

News and Publications

Lubbock, TX 79409-2022

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MEDIA ADVISORY

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(EDITOR'S NOTE: Media representatives interested in interviewing researchers as part of this informational series, may contact the Office of News and Publications at 742-2136.)

LUBBOCK -- Fact: Hot, arid lands may be destined to become green fields.

Fact: The secondary automobile fuel of the future could be gasoline.

Fact: Pesticide safety information is accessible to U.S. citizens 24 hours a day.

Fact: Science and academic research does not have to be an enigma to the general public.

Several Texas Tech research projects, including the topics listed above, will be highlighted for the media in a series of features and information sheets as part of National Science and Technology Week 1990, April 22-28. The theme for the sixth annual designated week is "Global Environmental Change."

The five-day information series begins Monday (April 23) focusing on environmental research being conducted at Texas Tech University and Texas Tech Health Sciences Center.

The week encourages people to become aware of the benefits of science and technology achievements. This year, the environmental theme provides a forum to spotlight national earth-saving actions that are being taken by the public and private sectors.

According to information by the program sponsor, the National Science Foundation, "Sometime in the next century, ... we will need to feed, house, clothe and provide energy for a doubled population. Yet, even at present rates of consumption, we are depleting natural resources and polluting the environment on unprecedented scales."

The awareness of environmental issues and their magnitude in today's way of life has been a growing concern for several years in Texas Tech's faculty research ranks, according to Texas Tech University administrator Robert M. Sweazy, Ph.D.

"The university is pleased to note that there is an increased awareness of environmental issues on college campuses. And we have good research programs that address environmental problems and solutions to many of these problems," said Sweazy, vice provost for research and an environmental engineer.

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According to Texas Tech records, environmentally related research involves in excess of 10 percent of the total \$21 million in annual research expenditures at the university.

Environmental concerns also are reflected in activities and research conducted at the Texas Tech Health Sciences Center. The issues are a natural area of study for the medical profession because of their impact on individual health.

"The issues related to the environment cut across virtually every sector of the population and involve many professions including the medical profession and its research concerns," said Kenneth L. Barker, Ph.D., health sciences center vice president for research and academic support. "Whenever our health may be threatened, it becomes a concern for the medical profession and its research efforts."

Current environmental projects cover a variety of academic fields and involve researchers from many of Texas Tech's colleges and institutes. The schedule of the series is:

Monday, April 22 -- The National Pesticide Telecommunications Network

The health sciences center's most visible environmental program, the network is a toll-free, 24-hour hotline that offers impartial information on pesticides to consumers and businesses. Created in 1977, the network has been affiliated with Texas Tech since 1984. The hotline recently has been funded again for a five-year term by the U.S. Environmental Protection Agency.

Tuesday, April 23 -- Toxins in the Environment

The research of a health sciences center physiology professor involves biomedical evaluations of the potential toxic effects of automobile pollutants, gases and dust. The researcher, a former General Motors senior investigator, also is working to establish methods for evaluating toxicity of aerosol agents commonly found in the environment.

Wednesday, April 25 -- Biotechnology in Agriculture

University researchers are working to genetically develop crops that can withstand extreme temperatures and low levels of moisture. The work is being conducted through Texas Tech's Plant Stress and Water Conservation Research Laboratory in conjunction with the Institute for Biotechnology. The laboratory is a consortium of researchers from the Texas Tech University colleges of Agricultural Sciences and Arts and Sciences, the U.S. Department of Agriculture and the Texas Agricultural Experiment Station.

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ENVIRONMENTAL RESEARCH/PAGE 3

Thursday, April 26 -- Biodegradation

Engineering and biology researchers are investigating a new method of biodegradation as an economical option for cleaning groundwater and soil contaminated by petroleum fuel. The process, often targeting waste from leaking underground storage tanks, utilizes oxygen-using bacteria to degrade the waste into harmless compounds. The project recently received funding from the U.S. Environmental Protection Agency.

