



**University of  
Zurich** <sup>UZH</sup>

**Department of Chemistry**

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## **Development of short peptides for selective chelation of toxic heavy metals**

**Position:** Master Thesis (Masterarbeit) or Internships (Praktikum)

**Area:** Bioinorganic Chemistry, Organic Chemistry, Medicinal Chemistry

**Contact:** Dr. Michal Shoshan, 34-F-84, tel: 044 635 65 91, email: [michal.shoshan@chem.uzh.ch](mailto:michal.shoshan@chem.uzh.ch)

**Supervision:** Dr. Michal Shoshan

Our new group is looking for highly motivated and talented MSc and BSc students to conduct a new, exciting, and multidisciplinary research. We combine peptide, inorganic and medicinal chemistry to solve current healthcare challenges by applying a broad range of techniques and skill-sets.

Metal poisoning currently poses a major challenge for medicinal chemistry. Although chelation therapy is the most efficient way to handle metal toxicity, the approved chelating agents still suffer from many drawbacks. The small molecule chelators do not distinguish between essential and toxic metal ions. As a result, most of these compounds are highly toxic and many segments of the population are prohibited from treatment with them. Peptides and short proteins serve as common scaffolds for metal detoxification in many organisms. As peptides are biocompatible, flexible and contain a variety of potential functionalities, developing a new peptidic-based chelator for this purpose may be highly advantageous. The aim of this project is to design non-toxic peptides for selective medicinal metal detoxification, based on bioinspired rational principals.

For more details and to submit an application (including a CV), please contact Dr. Michal Shoshan.