

CELL STRUCTURE AND FUNCTION 301

page 8

LAB ACTIVITIES

Course #: 34-BIOL-301	Autumn Quarter	David B. Fankhauser, Ph.D.
Office Hours: 12-1, M-F	2008-2009	Professor of Biology & Chemistry
Room EDS 215P		U.C. Clermont College
home page: http://Biology.clc.uc.edu/Fankhauser		Batavia OH 45103

Tues:	Lab Activity	Handouts, Protocols	Illustrations, Data
9/30	We'll have PreLab quizzes! Discussion of how to keep Lab Notebooks Microscope Use QUIZ I	Sched Lab Actvts, Tbl Cntnts Laboratory Notebook Proc. Format Suggestions Use of Contact Paper Samp 1st Notebook Gradesheet Notebook Illustrations Binocular Microscope Care Using & Eval the Microscope Microscope Check In Tooth Scraping Smear	Features of a notebook page Binocular Microscope Pear leaf c.s. Tooth scraping smear
10/7	Classic experiments revealing cell structure	Cells: Classic experiments: Functional Units of Living Organisms	Cells: Cork Onion epithelium Hyaline cartilages chicken muscle
10/14	Protein Assay QUIZ II	Microbiuret Standardization Sample Layout of an Expt. Spectrophotometer Use Graph Construction Sample Math Problems	Repipet and pipet bulb Spectrophotometer grph: Microbiuret st'd'z'n data: [Protein] in samples tabl's: [Protein] in unknowns Microbiuret stand'z'n
10/21	(We have a big lab today!) Classic Enzyme: Lactase Assay Compare Brands of Lactase Notebooks Due 10/22	Displacement Pipetter Use Enzyme Assay: Lactase Reagents for Lactase Assay Comparison of Brands	Displacement Pipetter Lactose, ONPG graph: A ₄₅₀ vs [lactase] bar graph: Lactase: Specif Activity by Brand
10/28	NOTEBOOKS RETURNED Glycolysis molecules	First Notebook Gradesheet Glycolysis/Fermentat'n models	Glycolysis Molecule Struct's
11/4	Tricarboxylic Acid Cycle	Molecular Models: Krebs Cycle	Krebs Cycle Molecular Structures
11/11	Armistice Day		
11/18	Determine pH Optimum QUIZ III	pH Optimum of Lactase	graph: Lactase Activity vs pH
11/25	Enzyme Kinetics: Lineweaver-Burk Plot Notebooks Due 11/26	Lineweaver-Burk Plot Protocol	table: activity vs. [ONPG] grph: activity vs [ONPG] grph: Lineweaver-Burk Plot
12/2	NOTEBOOKS RETURNED Isolation of Chloroplasts. QUIZ IV	Isolation of Chloroplasts by Differential Centrifugation Chloroplast reduction of DCIP in light	Dichlorophenolindophenol centrifuge & balance tubes Spinach fractured cells Spinach chloroplasts grph: chloroplast reduction of DCIP vs time Save NBGS for Winter NB
12/4	Tuesday: FINAL EXAM, 1:30-3:30		