

UNIVERSITY WIDE RESEARCH SYMPOSIUM
MARCH 29-31, 2005



CELEBRATING EXCELLENCE IN
RESearch
AND
EDUcATION



USDA/ARS Salutes THE 27th ANNUAL UNIVERSITY-WIDE Research Symposium 2005

The United States Department of
Agriculture, Agricultural Research
Service recognizes the research and
extension endeavors pursued by
Tennessee State University.

TSU's commitment to embracing
the environmental initiatives of
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27TH ANNUAL UNIVERSITY-WIDE
RESEARCH SYMPOSIUM
MARCH 29-31, 2005

TENNESSEE STATE UNIVERSITY
OFFICIAL 2005 SYMPOSIUM PROGRAM



Office of the President
Tennessee State University
3500 John A. Merritt Blvd.
Nashville, TN 37209-1561

March 29, 2005

Dear Colleagues:

Welcome to the 27th Annual University-wide Research Symposium, "Celebrating Excellence in Research and Education." I am certain you join me in anticipating the scholarly activities of the next few days, featuring posters and presentations by faculty and students from across the curriculum. These faculty and students have been engaged in investigating problems and pursuing theories that have challenged them over the course of the year, and the symposium gives us the opportunity to celebrate the results of their labor.

Indeed, as we celebrate excellence in research, we are celebrating excellence in the overall educational process at Tennessee State University. Research enriches the classroom experience, giving faculty and students the opportunity to explore new horizons and blend their innovations with the expertise of the leaders in their respective fields. As president of TSU, I take great pride in that fact and in the remarkable growth in sponsored research the university has undergone in the last decade. I anticipate the same remarkable growth during the next decade, as granting agencies give us the recognition that counts: the receipt of yet more funding for yet more projects. I also look forward to increased participation in sponsored programs from all academic disciplines.

Congratulations to each of our distinguished researchers. We in the TSU community look forward to hearing about your discoveries and your contributions to a body of knowledge that celebrates excellence and enhances our lives.

Sincerely,

A handwritten signature in blue ink that reads "James A. Hefner". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

James A. Hefner
President



Research and Sponsored Programs

Tennessee State University
3500 John A. Merritt Blvd.
Nashville, TN 37209-1561

Office of the Vice President

29 March 2005

Dear Colleagues:

I am delighted to welcome you to the 27th Annual University-wide Research Symposium highlighting the accomplishments of our distinguished researchers, students, and faculty. The theme for this year is "Celebrating Excellence in Research and Education." We pause at this time to reflect and celebrate the many contributions made by each of you to the success of the research enterprise at TSU.

Research at Tennessee State has grown tremendously over the past several years and we are uniquely postured to grow even further given sufficient resources. We have begun the process of realigning the research agenda of the University with the needs of our funding sources in the government and private sectors. In addition, we have developed interdisciplinary collaborative relationships, internally and externally, to leverage our excellent research reputation and strengths. New research activities have been launched in high-growth areas such as nanotechnology, biotechnology, homeland security, and several others that will lead to continued growth. We look forward to increased participation by all disciplines at the University in extramurally funded research as well as celebrating additional accomplishments in the future.

On behalf of the Division of Research and Sponsored Programs, I congratulate and celebrate the outstanding accomplishments of our students, researchers, and faculty. At Tennessee State, we believe research is essential to excellence in education as it informs the learning process and enhances the experience of our students. We remain committed to excellence in research and education!

As always, I remain

Sincerely,

Marcus W. Shute, P.E., Ph.D.
Vice President



OVERVIEW OF EVENTS

TUESDAY, MARCH 29, 2005

8:00 – 11:00	Registration	Forum
8:15 – 9:45	Key Note Speaker, Dr. Thomas Windham, <i>National Science Foundation</i>	Farrell Westbrook Bldg 118
10:00 – 11:00	Graduate Students Presentations, <i>Engineering, Computer Science, Physics, Math</i>	Forum
11:15 – 1:00	Undergraduate Students Presentations, <i>Engineering, Computer Science, Physics, Math</i>	Forum
1:45 – 4:30	Undergraduate Students Presentations, <i>Education, Humanities, Social Sciences</i>	Forum

WEDNESDAY, MARCH 30, 2005

8:00 – 11:00	Registration	Farrell Westbrook Bldg 118
8:15 – 9:30	Undergraduate Students Presentations, <i>Life Sciences</i>	Farrell Westbrook Bldg 118
9:45 – 11:15	Graduate Students Presentations, <i>Life Sciences</i>	Farrell Westbrook Bldg 118
9:45 – 11:15	Poster Sessions	Farrell Westbrook Bldg 118
11:45 – 1:45	USDA Speaker and Lunch, Dr. Ronald F. Korcak, <i>United States Department of Agriculture</i>	Farrell Westbrook Bldg 118
2:15 – 4:00	Graduate Students Presentations, <i>Education, Humanities, Social Sciences</i>	Farrell Westbrook Bldg 118
2:15 – 4:00	Poster Sessions	Farrell Westbrook Bldg 118

THURSDAY, MARCH 31, 2005

9:00 – 11:15	Faculty Presentations	Forum
12:00 – 2:30	Student Awards Luncheon (by invitation only) Dr. C. Fred Higgs, III, <i>Carnegie Mellon University</i>	Farrell Westbrook Bldg 118

All posters should be put up by the end of the day Tuesday, March 29, 2005.
Students should be at their posters 9:45 – 11:15 and 2:15 – 4:00 March 30, 2005.
All posters should be removed by 3:00 PM Thursday, March 31, 2005.

Opening Session Key Note Speaker

DR. THOMAS WINDHAM

Thomas L. Windham, Ph.D. joined the National Science Foundation (NSF) in February 2004 as Senior Advisor for Science and Engineering Workforce and is the Foundation's focal point in addressing issues, strategies, and implementations centering on broadening participation of underrepresented groups in the science and engineering workforce. Windham serves as a member of the Director's immediate staff and participates in policy development and strategic planning.

Before coming to NSF Windham served as Director and Principal Investigator for UCAR's Significant Opportunities in Atmospheric Research and Science (SOARS,) program www.ucar.edu/soars. SOARS is a multifaceted, multi-ethnic, multi-cultural science research and learning community at the University Corporation for Atmospheric Research (UCAR) and National Center for Atmospheric Research (NCAR), Boulder, CO. In December 2001, Windham accepted The Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring in Washington, D.C. on behalf of the SOARS program.



