

**THE NATIONAL LIBRARY OF MEDICINE**

**ENVIRONMENTAL HEALTH  
INFORMATION OUTREACH PROGRAM**

**PROCEEDINGS**

National Library of Medicine

Bethesda, Maryland

June 12, 2006

*Advances in Science: Forensic Science*

Prepared for

Specialized Information Services Division

National Library of Medicine

Prepared by

Medical Education and Outreach Group

Oak Ridge Institute for Science and Education

This document was prepared for the **Specialized Information Services Division, National Library of Medicine, National Institutes of Health** by the Oak Ridge Institute for Science and Education (ORISE) through an interagency agreement with the U.S. Department of Energy (DOE). ORISE is managed by Oak Ridge Associated Universities under DOE contract number DE-AC05-06OR23100.

---

The **Oak Ridge Institute for Science and Education** (ORISE) is a U.S. Department of Energy institute focusing on scientific initiatives to research health risks from occupational hazards, assess environmental cleanup, respond to radiation medical emergencies, support national security and emergency preparedness, and educate the next generation of scientists. ORISE is managed by Oak Ridge Associated Universities.

## CONTENTS

<b>AGENDA .....</b>	<b><i>ii</i></b>
<b>ATTENDEES .....</b>	<b>1</b>
<b>I. WELCOME AND INTRODUCTIONS .....</b>	<b>2</b>
<b>II. OPENING REMARKS .....</b>	<b>3</b>
<b>III. FORENSIC SCIENCE OVERVIEW.....</b>	<b>3</b>
<b>IV. WELCOME AND GREETINGS FROM DR. DONALD A.B. LINDBERG.....</b>	<b>4</b>
<b>V. RECOGNITION OF DR. THEODORE BATES.....</b>	<b>4</b>
<b>VI. NLM ROLES IN 9/11 DNA IDENTITIES.....</b>	<b>5</b>
<b>VII. ROLES OF ACADEMIA IN FORENSIC SCIENCE: HBCUs.....</b>	<b>6</b>
<b>VIII. ROLES OF ACADEMIA IN FORENSIC SCIENCE: HIGH SCHOOLS.....</b>	<b>7</b>
<b>IX. NATIONAL NETWORK OF LIBRARIES OF MEDICINE .....</b>	<b>8</b>
<b>X. NLM EXHIBITION TOUR: “Visible Proofs: Forensic Views of the Body” .....</b>	<b>9</b>
<b>XI. NIH E-GRANTS PROCESS .....</b>	<b>10</b>
<b>XII. NIH MINORITY RESEARCH PROGRAMS.....</b>	<b>10</b>
<b>XIII. GROUP DISCUSSION: EnHIOP AWARDS.....</b>	<b>12</b>
<b>XIV. EnHIOP PROJECT REPORTS.....</b>	<b>13</b>
<b>XIV. WRAP-UP AND ACTION ITEMS.....</b>	<b>15</b>
<b>APPENDIX A: EnHIOP DIRECTORY of CURRENT REPRESENTATIVES .....</b>	<b>17</b>
<b>APPENDIX B: EnHIOP EXECUTIVE COMMITTEE .....</b>	<b>20</b>
<b>APPENDIX C: 2005 EnHIOP PROJECTS.....</b>	<b>21</b>
<b>HBCUs, HSIs, and Tribal Colleges Environmental Information Outreach Map....</b>	<b><i>(inside back cover)</i></b>



**NATIONAL LIBRARY OF MEDICINE  
ENVIRONMENTAL HEALTH INFORMATION OUTREACH PROGRAM MEETING**

**Board Room  
Mezzanine, Bldg. 38  
Bethesda, Maryland  
June 12, 2006  
8:15 a.m. – 5:00 p.m.**

AGENDA

- |                         |  |
|-------------------------|--|
| 8:15 a.m. – 8:45 a.m.   | Registration and Continental Breakfast   |
| 8:45 a.m. – 9:00 a.m.   | <b>Welcome and Greetings</b><br>Donald Lindberg, M.D.<br>Director, NLM   |
| 9:00 a.m. – 9:10 a.m.   | <b>Opening Remarks</b><br>Jack Snyder, M.D.<br>Associate Director, SIS, NLM  |
| 9:10 a.m. – 9:15 a.m.   | <b>Recognition of Dr. Theodore Bates</b><br>Donald A.B. Lindberg, M.D. and Henry Lewis, Pharm.D.   |
| 9:15 a.m. – 9:30 a.m.   | <b>Introductions</b><br>Henry Lewis, Pharm.D.<br>Chairman, EnHIOP  |
| 9:30 a.m. – 10:00 a.m.  | <b>Forensic Science Overview</b><br>Jack Snyder, M.D.<br>Associate Director, SIS, NLM  |
| 10:00 a.m. – 10:20 a.m. | <b>NLM Roles in 9/11 DNA Identities</b><br>Lisa Forman, Ph.D.<br>NCBI, NLM   |
| 10:20 a.m. – 10:30 a.m. | BREAK  |
| 10:30 a.m. – 11:20 a.m. | <b>Roles of Academia in Forensic Science (HBCUs)</b><br>Charles O. Ochie, Sr., Ph.D.<br>Associate Professor and Chair<br>Department of Criminal Justice<br>Albany State University |

- 11:20 a.m. – 11:45 a.m.      **Roles of Academia in Forensic Science** (High Schools)  
Dorothy Harris  
Quince Orchard High School  
Gaithersburg, Maryland
- 11:45 a.m.. – 1:00 p.m.      **Working Lunch**  
**Presentations/Overview of National Network of Libraries of  
Medicine (NN/LM)**  
Angela Ruffin, Ph.D.  
Head, National Network Office, National Network of Libraries of  
Medicine, NLM
- 1:00 p.m. – 2:00 p.m.      **Tour NLM Exhibition**  
**“Visible Proofs: Forensic Views of the Body”**  
Jiwon Kim and Barbara Shaffer  
NLM Exhibition Program
- 2:00 p.m. – 2:30 p.m.      **NIH E-Grants Process**  
Megan Columbus  
e-Submission Project Manager, NIH, OD
- 3:10 p.m. – 3:30 p.m.      **NIH Minority Research Programs**  
Shelia McClure, Ph.D.  
NCRR/NIH
- 2:30 p.m.-3:00 p.m.      **Group Discussion: EnHIOP Awards**  
Henry Lewis, Pharm.D.
- 3:00 p.m. – 3:10 p.m.      BREAK
- 3:30 p.m. – 4:45 p.m.      **EnHIOP Project Reports**  
- Sarah Danner, *Oglala Lakota College*  
- Joseph McQuirter, D.D.S., *Charles R. Drew University of Medicine  
and Science*  
- Doris Withers, Ph.D., *Medgar Evers College*  
- Richard Ochillo, Ph.D., *Morgan State University*
- 4:45 p.m. – 5:00 p.m.      **Wrap-up**  
Henry Lewis, Pharm.D.



**DEPARTMENT OF HEALTH AND HUMAN SERVICES**

**NATIONAL INSTITUTES OF HEALTH  
NATIONAL LIBRARY OF MEDICINE**

**PROCEEDINGS OF THE ENVIRONMENTAL HEALTH  
INFORMATION OUTREACH PROGRAM (EnHIOP) MEETING  
June 12, 2006**

The Environmental Health Information Outreach Program (EnHIOP) panel convened on June 12, 2006 at 8:45 a.m. in the National Library of Medicine Board Room. The theme of the meeting was *Advances in Science: Forensic Science*.

