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FINAL REPORT

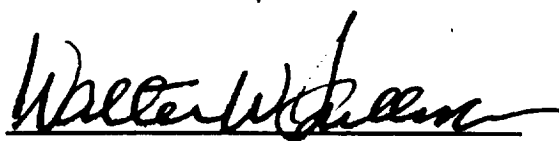
ON

SYMPOSIUM ON CAREER OPPORTUNITIES

IN

BIOMEDICAL AND PUBLIC HEALTH SCIENCES

Submitted by:



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Date: July 28, 1997

Symposium on Career Opportunities in Biomedical and Public Health Sciences

Final Report

1. SPECIFIC AIMS

The goal of the Symposium on Career Opportunities in Biomedical and Public Health Sciences is to encourage minority collegiate and junior and senior high school students to pursue careers in biomedical and public health sciences. The objectives of the Symposium are to:

- Provide information to participants concerning biomedical and public health science careers in government, academe and industry.
- Provide information to minority students about training activities necessary to pursue a biomedical or public health science career and the fiscal support that one can obtain for such training.
- Provide opportunities for participating minority biomedical and public health role models to interact with participants.

2. RESULTS

Recruitment of Students

Symposium staff invited liaison persons from member institutions of the Minority Health Professions Foundation and high school counselors, principals and science teachers to nominate potential participants. High School participants were obtained from: Detroit, Nashville, Dallas, Houston, Los Angeles, Seattle, Spokane, Baltimore, Washington, Atlanta, Indianapolis, Washington, D.C., New Orleans, Tallahassee, Montgomery County (Maryland), Jersey City, Newark, Montgomery and Tuskegee. The selection criteria included: a grade-point average of 3.0 or better; two (2) letters of recommendation from current teachers; submission of a completed application form, and the development of a three hundred (300) word or less essay which reveals why participants desired to attend or why they intend to pursue a biomedical or public health career.

College students were selected from Atlanta, Nashville, Tuskegee, New Orleans, Los Angeles, Houston, Washington, D.C., and Tallahassee.

Invitations were sent to all NIH training programs, MBRS Programs, Historically Black Colleges and Universities and institutions with significant populations of Native-Americans and Hispanics. A total of eight hundred and forty-three (843) students attended this year's Symposium.

Recruitment of Speakers

Biomedical and Public Health scientists were identified and used from groups of African-American, Hispanic, and Native-American scientists. All speakers are known via national and/or international groups. Plenary speakers included:

- Reed Tuckson, M.D.
Charles R. Drew University of Medicine and Science
- Charleta Guillory, M.D.
Baylor College of Medicine
- Rueben Warren, D.D.S., Dr. P.H.
Centers for Disease Control and Prevention
- Helene Gayle, M.D.
Centers for Disease Control and Prevention
- Benjamin Carson, M.D.
Johns Hopkins University
- Eloy Rodriguez, Ph.D.
Cornell University
- Charles Finch, M.D.
Morehouse School of Medicine

Workshop speakers included:

- Moses Williams, Ph.D.
Temple University
- Shirlette Milton, Ph.D.
Texas Southern University
- Astatkie Zikarge, Ph.D.
Texas Southern University

- Doris Jackson, Pharm.D.
Texas Southern University
- Richard Hackney, Ph.D.
Texas Southern University
- Tyrone Felder, D.D.S.
Texas Southern University
- Fannie Hawkins, Ph.D.
Texas Southern University
- Judith Mazique, Ph.D.
Texas Southern University
- Lovell Jones, Ph.D.
Houston, Texas
- Garry Radford, D.D.S.
Houston, Texas
- Jack Morgan, D.D.S.
Houston, Texas
- Kenneth King, D.D.S.
Houston, Texas
- Adeleh Esfandiari, Ph.D.
Charles R. Drew University of Medicine and Science
- Samuel Shacks, M.D., Ph.D.
Charles R. Drew University of Medicine and Science
- John Scrivens, Ph.D.
Florida A&M University
- Walter Bowie, D.V.M.
Tuskegee University
- John Martin, Ph.D.
Exxon Biomedical Research

- Marjorie Smith, M.D.
Morehouse School of Medicine
- Rudolph Jackson, M.D.
Morehouse School of Medicine
- Cyril Moore, Ph.D.
Morehouse School of Medicine
- Clifford Johnson, DVM
Baltimore, Maryland
- Anita Russell
Bristol Myers Squibb
- James Butcher
Bristol Myers Squibb
- Daniel Lawson, Ph.D.
Ortho Diagnostic Systems
- George Roberts, Ph.D.
Centers for Disease Control and Prevention
- Earl Long, Ph.D.
Centers for Disease Control and Prevention
- Billy J. Softly, Ph.D.
Sparta, New Jersey

Logistics

The Symposium site was the Hyatt Regency Hotel, Houston, Texas. Hotel rooms were obtained at ninety-two (\$92.00) per night for single or double accommodations. Most of the hotel's meeting rooms were utilized for plenary and/or break-out sessions.