Windham was born in Harlem and is a graduate of New York City's High School of Music and Art. He received his Ph.D. in social-personality psychology at the University of Colorado (CU) at Boulder, under Professors Stuart Cook and John Forward. Additional professional training includes postdoctoral study in Clinical and Descriptive Psychology at the Linguistic Research Institute, Boulder, under Peter Ossorio, Ph.D. Windham earned the Specialist in Education graduate degree from CU at Denver, and MS and BA degrees in psychology from New Mexico Highlands University, Las Vegas. Windham's career track includes positions as a licensed clinical and community-organizational psychologist, educator, and CEO of a comprehensive community mental health center.

Windham has served as a Lecturer for the American Psychology Association's Distinguished Visitor Program, President of the Boulder Valley School District Board of Education, and Invited Science Education Columnist for The Boulder Daily Camera. Windham's recent community service includes memberships on the American Meteorological Society Board on Women and Minorities, CU Alliance for Graduate Education and the Professoriate (AGEP) Advisory Committee, CU Graduate School Advisory Committee, I Have a Dream Foundation of Boulder County, CO, NSF Advisory Committee for Geosciences, NSF Alan T. Waterman Selection Committee and NSF Committee on Equal Opportunities in Science and Engineering. Windham is currently a visiting professor in the Department of Science and Technology at Universidad Metropolitana, San Juan, Puerto Rico.

In 1997 Windham was awarded Boulder County's Ninth Annual Multi-cultural Award for Science. January 2003 Windham received The Boulder Daily Camera Pacesetter Award for Science, Medicine and Health.

Key Note Address

Tuesday, March 29, 2005, 8:30 Farrell-Westbrook Bldg., Agricultural Research and Extension Complex Auditorium

Mistress of Ceremonies

Dr. Elaine Martin, Symposium Chair

Greetings

Dr. James Hefner, President, Tennessee State University

Welcome

Dr. Marcus W. Shute, P.E., Vice President, Research and Sponsored Programs

Introduction of Speaker

Dr. Barbara Nye, Executive Director, Research and Policy Center on Basic Skills

Key Note Speaker

Dr. Thomas Windham, National Science Foundation



Developments in Agricultural Research

DR. RONALD F. KORCAK

Ron Korcak is a native of New York City. He began his research career as a Soil Science Trainee at the Soil Conservation Service in Utica, New York, and as a Soils Analyst in the U.S. Army Corps of Engineers at Fort Meade, Maryland, and Long Bien, Vietnam where he served from 1969-1971. He received his B.S. in Agronomy in 1968 at Cornell University. He received his Masters of Science in Soil Chemistry in 1973 and Ph.D. in Soil Chemistry and Minors in Biometrics and Inorganic Chemistry in 1977 at the University of Maryland. Dr. Korcak's professional research began when he took a position as a Soil Scientist at the Fruit Laboratory, Plant Sciences Institute, Agricultural Research Service (ARS), U.S. Department of Agriculture in 1977, rising to the position of Research Leader in the Fruit Laboratory from 1993-1995. He also served as a Lecturer at the University of Maryland, Department of Horticulture in College Park, Maryland, from 1983-1985.

Dr. Korcak served as Associate Director of the Plant Sciences Institute from 1995-1999. Dr. Korcak was the ARS Representative on the Northeast SARE (Sustainable Agriculture, Research and Extension) Administrative Council from 1998-2001, and since 2000 he has served as the ARS Representative to the Scientific & Technical Advisory Council (STAC) for the EPA's Chesapeake Bay Program. He is currently a Board Member of Future Harvest-Chesapeake Alliance for Sustainable Agriculture and serves on the editorial boards for the Journal of Sustainable Agriculture and the Journal of Small Fruit and Viticulture.

In 1999, Dr. Korcak was appointed to the Senior Executive Service and became the Associate Area Director for the ARS Beltsville Area in Beltsville, Maryland. The Beltsville Area encompasses the Beltsville Agricultural Research Center, which is the largest agricultural research center in the world, the U.S. National Arboretum in Washington, D.C., and worksites in Chatsworth, New Jersey, Presque Isle, Maine, and McMinnville, Tennessee.

Developments in Agricultural Research

WEDNESDAY, MARCH 30, 2005, NOON, Farrell-Westbrook Bldg., Agricultural Research and Extension Complex Auditorium

Welcome

Dr. Marcus W. Shute, P.E., *Vice President, Research and Sponsored Programs*

Introduction of Speaker

Dr. Stephen H. Kolison, Jr., *Dean and Research Director,
Institute of Agricultural and Environmental Research*

Session Address

Dr. Ron Korcak, *Associate Director, Beltsville Agricultural Research Center,
Agricultural Research Service, United States Department of Agriculture*



Awards Luncheon Speaker

DR. C. FRED HIGGS, III

C. Fred Higgs, III joined the faculty of Carnegie Mellon University in the Fall of 2003. His educational background consists of a B.S. in mechanical engineering from Tennessee State University, and M.S/Ph.D. degrees from Rensselaer Polytechnic Institute. He was a post-doctoral fellow at the Georgia Institute of Technology in the mechanical engineering department from 2001 to 2003. Currently, he is working on various projects that have to do with the flow of particles and their friction, lubrication and wear behavior. Following his master's thesis on electrorheological fluids, every technical publication he has written has involved particle flows as lubricants, nano-abrasives, or fluid-type macromolecules. His laboratory at Carnegie Mellon University is being built from the ground up as a state-of-the-art multi-scale engineering facility that studies particle flows in biological, mechanical, and natural systems. Since 2003, he has been invited to present two papers on nanofabrication and chemical mechanical polishing at international conferences.

In 2004, he was the principal investigator on a proposal to join the "Sloan Ph.D. Program" (www.sloanphds.org) which recognizes select professors from across the nation who will be solid mentors and magnets for underrepresented minorities seeking doctorates. He and his department colleague are the first Carnegie Mellon professors to ever be selected. In addition to being a professor, he is also the co-founder and president of goCarpeDiem, Inc. The company has MIT, NASA Glenn, Lucent Technologies, INROADS, and Kennedy Space Center as past clients on its roster. At Carnegie Mellon, his educational and research program is designed to transform the local Pittsburgh community and its youth by motivating them to excel in math and science. He is a member of the Carnegie Mellon Data Storage Systems Center (DSSC) and is its first mechanical engineering tribologist. Dr. Higgs is from Tallahassee, Florida where he is a proud graduate of Florida A&M University High School.