Distinguished presidents, deans, and professors representing 17 of the nation's Historically Black Colleges and Universities (HBCUs), Hispanic-Serving Institutions (HSIs), and Tribal Colleges and Universities attended the meeting to discuss issues and outreach activities in environmental health with staff from the National Library of Medicine's Division of Specialized Information Services and distinguished guest speakers. Participating institutions not represented were California State University, Northridge; Morehouse School of Medicine; and Southern University, Baton Rouge.

**ATTENDEES**

**Representatives from Participating Institutions:**

Dr. Ann Barbre, Xavier University of Louisiana  
Dr. PonJola Coney, Meharry Medical College  
Dr. Robert Copeland, Howard University  
Mrs. Sarah Coulter Danner, Oglala Lakota College  
Dr. Constance Hendricks, Hampton University  
Dr. Diógenes Herreño-Sáenz, University of Puerto Rico Medical Sciences Campus  
Mr. David Hurley, Diné College (Alternate)  
Dr. Henry Lewis, Florida A&M University and EnHIOP Chairman  
Dr. Joseph McQuirter, Charles R. Drew University of Medicine and Science  
Dr. Milton Morris, Benedict College  
Dr. Richard Ochillo, Morgan State University  
Dr. Judith Mazique, Texas Southern University (Alternate)  
Dr. Leslie Schulz, University of Texas at El Paso  
Dr. Paul Tchounwou, Jackson State University  
Dr. James Webster, Tuskegee University  
Dr. Daniel Wildcat, Haskell Indian Nations University  
Dr. Doris Withers, Medgar Evers College

**Consultants to the EnHIOP:**

Mr. John Scott, Center for Public Service Communications  
Dr. Melvin Spann, NLM retired (EnHIOP Executive Secretary)  
Dr. Bailus Walker (EnHIOP Senior Science Officer)

**Speakers and Guests:**

Dr. Lisa Forman, National Center for Biotechnology Information, NIH  
Dr. Charles O. Ochie, Albany State University, Albany, Georgia  
Ms. Dorothy Harris, Quince Orchard High School, Gaithersburg, Maryland  
Ms. Jiwon Kim, NLM Exhibition Program, NIH  
Ms. Barbara Shaffer, NLM Exhibition Program, NIH  
Dr. Shelia McClure, National Center for Research Resources, NIH  
Dr. Angela Ruffin, Head, National Network of Libraries of Medicine National Network Office  
Dr. Marcia Hahn, Director, Division of Grants Policy, NIH

**NLM Staff:**

Dr. Donald A.B. Lindberg, Director, National Library of Medicine  
Dr. Betsy Humphreys, Deputy Director, National Library of Medicine  
Dr. Robert Mehnert, Director, Office of Communications & Public Liaison, NLM  
Dr. Jack Snyder, Division of Specialized Information Services, NLM  
Ms. Marti Szczur, Division of Specialized Information Services, NLM  
Gale Dutcher, Division of Specialized Information Services, NLM  
Ms. Cynthia Gaines, Division of Specialized Information Services, NLM (EnHIOP Project Officer)  
Stacey Arnesen, Division of Specialized Information Services, NLM  
Kristle Hunter, Division of Specialized Information Services, NLM  
Rose White, Division of Specialized Information Services, NLM  
Sidney Winston, Division of Specialized Information Services, NLM

**NLM/SIS Contractor Employees:**

Ms. Diane De Binder, Oak Ridge Institute for Science and Education  
Ms. Rose Foster, Oak Ridge Institute for Science and Education (EnHIOP Project Advisor)

**I. WELCOME AND INTRODUCTIONS**

Dr. Henry Lewis, Pharm.D., Florida A&M University, EnHIOP Chairman, opened the meeting and asked everyone to introduce themselves. He reviewed the information provided to the attendees, which included a portfolio on the current NLM exhibition, *Visible Proofs: Forensic Views of the Body*. Dr. Lewis encouraged the representatives from participating institutions to share information from the EnHIOP meeting with their university presidents at their earliest convenience. As Dr. Lindberg had not yet arrived, Dr. Lewis gave the floor to Dr. Jack Snyder for opening remarks.

## II. OPENING REMARKS

Dr. Jack Snyder, Associate Director, Division of Specialized Information Services, National Library of Medicine, welcomed everyone to NLM. He encouraged the panel to consider throughout the day how forensic science and environmental science intersect with one another. He also stated that forensic science is a way to get young people interested in science as well as employed in scientific careers and our criminal justice system.

## III. FORENSIC SCIENCE OVERVIEW

Dr. Jack Snyder, Associate Director, Division of Specialized Information Services, National Library of Medicine, gave an overview of forensic science. Dr. Snyder has an extensive background in forensic science and law and has taught forensics at George Washington University in Washington, D.C. for the past 15 years. He discussed the definition of forensic science, the goals of forensic investigation, and the varied subject matter of forensics, including the issue of fraud in forensic investigations. He also showed photographs and drawings representing different aspects of forensics, many of them from NLM's History of Medicine Division.

Dr. Snyder gave the definition of forensic science, as stated in the current NLM exhibit, *Visible Proofs: Forensic Views of the Body*, as “the use of science in law, in legal and/or government forums or agencies, especially coroner’s inquests, police investigations, and civil or criminal trials.” The purpose of forensic science, he said, is to recognize evidence for what it is and what it will reveal—then to document it, preserve it, and collect it.

Touching on the history of forensic science, Dr. Snyder pointed out how significantly forensic science has grown—from the early identification of people by their proteins to the wide range of modern forensic subject matter that today encompasses pathology, toxicology, serology, biology, odontology, anthropology, and psychiatry/psychology/neurology. Dr. Snyder also pointed out how other areas of forensic science are emerging. For example, there is now a growing presence of forensic radiology and computer forensics. He stated that there is a desperate need for good, trained people in these new areas, and encouraged the minority institutions represented at the table to consider those opportunities for their students, especially the area of computer forensics.

Dr. Snyder discussed the issue of scientific fraud in forensic investigations as a significant and important area. He cited an example from West Virginia in which acts of misconduct included, among many,

- overstating the strength of results and frequency of genetic matches,
- reporting inconclusive results as conclusive,
- altering lab records,
- failing to report conflicting results, and
- reporting scientifically impossible or improbable results.

This is an area that must be addressed. The determining factor for whether evidence will be admitted is the general acceptance by the scientific community.

Examples of some of the aspects of forensic investigation shared by Dr. Snyder included firearms, fingerprinting, forensic tools, and DNA identification. He also noted the importance of photographs and how much can be learned from them.

#### **IV. WELCOME AND GREETINGS FROM DR. DONALD A.B. LINDBERG**

Dr. Donald A.B. Lindberg, Director, National Library of Medicine, welcomed everyone to NLM and expressed his appreciation for the activities of the EnHIOP program

Dr. Lindberg spoke about the opening program and ribbon cutting ceremony for the current NLM exhibition, *Visible Proofs: Forensic Views of the Body*, which was held on February 16. The exhibit tells the history of forensic medicine in images and artifacts and is on display at NLM through February 16, 2008.

Among the noteworthy guest speakers for the opening program were Dr. Clyde Snow and Kirk Bloodsworth. Dr. Clyde Snow is a renowned forensic anthropologist from Norman, Oklahoma, whose skeletal confirmations include President John F. Kennedy, victims of the Oklahoma City bombing, and civilians killed during Argentina's "Dirty War." His work in Argentina led to the formation of the Argentine Forensic Anthropology Team, a nongovernmental organization dedicated to using forensic science to investigate human rights abuses. Kirk Bloodsworth is the first convicted murderer in the United States exonerated by DNA testing. The forensic stories of both of these men are featured in the exhibition.

Special guests in attendance at the opening ceremony included 250 students from local high schools in Maryland, Virginia, and the District of Columbia.