Friday, April 27 -- Alternative Fuel Sources

The role of alternative fuels in improving automobile emissions is being studied by other engineering researchers. The projects include the evaluation of fuel injectors for improved fuel combustion, the application of lasers to improve fuel injectors and the use of alternative fuels in automobiles.

Friday's highlights also will include Student Research Day at the health sciences center. Among the afternoon activities will be displays and discussions about careers in biomedical research.

(EDITOR'S NOTE: This is the first in a series of articles by Texas Tech faculty in recognition of National Science and Technology Week.)

SCIENTIFIC BANKRUPTCY

by KENNETH BARKER, PH.D.

This nation faces a scientific bankruptcy with implications that could far exceed the ramifications of failures in the U.S. banking system.

We are still making withdrawals from the bank of scientific knowledge we built up in the 20 years after Sputnik. However, our scientific account is dwindling, not so much from those withdrawals as much as from a failure to make new deposits.

The fault lies with the federal government for de-emphasizing broad basic research in the 1980s and with U.S. society as a whole for stressing short-term profits over long-term gains. Perhaps the most telling statistic of our plight compares U.S. and Japanese expenditures for research and development. We invested 2.8 percent of our gross national product on research and development in 1965, compared to 1.7 percent in 1985. The Japanese, by contrast, are now investing 2.8 percent of their GNP in research and development, a major factor in their strong economy and their ability to buy up America.

More than any other institution in our nation, the federal government must invest an appropriate share of its resources on basic scientific research, much as it did in the two decades following Sputnik. But because of the strain on federal dollars and the political pressures during the 1980s, the federal strategy now more closely follows

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the corporate approach which targets research on producing a scientific product or service with marketability or on seeking a cure for a targeted disease. And, where basic science research is being funded, a high percentage of dollars is being channeled into major projects -- the supercollider and human genome identification.

Both the supercollider and the human genome project have the potential to make fundamental discoveries. As with any basic research there are no guarantees, but the supercollider could help define the nature and structure of the atom and the human genome project could sequence the entire set of more than 50,000 human genes and provide the blueprint of human biology.

Scientifically sound as these projects may be, they do not come without a cost beyond the actual government dollars which will be expended. In effect, we are making a huge investment in two highly speculative stocks. We may get a large return. Or, we may not. That is the nature of all basic research. And, it is even possible that a return on these projects will be realized only after additional basic research to help us interpret the results.

The added cost of the supercollider and the human genome project comes from investments of our research capital that will not be made. A cautious stockbroker, for instance, would not discourage an investor from buying speculative stocks, but he would likely suggest spreading the investment out over several different stocks. That reduces the risk on any one issue and increases the chances of backing a profitable stock.

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With these super projects, we wind up with 50 scientists working on one concept. For expanding our knowledge bank, we may do better supporting individual scientists working on 50 different concepts.

A basic scientific knowledge bank is important because it provides the essential foundation upon which applied research can be built. History shows that understanding the rock solid basics of science leads to application, many times more effectively than targeted research built upon the sands of immediate need.

Take the AIDS problem, for instance. To date the major breakthroughs in understanding how AIDS works have come from scientists conducting fundamental cell and molecular biology research in cancer immunology. Had it not been for the government's willingness during the 1960s and 1970s to support basic research into the cellular mechanisms of cancer, we would be years behind where we are now in finding a treatment and possibly even a cure for the serious AIDS problem.

Money is only one prerequisite for broadening our scientific knowledge base. Young minds -- our future scientists -- is another. However, many young scientists considering research careers today see little hope of acquiring even a small-part of the declining research dollars to pursue their own lines of inquiry. As a result, they cannot build the research programs of tomorrow and they are forced to follow trails of their scientific predecessors -- even if those trails may lead nowhere -- just to get funding. By discouraging these young minds, we will, in effect, limit our future ability

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to expand our basic scientific information for a generation or more, further reducing our competitiveness in the international market.