Awards Presentation Luncheon

Sponsored by the United States Department of Agriculture

Thursday, March 31, 2005, Noon - 2:30 p.m. Farrell-Westbrook Bldg., Agricultural Research and Extension Complex Auditorium

Welcome	Dr. James A. Hefner, President, Tennessee State University
Introduction of Speaker	Dr. Marcus W. Shute, P.E., Vice President, Research and Sponsored Programs
Awards Luncheon Speaker	Dr. C. Fred Higgs, III, Assistant Professor, Mechanical Engineering, Carnegie Mellon University, Co-founder and President of goCarpeDiem, Inc.
Presentation of Awards	Dr. Maria Thompson, Director, Research and Sponsored Programs
Acknowledgements and Closing Remarks	Dr. Elaine Martin, Symposium Chair

Tuesday, March 29 • Forum • Floyd-Payne Campus Center

ORAL PRESENTATIONS

Graduates

COMPUTER SCIENCE, ENGINEERING, PHYSICS AND MATHEMATICS – C

Presiding: Saudat Adamson, Aloice Oredo

- | | |
|--------------------|---|
| 10:00 AM C1 | ANALYZING A THIN HAFNIUM DIOXIDE FILM FOR FUTURE APPLICATIONS IN SEMICONDUCTOR FABRICATION, USING RUTHERFORD BACKSCATTERING SPECTROSCOPY
F. Alston Advisors: Leszek Wielunski, Yves Chabal, and Theodore Madey, Department of Physics and Astronomy and Laboratory for Surface Modification, Rutgers University |
| 10:15 AM C2 | PATH MODELING AND DETECTION OF C. ELEGANS
*Yvette Rankin, Advisor: M. Bodruzzamon, Department of Engineering and Computer Sciences. |
| 10:30 AM C3 | DEVELOPMENT OF A NUMERICAL MODEL FOR OXYGEN-ENHANCED FUEL BIODEGRADATION IN KARST AQUIFERS
*Lashun.King, Advisor: Thomas Byl, Department of Civil and Environmental Engineering. |
| 10:45 AM C4 | BACTERIA INDUCED DISSOLUTION OF LIMESTONES IN CLEAN AND CONTAMINATED KARST AQUIFERS
*Serge Mondesir , Advisor: Thomas D. Byl, Department of Civil and Environmental Engineering |

Undergraduates

COMPUTER SCIENCE, ENGINEERING, MATHEMATICS AND PHYSICS (G)

Presiding: Karen Burke, Anthony Springfield

- | | |
|--------------------|---|
| 11:15 AM G1 | ROBOTIC TELESCOPE OBSERVATIONS OF YOUNG PLANETARY SYSTEMS
*Amelie Gillman, Advisor: Gregory W. Henry, Center of Excellence in Information Systems |
| 11:30 AM G2 | EXAMINING THE EFFECTS OF UV LIGHT ON AN ANCIENT AND NEARLY INDESTRUCTIBLE ORGANISM
Sharina Haynes, Advisor: Orville Bignall, Department of Physics and Mathematics |
| 11:45 AM G3 | A SEARCH FOR TRANSITING HOT NEPTUNES IN HIGH-PRECISION PHOTOMETRY OF SOLAR-TYPE STARS
*Amelie Gillman, *Tywana Lampkin, and Stephen Henry, Advisor: Gregory W. Henry, Center of Excellence in Information Systems |
| 12:00 PM G4 | HR 1613, A SHORT-PERIOD SPECTROSCOPIC BINARY
*Christiane.Buggs, *G. Onuoha, B. Smith, Advisor: Frank Fekel, Center of Excellence in Information Systems; Advisor: Geoff Burks, Department of Physics/Center of Excellence in Information Systems |
| 12:15 PM G5 | ANALYZING A THIN HAFNIUM DIOXIDE FILM FOR FUTURE APPLICATIONS IN SEMICONDUCTOR FABRICATION, USING RUTHERFORD BACKSCATTERING SPECTROSCOPY
*F. Alston, Advisors: Leszek Wielunski, Yves Chabal, Theodore Madey, Department of Physics and Astronomy and Laboratory for Surface Modification, Rutgers University |
| 12:30 PM G6 | SORPTION – DESORPTION ISOTHERMS FOR TOLUENE AND KARSTIC MATERIALS AND IMPLICATIONS FOR TRANSPORT IN KARST AQUIFERS
*Mario Beddingfield, C. Collins, K. Ahmed, R Painter and T. D. Byl, Advisor: Thomas D. Byl, Department of Civil and Environmental Engineering |
| 12:45 PM G7 | LACTATE INDUCTION OF THE AMMONIA MONO-OXYGENASE ENZYME AND PCE COMETABOLISM
*LyTreese Hampton ¹ , R. Graham ¹ , and T. D. Byl ^{1,2} , Advisor: Thomas D. Byl, Department of Civil and Environmental Engineering, ¹ Dept. of Civil and Environmental Engineering, ² Tennessee State University, Nashville, TN ; ² United States Geological Survey, Nashville, TN |

EDUCATION, HUMANITIES AND SOCIAL SCIENCES (F)

Presiding: ReEtta Catlin, Erica Taylor

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|-------------------|--|
| 1:45 PM F1 | A COMPARISON OF THE EFFECT OF PLYOMETRICS EXERCISES ON DEVELOPING STRENGTH AND FLEXIBILITY
*D.Farmer, Advisor: Harry Beamon, Department of Human Performance & Sports Science |
| 2:00 PM F2 | DOES STRETCHING BEFORE A ROUND OF GOLF INCREASE PERFORMANCE?
* Mark Searle , Advisor:Harry Beamon, Department of Human Performance and Sport Science. |
| 2:15 PM F3 | POSTPARTUM DEPRESSION AMONG WOMEN WHO KILL THEIR CHILDREN:A PANEL PRESENTATION
Postpartum depression among women who kill their children: Oscanette Campbell; Medical disregard and cultural implications of postpartum depression: S. Carter; Postpartum depression among mothers and its influence on partners behavior to harm or kill: R. Jarrett; D. Pendagrass, Advisor: E. Kelly Sanford, Department of Sociology |