In closing, Dr. Lindberg recommended genome analysis as a future topic for the group.

#### **V. RECOGNITION OF DR. THEODORE BATES**

Dr. Theodore Bates, professor of pharmaceuticals in the College of Pharmacy and Health Sciences at Texas Southern University (TSU), served the EnHIOP program well for 14 years, from its inception in 1991, when it was known as the Toxicology Information Outreach Program (TIOP), through its transition to the Environmental Health Information Outreach Program, and until December 2005.

A plaque was presented in honor of Dr. Bates' service to the NLM by Dr. Lindberg and Dr. Lewis. Dr. Judith Mazique, alternate panel member from TSU, was present to accept the plaque for Dr. Bates.

The plaque reads:

THEODORE R. BATES  
TEXAS SOUTHERN UNIVERSITY SCHOOL OF PHARMACY  
In recognition and appreciation of 14 years of service to the  
Toxicology Information Outreach Program 1991-1999  
Environmental Health Information Outreach Program 2000-2005  
NATIONAL LIBRARY OF MEDICINE

## VI. NLM ROLES IN 9/11 DNA IDENTITIES

Dr. Lisa Forman, National Center for Biotechnology Information (NCBI), National Library of Medicine, is a population geneticist with field, research, applied, administrative and policy experience. She has been involved in forensic DNA testing for nearly 20 years, first in helping to establish DNA testing as robust evidence in thousands of criminal and paternity cases and later in crafting programs and policies for the U.S. Department of Justice as the Chief of their Forensic and Investigative Science Research Division. At NCBI, Dr. Forman works on software programs aimed at quality assurance of DNA profiles used in both forensics and medical genetics and she develops tools to make NCBI's vast resources more useful to constituencies beyond the biomedical communities they currently serve.

Dr. Forman first gave a historical perspective of DNA analysis to better understand the forensic challenges presented by the 9/11 tragedy. In 1985, the evolutionary British molecular biologist Sir Alec Jeffries first discovered the genetic markers that made DNA identification possible. The "polymerase chain reaction" (PCR) technique was developed in 1988; this technique, which increases the amount of a specific sequence of DNA in a sample, has become invaluable in modern day DNA typing. "Short Tandem Repeats" (STR), the current forensic marker of choice, was first developed in 1990 and this process continued to be refined and expanded until STR became the standard method of DNA identification in 1995.

In DNA testing, Dr. Forman stated that she always looks at two aspects: "what makes each person unique and what makes each person uniquely special." She showed pictures of samples that would be obtained from a typical crime scene or paternity investigation and then explained how those samples would be processed.

Dr. Forman then described the unprecedented challenges faced by the 9/11 World Trade Center tragedy. Those challenges are chronicled in the book, *Who They Were* by Robert C. Shaler, which Dr. Forman highly recommended. This was the first "open" situation the forensic community had to face—and the biggest thing that had ever happened. The almost 250,000 remains recovered were severely compromised, fragmented, and commingled, which presented overwhelming information reporting tasks. New York City did not have the capacity for the huge sample volume or the casework; there was no software to integrate and unify the data; and there were four types of samples to track. The sampling workload was divided between local, state and

private labs, and NLM's National Center for Biotechnology Information (NCBI) was on the ground at the World Trade Center every other week for the first year to generate needed software programs. Dr. Forman described the situation as "the birth of forensic informatics."

In 2003, the National Institute of Justice (NIJ) and the National Library of Medicine (NLM) formed an interagency agreement to develop computational tools for forensic identification. The work was done at NLM's National Institute for Biotechnology Information (NCBI), and the resulting software, OSIRIS (Open Source Independent Review & Interpretation System), has become an invaluable resources in the forensics community, including identifications associated with Hurricane Katrina fatalities. Dr. Forman described how OSIRIS works and the huge impact it has had on the future of DNA identification.

As a final point, Dr. Forman presented the following forensic DNA policy issues to be considered:

- Is there a forensic element to mass fatalities caused by natural disasters?
- What should be considered in mass fatality identification testing?

She emphasized that there are questions and decisions to be made in how to identify our dead and that we must remember that these issues intersect with a broad array of civil liberties.

## **VII. ROLES OF ACADEMIA IN FORENSIC SCIENCE: HBCUs**

Dr. Charles O. Ochie, Associate Professor and Chair, Department of Criminal Justice and Forensic Science, Albany State University (ASU), Albany, Georgia, discussed the role of academia in forensic science at the university level and gave an overview of forensic science within Historically Black Colleges and Universities (HBCUs). He stated that there has been a recent surge in the number of forensic science programs at colleges and universities as interest in the field has increased. Approximately 21 institutions in the U.S. currently offer a B.S. degree in forensic science, and about 52 institutions offer some kind of combination forensic science programs, both undergraduate and graduate. Among HBCUs, two institutions have a forensic science program: Albany State University (ASU) in Georgia, and Fayetteville State University in Fayetteville, North Carolina. ASU offers the only Bachelor of Science degree in Forensic Science in the state of Georgia. The picture at right shows the building that houses ASU's Department of Criminal Justice and Forensic Science.



Dr. Ochie described forensic science as a unique scientific discipline that requires its practitioners to have—in addition to technical skills and knowledge—critical, analytical thinking skills, communication skills, and an ethical awareness of the role of the scientist in our criminal justice system. DNA technology alone has made it possible to identify criminal offenders and exonerate the innocent, and recent advances in this technology have made it even more reliable and efficient.

Albany State's forensic science program began with its approval by the Albany State Board of Regents in September of 1997, and the first classes were held that fall. Albany State has since graduated four cohorts in this program, with a total of 12 graduates. Dr. Ochie said that a forensic science program should encompass the roles of criminalistics and criminalists, research and development, cooperation and discussion among laboratories, and knowledge of common cases and court procedures. The program at ASU is based on the natural sciences of chemistry, physics, and biology, with an emphasis on applying these sciences to practical problems. Therefore, hands-on experience and research are important aspects of the program. As a part of their studies, students have the option to perform on-campus research or two off-campus internships. Equipment available to the students includes a scanning electron microscope, a ballistic comparison microscope, a polarized light microscope, a latent and visible fingerprinting setup with Automatic Fingerprint Identification System (AFIS) matching, and a DNA sequencing gel chamber, and many other high-tech instruments.

Classes at ASU consist of Forensic Chemistry, Forensic Microcopy, Trace Evidences, Drug Analysis, Instrumental analysis, Forensic Serology, Forensic Toxicology, Crime Scene Investigation, Photography, and Court Room Practices, and are taught by two full-time and two part-time faculty. Students are required to complete 125 credit hours for the B.S. degree and 65 for an Associates Degree. Laboratory exercises are an integral part of the program.

Collaboration with other agencies strengthens the ASU forensic science program; the agencies include the Forensic Institute Pathology Medical Services in Lincoln, Nebraska, the Georgia Firearms Program, the Georgia Bureau of Investigation in Moultrie, Georgia, the Valdosta Crime Lab, and the Dougherty County Sheriff's Office (for AFIS). Dr. Ochie also explained that community services are provided in the form of outreach, community recruitment activities, and career consulting presentations and discussions.

A major activity of the department is the annual "Symposium on Evidence," held each spring. The chief guest at the 2006 symposium was the world-renowned forensic expert Dr. Henry Lee.

