From:	John Mullet
To:	Bill McCutchen
Cc:	Bill Rooney
Subject:	Teaching follow up
Date:	Thursday, November 05, 2009 7:39:57 AM

Bill,

The honors course I taught in the Spring of 2001 was for senior Biochemistry or Genetics majors. The title was "Genomics"; we met twice per week for 6 weeks (1 credit) for 1hr per session. I gave 40 mins of lecture and then had class discussion over a reading assignment. 25% of the grade was for class participation (discussions, etc.) and 75% for the test.

Topics:
Genomics - the basics
Variation in genome size - origins
Genome macrostructure
Synteny, order, and gene homology
Human genome project
Gene expression (profiling)
Proteomics
Genome maps and their use
Life with 482 genes (bacteria)
Plant genome projects
Mutations and their utility
Gene function
Applications.

Co-Chairing a committee
I like both of your ideas for a thesis project.
1. CN-glucosides - develop assays for variation X germplasm
track down the genes involved
assay gene expression in high/low lines, roots shoots vs. development (N-sink)
QTL mapping in a population
transfer this trait to WH

2. Herbicide resistance.
- Bill and I have been developing a good EMS mutant collection (still increasing in size)
- student could further develop Tx3361 EMS lines
- screen existing lines for resistance (work out a screening protocol)
- sequence to determine the mutation involved
- transfer to WH for testing

Thanks,

John