

Core Techniques in Protein and Genetic Engineering
July 13-17, 2020

Date/Time	Event/Instructor	Details
Monday, July 13, 2020		
9:00a – 9:30a	Course Introduction A. Prevost	Course overview and introductions. Mandatory synchronous
9:30a – 10:45a	Lecture: S. Teter	Nucleic acid isolation Mandatory synchronous
10:45a – 12:30p	Laboratory: A. Prevost, S. Teter	Nucleic acid isolation from tissues. Mandatory synchronous
12:30p -2:00p	Lunch Lecture: R. Burgess	Overview of protein expression and purification. Mandatory synchronous
2:00p – 2:30p	BREAK	
	Lecture: J. Hartnett	Molecular cloning. Mandatory synchronous
4:00p – 5:00p	Discussion/ Laboratory: A. Prevost, N. Betz	Review data from nucleic acid isolation; chalk-talk RT-PCR, set up RT-PCR reactions Mandatory synchronous
5:00p – 5:30p	A. Prevost	Office Hours
Tuesday, July 14, 2020		
9:00a – 10:00a	Laboratory: A. Prevost, N. Betz	Cloning – gel analysis and ligation. Mandatory synchronous
10:00a – 12:00p	Lecture/ Laboratory: D. White, A. Prevost	Plasmid purification. Mandatory synchronous

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12:00p – 1:00p	BREAK	
1:00p – 3:00p	Lecture: R. Pennington	PCR Technologies Mandatory synchronous
3:00p – 3:30p	BREAK	
3:30p – 5:00p	Laboratory: A. Prevost, N. Betz	RT-qPCR set up + transform and plate cells for cloning. Mandatory synchronous
5:00p – 5:30p	A. Prevost	Office Hours
Wednesday, July 15, 2020		
9:00a – 11:00a	Lecture/ Laboratory: S. Tseng, C. Zimprich	Transfection. Mandatory synchronous
11:00a – 11:30a	BREAK	
11:30a – 12:30p	Lecture: N. Betz	Epigenetics in human health. Optional synchronous or asynchronous
12:30p – 1:30p	BREAK	
1:30p – 2:00p	Laboratory: N. Betz, A. Prevost	Analysis of RT-qPCR. Mandatory synchronous
2:00p – 3:00p	Laboratory: N. Betz, A. Prevost	Colony PCR. Mandatory synchronous
3:00p – 3:30p	BREAK	
3:30p – 5:00p	Lecture: M. Rosenblatt	Characterizing proteins. Optional synchronous or asynchronous
5:00p – 5:30p	A. Prevost	Office Hours
Thursday, July 16, 2020		
9:00a – 10:00a	Lecture: R. Ohana	Using tags to purify proteins.

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		Mandatory synchronous
10:00a – 11:00a	Lecture: C. Strayer	Reporter gene assays. Mandatory synchronous
11:00a – 11:30a	BREAK	
11:30a – 12:30p https://us.bbcollab.com/guest/65839a7046744761b9354193cbca20c1	Laboratory: N. Betz, A. Prevost	Protein purification from mammalian cells. Mandatory synchronous
12:30p – 1:30p	BREAK	
1:30p – 2:30p	Lecture: E. Caine	Using Halotag to study protein degradation. Optional synchronous or asynchronous
2:30p – 4:00p	Laboratory: N. Betz, A. Prevost	Protein purification from mammalian cells. Mandatory synchronous
4:00p – 5:30p	A. Prevost	Office Hours
Friday, July 17, 2020		
9:00a – 11:00a	Lecture: C. Eggers	Western blot, ICC and ELISA Mandatory synchronous
11:00a – 11:30a	BREAK	
11:30a – 1:45p	Laboratory: Western Blot	Western Blot demo. Mandatory synchronous
1:45p – 2:45p	Laboratory: Transfection Analysis A. Prevost, C. Zimprich	Review transfection results. Mandatory synchronous



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2:45p – 3:45p	Laboratory: Cloning N. Betz, A. Prevost	Colony PCR gel analysis. Mandatory synchronous
3:45p – 5:30p	A. Prevost	Wrap up and review; Final office hours Mandatory synchronous for wrap up and review