### **VIII. ROLES OF ACADEMIA IN FORENSIC SCIENCE: HIGH SCHOOLS**

Ms. Dorothy J. Harris, Chairman, Science Department, Quince Orchard High School, Gaithersburg, Maryland, discussed forensic science at the high school level. Ms. Harris, who has been teaching for 28 years, is highly qualified in all science disciplines and currently teaches Honors Anatomy and Forensic Science. She has won two different "Teacher of the Year" awards, and she is also an active member (since 2000) of the Disaster Mortuary Operational Response Team (DMORT) Region III, currently housed under Homeland Security. She has been instrumental in developing a pilot project for forensic studies at the high school level, which is being implemented at Quince Orchard High School and other high schools in the area that had heard of the program and wanted to participate in the pilot. More than 1,000 students in Montgomery County, in more than half of the high schools, are now signed up for the program. The pilot project covers two academic years, 2004-2005 and 2005-2006. Ms. Harris's presentation described the course content and activities, examples of student artifacts from the first year, and ways in which forensic science can be integrated with other subjects.

Ms. Harris described her teaching technique, which involves incorporating reasons and activities to nurture an understanding within the students of “why” they need to know the information in the course. The forensic science course that she has developed encompasses this philosophy. Students learn about how science is applied to law beginning at the crime scene. Ms. Harris stressed that the course is appropriate only for older students—juniors and seniors—who are mature enough to handle the graphic content of the course. Therefore, not everyone gets into the class. Having a science background is also important; Ms. Harris stressed that biology alone is not enough due to the cross-disciplinary nature of forensic science.

The recent increase of television crime scene shows such as CSI, Ms. Harris said, is a “great wave we in science can ride to hook kids into our classes,” but it is important to impress upon them that these shows are not reality. In particular, she described some of the problems with CSI that are not realistic. In class, the students do an activity called “Reel to Real” in which they watch six-minute segments of the show and then identify the mistakes they saw.

The course integrates many areas of science and includes professional/technical writing in the form of presentations and written lab reports. Ms. Harris stated that everything the students do is based on a scenario. Activities include evaluation of physical evidence, glass/soil sampling and analysis techniques, organic analysis, microscopic evaluation of evidence, and analysis of hair, fiber, paint, and drugs. Field trips, guest speakers, and Internet research are also incorporated, and the students also read many case studies.

Ms. Harris recommended two excellent Web sites: the American Academy of Forensic Sciences Web site, which contains workshop ideas and opportunities for students, and FirearmsID.com.

## **IX. NATIONAL NETWORK OF LIBRARIES OF MEDICINE**

Dr. Angela Ruffin, Head, Office of the National Network of Libraries of Medicine (NN/LM) National Network Office, gave an overview of the NN/LM.

The NN/LM consists of 5,049 local health science libraries, 159 resources libraries, and eight regional medical libraries serving all health professionals and the public. Coordinated by the National Library of Medicine, the NN/LM has three primary goals:

- to promote awareness of and access to biomedical information resources for health professionals and the public,
- to improve access to and sharing of biomedical information resources, and
- to develop, promote, and improve access to electronic health information resources by network member libraries, health professionals, and organizations providing health information to the public.

These goals are accomplished through the NN/LM’s member libraries. Activities include training and presentations, consultation, identification of local libraries, fostering partnerships and connections, and funding mechanisms. Four of the EnHIOP school libraries are members of the NN/LM. These are:

- Diné College, a Tribal Connections 4 Corners (TC4C) Project Partner
- Morehouse School of Medicine, which received a Consumer Health and Toxicology Information Project & Exhibit Award,
- Oglala Lakota College, a partner in a project with the University of South Dakota, and
- Tuskegee University, Rural Health Information Project.

Winston Salem State University is also a member library and a part of the Northwest AHEC PDA Project.

Dr. Ruffin demonstrated the NN/LM Web site, including the Outreach Evaluation Resource Center. She also reported that 1,094 funding awards have been made in 2001-2006, which included:

- major outreach/consumer health projects,
- partnership planning awards,
- technology improvement/Internet connection awards
- training awards,
- exhibit awards, and
- technology awareness conferences.

#### **X. NLM EXHIBITION TOUR: “Visible Proofs: Forensic Views of the Body”**

Jiwon Kim and Barbara Shaffer, NLM Exhibition Program, led the EnHIOP representatives on a special tour of this exhibition. *Visible Proofs: Forensic Views of the Body* traces the history of forensic medicine from medieval times to the present, illustrating with graphic displays how forensic science has changed our world. The many items on display include:

- Some of the first medical treatises on forensics, dating back to the 1600s
- Surgical instruments used in the autopsy of Abraham Lincoln
- Fingerprints from the first investigation to use fingerprints to help secure a conviction for murder—the 1892 Francesca Rojas case
- A human heart with a bullet hole, a stomach poisoned by arsenic, and a kidney punctured by a fatal knife wound
- The famous “Nutshell Studies” dollhouse crime scenes, based on true cases and created in the 1940s as a forensic teaching tool
- Film clips of actual forensic autopsies

Stories of specific forensic investigations are also a part of the exhibition, including:

- How, in 1998, DNA evidence identified the Vietnam War's "Unknown Soldier" as Lt. Michael Blassie of St. Louis, Missouri
- How American anthropologist Clyde Snow and a group of courageous Argentinean students invented the field of human rights forensics in the mid-1980s. Evidence uncovered in their excavations of mass graves led to the conviction of members of Argentina's murderous military junta, and the Argentinean effort became the model for investigations of political and ethnic murders and atrocities around the globe
- How Kirk Bloodsworth, a crab fisherman from Maryland's Eastern Shore, became the first person convicted of murder to be exonerated by DNA evidence.

## **XI. NIH E-GRANTS PROCESS**

Ms. Marcia L. Hahn, Director, Division of Grants Policy, gave an overview of the electronic submission of research grant applications. She announced that by the end of September 2007, NIH plans to require electronic submission through Grants.gov for all NIH grant applications and to transition from the PHS 398 application form to the SF424 (R&R) form. These changes will be implemented gradually and are necessary to increase efficiency and to simplify applicant interactions across all NIH agencies. The two crucial systems are Grants.gov, which provides access to 900 grant programs within 26 grant-making agencies, and eRA Commons, where applicants/grantees can electronically receive and transmit application and award information after their application has been submitted.

The transition process will involve transitioning each research program/funding mechanism individually. Announcements will be posted in the NIH Guide for Grants and Contracts. Mechanisms that have not been transferred will continue to be submitted on PHS 398 on paper. All applications submitted for the research program transitioning receipt date and beyond must be submitted through Grants.gov on the SF424 (R&R), including amended applications previously submitted in paper. To date, more than 7,000 applications have been received electronically.

Ms. Hahn outlined the process, mechanism transition dates, and the two methods for submission. She recommended that grantees review the eSubmission Web site, become familiar with the forms and application guide(s), review available training resources, and share their experiences with others by networking at meetings and using the available listservs.

## **XII. NIH MINORITY RESEARCH PROGRAMS**

Dr. Sheila McClure, Division of Research Infrastructure (DRI), National Center for Research Resources (NCRR), National Institutes of Health (NIH), gave an overview of the Research Centers in Minority Institutions (RCMI) Program and other opportunities for fostering research excellence. Dr. McClure is the director of the RCMI Program. She described the divisions of NCRR, and in particular the DRI, which has as its goal "to develop the nation's capacity for biomedical research by providing support for the development of research infrastructure." She

explained that “research infrastructure” could be facilities, faculty, core labs, or opportunities for graduate students to excel. The activities of the DRI include

- the Institutional Development Award (IDeA) Program,
- the Facilities Improvement Programs, and
- the Research Centers in Minority Institutions (RCMI) Program

Dr. McClure described each of these programs in detail and the opportunities available through them.

The IDeA Program was established to enhance the geographical distribution of NIH extramural funding. Twenty-three states and Puerto Rico have met the eligibility requirements to receive funding through this program. To be eligible the state or territory must have previously obtained NIH grant awards of less than 20 percent between 1999 and 2003; states with higher success rates, but less than \$100 million average NIH funding over those five years, are also eligible.

