

Bio 5478 Biomolecular NMR**Spring 2005, 3 Credits**

Tuesdays and Thursdays, 2:30-4:00 PM, Room 2918 South Building, Medical Campus

Course Website: www.biochem.wustl.edu/classes/bio5478Instructors: Prof. David P. Cistola cistola@cosine.wustl.edu phone: 362-4382Prof. Kathleen B. Hall hall@bionmr3.wustl.edu phone: 362-4196

January	18:	NMR strategies for proteins	Cistola
	20:	Instrument design and experimental aspects	“
	25:	Pulse sequences and product operators	“
	27:	Polarization transfer and INEPT, DEPT	“
February	1:	Introduction to 2D NMR	“
	3:	Homonuclear correlation experiments: 2D COSY and TOCSY	“
	8:	Homonuclear correlation experiments II	“
	10:	Heteronuclear correlation experiments: 2D HSQC and TROSY	“
	15:	Heteronuclear correlation experiments II	“
	17:	Multiple-quantum NMR	“
	22:	Pulsed field gradients	“
	24:	Triple-resonance 3D NMR	“
March	1:	The nuclear Overhauser effect and nD NOESY	“
	3:	Protein structure determination	“
	8:	Reading Period – no class	
	10:	Reading Period – no class	
	15:	Midterm Exam – In Class	
	17:	NMR strategies for nucleic acids I	Hall
	22:	NMR strategies for nucleic acids II	“
	24:	Dynamics by nuclear spin relaxation I	“
	29:	Dynamics by nuclear spin relaxation II	“
	31:	Dynamics by nuclear spin relaxation III	“
April	5:	Dynamics by nuclear spin relaxation IV	“
	7:	Dynamics by nuclear spin relaxation V	“
	12:	Dynamics by nuclear spin relaxation VI	“
	14:	Dynamics by nuclear spin relaxation VII	“
	19:	Dynamics by nuclear spin relaxation VIII	“
	21:	Slow protein dynamics by R_{ex}	Cistola
	26:	Protein order-disorder by hydrogen exchange	“
	28:	Residual dipolar couplings	“
May	3 & 5:	Reading Period – no class	
	10:	Final Exam – In Class	