

Dr Pascale DELANGLE

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Team Chemistry-Biology Interface for environment, health and toxicology
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Researcher at CEA Grenoble since 1997

Director of the SyMMES laboratory since 2021
 Leader of the CIBEST team (2017 – 2020)
 Leader of the group “metal-peptide interactions” since 2005

Research topics : Peptide design and biomimetic approaches for selective metal ion chelation

- **Metalloenzyme mimics** to decipher the mechanism of action and design novel therapeutic agents.
- **Cu(I) selective chelators**, inspired from proteins involved in copper homeostasis and targeted at the hepatocytes, to treat localized copper accumulation in the rare Wilson’s disease.
- **Actinide-binding peptides** modeling actinide’s interaction with proteins to understand the molecular mechanisms responsible for their toxicity and to design peptide-based detoxification agents.

Education

- 2005 Habilitation à Diriger des Recherches** (University Grenoble Alpes)
“Selective complexation of metal ions: key-parameters for affinity and selectivity”
- 1996 PhD** in Chemistry (Ecole Normale Supérieure de Lyon)
“Design and study of novel receptors for metal cations: phosphorous hemispherand and cavitand”, PhD supervisor: Dr Jean-Pierre Dutasta
- 1989-1993** Student at the Ecole Normale Supérieure de Lyon

75 publications of which 3 proceedings and 2 book chapters – **3 patents.**

43 invited conferences of which 19 international, 7 plenary and 3 keynotes

5 selected publications

- Laporte, F. A.; Lebrun, C.; Vidaud, C.; Delangle, P., Phosphate-rich biomimetic peptides shed light on high affinity hyperphosphorylated uranyl binding sites in phosphoproteins. *Chem. Eur. J.* **2019**, *25*, 8570-78.
- Domergue, J.; Pécaut, J.; Proux, O.; Lebrun, C.; Gateau, C.; Le Goff, A.; Maldivi, P.; Duboc, C.; Delangle, P., Mononuclear Ni(II) complexes with a S3O coordination sphere based on a tripodal cysteine-rich ligand: pH tuning of the SOD activity *Inorg. Chem.* **2019**, *58*, 12775-12785.
- Mesterházy, E.; Lebrun, C.; Jancsó, A.; Delangle, P., A Constrained Tetrapeptide as a Model of Cu(I) Binding Sites Involving Cu₄S₆ Clusters in Proteins. *Inorg. Chem.* **2018**, *57*, 5723-5731.
- Conte-Daban, A.; Boff, B.; Candido Matias, A.; Montes Aparicio, C. N.; Gateau, C.; Lebrun, C.; Cerchiaro, G.; Kieffer, I.; Sayen, S.; Guillon, E.; Delangle, P.; Hureau, C., A trishistidine pseudopeptide with ability to remove both Cu(I) and Cu(II) from the amyloid-b peptide and to stop the associated ROS formation. *Chem. Eur. J.* **2017**, *23*, 17078–17088.
- Pujol, A. M.; Cuillel, M.; Jullien, A.-S.; Lebrun, C.; Cassio, D.; Mintz, E.; Gateau, C.; Delangle, P., A sulfur tripod glycoconjugate releases a high affinity copper chelator in hepatocytes. *Angew. Chem. Int. Ed.* **2012**, *51*, 7445-7448.

Other professional experiences

1993-1997 Teacher at the Ecole Normale Supérieure de Lyon
 1998- 2017 Teacher in Licence and master at Grenoble University
 2012-2013 Organisation of two international conferences (IMBG 2012 and ICBC16)
 2006-2008 and 2015-2016 : Member of ANR committees