The purpose of the IDeA Program is to establish multidisciplinary research centers of excellence at doctoral institutions or research institutes. Its goals are to establish networks of undergraduate institutions to develop a pipeline of next generation researchers, mentor junior faculty, support professional technical staff, provide startup funding for new hires, renovate laboratories, or provide equipment. To date, 73 centers have been established.

The Facilities Improvement Programs include funding for research facilities and animal facilities. Dr. McClure highlighted the Animal Facilities Improvement Program, which offers funds to upgrade animal research facilities and develop centralized programs of animal care that comply with federal laws, regulations, and policies. The matching requirement for applicants has been eliminated, and there is a \$700,000 limit.

The RCMI was established by Congress in 1985 to expand the nation’s capacity to conduct biomedical and behavioral research at minority doctoral degree-granting institutions. Since that time, the program has been expanded to include developing the research infrastructure at RCMI institutions and expanding the capacity of RCMI-supported medical schools to conduct clinical research through recruitment of magnet clinical investigators. RCMI institutions are located in 10 states, the District of Columbia, and Puerto Rico, and include most of the EnHIOP institutions.

Grants are available to establish Comprehensive Centers on Health Disparities (CCHD) for the development of sustainable, replicable, and culturally appropriate prevention and/or intervention research programs; to enhance opportunities for multi-disciplinary research collaborations; and to increase the role of research in maintaining a vigorous and stimulating academic environment that will inspire students and fellows to pursue careers that focus on health disparities.

There are currently three CCHD-supported projects:

- HIV/AIDS Disparities (2) – **Puerto Rico Consortium** (University of Puerto Rico Medical Sciences Campus, Ponce, and UCC) and **Meharry Medical College**
- Chronic Kidney Disease – **Charles R. Drew University of Medicine and Science**

The Clinical Research Education and Career Development (CRECD) Awards support the development and implementation of curriculum-dependent programs to train doctoral and post-doctoral candidates in clinical research leading to a Master of Science in Clinical Research or a Master of Public Health in a clinically relevant area. Five CRECD awards have been funded.

The DRI also participates in co-funding of NIH activities through the Stroke Prevention and Intervention Research Program, Cooperative Reproductive Science Research Programs at Minority Institutions, and Specialized Neuroscience Research programs at Minority Institutions.

Dr. McClure encouraged the representatives to also look at other institutes for environmental research funding. She demonstrated a search on “minority institutions” at the NIH grants site, at <http://grants1.nih.gov/grants/guide/index.html>. Other key words could include “minority faculty development,” “minority student development/training,” “infrastructure development,” and “environmental health.”

Unsolicited opportunities are also available. To tap this resource, Dr. McClure said to first find out what types of research are funded by the NIH institutes and centers, write concept papers, contact or visit with program officials, and be ready to revise and resubmit applications as often as necessary—just do not give up.

In closing, Dr. McClure invited everyone to attend the RCMi Tenth International Symposium on AIDS and Health Disparities, which will be held December 13-16, 2006, at the Caribe Hilton Hotel in San Juan, Puerto Rico. The University of Puerto Rico Medical Sciences Campus will host the symposium, and the theme will be *Pathways to Discovery: Multidisciplinary Translational Research*.

### **XIII. GROUP DISCUSSION: EnHIOP AWARDS**

Dr. Lewis led the discussion on the NLM EnHIOP Awards Program. He noted that the decline in the level of participation in the 2005-2006 submissions indicates a possible need for further review of the program. Key points that were brought up during the discussion were as follows:

- Should NLM continue to offer the awards at the current level?
- Should EnHIOP recommend a revamping of the program that would provide for larger grants to fewer schools each year?
- If the program were revamped, what should the criteria be for receipt of each award?
- What revised level of funding should be the maximum if the program is revised?

- In order to be representative of the composition of the EnHIOP schools, how should a revised program be conducted so that it does not create unfair competition between schools along the continuum of the Carnegie Classification System for colleges and universities?
- Should the EnHIOP Awards Program focus on targeted types of demonstration programs and, if so, who would determine the annual “targets”?

In consideration of timing, any recommended changes to the program would be for the 2007-2008 fiscal year. The EnHIOP Executive Committee will discuss this item at their next meeting.

#### **XIV. EnHIOP PROJECT REPORTS**

In 2005, awards of \$5,000 each were made to thirteen EnHIOP schools that submitted proposals to NLM to carry out information-related projects on their campuses and/or in their communities. Project updates were presented by representatives from Oglala Lakota College, Charles R. Drew University of Medicine and Science, Medgar Evers College, and Morgan State University.

##### **Oglala Lakota College, Department of Nursing—Kyle, South Dakota**

###### *Taking Charge—Living Wisely, Phase II*

Mrs. Sarah Coulter Danner, Chair, Department of Nursing, Oglala Lakota College (OLC) and OLC’s EnHIOP representative, described the research being conducted with their 2005 EnHIOP award. Dr. Deig Sandoval, professor and research scientist at OLC, is conducting the research, which involves the extraction of chemicals for analysis from the bitter melon of the tropical plant, *momordia charantia*, found in this country in California and Florida. This plant is thought to have properties of insulin and could be valuable for the treatment of diabetes, a major health issue for the Oglala Sioux Tribe. Once the hypoglycemic component of the plant is identified, the information will be disseminated to the Oglala Sioux Tribe and the findings will be incorporated into educational and research opportunities for the people of the Pine Ridge Indian Reservation.

Three varieties of the plant were studied to determine optimum germination conditions. Two of these varieties, Balsam Pear and Baby Doll, were harvested and processed and are currently being utilized for the animal testing. The time from germination to full grown plant is about four months. Reproduction of the plant’s natural environment is an important part of the process; OLC is collaborating with a greenhouse in Rapid City to provide the right environment. Dr. Sandoval employed two extraction processes and will compare the results to determine which process produces the best result. Testing is being conducted at the University of South Dakota School of Medicine in Vermillion, where the extract produced will be administered to the animal models to determine the active compounds responsible for lowering blood sugar.

Mrs. Danner reported that statistics from diabetes population studies being conducted on the reservation indicate that 9 percent of the population on the reservation has diabetes, compared to the national average of 6 percent, females consistently showed a higher percentage of registered

cases than males, and one district (Wounded Knee) was identified as having the highest percentage of registered cases (18 percent). In addition, Native Americans are six times more likely to have amputations than any other race. To address this issue, Dr. Sandoval and Mrs. Danner are developing a foot spa treatment as an outreach project to promote diabetes education, reconnect the relationship between elders and young people, and inform the people of the Pine Ridge Reservation of the diabetes research being conducted and the progress being made.

In addition to the plant research, some of the award money will be used to test the levels of arsenic in well water on the Pine Ridge Indian Reservation. Future endeavors include measuring fluoride levels to correlate to the dental health demographics of the reservation, then linking the geographical prevalence of diabetes on the reservation with environmental factors and mapping the results.

Mrs. Danner also showed a picture of her department's new nursing building, which was completed in January 2005. Funds from the National Library of Medicine were used in framing historical documents and to purchase the computers and printers for the new computer lab.

**Charles R. Drew University of Medicine and Science, Department of Oral and Maxillofacial Surgery—Los Angeles, California**

*Environmental and Toxicological Information Outreach*

Dr. Joseph McQuirter, Chief of Oral Surgery, Department of Oral and Maxillofacial Surgery, Charles R. Drew University, reported that the funding they received is being used to train post graduate students in emergency and family medicine on the use of NLM's environmental health and toxicology information resources. The hospital has a goal to make hazardous material training a mandatory in-service requirement, and they will dovetail the use of NLM resources into this. A follow-up survey will be conducted to determine how the NLM resources are being used.