2:30 PM F4	THEFT IN MY HEART: A CASE STUDY OF ABUSIVE BEHAVIOR *Donna Pendergrass, Advisor: E. Kelly Sanford, Department of Sociology
2:45 PM F5	TEENAGE VIOLENCE *Tiffany June, Advisor: Samantha Morgan-Curtis, Department of Language, Literature & Philosophy
3:00 PM F6	THE COMPARISON OF TWO GOLF PRACTICE STYLES *Pam Edwards, C. Starks, Advisor: C. Starks, Department of Human Performances and Sport Sciences.
3:15 PM F7	THE AFFECTS OF PHYSICAL ACTIVITY ON OBESE CHILDREN *Jade Medders, Advisor: Catana Starks, Human Performance And Sport Sciences
3:30 PM F8	RURAL DEVELOPMENT NEEDS IN TENNESSEE: AS PERCEIVED BY TEACHING, RESEARCH, FACULTY, AND EXTENSION PERSONNEL IN AGRICULTURE AT TENNESSEE STATE UNIVERSITY *Ashley Johnson, Advisor: Surendra P. Singh, Department of Agricultural Sciences
3:45 PM F9	AGRICULTURAL TRADE AND TENNESSEE: TRENDS AND IMPLICATIONS FOR TENNESSEE AGRICULTURE AND THE ECONOMY *Christopher. Taylor, Advisor: Surendra P. Singh, Department of Agricultural Sciences
4:00 PM F10	THE SCIENCE OF TROPHOLOGY *Melanie Hawkins* Advisor: Terry Silver, Department of Human Performance And Sport Sciences.
4:15 PM F11	THE AFFECTS OF PHYSICAL ACTIVITY ON OBESE CHILDREN *Jade Medders, Advisor: Harry Beamon, Department of Human Performance And Sport Sciences

Wednesday, March 30

Farrell Westbrook Agricultural Research and Extension Complex Auditorium

ORAL PRESENTATIONS

Undergraduates

LIFE SCIENCES, AGRICULTURE, BIOLOGY, CHEMISTRY (E)

Presiding: Maggie Oldham, Armah R. Bell

8:15 AM E1	HETEROSIS LEVELS IN MEAT GOAT KIDS PRODUCED BY A THREE-BREED DIALLEL MATING SCHEME *William C. Hendrixson, R. Browning, Jr., P. Pandya, T. Payton, M. Byars. Advisor: Richard Browning, Jr., Institute of Agricultural and Environmental Research.
8:30 AM E2	EFFECT OF ENDOPHYTE-INFECTED TALL FESCUE ON GROWTH AND FEED INTAKE OF BOER AND KIKO CROSSBRED DOES *Prashant F. Pandya, R. Browning, Jr., T. Payton, M. Byars. Advisor: Richard Browning, Jr., Institute of Agricultural and Environmental Research.
8:45 AM E3	INVESTIGATIONS OF ANTI-CANCER COMPOUNDS FROM ROOT EXTRACT OF ECHINACEA *Lakeshia N. Wright, Makeesa Duke, Lakeisha Woods, Todd Gary and E. Lewis Myles, Advisor: Todd Gary and E. Lewis Myles, Center of Excellence in Information Systems and Engineering Management, Department of Biological Sciences.
9:00 AM E4	ANTI-TUMORGENIC PROPERTIES OF PHYTOCHEMICALS *Makeesa Duke, Lakeshia Wright, Lakeisha Woods, Advisors: Todd Gary and E. Lewis Myles, Center of Excellence Information Systems, Engineering and Management, Department of Biological Sciences
9:15 AM E5	CHARACTERIZATION OF ESTROGEN RECEPTOR SIGNALING IN A NOVEL MAMMARY TUMOR MODEL SYSTEM *Gennifer Goode ¹ , Meggan Valrance ² , JoEllen Welsh ² , ¹ Tennessee State University, Nashville, TN. 37209, ² University of Notre Dame, Notre Dame, IN. 46556, Advisor: Dr. Benny Washington

Graduates

LIFE SCIENCES, AGRICULTURE, BIOLOGY, CHEMISTRY (D)

Presiding: Antionette Gaston, LeeShawn Thomas

9:45 AM D1	DIBUTYLtin EXPOSURE DECREASES GRANZYME B AND PERFORIN LEVELS IN HUMAN NATURAL KILLER CELLS *ReEtta. Catlin, H. Shah, A.D. Bankhurst, and M. Whalen, Advisor: M. Whalen, Department of Chemistry.
10:00 AM D2	TRIBUTYLtin-INDUCED EFFECTS ON MAP KINASES p38 AND p44/42 IN HUMAN NATURAL KILLER CELLS *Aloice O. Aluoch and Margaret M. Whalen. Advisor: Margaret M. Whalen, Department. of Chemistry

ORAL PRESENTATIONS *continued*

Graduates LIFE SCIENCES, AGRICULTURE, BIOLOGY, CHEMISTRY (D)

Presiding: Antionette Gaston, LeeShawn Thomas

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- 10:15 AM D3 EFFECTS OF TRIBUTYLTIN EXPOSURE ON THE ABILITY OF HUMAN NATURAL KILLER CELLS TO LYSE K562 VERSUS JURKAT TARGET CELLS** *Armah R.Bell and M.M. Whalen Advisor: M. Whalen, Department of Chemistry
-
- 10:30 AM D4 INCREASED GENE EXPRESSION OF MUSCLE CELLS IN C. ELEGANS AFTER EXPOSURE TO HYPERGRAVITY**
 *Carla Coleman, S. Ravelomanantsoa, S. Nur, Advisors: Todd Gary and E. Lewis Myles, Center of Excellence Information Systems, Engineering and Management, Department of Biological Sciences
-
- 10:45 AM D5 ANTICARCINOGENIC PROPERTIES FROM TWO SPECIES OF ECHINACEA**
 *S. Nicole Driggins, Advisors: Dr. E. Lewis Myles, Dr. Todd Gary, Biological Sciences, Center of Excellence in Information Systems and Engineering Management
-
- 11:00 AM D6 HETEROGENEITY OF THE MEF2 GENE IN RATS**
 *Monique McCallister, Charlie Mtshali, and Benny Washington Advisor: Benny Washington, Department of Biological Sciences
-

EDUCATION, HUMANITIES, AND SOCIAL SCIENCES (B)