Brock Tours and Travel, Decatur, Georgia, served as the consultant firm for logistics. The firm was responsible for negotiating and recommending hotel room rates, airline travel rates, food and beverage arrangements, hotel amenities, hotel check-in and check-out procedures for participants, bus transportation, basic exhibit space rates and entertainment. Freeman Decorating Company served as the expositioner.

All out of town students, except those from Dallas, were flown to Houston. Local students were transported by bus each day to and from the Symposium site.

Organization

Dr. Sullivan and his staff provided on-site logistical support for all Symposium activities. He was responsible for the complete oversight of all Symposium activities and direction. He was assisted in his efforts by members of his staff which included: Ms. Donna Florence, Mr. Waverly McMichael, Ms. Cynthia Pierce, and Ms. Beatrice Raiford.

A Symposium Planning Committee was very active in planning the Symposium. The Committee was represented by each member institution of the Minority Health Professions Foundation. The members of the committee were: Dr. Fred Jones, Meharry Medical College; Dr. Samuel Shacks and Ms. Mary Quash, Charles R. Drew University of Medicine and Science; Mr. Carlton Bailey, Florida A&M University; Ms. Lajoy Kay, Texas Southern University; Dr. Hyacinth Findlay, Tuskegee University; Mr. Randall Schexnayder and Ms. Regina Redmond, Xavier University; Ms. Audrey Vaughan, Howard University and Dr. Walter W. Sullivan, Morehouse School of Medicine. The Committee provided assistance to the Symposium Director for overall planning and developed policy matters related to the Symposium.

Exhibits

Forty (40) firms displayed exhibits at the Symposium. The exhibitors included:

- Association of American Veterinary Medical Colleges
- Case Western Reserve University
- Centers for Disease Control and Prevention
- Dr. William M. Scholl College of Podiatric Medicine
- Exxon Biomedical Sciences, Inc.
- Florida A&M University College of Pharmaceutical Sciences
- Florida A&M University Space Life Sciences Training Program
- Mayo Medical and Graduate Schools
- Meharry Medical College
- Merck and Company
- Minority Health Professions Foundation
- Morehouse School of Medicine
- National Heart, Lung, and Blood Institute
- National Institute on Aging - Gerontology Research Center

- National Institute of Allergy and Infectious Diseases
- National Institute of Arthritis and Musculoskeletal and Skin Diseases
- National Institute of Child Health and Human Development
- National Institute on Deafness and Other Communication Disorders
- National Institute of Dental Research
- National Institute of Diabetes and Digestive and Kidney Diseases
- National Institute on Drug Abuse
- National Institute of Health - Clinical Center
- National Institute on Neurological Disorders and Stroke
- National Institute of Nursing Research
- New York University School of Medicine
- Organ and Tissue Donation Consortium
- Texas A&M University - Graduate Studies
- Texas Southern University/College of Pharmacy and Health Sciences
- The Endocrine Society
- Tulane University School of Medicine
- Tuskegee University, School of Veterinary Medicine
- UCLA Access Program
- University of Iowa College of Medicine
- University of Medicine and Dentistry of New Jersey
- University of Michigan Medical School
- University of Texas Houston Health Science Center
- University of Texas Southwestern Medical Center at Dallas
- Xavier University College of Pharmacy
- Yale University

The Exhibitors displayed aspects of their biomedical and/or public health research activities; some of these featured minority programs. The displays augmented efforts of various Symposium speakers. The exhibitors were composed of biomedical and public health firms, as well as, educational institutions and governmental agencies.

Sponsors

The following organizations provided support for the Symposium:

- AMGEN, Inc.
- Bristol-Myers Squibb Company
- Centers for Disease Control and Prevention
- Exxon Corporation and Exxon Biomedical Sciences, Inc.
- Eli Lilly and Company
- Food and Drug Administration
- National Aeronautics and Space Administration

- Office for Research on Minority Health
- Office of Minority Health, Department of Health and Human Services
- Ortho Diagnostics Systems, Inc.
- The Prudential Foundation

Symposium Program

The Symposium consisted of five (5) plenary sessions, one (1) luncheon session and seventy (70) workshops. The workshop topics included:

- Career Pathways to Biomedical and Public Health Sciences
- Careers in Biomedical Research
- Careers in Dentistry (Academic and Practice)
- Careers in Industry
- Careers in Medicine (Academic and Practice)
- Careers in Pharmaceutical Sciences
- Careers in Pharmacy (Academic and Practice)
- Careers in Public Health Research
- Careers in Veterinary Medicine (Academic and Practice)
- Computers in Biomedical Research
- Scholarships and Fellowships
- Research Presentations

All speakers were well received by those in attendance.