Consider the National Institutes of Health, the major funding agency for medical research in this country. At one time, the NIH funded approximately 40 percent of the new investigator-initiated research proposals it received. Today that figure is less than 11 percent. Further, complete funding is available for only some 4,000 projects, compared to 5,000 new competitive grants just a few years ago. This drop is attributable to several factors, including inflation, high costs of some types of experiments and the reallocation of funds necessitated when Congress mandates major targeted projects without providing sufficient additional appropriations.

As a nation, we must reverse this decline. Our ability to compete in the international market depends on it. We must demand that Congress and the federal government provide funding continuity for scientific inquiry. We must insist that basic research is allowed to restock our bank of scientific knowledge. To do less is a disservice to our children and their future. Without action, we are faced with a scientific bankruptcy from which we might never recover.

Kenneth Barker, Ph.D., is vice president for research at the Texas Tech University Health Sciences Center.

(EDITOR'S NOTE: This is the second in a series of articles produced by Texas Tech faculty in recognition of Science and Technology Week.)

PESTICIDES: HELPFUL OR HARMFUL?

By Jack Hayes

On the whole we are an overreacting society, which has become increasingly evident in the ongoing pesticide issue. Whenever the Environmental Protection Agency bans the use of various chemicals, we get ourselves into a frenzy for fear of pesticide contamination to ourselves and our families.

Unfortunately, the situation is complicated by the media -- our main source of information. The media are a lay group of people reporting to a lay public. It seems that only bad news is news. Alar -- the trade name for the pesticide daminozide -- has become a household word in recent months. The latest battle cry in the controversy has been "buy organic." And in Dallas recently, organic produce sales have increased dramatically.

Technology is so advanced today, it almost works to our disadvantage in terms of the "fear factor." Today's technology is so good that we often are able to test parts per billion for signs of pesticide residue. The fact that U.S. technology is able to measure these minuscule residues sends out misconstrued information to the public that pesticides are extremely harmful -- even life-threatening.

By definition, pesticides are toxic chemicals -- designed to kill insects, weeds, fungi and other pests. And yes, some also have been found to cause cancer, birth defects and other health problems.

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Yet the American Council on Science and Health finds no scientific evidence that residues in food from the regulated and approved use of pesticides has ever been the cause of illness or death in either adults or children.

It is true, however, that our food, drinking water and environment often contain trace amounts of various pesticides.

Another serious consequence -- pointed out by environmentalists -- is that the targeted pests are becoming resistant to these chemicals. The typical solution to the problem is to apply more pesticides which in turn can increase the pest's resistance.

Pesticides have taken on a crucial role in the U.S. economy. Agricultural production now depends on pesticides, as does an entire industrial sector of manufacturers, formulators and distributors.

There are valid reasons to use man-made chemicals to produce an adequate, wholesome and economical food supply. In 1989, less than two percent of the population was engaged in food production for a nation of 248 million Americans.

Today, the typical farmer feeds about 79 people, including 26 in foreign countries. In 1910 -- in contrast -- the typical American farmer produced only enough to feed seven people.

Modern, scientific farming -- including the use of pesticides, fertilizers and automated equipment -- has given the American farmers of today the opportunity to maintain their position as the world's most efficient food producers.

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Just since the 1940s, pesticide use has increased tenfold. Last year alone, more than 2 billion pounds of pesticides were sold in the United States.

Farmers daily compete with literally thousands of different species of insects and plant diseases that can wipe out a crop --sometimes within a matter of days -- before any alternative "natural" methods of pest control can take effect.

But nature is not benevolent to humans who abandon science and technology. Even without agrichemicals, there is nothing "natural" about planting fields of crops or raising a herd of domestic animals. Nor is it "natural" for large human populations to live in cities or towns without coexisting vermin and the diseases they transmit. Without the active and deliberate intervention of man, nature would rapidly eradicate the world's food production capacity and unleash plagues of long-forgotten virulence.

In short, we would suffer and die.