Presiding: Rhonda Lane, Rachel Person

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- 2:15 PM B1 THE FURY AND PLURALITY OF SEXUALITY AND THE BODY IN ANNE SEXTON'S POETRY**
 *Dana Kennedy, Advisor: Elaine Phillips, Department of Languages, Literature and Philosophy
-
- 2:30 PM B2 USING COMPUTER-AIDED TECHNOLOGY AND SELF-PACED LEARNING TO INCREASE SPANISH I SCORES IN MIDDLE TENNESSEE HIGH SCHOOL** *Gloria Green and *J. Sanders. Advisor: Christon Arthur, Department of Educational Administration.
-
- 2:45 PM B3 HEALTH LITERACY AND SOURCES OF HEALTH INFORMATION IN A COMMUNITY SAMPLE**
 *Krystal Sandifer, Advisor: Pamela Hull, Center for Health Research.
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- 3:00 PM B4 DESIGN OF AN AUTOMATED SIGNATURE RECOGNITION SYSTEM**
 *Simeon Rotich, Advisor: Bodruzzaman, Mohammad, Department of Electrical and Computer Engineering
-
- 3:15 PM B5 THE CHARACTERISTICS OF PROFESSIONAL MUSICIANS**
 *Tony Artimisi Advisor: Robert Elliott, Department of Music
-
- 3:30 PM B6 CHRONIC CONDITIONS AND CO-MORBID PSYCHIATRIC DIAGNOSES AMONG TENNESSEE MEDICARE ELDERLY**
 *Cynthia D. Jackson, *Michelle C. Reece, Pam Hull, Barbara Kilbourne, and Baqar Husaini, Advisor: Pamela Hull, Center for Health Research
-
- 3:45 PM B7 FACTORS THAT INFLUENCE FIRST YEAR STUDENT ACADEMIC SUCCESS AND RETENTION - STUDENT PRIORITIES, PARENTAL EDUCATIONAL LEVELS AND ACADEMIC READINESS**
 *Regina Vincent Clark, Advisor: Christon Arthur, Department of Educational Administration.
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Thursday, March 31

Forum Floyd-Payne Campus Center

ORAL PRESENTATIONS (A)

Faculty

Presiding: Dr. Anthony Ejiofor

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- 9:00 AM A1 MODELING OF CELLULAR BEHAVIORS IN ZEBRAFISH EMBRYOS**
 *Colette Calmelet¹, Lila Solnitka-Krezel², Diane Sepich², Department of Physics and Mathematics
-
- 9:15 AM A2 AN AB INITIO STUDY OF THE PATHWAYS FOR THE REACTION BETWEEN CH₃O₂ AND BrO RADICALS**
 *Sujata Guha, Department of Chemistry
-
- 9:30 AM A3 THE INFLUENCE OF DEMOGRAPHICS OF AN INTRODUCTORY CIRCUITS COURSE**
 *Carlotta Berry, Department of Electrical and Computer Engineering.
-
- 9:45 AM A4 RACE, ETHNICITY, AND NEIGHBORHOOD EFFECTS ON ADOLESCENT WELL-BEING**
 *Pamela. Hull, Department of Sociology, Center for Health Research
-

- 10:00 AM A5 USE OF COOPERATIVES BY SMALL FARM OPERATORS IN TENNESSEE**
 *Fisseha Tegegne, Enefiok Ekanem, Safdar Muhammad and Surendra Singh. Institute of Agricultural and Environmental Research and Department of Agricultural Sciences
- 10:15 AM A6 RHIZODEGRADATION OF PESTICIDES IN SELECTED PLANT RHIZOSPHERES**
 *Dzantor, Kudjo, Institute of Agricultural and Environmental Research
- 10:30 AM A7 PRODUCERS' BIOTECH ATTITUDES IN THREE SOUTHERN STATES: IMPLICATIONS AND PRESCRIPTIONS FOR POLICY**
 *Enefiok Ekanem, Fisseha Tegegne, Safdar Muhammad, and Surendra Singh, Institute of Agricultural and Environmental Research.
- 10:45 AM A8 GENDER DIFFERENCES IN CHURCH ATTENDANCE**
 *Ezell Lundy, Department of Sociology
- 11:00 AM A9 POINSETTIA OPEN HOUSE REVEALS CONSUMER PREFERENCES**
 *C. Catanzaro, S. Bhatti, S. Muhammad, S. Abdullah, H. Kamake, Institute of Agricultural and Environmental Research.

POSTER PRESENTATIONS

Faculty

- H1 DIURNAL ACTIVITY OF BUPRESTIDS AS INDICATED BY PURPLE STICKY TRAP COLLECTION**
 Nadeer Youssef, Jason B. Oliver, Donna C. Fare, and Sue Scholl. Institute of Agricultural and Environmental Research, and Horticultural Research Institute
- H2 INDUCTION OF GENE TRANSCRIPTION BY COLD AND HEAT SHOCK IN PACHYSANDRA TERMINALIS**
 *Suping Zhou, Roger Sauve, Sarabjit Bhatti, Debra Long, Tingting Chen, Institute of Agricultural and Environmental Research
- H4 INHIBITION OF ADENYL CYCLASE OR PK A INCREASES THE EXPRESSION OF PLC GAMMA 1 AND P44/42 IN HUMAN NATURAL KILLER CELLS**
 *Margaret Whalen and Sabah O. Ghazi: Department of Chemistry
- H5 EVALUATION OF THE DESIGN AND SITE PLACEMENT OF VARIOUS TRAPS FOR THE COLLECTION OF EMERALD ASH BORER**
 *J. Oliver, J. Francese, N. Youssef, V. Mastro, D. Lance, I. Fraser, and D. Fare, Institute of Agricultural and Environmental Research
- H6 A COMPARISON OF CLINICAL TREATMENT OUTCOMES ACROSS SEMESTERS**
 *Mary T. Fitzgerald and E.L. Kindle, Department of Speech Pathology and Audiology.
- H7 ADEQUACY OF DIETS OF FOOD STAMP RECIPIENTS AS COMPARED TO NON-FOOD STAMP RECIPIENTS IN MIDDLE TENNESSEE**
 *Leslie Speller-Henderson, Sandria Godwin, Fisseha Tegegne, and Cindy Thompson. Institute of Agricultural and Environmental Research
- H8 CONTROL OF MICROBIAL CONTAMINATION ON THE SURFACE OF FRESH FRUITS AND VEGETABLES: HOME WASHING METHODS**
 *Agnes Kilonzo-Nthenge, F. Chen, S. Godwin, C. Agyemang, and P. Oyaro. Institute of Agricultural and Environmental Research and Department of Family and Consumer Sciences
- H9 CARCASS TRAITS OF FRENCH GUINEA KEET BROILERS FED DIETS WITH VARYING LEVELS OF METABOLIZABLE ENERGY**
 Samuel Nahashon, N. Adefope, A. Amenyenun, and D. Wright. Institute of Agricultural and Environmental Research.
- H10 POTENTIAL PROTEIN MARKERS FOR ASSESSING THE EFFECTIVENESS OF INACTIVATION OF BSE AGENT IN MEAT PRODUCTS**
 *Fur-Chi Chen, A. Kilonzo-Nthenge, D. Young, and A. Abdullah. Institute of Agricultural and Environmental Research
- H11 NEW METHOD TO DETERMINE STABLE ISOTOPIC ENRICHMENT AND CONCENTRATION OF GLYCEROL AND GLUCOSE IN PLASMA VIA GAS CHROMATOGRAPHY-MASS SPECTROMETRY** *Mu Zheng, Department of Chemistry.
- H12 A NOVEL TRAFFICKING PATHWAY FOR THE HIGH AFFINITY CHOLINE TRANSPORTER.** *Michael T. Ivy¹ and James G. Townsel², Department of Biological Sciences¹, Tennessee State University, Nashville, TN 37209, and Department of Physiology, Meharry Medical College², Nashville, TN 37208.
- H13 DEVELOPMENT OF F-AFLP TECHNIQUES FOR GOLDENSEAL (HYDRASTIS CANADENSIS)**
 *Roger Sauve, and Suping Zhou., Institute of Agricultural and Environmental Research.