**Medgar Evers College, CUNY—Brooklyn, New York**

*Using NLM Online Resources to Promote Knowledge of Human Genomics and Related Minority Health Issues: An Education and Outreach Program for Students, Faculty, and Community*

Dr. Doris Withers, Vice President for Assessment, Planning & Accountability, Medgar Evers College, reported that the MECGenIOP (Medgar Evers College Genomics Education and Outreach Program) Project, which began in 2004, has dovetailed into other projects. One of those was a presentation to community members on the human genome and health disparities. One very useful tool was the Surgeon General's "My Family Health Portrait," which she used to understand the relationship between disease and the environment. Other activities will be compiling a Webliography and doing a health history pedigree.

**Morgan State University, Department of Biology—Baltimore, Maryland**

*The Use of Laptop Computers to Enhance the Learning of Five Selected Junior and/or Seniors Who Have Expressed the Desire to Proceed to Professional Doctoral Degrees*

Dr. Richard Ochillo, Professor of Biology at Morgan State, reported that the NLM funding has made possible the purchase of 11 computers for their department's new computer lab. These computers are available for overnight use, and the students are using them all the time.

**XIV. WRAP-UP AND ACTION ITEMS**

Dr. Lewis distributed a list of draft discussion issues for the panel to discuss at a later time. These issues were:

- Development of a new mission statement for EnHIOP
- The role of EnHIOP within the National Library of Medicine
- The role of EnHIOP to member institutions
- Expanding health information outreach by EnHIOP
- The role of EnHIOP in addressing health literacy
- The development of short term goals (1-18 months)
- The development of long term goals (19-48 months)
- The role of EnHIOP in translational research

The meeting adjourned at 5 p.m.



## APPENDIX A

---

### ENVIRONMENTAL HEALTH INFORMATION OUTREACH PROGRAM

#### Directory of Current Representatives 2005-2006

##### **Dr. Henry Lewis, III, CHAIRMAN**

Professor, College of Pharmacy and Pharmaceutical Sciences  
Florida A&M University  
New Pharmacy Building, Room 353  
1415 Pershing Street  
Tallahassee, FL 32307  
TEL: (850) 599-3301  
FAX: (850) 599-3347  
E-mail: henry.lewis@famuedu

#### **PARTICIPATING HISTORICALLY BLACK COLLEGES AND UNIVERSITIES, HISPANIC-SERVING INSTITUTIONS, and TRIBAL COLLEGES**

##### **Dr. Ann Barbre**

Professor of Pharmacy Administration  
College of Pharmacy  
Xavier University of Louisiana  
7325 Palmetto Street  
New Orleans, LA 70125  
TEL: (504) 520-7439  
FAX: (504) 520-7930  
E-mail: arbarbre@xula.edu

##### **Mr. Ferlin Clark**

President  
Diné College  
P.O. Box 126  
Tsaile, AZ 86556  
TEL: (928) 724-6670  
FAX: (928) 724-3327  
E-mail: fclark@dinecollege.edu

##### **Dr. PonJola Coney**

Office of the Dean  
Meharry Medical College  
College of Medicine  
1005 D. B. Todd Boulevard, Suite 127  
Nashville, TN 37208  
TEL: (615) 327-6204  
FAX: (615) 327-6568  
E-mail: pconey@mmc.edu

##### **Dr. Robert Copeland, Jr.**

Associate Professor, Dept. of Pharmacology  
Howard University College of Medicine  
520 W Street NW, Room 3408  
Washington, DC 20059  
TEL: (202) 806-6311  
FAX: (202) 806-4453  
E-mail: rlcopeland@howard.edu

##### **Mrs. Sarah Coulter Danner**

Instructor, Chairperson  
Nursing Department  
Oglala Lakota College  
P.O. Box 861  
Pine Ridge, SD 57770  
TEL: (605) 867-5856/7  
FAX: (605) 867-5724  
E-mail: sdanner@olc.edu OR  
scoulterdan@yahoo.com

##### **Dr. Constance Smith Hendricks**

Dean, School of Nursing  
Hampton University  
Hampton, VA 23668  
TEL: (757) 727-5654  
FAX: (757) 727-5423  
E-mail: constance.hendricks@hamptonu.edu

**APPENDIX A**  
**Environmental Health Information Outreach Program 2005-2006**

---

**Dr. Thomas H. Hatfield**

Professor and Chair  
Environmental and Occupational Health Dept.  
California State University, Northridge  
18111 Nordhoff Street  
Northridge, CA 91330-8412  
TEL: (818) 677-7476  
FAX: (818) 677-7411  
E-mail: thomas.hatfield@csun.edu

**Dr. Diógenes Herreño-Sáenz**

Professor, Dept. of Pharmacology/Toxicology  
Univ. of Puerto Rico Medical Sciences Campus  
P.O. Box 365067  
San Juan, PR 00936-5067  
TEL: (787) 758-2525 Ext 1005  
FAX: (787) 282-0568  
E-mail: dherreno@rcm.upr.edu

**Dr. Joseph McQuirter**

Chief of Oral Surgery  
Dept. of Oral and Maxillofacial Surgery  
Charles R. Drew Univ. of Medicine & Science  
1731 East 120th Street, Rm. 3072AFH  
Los Angeles, CA 90059  
TEL: (310) 668-3322  
FAX: (310) 638-2529  
E-mail: jmcquirter@ladhs.org

**Dr. Milton Morris**

Director, Department of Environmental  
Health Sciences  
Benedict College  
1600 Harden Street  
Columbia, SC 29204  
TEL: (803) 253-5415  
FAX: (803) 253-5336  
E-mail: morrism@benedict.edu  
miltaug@aol.com

**Dr. Richard Ochillo**

Professor, Biology Department  
Morgan State University  
1700 E Cold Spring Lane  
217 Callway Hall  
Baltimore, MD 21251  
TEL: (443) 885-3033  
FAX: (443) 885-8285  
E-mail: rochillo@morgan.edu

**Dr. Kimberly Pounds**

Coordinator of Outreach Programs  
College of Pharmacy and Health Sciences  
Texas Southern University  
2450 Holcombe Blvd Suite 2-35G  
Houston, TX 77021  
TEL: (713) 313-1206  
FAX: (713) 313-1209  
E-mail: poundskl@tsu.edu

**Dr. Janet Rami**

Dean, School of Nursing  
Southern University at Baton Rouge  
P.O. Box 11794  
Baton Rouge, LA 70813  
TEL: (225) 771-2166 or 3266  
FAX: (225) 771-2641  
E-mail: janetrami@suson.subr.edu

**Mr. Perry Riggins**

Director, Media Technology Services  
Division of Information Technology Services  
Morehouse School of Medicine  
720 Westview Drive SW  
Atlanta, GA 30310-1714  
TEL: (404) 752-1172  
FAX: (404) 752-1075  
E-mail: rigginp@msm.edu

**Dr. Leslie Schulz**

College of Health Sciences  
University of Texas at El Paso  
1101 N. Campbell Street  
El Paso, TX 79902  
TEL: (915) 747-7201  
FAX: (915) 747-8223  
E-mail: lschulz@utep.edu

**Dr. Paul Tchounwou**

Director, Environmental Science Ph.D. Program  
Department of Biology  
Jackson State University  
P.O. Box 18540  
Jackson, MS 39217  
TEL: (601) 979-3321  
FAX: (601) 979-2341  
E-mail: paul.b.tchounwou@jsums.edu

**APPENDIX A**  
**Environmental Health Information Outreach Program 2005-2006**

---

**Dr. James Webster**

Chairman, Department of Biomedical Sciences  
School of Veterinary Medicine  
Tuskegee University  
Tuskegee, AL 36088  
TEL: (334) 727-8469  
FAX: (334) 727-8177  
E-mail: websterj@tuskegee.edu

**Mr. Daniel Wildcat**

Professor of American Indian Studies  
School of Arts and Sciences  
Haskell Indian Nations University  
155 Indian Avenue  
Lawrence, KS 66046-4800  
TEL: (785) 832-6677  
FAX: (785) 832-6613  
E-mail: dwildcat@haskell.edu  
dwildcat@sunflower.com

**Dr. Doris Withers**

Vice President for Assessment, Planning &  
Accountability  
Medgar Evers College, CUNY  
1650 Bedford Avenue  
Brooklyn, NY 11225  
TEL: (718) 270-5020  
FAX: (718) 270-6918  
E-mail: doris@mec.cuny.edu  
jacqueline@mec.cuny.edu (sec.)

