## BioStruct - UiT

## PhD Course announcement

Norwegian Graduate School in Structural Biology -A collaboration between 5 universities





NorStruct, Department of Chemistry, University of Tromsø.











Time: October 3-7, 2016 ECTS: 5 ECTS (PhD level course) Teaching: Lectures and practical computer sessions Exam: Written project and oral exam (pass/fail grade) Deadline for registration: June 1, 2016 (max 12 participants) Course responsible: Richard Engh, UiT (richard.engh@uit.no) Contact registration/accommodation: Maarten Beerepoot, UiT (biostruct@uit.no) External students must register as a guest student at UiT

## **Course contents**

This course aims to provide students an overview of the structural aspects of modern drug discovery. Industry and academic speakers will review: retrospective studies on the structural mechanisms of classical drugs, structures of drug target classes, evaluation of "druggability", de-novo and substrate based hit generation, structure guided screen design, scaffold swapping, in vitro and in silico binding site characterization (fragment/solvent screens, cheminformatic fragmentization), lead optimization, structure guided synthesis strategies (hit explosion, diversity oriented synthesis), and late stage processes, including prediction of and reaction to drug resistance.

Presentation of these topics aims to remain fundamentally grounded in the basic chemistry of protein-ligand interactions, chemical reactivity in biological environments, chemical synthetic methods, enzyme kinetics, thermodynamics and cheminformatics. Lectures will be accompanied by computer and literature exercises, and students will propose and carry out a project, optionally integrated with their thesis research.

Note! BioStruct covers the costs for travel and accommodation for BioStruct students participating in national courses at Norwegian universities other than the student's home institution. For information contact Maarten Beerepoot (biostruct@uit.no / 776 23103). If the number of applicants exceeds the capacity of the course, 75% of the course admissions will be reserved students attending the PhD school, BioStruct. The course may be cancelled if the number of registered participants is too low. Registered students will be contacted shortly after the registration deadline.