-
- H14 LOW TEMPERATURE REGULATION OF GENE TRANSCRIPTION IN PACHYSANDRA TERMINALIS**
 Roger Sauve and Suping Zhou, Institute of Agricultural and Environmental Research.
-
- H15 OPTIMIZATION OF HEAT TREATMENTS FOR HEAT STRESS STUDIENS IN VINCA (*Catharanthus hybrida*)**
 *Roger Sauve and Suping Zhou, Institute of Agricultural and Environmental Research
-
- H16 AGRICULTURAL BIOTECHNOLOGY ISSUES: FOCUS GROUP RESULTS FROM THREE STATES**
 *Enefiok Ekanem, Fisseha Tegegne, Safdar Muhammad, and Surendra Singh. Institute of Agricultural and Environmental Research
-
- H17 COLLEGE STUDENTS PERCEPTION OF TEACHING EFFECTIVENESS IN INSTRUCTORS WITH ACCENTS**
 Iris Johnson, H. Blakemore, A. Willis*, and M. Hughes*, Health Sciences
-

POSTER PRESENTATIONS

Graduate Students

-
- H18 TRIBUTYLtin-INDUCED EFFECTS ON MAP KINASES p38 AND p44/42 IN HUMAN NATURAL KILLER CELLS**
 *Aloice Aluoch, Advisor: Margaret Whalen, Department of Chemistry
-
- H19 DESIGN OF AN INTELLIGENT CONTROL SYSTEM FOR AN UNMANNED AERIAL VEHICLE (UAV)**
 *Charles D. McCurry, Advisor: Saleh Zein-Sabatto, Electrical and Computer Engineering
-
- H20 IN VITRO REGENERATION OF LYCOPERSICON ESCULENTUM FOR GENETIC TRANSFORMATION STUDIES**
 *Tingting Chen, Suping Zhou and Roger Sauve, Advisor: Suping Zhou, Institute of Agricultural and Environmental Research
-
- H21 COMPARISON OF SAMPLE DARK-GREEN VEGETABLE VARIETIES VIA GERMINATION RESPONSE AND GENOTYPING**
 *Kori. Shaw, D. Long, A. Aziz, and R. Sauve, Advisor: Dr. Ahmad Aziz, Institute of Agricultural and Environmental Research
-
- H22 APPLICATIONS OF AFLP IN PLANT GENOTYPING**
 *Russell Harrison, A. Aziz and R. Sauve, Advisor: A. Aziz, Institute of Agricultural and Environmental Research
-
- H23 DEVELOPMENT OF A COMPUTER PROGRAM THAT USES RTD AND BIODEGRADATION RATES TO PREDICT TOLUENE REMOVAL IN KARST AQUIFERS** *Ryan Fitzwater, Advisor: Thomas D. Byl, Department of Civil and Environmental Engineering
-
- H24 COMPARISON OF BIOLUMINESCENT BACTERIA AND OXYGEN UPTAKE RESPONSE AS INDICATOR OF WATER QUALITY**
 Poster Graduate *Dominic Anako¹, J Suber¹, M. Ricks¹, P Frymier² and T D Byl^{1, 3}, ¹Tennessee State University Nashville TN ; ²University of Tennessee Knoxville TN ; ³United States Geological Survey, Advisor: Thomas D. Byl, Department of Civil and Environmental Engineering
-
- H25 FIELD APPLICATION OF RTD/BIODEGRADATION MODEL TO A CONTAMINATED KARST SITE**
 *Revell Isabelle Ford, Roger Painter, and Tom Byl, Advisors: Thomas D. Byl and Roger Painter Department of Civil and Environmental Engineering
-

POSTER PRESENTATIONS

Undergraduate Students

-
- H26 THE EFFECTS OF NOISE EXPOSURE ON COLLEGE BAND MUSICIANS: PURE TONE AND OTOACOUSTIC EMISSIONS SCREENINGS**
 *Jamie Fisher, *D. Hayes, Advisor: Valerie Matlock, Department of Speech Pathology and Audiology
-
- H27 EXPLORING THE RELATIONSHIP BETWEEN LEARNING STRATEGIES AND GRADE POINT AVERAGE**
 *Linda Burks, W. Jordanov, Advisor: Wendy Jordanov, Department of Psychology
-
- H28 BRIEF EXPOSURE TO PENTACHLOROPHENOL CAUSES PROGRESSIVE LOSS OF CYTOTOXIC FUNCTION IN HUMAN NATURAL KILLER CELLS** *Telpiore Tucker, Advisor: M. Whalen, Department of Chemistry
-
- H29 EFFECTS OF IN VITRO EXPOSURES TO LOW LEVELS OF ORGANOTIN PESTICIDES ON HUMAN NATURAL KILLER CELL CYTOTOXIC FUNCTION** *Marilyn Pruitt, L.Dzon, A. Reed, and M. Whalen, Advisor: Margaret Whalen, Department of Chemistry
-

