

Distance Learning for Biotechnology Teachers

(Please be sure to also check the Science section, under Biology for related programs.)

Center for Agricultural Science & Heritage: *All New*

"Agricultural Biotechnology"

Participants join in an overview of the history of biotechnology followed by an in-depth investigation of what transgenic crops now are in America's fields. The where, when, what, and how of biotech will be answered with a glimpse into our future. Participants will be encouraged to discuss candidly their feeling on ethics regarding genetically modified organisms. Designed for grades 6 - 12.

"Celebrating Agriculture and the Good Earth"

Join the center for a lively discussion of current issues in agriculture. The program is designed for a point-counter point discussion that will include the controversial use of fertilizers and pesticides as well as the cultivation of GMO (Genetically Modified Organism) crops. Designed for grades 7 - 12.

COSI – Columbus: *All New*

"Feeding Africa: Bioengineering Cassava for Reduced Cyanide Toxicity"

Oct. 28, '05 @ 1:00 PM ET - ONLY ONE DATE!

\$130

Applicable subjects: Biology, Biotechnology, Agriculture, International Studies.

Students should have prior knowledge of: Plant biology, Gene structure and function, General chemistry.

Cassava roots are one of the major sources of nutrition for sub-Saharan Africans. All parts of the cassava plant, however, contain cyanogenic glycosides. If the cyanogenic glycosides are not effectively removed prior to consumption they can potentially produce toxic levels of cyanide. Dr. Sayre will describe genetic engineering approaches to reduce the cyanide toxicity of cassava and the surprise outcomes of these results on the metabolism and growth of cassava plants.

Dr. Sayre is a faculty member in the Department of Plant Cellular and Molecular Biology at Ohio State University. He was trained in plant molecular biology while a postdoctoral fellow at Harvard University. Dr. Sayre is the lead investigator of an international team of experts funded by the Bill and Melinda

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Gates Foundation to biofortify cassava to provide complete nutrition for subsistence farmers in Africa. Test connection is on October 25 at 2:30 PM ET.

Indiana State Museum:

All New

“2025: A Genetic Odyssey”

See how your vote could influence the future! Experience an interactive presentation exploring the impact of genetic research on our lives. Meet the Caldwell’s—a futuristic family who in the year 2025 are facing issues about cloning, genetic engineering, and crop modification. As you watch and listen to each scenario you will be asked to vote on how you think the family should handle their choices. At the conclusion we will fast forward to the year 2050 and see how your votes played out in the Caldwell’s future. Grades 9 - 12.

Vanderbilt University Center for Science Outreach:

All New

"Does Genetic Testing Make the Grade? Ethical Issues in Genetic Counseling"

Topic: Genetics

Time: 10/19/05 10:30 am, AND 1:30pm, 30 minutes, High School

Expert: Melinda Cohen

Description: Meet with Melinda Cohen, a Genetics Counselor in Vanderbilt's Division of Medical Genetics, who will talk about and lead discussion in how genetic tests vary, pitfalls of test interpretation, impact of test results on individuals and families, and ethical dilemmas in genetic testing/counseling.

Offered through a continued partnership between Vanderbilt's Center for Science Outreach and Vanderbilt University Medical Center Division of Medical Genetics.

"The Human Genome Project"

Topic: Genetics

Time: 11/09/05 10:30 am AND 1:30pm, 30 minutes, High School

Expert: Melinda Cohen

Description: At least once a week somewhere in the daily newspapers there is some mention of a new genetic breakthrough, a new finding in the human genome project or a new genetically engineered plant has been created....what does all of this mean?

Melinda Cohen is a certified genetic counselor and offers topics through a Vanderbilt Center for Science Outreach and Division of Medical Genetics partnership.