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National Center for Toxicological Research

“Taking Public Health Risks Seriously”

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NCTR Quarter Page

FDA Commissioner Visits NCTR

On Wednesday, February 12, 2003, Dr. Mark McClellan, Commissioner of the Food and Drug Administration, visited the Jefferson Laboratories. Dr. Dan Casciano, NCTR Director, presented an overview of NCTR. Highlights of NCTR’s work in Risk Assessment/Management, Toxicoinformatics, Structural Genomics, Food Safety, and Counterterrorism were outlined by each area’s director. Dr. McClellan toured the Phototoxicology Center, the Neurotoxicology and Functional Genomics areas, and the Arkansas Regional Laboratory.

At an “All-Hands Meeting,” Dr. McClellan identified the FDA’s new strategic goals as 1) Strong FDA, 2) Risk Management, 3) Better Informed Consumers, 4) Patient Safety, and 5) Counterterrorism. He emphasized that research being conducted at the Jefferson Laboratories directly relates to these strategic goals and the results will have a major impact on the public’s safety and health.



Dr. Mark McClellan, FDA Commissioner, responds to a question from a Jefferson Laboratories staff member. Photo/Danny Tucker

“We [the FDA] are the world’s foremost science-based regulatory agency. The NCTR plays a critical role in the mission of the Agency. ... This is a place where you can make a tremendous difference, ... where your career can have a major impact.” Dr. Mark McClellan

ABI Meets at NCTR

The Arkansas Biosciences Institute (ABI) is a partnership of scientists from the University of Arkansas Division of Agriculture, the University of Arkansas for Medical Sciences (UAMS), the University of Arkansas at Fayetteville, Arkansas Children’s Hospital, Arkansas State University, the Arkansas Science and Technology Authority and the NCTR.

The ABI was created as part of the Tobacco Settlement Proceeds Act to foster collaborative efforts between the member institutions and to conduct and promote research in the fields of agriculture and medicine, focusing particularly on tobacco and cancer-related illness. The new building to house the ABI is being constructed on the campus of the UAMS.

On Friday, January 24, 2003, NCTR hosted a meeting of the ABI. After updates by ABI member institutions, Dr. Dan Casciano, Director of NCTR, reported on ongoing collaborative research projects at NCTR. Dr. Casciano and Dr. Paul Howard, Director of NCTR’s Center for Phototoxicology, then led the group in a tour of NCTR.

Center for Functional Genomics

Did you know that technologies developed as a result of the Human Genome Project can help assess toxicity of everyday products used by the public?

NCTR’s Center for Functional Genomics will 1) assess changes in genes to investigate the relationship between chemical exposure, toxicity and disease, 2) develop standard DNA-based testing methods that will be directly applicable to regulatory science, and 3) use microarray-generated data to develop new, more relevant, predictors of human toxicity.

On February 2, 2003, the Center for Functional Genomics held an Open House. NCTR staff enjoyed viewing a demonstration of the process of creating a microarray and sampling “microarray cookies.”



William Branham and Cathy Melvin demonstrate the process of creating microarrays at the Center for Functional Genomics Open House. Photo/Shirley Dawson

Jefferson Lab "Trail Blazers"

By Priscella Sullivan

There are "trail blazers" among us! Vicky Culp and Rudy Rieple have been selected as the Department of Health and Human Services Energy Champions as part of the *You Have the Power* campaign. The campaign, an initiative funded by the U.S. Department of Energy, spreads the word about saving energy costs and resources among Federal workers.

Vicky and Rudy are responsible for the first competitively awarded natural gas contract for Jefferson

Labs since deregulation. The pièce de résistance is that it resulted in a budget savings of \$220,000. Thanks Vicky and Rudy for your efforts.

Vicky and Rudy follow in the footsteps of the "Innovator," Bruce Rice, who won the prestigious distinction in 1998.



Vicky Culp and Rudy Rieple, recipients of the prestigious DHHS Energy Champions Award.
Photo/Danny Tucker

Recent Publications

NCTR conducts research designed to protect the public's health. Results from some of these research projects have recently been accepted for publication in nationally recognized scientific journals.

Billedeau, S.M., Development of Methods for Analysis and Confirmation of Erythromycin A Residues in Tissue Samples from Terrestrial and Aquatic Farmed Animals by Liquid Chromatography, *J. Agricultural and Food Chemistry*

Billedeau, S.M., LC Analysis of Erythromycin A in Salmon Tissue by Electrochemical Detection with Confirmation by Electrospray Ionization/Mass Spectrometry, *J. Agricultural and Food Chemistry*

Ferguson, S.A., Dietary Ethinyl Estradiol Exposure during Development Causes Increased Sodium Intake and Mild Maternal and Offspring Toxicity in Rats: An Indication of Male Feminization and Female Hyperfeminization?, *Journal Hormones and Behavior*

Morris, S.M., Effect of Dietary Genistein on Cell Replication Indices in C57BL6 Mice, *Cancer Letters*

Ratnasinghe, L., Gene-environment Interactions between Codon 194 Polymorphisms of XRCC1 and Antioxidants Influence Lung Cancer Risk, *Anti-Cancer Research*

Scallet, A.C., Dietary Exposure to Genistein Increases Vasopressin, but Does Not Alter B-endorphin, in the Rat Hypothalamus, *Toxicological Sciences*

Schmued, L.C., Demonstration and Localization of Neuronal Degeneration in the Rat Forebrain Following a Single Exposure to MDMA, *Brain Research*

Slikker, W., Childhood Obesity: Possible Causes and Public Health Impact, *Journal of Children's Health*

Snellings, S.L., Rapid Colorimetric Method to Detect Indole in Shrimp with Gas Chromatography Mass Spectrometry Confirmation, *Journal of Food Science*

Thai, S., Altered Gene Expression in Mouse Livers After Dichloroacetic Acid Exposure, *Mutation Research*

Turesky, R., The Effects of Coffee on Enzymes Involved in Metabolism of the Dietary Carcinogen 2-amino-1-methyl-6-phenylimidazo[4,5-b]pyridine in Rats, *Chemico-Biological Interactions*

On-Line Research Information

Regulatory Research Perspectives: Impact on Public Health, an on-line newsletter that provides a vehicle for FDA scientists to communicate important scientific information, and *NCTR's FY 2002-2003 Research Accomplishments and Plans* are available from NCTR's web site at <http://www.fda.gov/nctr/science/science.htm>.

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