-
- H30 THE COMBINED EFFECTS OF LOW AND HIGH DOSES OF COPPER AND NICKEL IONS ON U937 CELLS**
 *Shalandus Harris and W. Y. Boadi, Advisor: William Y. Boadi, Department of Chemistry
-
- H31 SEMAPHORIN SIGNALING DURING CARDIAC NEURAL CREST DEVELOPMENT**
 *Kiana Brooks, Advisor: Christopher Brown, Vanderbilt University Medical Center Department of Pediatric Cardiology
-
- H32 REGULATION OF GLUTATHIONE LEVELS IN U937 CELLS BY HIGH DOSES OF QUERCETIN**
 *Rhodes Akhimi, and W. Y. Boadi, Advisor: William Y. Boadi, Department of Chemistry
-
- H33 AFLP FRAGMENT ANALYSIS ON SEQUENCING GEL USING SAGA GENERATION 2 SOFTWARE**
 *Mirica Stevens, R. Harrison, C. Robinson and T. Gary, Advisor: A. N. Aziz, Institute of Agricultural and Environmental Research
-
- H34 AFRICAN AMERICAN VERSUS CAUCASIAN WOMEN'S REACTIONS TO SEXUALLY SUGGESTIVE PRINT MEDIA**
 *Sheriton Shelton, Advisor: Christy Scott, Department of Psychology
-
- H35 STUDY OF THE ENZYMATIC ACTIVITY OF HYALURONAN LYASE USING GEL PERMEATION CHROMATOGRAPHY WITH PHOTODIODE ARRAY DETECTION** *Jeanita S. Pritchett and Koen P. Vercruysse, Advisor: Koen P. Vercruysse, Department of Chemistry
-
- H36 EFFECTS OF GENISTEIN ON OXIDATIVE STRESS IN U937 CELLS**
 *Jessica Lawrence and W. Y. Boadi, Advisor: William Y. Boadi, Department of Chemistry
-
- H37 EXAMINING THE EFFECTS OF UV LIGHT ON AN ANCIENT AND NEARLY INDESTRUCTIBLE ORGANISM**
 *Sherina Haynes, Tanisha Taylor, and Rhonda Lane, Advisors: Dr. Todd Gary, Dr. E. Lewis. Myles, Department of Biological Sciences
-
- H38 COMPARISON OF MEAT GOAT MARKET ACTIVITY AT LIVESTOCK AUCTIONS IN THREE STATES**
 *Marissa Love and R. Browning, Jr., Advisor: Richard Browning, Jr., Institute of Agricultural and Environmental Research
-
- H39 ANALYZING A THIN HAFNIUM DIOXIDE FILM USING RUTHERFORD BACKSCATTERING SPECTROSCOPY FOR FUTURE APPLICATIONS IF SEMICONDUCTOR FABRICATION**
 *Frank Alston, Advisor: Leszek Wielunski, Yves Chabal, and Ted Madey, Department of Physics and Astronomy, Rutgers University
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- H40 DESIGN OF A NUMERICAL MODEL TO PREDICT SEDIMENT STORAGE OF FECAL BACTERIA AND TRANSPORT IN A RIVER**
 *James Davis, *Tiffany Hines, *John Brew and T. D. Byl, Advisor: Thomas D. Byl, Department of Civil and Environmental Engineering
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- H41 CONSUMER AWARENESS OF THE EFFECTS OF SMOKING ON VOCAL QUALITY**
 *Sabrina Smiley, Advisor: Valeria Roberts Matlock, Department of Speech Pathology and Audiology
-
- H42 AN EXAMINATION OF THE AWARENESS OF THE PROFESSIONS OF SPEECH LANGUAGE PATHOLOGY AND AUDIOLOGY AMONG UNDECIDED MAJOR STUDENTS AT TENNESSEE STATE UNIVERSITY**
 *Jennifer Washington and *Tanya Gates, Advisor: Valeria Matlock, Department of Speech Pathology and Audiology
-

All abstracts can be found at www.tnstate.edu/research/RSP.htm

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SYMPOSIUM LAYOUT

Time	March 29 Tuesday	March 30 Wednesday	March 31 Thursday
8:00 AM	Registration	Registration	Registration
8:15 AM	KEY NOTE SPEAKER THOMAS WINDHAM (Farrell-Westbrook)	E-1	
8:30 AM		E-2	
8:45 AM		E-3	
9:00 AM		E-4	A1 (Forum)
9:15 AM		E-5	A2 (Forum)
9:30 AM			A3 (Forum)
9:45 AM		D1 + POSTERS	A4 (Forum)
10:00 AM	C1 (FORUM)	D2 + POSTERS	A5 (Forum)
10:15 AM	C2 (FORUM)	D3 + POSTERS	A6 (Forum)
10:30 AM	C3 (FORUM)	D4 + POSTERS	A7 (Forum)
10:45 AM	C4 (FORUM)	D5 + POSTERS	A8 (Forum)
11:00 AM		D6 + POSTERS	A9 (Forum)
11:15 AM	G1 (FORUM)		
11:30 AM	G2 (FORUM)		
11:45 AM	G3 (FORUM)	USDA SPEAKER AND LUNCH (Farrell-Westbrook)	STUDENT AWARD LUNCHEON (Farrell-Westbrook)
12:00 NOON	G4 (FORUM)		
12:15 PM	G5 (FORUM)		
12:30 PM	G6 (FORUM)		
12:45 PM	G7 (FORUM)		
1:00 PM			
1:15 PM			
1:30 PM			
1:45 PM	F1 (FORUM)		
2:00 PM	F2 (FORUM)		
2:15 PM	F3 (FORUM)	B1 + POSTERS	
2:30 PM	F4 (FORUM)	B2 + POSTERS	
2:45 PM	F5 (FORUM)	B3 + POSTERS	
3:00 PM	F6 (FORUM)	B4 + POSTERS	
3:15 PM	F7 (FORUM)	B5 + POSTERS	
3:30 PM	F8 (FORUM)	B6 + POSTERS	
3:45 PM	F9 (FORUM)	B7 + POSTERS	
4:00 PM	F10 (FORUM)		
4:15 PM	F11 (FORUM)	ALL WEDNESDAY PRESENTATIONS AND POSTERS ARE HELD IN FARRELL-WESTBROOK	
4:30 PM			
4:45 PM			