The development of non-chemical methods to suppress pests requires applying technical knowledge and conducting scientific research with the same diligence as for pesticides. For the foreseeable future, most pesticide alternatives have significant limitations, but we need all options in order to increase food production, improve public health and foster a better environment.

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PESTICIDES/PAGE 4

Our task -- whether we are among the legion of home and garden pesticide users, or only contact pesticides when picking out an orange in the supermarket -- is to make informed decisions about pesticides, for it is only our decisions that can make a difference.

Jack Hayes, Ph.D., is the director of the Texas Tech University Health Sciences Center National Pesticide Telecommunications Network. The network provides a 24-hour hotline aimed at educating people nationwide on the benefits and potential risks of pesticide use.

LACK OF WATER OF IMPORTANCE TO TEXAS TECH RESEARCHERS

By Robert C. Albin, Ph.D.
Texas Tech University

In the spring, when everything begins to turn green, it's often difficult for most of us to remember that water is a limited resource. Yet the lack of water, combined with extreme temperatures, is an environmental concern being studied year round by a large group of scientists at Texas Tech University.

Much of the research is being done in conjunction with the Plant Stress and Water Conservation Research Laboratory and Program, which was authorized in 1988 by the 100th Congress to be established at Texas Tech. No action of the federal government has been more timely, nor likely to substantially impact food production and environmental quality than this Public Law 100-339.

The "Greenhouse Effect" resulting from increased atmospheric carbon dioxide and other gases, global warming induced climatic changes and the extensive drought of the summer of 1988 are ready examples of the fragility of our managed and natural ecosystems. Even modest changes in weather patterns can potentially reduce food and fiber quantity and quality. Projections of continued water shortages and extreme temperatures are predicted to increasingly impact most plant growth patterns in the Northern Hemisphere from now through the first part of the next century.

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The Plant Stress and Water Conservation Research Program is committed to understanding the basic principles of plant growth and development under conditions of thermal and water stress, and to use this knowledge to produce new crop varieties and management systems that minimize the impact of climatic extremes. Research is being conducted in the disciplines of genetics, breeding and molecular biology; biochemistry and physiology; and climatology, soil science and cropping systems.

The program is unique because of its cooperative effort between scientists at Texas Tech, the U.S. Department of Agriculture -- Agricultural Research Service and the Texas Agricultural Experiment Station. While one researcher may focus on a plant's enzymes, other scientists may be concerned about a specific gene or about how best to grow a particular plant under extreme conditions. Yet the researchers communicate, share information and work together in the quest to find and produce drought- and temperature-tolerant plants. Every aspect of stress-tolerance and -resistance in plants is analyzed -- from the most fundamental cellular level to field production practices.

Although the program initially began with an emphasis on the Great Plains region of the United States, the research has international implications. Just as the agricultural economy of the Great Plains is shifting from irrigated agricultural systems toward dry-land agricultural systems, other areas of the world are moving in the same direction. The goal of the program is to develop crops that can withstand low levels of moisture and extreme temperatures -- not just in Lubbock or on the Great Plains, but everywhere in the world.

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Yet results don't always come quickly. The Plant Stress and Water Conservation Research Program is a long-range project. That fact is sometimes difficult to explain to agricultural producers and legislators who want a product available tomorrow for dollars spent today. Tremendous strides are being made. Genes that are linked to stress-resistance or stress-tolerance have been discovered, but much time and effort is required to get those genes transformed into plants that grow and produce in a given environment. Progress is being made, but it can't happen overnight.

Fortunately, the U.S. Congress has recognized the importance of putting such a program in place so that when answers are necessary 10 to 15 years down the road, much of the initial research and development will be established. In 1988, the federal government granted an initial \$500,000 for the construction of a laboratory to unite all of the researchers and expedite their research. Currently, the scientists are scattered in eight different labs on the Texas Tech campus and around Lubbock. It's important that they be consolidated in a single facility where they can promote the flow of information -- that's the whole thrust and strength of the program.