## APPENDIX B

---

### ENVIRONMENTAL HEALTH INFORMATION OUTREACH PROGRAM

2005-2006

#### EXECUTIVE COMMITTEE

**Dr. Henry Lewis, III, Chairman**  
Professor, College of Pharmacy and  
Pharmaceutical Sciences  
Florida A&M University  
New Pharmacy Building, Room 353  
1415 Pershing Street  
TEL: (850) 599-3301  
FAX: (850) 599-3347  
E-mail: henry.lewis@famuedu

**Dr. Jack Snyder**  
**Associate Director**  
Division of Specialized Information Services  
National Library of Medicine  
6707 Democracy Blvd., Suite 510  
Bethesda, MD 20892  
TEL: (301) 496-3147  
FAX: (301) 480-3537  
E-mail: snyderj@mail.nlm.nih.gov

**Ms. Martha Szczur**  
**Deputy Associate Director**  
Division of Specialized Information Services  
National Library of Medicine  
6707 Democracy Blvd., Suite 510  
Bethesda, MD 20892  
TEL: (301) 496-3147  
FAX: (301) 480-3537  
E-mail: martha\_szczur@nlm.nih.gov

**Ms. Gale Dutcher**  
**Head, Office of Outreach and Special  
Populations**  
Division of Specialized Information Services  
National Library of Medicine  
6707 Democracy Blvd., Suite 510  
Bethesda, MD 20892  
TEL: (301) 496-5082  
FAX: (301) 480-3537  
E-mail: dutcherg@mail.nlm.nih.gov

**Ms. Cynthia Gaines, Project Officer**  
Division of Specialized Information Services  
National Library of Medicine  
6707 Democracy Blvd., Suite 510  
Bethesda, MD 20894  
TEL: (301) 496-3669  
FAX: (301) 480-3537  
E-mail: gainesc@mail.nlm.nih.gov

**Dr. Bailus Walker, Jr.**  
**Senior Scientific Advisor**  
Professor of Environmental and Occupational  
Medicine and Toxicology  
Howard University College of Medicine  
520 W Street NW  
Washington, DC 20059  
TEL: (202) 806-4477  
FAX: (202) 806-4898  
E-mail: bwalker@howard.edu

**Dr. Melvin L. Spann**  
**Executive Secretary**  
National Library of Medicine (Retired)  
11525 Lovejoy Street  
Silver Spring, MD 20902  
TEL: (301) 593-7364  
FAX: (301) 593-5059  
E-mail: melspann7@aol.com

**Ms. Rose Foster, Project Advisor**  
Medical Education and Outreach Group  
Oak Ridge Institute for Science and Education  
P.O. Box 117, MS-37  
Oak Ridge, TN 37831-0117  
TEL: (865) 576-9342  
FAX: (865) 241-3851  
E-mail: fosterr@ora.gov

**2005 EnHIOP PROJECTS**

**Benedict College, Environmental Health Science Program—Columbia, South Carolina**  
*Continuing to Facilitate the Use of the NLM's Web-based Databases Through Efforts of Benedict College*

This project is a follow-up to Benedict's 2004 project. The goals are to: 1) increase the on-campus awareness of environmental health information and other information available within NLM's databases; 2) increase the on-campus utilization of NLM databases; and 3) provide NLM-based information outreach to communities currently being assisted by the Benedict College Environmental Health Science Program. Objectives are to continue the on-campus survey of junior and senior students at Benedict College to further ascertain their knowledge and use of NLM databases and inform students about the benefits and services that are available within the NLM databases. Three strategies will be used to increase usage: 1) provide monthly highlighting of an NLM database; 2) encourage database use within student academic organizations through use-competition; and 3) provide annual re-surveys to determine use after exposure to the databases. Information brochures about NLM databases will also be provided to at least 50 percent of the local community, a follow-up survey will be conducted, and NLM database research information will be provided to concerned citizens within the community relating to any identified types of cancer.

**California State University-Northridge, Dept. of Environmental and Occupational Health—Northridge, California**

*Presentation of NLM Databases Across Curriculum at a University*

The goal of this project is to raise awareness of NLM Environmental Health databases among CSUN faculty and students across all disciplines. Objectives are to: 1) develop sample one-hour lesson plans for specific courses that demonstrate how the NLM Environmental Health databases can be used by faculty and students; and 2) develop a means of distributing these instructional materials. The concept of incorporating a lecture discussing how to use NLM resources and services with an applied approach will be publicized throughout the university. Interested faculty who agree to incorporate some form of the training in their coursework will be awarded a stipend of \$250. This will provide incentive to the faculty in their participation. Funding will also be used to support printing, inks, small equipment purchases, or other incidental expenses that will support the project.

**Charles R. Drew University of Medicine and Science, Dept. of Oral and Maxillofacial Surgery—Los Angeles, California**

*Environmental and Toxicological Information Outreach*

The goals of this project are to: 1) increase awareness of NLM online resources related to the use of toxicological, environmental, occupational, and hazardous materials/waste at Charles R. Drew

**APPENDIX C**  
**2005 EnHIOP Projects**

---

University of Medicine and Science (CRDUMS); 2) provide instruction in the use of the Web-based resources; and 3) enhance the use and distribution of health-related information to the Drew University faculty, staff, and students. Training will be conducted for approximately 100-200 faculty, students, and staff of Drew University and its affiliated training sites. The focus of the training will be how to retrieve scientific literature in the fields of medicine, nursing, dentistry, and healthcare systems; information from TOXNET on toxicological profiles on hazardous chemicals that cause health and environmental effects; Haz-Map information about the possible effects of exposure to chemicals and biological agents; and information from Tox Town on common toxic substances encountered in everyday life.

**Diné College, Division of Math Science and Technology—Shiprock, New Mexico**  
*Health Survey of Navajo People in the Aneth Region of Utah*

The goals of the project are to support a research study comparing the current self-reporting of health symptoms to a previous study conducted in 1998 to determine if self-reported health symptoms change in relationship with distance from oil and gas production facilities. Activities will include development of education and outreach on the dangers of oil/gas exposure and include ways to decrease risks and promote community empowerment and input for a remedial program. Survey participants will also be asked about their ideas on ways to decrease risks and what topics need more research. The project objectives are to: 1) survey community members to determine self-reported health effects; 2) evaluate the data with respect to location from emission sources and air-shed plum migration; 3) train students in the use of geospatial analysis; 4) communicate the results of the assessment to community members and the tribal leadership; 5) use the results to prioritize resources and develop programs to address the health needs of impacted communities; and 6) collect air data on CO, VOCs, H<sub>2</sub>S and SO<sub>2</sub>. This is the second year of this study. Changes needed to be made to the survey form due to issues with the Navajo language and in particular the dialect of Navajo spoken in the Aneth area, and survey techniques have been modified to be more cost effective.