Research Posters

Twenty-five (25) research posters were prepared and presented by high school and college students. A list of each poster title and author is given below.

MODULATION OF RECONSTITUTED GLUTAMATE (AMPA) RECEPTORS BY POLYANIONIC POLYSACCHARIDES. Causey, Z., Yilma, S., McCall, L., Thomas, J., Suppiramaniam, V., Department of Biology, Tuskegee University, Tuskegee, AL.

SHORT-TERM SLEEP DEPRIVATION AND EXPRESSION OF CRF mRNA. Davenport, L., Lewis Cass Technical High School, Detroit, MI.

MEASUREMENT OF GFAP LEVELS IN VARIOUS REGIONS OF THE CNS AFTER REPEATED TRICHLOROETHYLENE ORAL EXPOSURE IN RATS. Enongene, E., Sun, P.N., Mehta, S. MCTR, College of Pharmacy, Texas Southern University, Houston, TX.

A STUDY OF GLIALFIBRILLARY ACIDIC PROTEIN AS A NEUROBIOMARKER FOLLOWING A SINGLE ORAL EXPOSURE TO EITHER TOLUENE OR TRICHLOROETHYLENE IN RATS. Gammage, N., Mehta, C.S., Sun, P.N., Zikarge, A., Muntax, M.M., Texas Southern University, College of Pharmacy and Health Sciences, Houston, Texas, Division of Toxicology ATSDR, Atlanta, GA.

COMPATIBILITY OF MEDICATIONS WITH PARENTERAL NUTRITION SOLUTIONS: TWO-IN-ONE FORMULAS. Gilbert, D.L., Trissel, L.A., and Martinez, J.F., U.T.M.D. Anderson Cancer Center, Houston, TX.

EVALUATION OF RAT BRAIN GFAP LEVELS FOLLOWING REPEATED ORAL EXPOSURES TO TOLUENE. Hollomon, M.G., Sun, P.N., and Mehta, C.S., MCTR, College of Pharmacy, Texas Southern University, Houston, TX.

REGULATION OF SMC GROWTH AND PROLIFERATION BY REDUCED GALECTIN-1 EXPRESSION. Hunter, M.D., Sanford, G.L., Harris-Hooker, S., Morehouse School of Medicine and Spelman College, Atlanta, GA.

HIV-1 LTR EXPRESSION ASSAYS. Jackson, A.M., Henry Ford High School, Detroit, MI.

A SEARCH FOR POLYMORPHISM IN THE HUMAN ALDEHYDE DEHYDROGENASE 2 (ALDH2) PROMOTER REGION. Latimer, E., Williams, A., and Crab, D. Department of Medicine, Indiana University, Indianapolis, IN.

DNA MUTATIONS CAUSED BY LEAD TOXICITY IN THE BRAINSTEM OF RANA CATESBEIANA. Ledbetter, A.L., Lewis Cass Technical High School, Detroit, MI.

GLUR SUBUNIT COMPOSITION ALTERS AMPA CHANNEL KINETICS. McCall, L.K., Suppiramaniam, V., Causey, Z.S., Yilma, S. and Thomas, J. Biology Dept. Tuskegee University, Tuskegee, AL.
CUMULATIVE ENERGY DEPOSITION IN HUMAN TEETH DURING LASER IRRADIATION. McNair, R., Fried, D., Featherstone, J.D.B., University of California San Francisco, San Francisco, CA.

ASSESSMENT OF MEDICATION DELAYS AT A LARGE PRIVATE HOSPITAL. MOORE, A., Lopez, J., Francise, A., Texas Medical Center, Texas Southern University, College of Pharmacy and Health Sciences, Houston, TX.

EFFECTS OF DIAZOXICIDE AND SALICYLADOXIME ON ACTION POTENTIAL PARAMETERS, MYOCARDIAL FORCE, AND MEMBRANE POTENTIAL PERTUBATIONS. MULL, K.P., Debnam, Q.J., Kabir, S.M., Bhattacharyya, M.L., Department of Anatomy and Physiology, Meharry Medical College, Nashville, TN.