The plant stress and agricultural biotechnology research efforts also have been successful in securing state support. For the second funding period in a row, the scientists affiliated with the research have received Advanced Technology Program and Advanced Research Program grants, which are awarded every two years by the Texas Higher Education Coordinating Board.

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The program also has fared well in the area of competitive grants, which match research projects against each other for a limited amount of funding. The success in receiving research dollars is a stamp of approval, not only for the scientists involved in the program but for the university and the Lubbock community as well.

The plant stress and agricultural biotechnology research program has all of the necessary elements to become a national and internationally recognized program. It has a core of outstanding scientists, recognition from the state and national government for the importance of such research and some preliminary funding. We have a strong foundation and base -- now it will simply take time.

Robert C. Albin is the associate dean for research and agricultural operations in the College of Agricultural Sciences at Texas Tech University. He also serves as director of the Plant Stress and Water Conservation Research Institute and has worked with the program since 1980.

NEWS RELEASE

TEXAS TECH
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LUBBOCK -- The Texas Tech Office of News and Publications has received nine awards in a competition sponsored by District IV of the Council for the Advancement and Support of Education (CASE), an organization comprised of professionals in public and private institutions of higher education.

The awards for photography, design and public relations achievements marked the second consecutive year the office was among the top award winners in the five-state district. In 1989, the office garnered 11 awards for work involving the university and health sciences center.

"It is an honor to receive this recognition from peers in higher education, especially considering the quality of competition in the state of Texas alone. But being among the top award winners for a second year indicates the consistency of quality work produced by the office personnel at Texas Tech," said News and Publications Director Margaret S. Simon.

The awards were presented during the CASE District IV conference April 1-4 in Corpus Christi.

Among this year's top honors for Texas Tech was a first place Grand Award in structured color photography presented to Artie Limmer, manager of the office's photographic services bureau. Limmer also won a third place Achievement Award in the same category.

The bureau won four of the 10 photography awards given at the conference.

Other honors were a second place Award of Excellence in black and white candid photography given to Limmer and an Achievement Award in black and white structured photography presented to Mark Mamawal, staff photographer for the bureau.

The health sciences center news bureau received a Grand Award in television news for a video medical feature service coordinated by Bureau Manager Preston Lewis.

The Office of News and Publications won two awards for work involving the July 1989 health sciences center break-in by animal rights activists.

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Lewis received an Achievement Award in interpretive writing for an article on the break-in published in the university's alumni magazine, "The Texas Techsan." Texas Tech's response to the break-in and continued attacks by animal rights activists won an Achievement Award in public relations programs.

Design work by Elaine Atkinson, assistant manager of the publications bureau, won two awards in the competition. She received an Award of Excellence in design series for a poster/brochure series about graduate and undergraduate studies in agricultural economics. A Special Award in one-color design pieces went to Atkinson for a poster produced this year for Texas Tech's annual Comparative Literature Symposium.

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MEDIA ADVISORY**REF: 3-4-17-90****CONTACT: Jennifer LeNoir****ALTERNATIVE FUELS KEY TO CLEANER AIR**

LUBBOCK -- Texas Tech University engineers are searching for ways to improve automobile emissions through alternative fuels research, an effort that would help maintain cleaner air.

The research in Texas Tech's College of Engineering is aimed at cleaning up automotive fuels. With a \$90,000 National Science Foundation (NSF) grant, Texas Tech researchers are studying the application of lasers to fuel injectors for improved fuel combustion and a cleaner environment.

A fuel injector breaks gasoline into a fine mist by pushing the liquid through a small hole or atomizer. Researchers are using a laser beam to break-up the stream of liquid gasoline as a way to improve the fuel injector process, explained Edward Anderson, Texas Tech mechanical engineering department chairman.

Researchers are using a second grant of \$101,300 from the Texas Higher Education Coordinating Board Advanced Research Program to study fuel injectors for improved fuel combustion and cleaner emissions.

