

Thesis topics
Department of Inorganic and Analytical Chemistry
2026/2027. academic year II. semester

Supervisors: Prof. Péter Buglyó, Nóra Ildikó Kovács

1. *Metal ion binding strength of the 2-QuinButHpH ligand*

For **chemistry, chemical engineering BSc, chemist, chemical engineering MSc** students
(there is an applicant for it)

2. *Interaction between Fe(III) and hydroxy-pyridinonate based ambidentate ligands*

For **chemistry, chemical engineering BSc, chemist, chemical engineering MSc** students
(there is an applicant for it)

Supervisor: Prof. Attila Gáspár

Analysis of cyanobacterial toxins using CE-MS

For **chemistry BSc** students

Supervisors: Prof. Attila Gáspár, Dr. Melinda Andrási

Analysis of glycated forms of hemoglobin using CE-MS

For **chemist MSc** students

Supervisors: Prof. Attila Gáspár, Ruben Szabó

Development of a CE-MS based bottom-up proteomic for yeast samples

For **chemistry BSc** students

Supervisor: Dr. Csilla Kállay

Interaction of N-acylhydrazones with transition metal ions

For **chemist MSc** student (there is an applicant for it)

Supervisor: Prof. Katalin Várnagy

Study of transition metal ion-peptide interactions

For **chemistry, chemical engineering BSc, chemist, chemical engineering MSc** students – for 2 students (there is one applicant for it)

The interactions of proteins involved in biological processes with essential metal ions are vital. However, if the concentration of these essential metal ions significantly changes, or if toxic metal ions enter the body, these metal ion-protein interactions can lead to development of different diseases (e.g. neurodegenerative diseases). Thus, understanding the interactions between different protein fragments and transition metal ions can contribute to understanding the chemical background of diseases related to these proteins.