INTERLEUKIN-EIGHT (IL-8) CAUSES ALTERATIONS IN TYROSINE PHOSPHORYLATION OF LCK, RAF-1, AND MAP KINASE AND INDUCES DEGRANULATION AND THE SYNTHESIS OF CYTOKINES IN NK CELLS. Pearson, L.L., and Adunyah, S.E., Microbiology and Biochemistry Department, Meharry Medical College, Nashville, TN.

TRANSFERRIN OR ANTI-TRANSFERRIN ANTIBODY (7D-3) AS A LIGAND TO PRODUCTION OF INDOLE-3-ACETIC ACID IN PSEUDOMONAS SOLANACEARUM. SHAH, A.D., Howard, K.M., Biology Department, Morehouse College, Atlanta, GA.

CONSTRUCTION OF CHIMERIC RECEPTORS TO IDENTIFY REGIONS OF THE CC-CHEMOKINE RECEPTOR CCR-5 AS IMPORTANT DETERMINANTS OF INFECTION BY HIV-1 PRIMARY ISOLATES. Sidelko, M., Tuskegee University, Department of Biology, Tuskegee, Alabama and Sodroski, J., Dana Farber Cancer Institute, Harvard Medical School, Boston, MA.

GENDER-RELATED DIFFERENCES IN ALTERATIONS IN GFAP LEVELS IN VARIOUS REGIONS OF THE CNS AFTER REPEATED TRIMETHYLTIN EXPOSURES IN RATS. Small, L., Sun, P.N. and Mehta, C.S., MCTR, College of Pharmacy, Texas Southern University, Houston, TX.

THE EFFECT OF LEAD, CADMIUM, MERCURY, TIN, CALCIUM, AND SELENIUM ON PC12 CELL VIABILITY. Smith, G., Ndifor, A., Reams, Renee, College of Pharmacy and Pharmaceutical Sciences, Florida A&M University.

RECEIPT OF POST PARTUM HOME HEALTHCARE: WHO IS RECEIVING CARE? Solomon, E., Department of Biological Sciences, Clark Atlanta University, Atlanta, GA.; Gazmararian, J., Prudential Center for Health Care Research, Atlanta, GA.

NEURONAL EXTENSIONS FROM THE RESPIRATORY CENTERS IN THE BRAIN TO THE ACCESSORY MUSCLES OF RESPIRATION. Stanley, S., Lewis Cass Technical High School, Detroit, MI.

TARGET LIPOSOMAL METHOTREXATE TO HUMAN TUMOR CELLS. Stembridge, N.Y., Bennefield, S. and Singh, M., Florida A&M University, College of Pharmacy, Tallahassee, FL.

ANGIOGENESIS IN CULTURES OF RAT HEPATOCYTES. Stewart, L., Lewis Cass Technical High School, Detroit, MI.

DIAGNOSIS OF *CANDIDA GLABRATA* INFECTION BY THE DETECTION OF MANNA ANTIGENS IN SERUM AND URINE. Taiwo, T., Morrison, C., McNeese, A., National Center for Disease Control and Prevention, Atlanta, GA.

ISOLATION OF DNA FROM CHICKEN TOENAIL AND BLOOD. Vaughn, D.A., Drummond, P.B., Song, Y. And Smith, E.J., Booker T. Washington High School, Tuskegee University, Tuskegee, AL.

The following students were cited for their research poster and received a monetary award:

- Ms. Gwenesia Smith, Tallahassee, FL.	- \$200.00
- Ms. Tania Taiwo, Atlanta, GA.	- \$200.00
- Ms. Felicia Solomon, Atlanta, GA.	- \$425.00
- Mr. Rameek McNair, Atlanta, GA.	- \$425.00
- Mr. Daleik Vaughn, Tuskegee, AL.	- \$875.00
- Ms. Neena Stembridge, Tallahassee, FL.	- \$875.00

Students/Counselors

Eight hundred and forty-three (843) students were in attendance along with thirty-seven (37) counselors and eighty (80) exhibitors. The students were inquisitive, energetic and bright. They were enthusiastic in their praise for the Symposium content and speakers as evidenced in letters of thanks, oral statements and other comments.

The tracking of Symposium participants is an important phase of this project. An initial sampling of one thousand (1,000) previous attendees revealed the following:

- four hundred (400) are in undergraduate science programs;
- fifty (50) are in graduate science programs;
- four (4) have received the Ph.D. degree; and
- six (6) have received the Doctor of Veterinary Medicine degree.