"We're applying vibrating sounds to gasoline to assist it in breaking-up. There have been a number of studies involving sound, but instead of shaking the whole fuel injector like most researchers are doing, we're focusing on applying an alternating pressure directly to the fluid," Anderson said.

Finally, a third grant of \$177,300 from the Texas Higher Education Coordinating Board Advanced Technology Program is being used by mechanical engineering researchers to study the cold-starting of methanol-powered automobiles.

"Methanol fuel doesn't vaporize well in cold weather, especially at temperatures below zero degrees Fahrenheit," said Timothy T. Maxwell, Texas Tech associate professor of mechanical engineering.

The research will focus on separating the methanol into hydrogen and carbon-monoxide gases, which will allow the engine to ignite fairly easily, especially in cold weather.

SOURCES:

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Timothy T. Maxwell, Ph.D., (806)742-3563
Associate professor of mechanical engineering

ALTERNATIVE FUELS IMPERATIVE FOR ATTAINING CLEAN AIR

**By Ed Anderson
Texas Tech University**

If Americans want clean air, then individuals must be willing to change their behaviors. More practical than depending on a complete societal answer to air pollution, researchers can offer other engineering solutions toward clean air. Still, Americans will have a choice to make.

Unacceptable levels of air pollution plague many U.S. cities. Transportation alternatives that would help create cleaner air include expanding mass transit systems, increasing the number of occupants per automobile and changing the physical workings of automobile engines.

While the first two options depend upon the decisions of individual citizens, the last choice does not. The psychological use patterns of the American public, like the one-person-per-car mindset, are hard to break. Engineers therefore, have two options.

Engineering researchers are working on ways to produce cars that emit fewer toxic pollutants, first, by finding ways to improve the automobile engine, and second, by examining alternative fuels that may help automobiles to run more efficiently.

An offspring of the second possibility involves the development of appropriate gasoline additives, such as methanol and ethanol, to help vehicles burn fuels more efficiently. Alternative fuels reduce the amount of toxic automobile emissions, however, they do not eliminate all carbon monoxide pollutants.

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Instead, the fuel additives simply burn more completely than gasoline. The additives are called oxygenated gasolines because the added oxygen helps to reduce the engine's reliance on the environment's oxygen, which is necessary to burn fuel.

Another alternative to gasoline-burning engines are engines powered by electricity. One consideration previously used in San Francisco and in parts of Europe is the addition of a "fly-wheel," a large, heavy wheel that may be powered by electrical contacts.

The electrical contacts enable the wheel to spin as the car is being refueled or while passengers are loading a mass transit vehicle. The inertia generated from the electrical hook-ups allows vehicles to travel without a motor, although the inertia must be replaced from time to time.

Ideally, our technological capabilities indicate that the way to cleaner air is through electrical cars, fly-wheels, alternative fuels and physical changes to the automobile engine.

Practically, however, engineering research studies and the U.S. infrastructure determine that the best attempt at cleaner air involves research of the internal combustion engine, a way to improve the existing automobile engine.

At Texas Tech University, engineers are conducting research aimed both at cleaning up automotive fuels and at designing fuel injectors for improved fuel combustion and cleaner emissions.

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Laser ignition and atomization both are ways of improving the vehicle engine itself. Both applications address the burning of current fuels, like gasoline, in currently designed engines. Both alternatives practically apply recent technology without involving a great expense for individual automobile owners or producers.

With a \$90,000 grant from the National Science Foundation, Texas Tech engineers are studying the application of lasers to the fuel injector.

The fuel injector breaks gasoline into a fine mist by pushing the liquid through a small hole or atomizer. Researchers are using a laser beam to break-up the stream of liquid gasoline as a way to improve the fuel injector process.

Texas Tech researchers are using a second grant of \$101,300 from the Texas Higher Education Coordinating Board Advanced Research Program to study fuel injectors for improved fuel combustion and cleaner emissions.

