

Syllabus: BIOL 4535 "HUMAN GENETICS"**Fall 2014**

Tue	Aug 19	Introductory Lecture (Powerpoint)		
Thu	Aug 21	Genetic Models of Disease		
Tue	Aug 26	The Human Genome		
Thu	Aug 28	Human Evolutionary Genetics		
Tue	Sep 2	Presentation 1: The ancestry of native Americans		
Thu	Sep 4	Classical Human Genetics		
Tue	Sep 9	Normal Human Variation		
Thu	Sep 11	Genome-Wide Association Studies		
Tue	Sep 16	Whole Genome Sequencing		
Thu	Sep 18	Presentation 2: SLC30A8 mutations in type 2 diabetes		
Tue	Sep 23	Gene Expression Profiling		
Thu	Sep 25	Chromatin Profiling		
Tue	Sep 30	Integrative Genomics and the Microbiome		
Thu	Oct 2	Presentation 3: The microbiota of malnourishment in Bangladesh		
Tue	Oct 7	Predictive Health Genomics		
Thu	Oct 9		3:30 – 4:50	Mid-Term Exam
Tue	Oct 14	Fall Break		
Thu	Oct 16	Inflammatory Disease		
Tue	Oct 21	Auto-immune Disease		
Thu	Oct 23	Presentation 4: Autoimmune disease alleles detected in blood		
Tue	Oct 28	Metabolic Syndrome		
Thu	Oct 30	Type 2 Diabetes		
Tue	Nov 4	Atherosclerosis and Arrhythmia		
Thu	Nov 6	Presentation 5: Genetic variation for the human metabolome		
Tue	Nov 11	Breast and Prostate Cancer		
Thu	Nov 13	Lymphoma, Lung, and Skin Cancer		
Tue	Nov 18	Psychiatric Genetics		
Thu	Nov 20	Presentation 6: 108 loci for schizophrenia from GWAS		
Tue	Nov 25	<i>Abu Dhabi – Review Session</i>		
Thu	Nov 27	Thanksgiving		
Tue	Dec 2	Cognitive Decline and Aging		
Thu	Dec 4	Wiki Disease Site Presentations		
Thu	Dec 11		11:30 – 2:20	Final Exam

Current Literature for **Human Genetics**, BIOL 4545 Fall 2014

Raghavan et al Nature 505: 87-91 Jan 2, 2014

Upper Palaeolithic Siberian genome reveals dual ancestry of Native Americans

Flannick et al Nature Genetics 46: 357-363 April, 2014

Loss-of-function mutations in SLC30A8 protect against type 2 diabetes

Subramanian et al Nature 510: 417-421 June 19, 2014

Persistent gut microbiota immaturity in malnourished Bangladeshi children

Raj et al Science 344: 519-523 May 2, 2014

Polarization of the effects of autoimmune and neurodegenerative risk alleles in leukocytes

Shin et al Nat Genet 46: 543-550 June 2014

An atlas of genetic influences on human blood metabolites

SZ Working Group Nature 511: 421-427 July 24, 2014

Biological insights from 108 schizophrenia-associated genetic loci