



Graz, May 2021

Masterarbeiten & Projektlabor Strukturbiologie/Biochemie/Biophysik/Molekularbiologie // **Master theses in Structural Biology/Biochemistry/Biophysics/Molecular Biology**

Excellent opportunities are open as project labs (MOL.832) or for **master theses** for students of Molecular Biology/Biochemistry/Chemistry or Biophysics in the group of [Monika Oberer](#) at the [Structural Biology Group of the Institute of Molecular Biosciences](#), University of Graz, Austria.

Possible Topics are:

- **Characterization of G0S2 and CGI-58/ABHD5, two important inhibitory and activating proteins in intracellular lipid degradation**
- **Characterization of Carboxylesterases (Ces) - proteins that are efficient diacylglycerol and monoacylglycerol lipases and possibly implicated in metabolic disease**
- **Characterization of monoacylglycerol lipases from human pathogens**

Research on all these proteins is of outstanding interest in different research laboratories in Graz, especially at the Institute of Molecular Biosciences (including the group of M. Oberer), the Medical University of Graz, and Graz University of Technology.

Techniques: Cloning, protein overexpression in bacteria and eukaryotic cells, protein purification, biophysical and biochemical characterization of proteins (CD spectroscopy, microcalorimetry, binding studies, activity assays), protein crystallization, 3D structure analysis, NMR spectroscopy. Previous knowledge in specific techniques of structural biology is not required. The exact research techniques will be decided upon the current progress of our projects and the interest of the incoming student.

Our research is carried out in an interdisciplinary, international team within the frameworks of the priority research program [SFB-Lipid Hydrolysis](#), the PhD training program [doc.fund Molecular Metabolism](#), The [Field of Excellence BioHealth](#), NAWI Graz and [BioTechMed Graz](#).

Candidates interested in the above areas of science are encouraged to contact **Monika Oberer** (+43-316-380-5431, m.oberer(at)uni-graz.at)

Links:

<https://pubmed.ncbi.nlm.nih.gov/?term=oberer+M&sort=date>

<https://molekularbiologie.uni-graz.at/en/strukturbiologie/>

<https://biohealth.uni-graz.at/de/forschung/>

<https://www.medunigraz.at/lipid-hydrolysis/overall-concept/>

<https://docfunds-molecular-metabolism.uni-graz.at/en/overview/>

<https://biotechmedgraz.at/en/>