V., Cianférani S., Sizun C., Toledano M. B., D'Autréaux B. Iron insertion at the assembly site of the ISCU scaffold protein is a conserved process initiating Fe–S cluster biosynthesis. *Nature Communications*. 10 :3566.