In the research, engineers are applying vibrating sounds to assist in breaking up gasoline. A number of previous studies have used sound but involve shaking the entire fuel injector. The Texas Tech study focuses on applying an alternating pressure directly to the fluid. Atomizers are used to help break large droplets of gasoline into more uniformly sized droplets which can be burned in the engine, thus reducing pollutants that escape through the exhaust pipe into the air.

Unburned gasoline, or hydrocarbons, accumulate quickly in the air. Current technology, such as the catalytic converter, assists in burning hydrocarbons but has not eliminated the problem of air pollution.

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The future technology involved is relatively simple: take out the spark plugs and insert laser plugs. The new procedure improves the way fuel is burned, and thus, reduces the amount of nitrous oxides, sulfur oxides and unburned hydrocarbons released into the air. These three pollutants are the most difficult to remove from the environment and the biggest contributors to air pollution. The pollutants cannot be reduced without first changing the processes by which fuels are burned in the engine.

Another way of reducing nitrous oxides in the air involves reducing the temperatures in the engine itself. Reduced engine temperatures are key because lower heat means that fuel is burned at a slower rate, reducing the amount of hydrocarbons and nitrous oxides entering the air. Reduced engine temperatures correlate with fuel-efficient or economy cars.

Herein lies another essential societal dilemma: What do Americans want in an automobile? Recently American automobile consumers concurred that they do not want fuel economy; they want performance.

Larger automobiles are making a comeback. The popularity of Cadillac's 1990 Lincoln Town Car, which has an expanded wheel base of six inches, is the classic example of society's latest demands in a car.

The trade-off for a cleaner environment is automobile performance that is less powerful, less racy. Ultimately the choice will be made by the public because automobile manufacturers will produce whatever the consumer wants. For now, the consumer does not want fuel-efficient, less polluting cars.

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Someday engineers may be able to find a compromise for the American public and the global environment by building a vehicle that has qualities of both performance and fuel economy -- I look forward to that day.

Very soon, we Americans will be forced to decide which we desire most: the excitement of the wind in our faces as we drive at high speeds attained in only a few seconds, or the sensation of a fresh breath of clean air easily inhaled.

Edward E. Anderson, Ph.D., is chairman of the mechanical engineering department at Texas Tech University. Anderson has been involved in automotive research at Texas Tech for the past five years. His research relates to making automobiles more efficient through aerodynamics, alternative fuels, fuel ignition and fuel combustion.

by James McGrath, Ph.D.

It is our most precious natural resource and yet the one we take most for granted. It is the air we breathe.

Air is the most fundamental of human needs. You can go a long time without food, a little while without water, but only a few seconds without air.

And yet, we as a society are releasing thousands of tons of harmful gasses and particles into this lifeline of our existence. And while industry shares part of the blame, we as individuals are not faultless because by numbers alone and by our insistence on living in a throw-away society, we are exacerbating the problem as well.

Compare, for instance, the vehicle you drive today with that used on the first Earth Day in 1970. Current vehicles have engines which run much cleaner than those then. You would think that has helped reduce our air pollution and in many cases it has for pollutants such as carbon monoxide and lead. Others such as nitrogen oxides, however, have actually risen. But with so many more vehicles on the road today than two decades ago, the technological gains we have made are being offset to a large extent by our increased numbers and our concentration in cities.

In our fast-paced society, convenience is a commodity we all seek and are willing to pay for, conveniences such as having a car for ourself, another for our spouse and possibly a third for

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our driving-age children. But the cost we pay for convenience of a car does not reflect the true cost to society nor even the individual cost to our health of the air pollution it produces.

I would like to say we can solve our air pollution problems, but I am not so certain that is realistic, not as long as our population density increases, both in this country and in the world. And, not as long as we ignore the paradox of us with one hand pointing a finger toward industry while in the other holding a styrofoam cup of coffee as we sit smugly in front of our fireplaces, failing to realize that fireplaces and styrofoam are themselves substantial contributors to our air and solid waste pollution predicaments.

As the people of more Third World nations demand the same advantages and convenience that technology has brought us in this country, the situation will only worsen.

