BIOCHEMISTRY INTD-571 (4-units)

Fall Semester 2015- Tuesday & Thursday – 1:00 PM - 3:00 PM NRT LG-503/504 in Harlyne Tower, (August 25th) & McKibben Hall - Room 156 (All classes) <u>Proteins, Enyzmes and Proteomics</u>

August 25	Primary structure & chemical synthesis of proteins	Ullmer
23	Secondary & tertiary structure of proteins	Ulmer
<u>September</u>		
1	Enzymes: Basic concepts & kinetics	Frey
3	Enzymes: Regulation of activity	Frey
8	Techniques for evaluating protein structure	DeClerck
10	Proteomics	DeClerck
15	Catabolism of amino acids & urea cycle	Markland
17	Amino acid biosynthesis & genetic diseases	Markland
22	EXAM-1 (covering lectures from 8/25 to 9/17/15)	Ulmer
	Metabolism of Carbohydrate and Lipids, and Cell Signaling	
24	Carbohydrate metabolism (Glycolysis, TCA cycle, & glycogen)	Kalra
29	Oxidative phosphorylation & mitochondria	Kalra
<u>October</u>		
1	Lipid metabolism: Fatty acid oxidation & synthesis	Kalra
6	Biosynthesis of membrane lipids & steroids	Kalra
8	Cholesterol metabolism, atherosclerosis & eicosonoids	Kalra
13	Oxidative stress, hypoxia and HIF-1 α pathways	Kalra
15	Cellular Signaling pathways	Kalra
20	EXAM-II (Covering lectures from 9/24 to 10/15/15)	Kalra
	RNA , DNA , Chromatin structure , and genome organization	
22	Nucleotide & nucleic acid structure	DeClerck
27	Nucleotide metabolism & connections to disease	DeClerck
29	Recombinant DNA technology & genomics	Hong
<u>November</u>		
3	Chromatin structure & genome organization	Hong
5	DNA replication	Reddy
10	DNA damage, repair, & modification	Reddy
12	Transcription & its regulation: Prokarytoes	Rice
17	Transcription & its regulation: Eukaryotes	Rice
19	The genetic code & translation	Rice
24	RNA processing, transport, & degradation	Reddy

Thanksgiving Recess (November 25-28)

December

10 EXAM-III (Covering lectures from 10/22 to 11/24/15) Rice

Course Coordinator: Dr. Vijay Kalra

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Recommended Texts:

Biochemistry by Berg, Tymoczko, Lubert Stryer, Sixth edition Biochemistry with Clinical Correlations by Devlin, Sixth Edition Molecular Biology of the Cell by Alberts, et al., Fourth Edition

Please note: First class will be in NRT LG 503/504 (Harlyne Tower), and the remaining classes will be in McKibben Building –Rm 156