

Dear Middle/High School Principals and Teachers:

You are invited to attend a teacher's workshop that will focus on how our genes and the environment interact. The goal of this workshop is to provide you, the teacher, with tools that you may use in your classroom to educate your students on this important topic. In addition, members of the scientific community will also be attending this workshop and will serve as mentors and as an additional resource. If you are interested in attending this workshop, please fill out the registration form provided and enclose the \$10 registration fee. This fee will contribute towards the expenses that include lunch and materials. Your sponsors will cover the cost of providing a substitute teacher in your absence. If you have further questions, please contact Dr. Marybeth Genter, University of Cincinnati. Phone: (513) 558-6266, E-mail: marybeth.genter@uc.edu. or Dr. Hollie Swanson, University of Kentucky. Phone: (859) 323-1463, E-mail: hswan@pop.uky.edu.

Facilitators: Drs. Susan Vandale, Brian Johnson, Greg Oakley (Department of Environmental Health, University of Cincinnati), Amy Roe (The Procter and Gamble Co.) and Mary Dereski (Wayne State University)

Schedule of Events:

Registration:	11:45
Lunch with mentors	12:00
Program	1:00-5:00

Preliminary Program:

[Introduction to the Workshop](#) (10 minutes)

Topic 1: "Science and Issues in Stem Cell Research"

(20 Minutes)-Facilitators: Brian Johnson, Greg Oakley, Susan Vandale.

- Presentation on concepts and issues
- Group Discussion

Exercise 1 in small groups: "Scenarios Related to Human Genome Research: The Remarkable Case of the Stem Cell" (25 minutes)

Topic 2: "A Look at our Genetic Material"

(45 minutes)

Facilitator (Topics 2-4): Mary Dereski

- Discussion of DNA and RNA
- Isolation of DNA

Break (15 minutes)

Topic 3: "A Look at Mutations and Polymorphisms"

(45 minutes)

- Discussion of Transcription and Translation
- Mutations and Activity

Topic 4: "What is the Effect on Human Health"

(45 minutes)

- Discussion of Human Issues of Environmental Health and Genetics
- Running a Paper Gel
- A Look at a Molecular Model of DNA and Protein

Post-Lesson Quiz: "Applying what I learned in this workshop" (10 minutes) and workshop evaluation (5minutes)

Workshop Wrap-Up (comments, questions and answers - 10 minutes)

Happy Hour: (Optional)
Mayura Indian Restaurant
3201 Jefferson Ave.
(Behind the EPA)

Registration Form

If you are interested in participating in the workshop, please provide the information below and mail the form plus a \$10 check made out to OVSOT and send to Dr. Hollie Swanson, Department of Pharmacology, University of Kentucky Medical Center, Lexington, KY 40536

Name _____

Address _____

City _____

State _____

Zipcode _____

Telephone _____

Email _____

School _____

About The Sponsors:

Ohio Valley Chapter of the Society of Toxicology

The Ohio Valley Chapter Society of Toxicology (OVSOT) is one of 17 regional chapters of the Society of Toxicology (SOT). The membership is composed of individuals from academia, government, and industry with a professional interest in toxicology, including toxicologists, regulators, and students. Individuals from the states of Kentucky, Ohio, Indiana, and West Virginia participate in the OVSOT. The OVSOT sponsors annual or semi-annual meetings dedicated to a topic of current interest in toxicology. These 1-2 day meetings are designed to allow maximum participation from students as well as senior level scientists.

The Center of Environmental Genetics, University of Cincinnati

The Center of Environmental Genetics (CEG) is a Center of Excellence sponsored by the National Institute of Environmental Health Sciences (NIEHS). It was directed by Dr. Daniel W. Nebert through its first successful 5 years, which began in 1992. The purpose of the CEG is to investigate the interaction between genes and the environment. The CEG currently consists of over forty scientists from departments throughout the University of Cincinnati College of Medicine, College of Arts and Sciences, the Children's Hospital Medical Center, as well as the University of Indiana and Case Western Reserve University. CEG members have joined together to examine the impact of genetic diversity on the response of individuals and populations to toxic environmental agents which include sunlight, chemicals in our diet, carcinogens, air pollutants, etc.

Directions to the EPA Building

The EPA is located at the intersection of Vine Street and MLKing Drive, directly across from the University of Cincinnati campus. If you are coming from the South, take I-75 north to Hoepple (left exit ramp), back over I-75 and go up the hill past the White Castle. Hoepple then becomes King Drive. From the North, take I-75 south to Mitchell Street (exit 6), then back under I-75. The first right is Vine Street.

Genes, Disease and the Environment: A Look at Genetic Susceptibility to Environmental Factors

A Workshop for Science Teachers in the Greater Cincinnati Area

**November 15, 2001
EPA Building
26 W. Martin Luther King Drive
Cincinnati, OH**

Sponsors:

**Ohio Valley Chapter of the Society of
Toxicology**

**Center of Environmental Genetics,
University of Cincinnati**