**Florida A&M University, College of Pharmacy—Tallahassee, Florida**  
*Using NLM Online Resources to Develop a Model Health Literacy Program for Minority and Disadvantaged Communities*

The goal of this project is to develop a model community-based health literacy improvement program that will enhance health literacy in underserved populations by incorporating the online resources of the National Library of Medicine. This is a three-phase project; each phase will take approximately 12 months to complete. Phase one includes designing the health literacy workshop, developing formal agreements with four targeted training sites in Tallahassee, purchasing and placing one computer at each site, and conducting training sessions on utilization. In phase two, approval by the University's Institutional Review Board will be secured, and patients/patrons will be randomly selected and followed relative to their utilization of the resources provided to them. Phase three will consist of analysis of the findings from phase two. A portion of the funding will be used for supplies to support the project.

**APPENDIX C**  
**2005 EnHIOP Projects**

---

**Jackson State University—Jackson, Mississippi**

*Enhancing Environmental Health and Biomedical Sciences Research and Education at Jackson State University*

The goal of this project is to enhance environmental health and biomedical sciences research and education at Jackson State University (JSU) by organizing and implementing workshops to increase awareness and accessibility and to train participants on the use of the National Library of Medicine's online environmental health and medical resources. The focus of the training will be on MEDLINE/PubMed, MedlinePlus, TOXNET, Haz-Map, and Tox Town. The target audience will include 30 JSU faculty members in biomedical sciences and environmental health research, 40 graduate students, and 50 undergraduate students. A total of four workshops will be conducted.

**Medgar Evers College, CUNY—Brooklyn, New York**

*Using NLM Online Resources to Promote Knowledge of Human Genomics and Related Minority Health Issues: An Education and Outreach Program for Students, Faculty, and Community*

The goal of this project is to develop and design the framework and content for a computer-enhanced educational module that addresses genomics and one genomics-related health issue in the African American community, incorporating the online resources of the National Library of Medicine. Possible NLM resources to be incorporated include MedlinePlus, Genetics Home Reference, and GENE-TOX. The module will be implemented initially through a workshop for MEC students majoring in biology, environmental science, and nursing, and one of two target community groups: 1) African American doctors in Brooklyn who belong to the Provident Clinical Society of NMA, or 2) Residents of the Brooklyn community. This project will seed the development of the Medgar Evers College Genomics Education and Outreach Program, to educate and disseminate information about human genomics and the issues that affect and are relevant to the African American community.

**Meharry Medical College—Nashville, Tennessee**

*Approach for Building New Community-based Library Partnerships with Local Community Churches*

The goal of this project is to encourage and support the diffusion of principles of access to health information technology by increasing awareness in one faith-based organization in Nashville/Davidson County. The project will document a conceptual model for implementation and effectiveness of approaches that involves a collaboration of public libraries and faith-based organizations in the diffusion of health information technology. The project plans to increase the awareness of 75 members of the Claiborne Street Missionary Baptist Church around access to health information technology by providing 10 sessions on use of a computer for accessing health information. This is a continuation of the 2004 EnHIOP project. This year, an additional computer will be purchased to respond to the increased interest and usage of the computer purchased last year.

**APPENDIX C**  
**2005 EnHIOP Projects**

---

**Morgan State University, Department of Biology—Baltimore, Maryland**

*The Use of Laptop Computers to Enhance the Learning of Five Selected Junior and/or Seniors Who Have Expressed the Desire to Proceed to Professional Doctoral Degrees*

The goal of the project is to improve the competitiveness of five undergraduate students to get accepted into graduate and professional schools after matriculating from Morgan State University. Funding will be used to purchase four laptop computers; the fifth computer will be provided by the Principal Investigator. Students will be randomly selected from those students with a GPA greater than 3.50 on a 4.00 scale. Objectives of the project are to: 1) explore how the availability of laptop computers can positively impact upon the selected students; 2) strengthen the links between brilliant undergraduate students and selected disciplines in which they can continue their studies on a graduate level; and 3) assist students in improving their research capabilities in the areas of data accumulation/compilation and presentations.

**Oglala Lakota College, Department of Nursing—Kyle, South Dakota**

*Taking Charge—Living Wisely, Phase II*

The goal of the project is to enable the Oglala Lakota people to identify healthy lifestyles and reasons to pursue the change in lifestyles through exercise, balance diet, and understanding toxicants and environmental toxicants. An addition to the project this year is to look at the demographics of dental caries in children under the age of five through: 1) using posters and small group discussions to educate parents and children about oral hygiene and the effects of sugar on teeth; and 2) testing the water in various districts to detect fluoride levels and environmental toxicants.

**Southern University A&M College, School of Nursing, Office of Research—Baton Rouge, Louisiana**

*REACH for a Breath of Fresh Air Indoors and Outdoors with African American Families (INDOORS) and First Responders (OUTDOORS)*

The overall goal of this project is to address the issue of low environmental health literacy among African Americans in Baton Rouge, Louisiana by increasing awareness of and access to NLM environmental health information technology resources in the targeted population. Objectives are to: 1) training 30-50 African Americans to use NLM online resources and recommendations to decrease their exposure to indoor environmental health hazards; 2) increase access to and use of NLM's Tox Town and WISER resources by African American librarians and patrons using Internet access on public library computers; 3) introduce emergency nurses, security personnel, and first responders to NLM's WISER software; and 4) develop and disseminate 1,000 asthma care fact sheets to women and children to promote their applied use of environmental health protection strategies.

**APPENDIX C**  
**2005 EnHIOP Projects**

---

**University of Puerto Rico, Department of Pharmacology and Toxicology, School of Medicine—San Juan, Puerto Rico**

*UPR-Medical Sciences Campus: Outreach Project in Environmental Health Information*

The goal of the project is to help to reduce environmental health disparities through information access to groups and communities in Puerto Rico. Project objectives are to: 1) develop and schedule a set of training activities directed to middle and high school teachers and students to equip them to serve as liaisons to provide information and orientation about HIV and STDs to other teens and young adults at risk to acquire HIV or STDs; 2) train UPR biology and pre-medical students in the effective use of NLM resources; 3) train groups of women to access, retrieve, and understand access women's health information available on the Internet; and 4) train a group of first year UPR Pharmacy School graduate students in the effective use of NLM resources. The training sessions will be conducted at the Community Technology Centers (CTC) of ASPIRA, Inc. of Puerto Rico (a nonprofit organization devoted to the educational and leadership development of Puerto Rican youth), the UPR Natural Sciences Library Computer Center in Rio Piedras, and the Computer Center of the UPR Medical Sciences Campus.

**Xavier University of Louisiana, College of Pharmacy—New Orleans, Louisiana**

*Teaching Elderly Adults to Use the Internet to Access Health Care Information*

The purpose of this project is to teach a targeted group of African American senior citizens to use the Internet to access health care information through NLM Internet resources. The target audience is a senior center in a predominantly African American neighborhood near the university with a high rate of impoverished households and where almost half of the households have grandparents as the caregivers of minor children. Funding will be used to place a computer, printer, and supplies at the senior center to facilitate access to NLM resources, including MedlinePlus®, NIHSeniorHealth, and ClinicalTrials.gov. A clinical pharmacist will provide training. Seniors will be encouraged to print copies of the information for subsequent review and reference and to encourage other seniors at the center to participate. A total of six training sessions are initially planned, to be provided to groups of five seniors over a one-week period per month. As a part of student training, fourth-year pharmacy students will assess the effectiveness of the intervention strategies to enhance knowledge and foster appropriate health behaviors.