A = FACULTY

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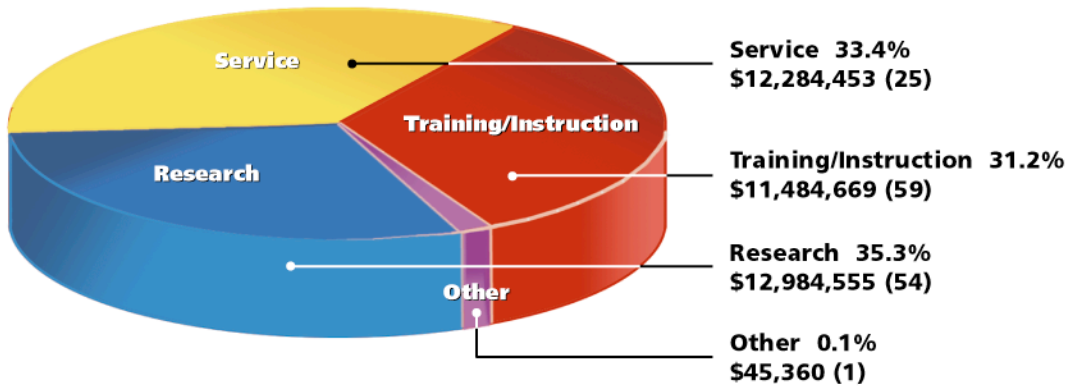
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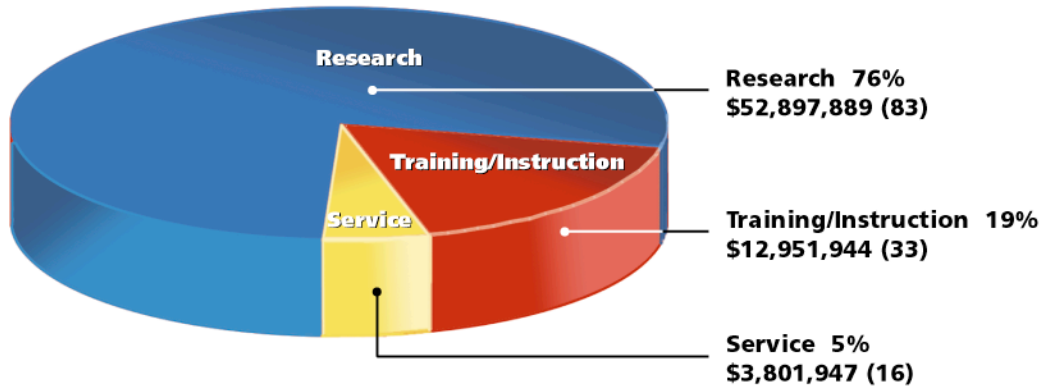
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2nd PLACE Graduate Oral Presentation - Science	*LeeShawn Thomas
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2nd PLACE Graduate Poster Presentation	*Dominic Anako

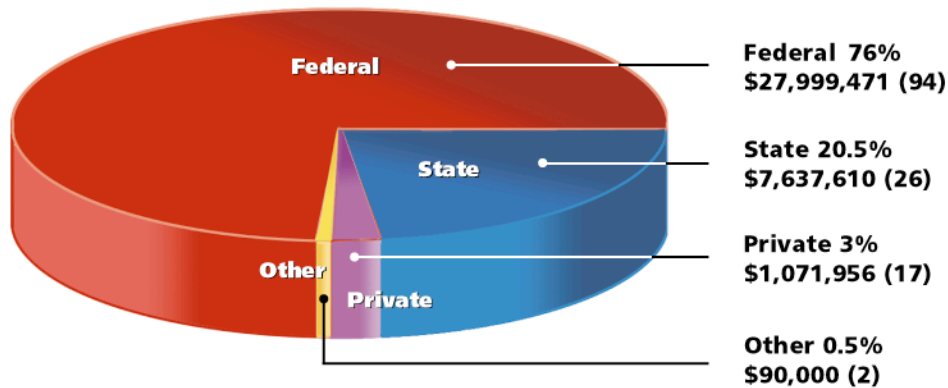
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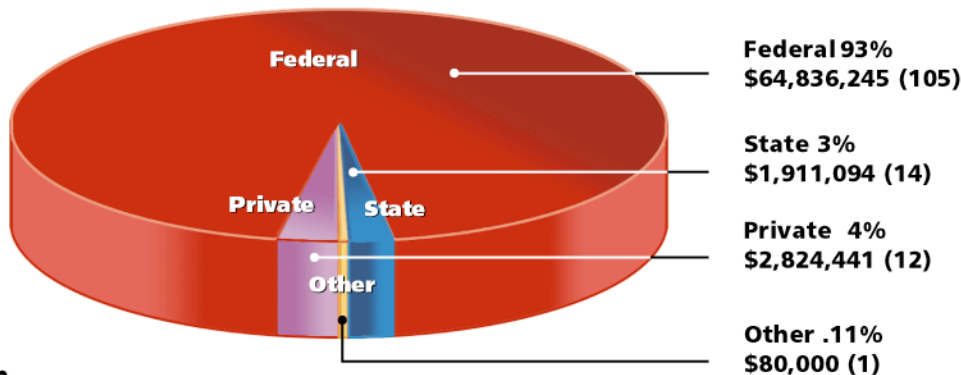
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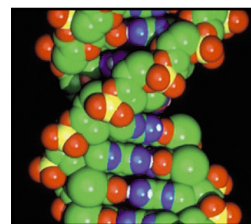
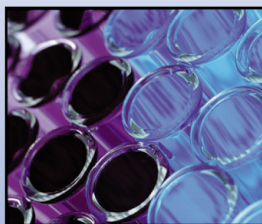
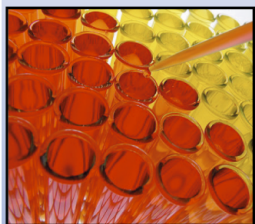
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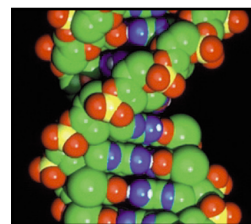
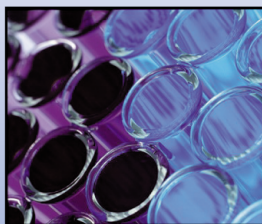
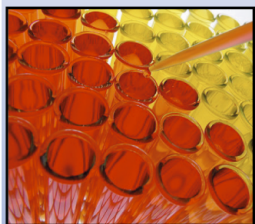


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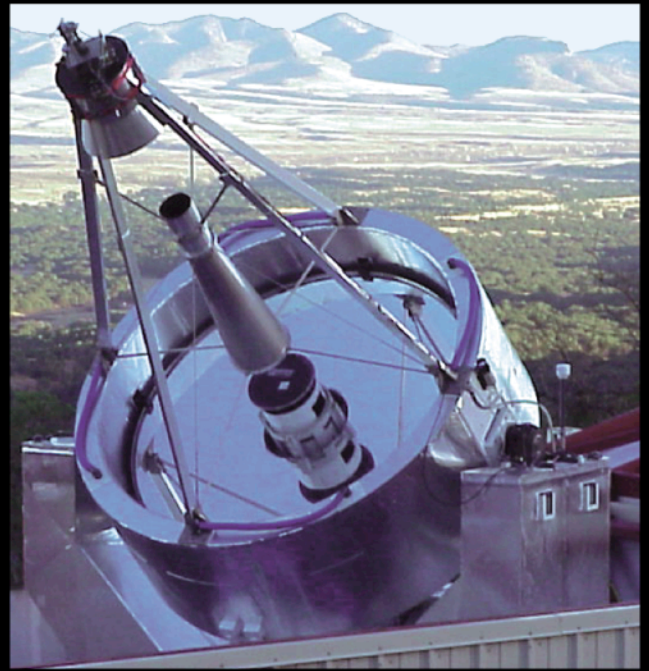


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Web Site: www.tnstate.edu/research

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