

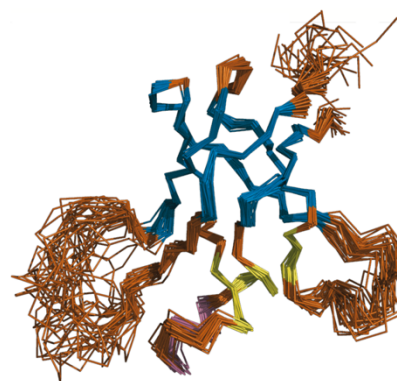
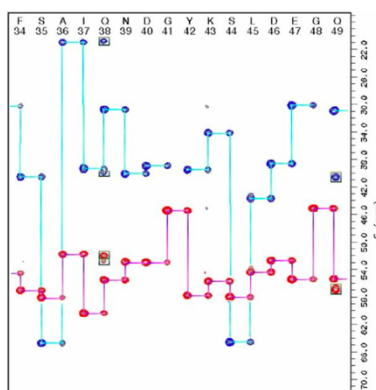
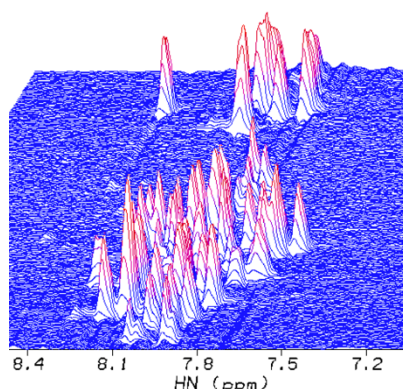
MCB 5076  
Fall 2020

# Biomolecular NMR Spectroscopy

Time: Thursdays 2:00-3:15, online course for 2020

**Two credits**

**Enrollment is open to grads & advanced undergrads**



## TOPICS:

**NMR theory      Multidimensional NMR      Drug screening**  
**NMR assignments      NMR structure determination      Protein folding**  
**Protein Dynamics      Molecular interactions      Metabolomics**

The course covers NMR (nuclear magnetic resonance) theory, with an emphasis on the applications of the technique to determining protein structure and dynamics. Starting from the principles of NMR spectroscopy, we move to the two- and three-dimensional NMR experiments used to assign resonances to specific atoms. Next, we focus on methods to interrogate “spin spies” about molecular structure and complementary information on dynamics. The last part of the course describes advanced NMR applications such as protein folding studies, metabolomics, amyloids, membrane proteins, and drug discovery.

**Course grade:** quizzes, specialized assignments for the online version of the course and a take-home final where students write a report on an NMR paper from the scientific literature.

**For more information contact Prof. Alexandrescu at: [andrei.alexandrescu@uconn.edu](mailto:andrei.alexandrescu@uconn.edu)**