While we may never be able to solve our air pollution problem, we can and should do a better job of managing it.

First, we can pass much more stringent federal laws to regulate industrial emissions into the atmosphere. We must as a government also support similar efforts in industrialized nations throughout the world. In doing this, we as citizens must understand it may cost us initially, both in decreasing our disposable income and in reducing some job options. Over the long run, it will be more cost effective as an investment in the health of ourselves and our planet and as an investment in newore-

jobs in the waste management and recycling industries.

Second, we must change elements of our lifestyle by reducing those activities and habits which contribute to the problem. For example, we must reduce our reliance on the automobile and reduce the number of vehicles which clog our highways and sully our atmosphere. We must put catalytic converters, like our cars use, on our fireplaces or convert them to cleaner burning natural gas systems to reduce the particle emissions. We must insist on energy-efficient appliances and we must insulate homes.

Third, we must understand the total implications of convenience and pre-packaged goods. For us, they are usually items of the moment, but for the environment they are often trash for the ages. These goods, ranging from polystyrene containers to disposable packaging, are a double-edged sword, drawing environmental blood both when they are produced and when they are discarded. We must wean ourselves from them, and industry must find ecologically sounder substitutes.

Finally, we must make recycling a habit. The mountains of trash we produce daily in this country are filled with newspapers, metals and plastics which could and should be re-used. We should no longer view that hated household chore as taking out the trash, but rather as sorting resources and making a sound environmental statement. To get widespread compliance, legislation should be passed mandating this for homes and businesses. Further, industries should be given legislative more-incentives for re-tooling their plants to re-cycle goods and for developing ways to better use recycled materials.

Probably the most beneficial impact of the environmental movement is simply that we have come to understand that this planet is a closed system. We cannot escape the environmental ramifications of what we do to ourselves. Just in re-cycling our goods, for instance, we have not only reduced an unsightly disposal problem but we also have lessened the atmospheric impact of the industrial processes which created those goods initially.

Whether we will ever be able to breathe easier over our environmental morass remains to be seen. If not, the question will become whether or not we can breathe at all and live to tell about it.

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RESEARCHERS STUDY BIODEGRADATION FOR GROUNDWATER, SOIL CLEAN-UP

LUBBOCK -- Three Texas Tech University faculty members are investigating a new method of biodegradation that could help in the clean-up of petroleum contaminants in groundwater and soil.

The research, which involves stimulating the rate at which naturally occurring bacteria consume organic contaminants in groundwater and soil, is funded by the Environmental Protection Agency (EPA) with a \$117,000 grant.

The Texas Tech researchers who are spending two years to study the new process in the laboratory are: Kenneth Rainwater, assistant professor of civil engineering, Bill Claborn, professor of civil engineering, and Caryl Heintz, associate professor of biological sciences.

Much of the contaminants originated from waste problems involving leaking underground storage tanks (LUST) for petroleum fuels. The contaminants in the groundwater and soil may be consumed through a process of biodegradation. The process involves aerobic, or oxygen-using, bacteria that degrade the organic liquids into harmless compounds, Rainwater said.

The rate of biodegradation may be enhanced by artificially providing oxygen and other nutrients, which may be essential to the bacteria. The new method alternately exposes the bacteria to moisture and oxygen required to degrade the organic hydrocarbon liquids, he said.

Currently, the Texas Water Commission has identified more than 1,600 LUST sites still in need of restoration. A 1986 EPA study reported that as many as one-third of the 3 to 4 million tanks in the nation may leak at least a small amount of contaminants.

SOURCES:

Kenneth A. Rainwater, Ph.D. (806) 742-3490

Texas Tech assistant professor of civil engineering

Caryl Heintz, Ph.D. (806) 742-2714

Associate professor of biological sciences at Texas Tech

Bill J. Claborn, Ph.D. (806) 742-3485

Professor of civil engineering at Texas Tech University

NEWS RELEASE

TEXAS TECH
University & Health Sciences Center

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Lubbock, TX 79409-2022
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FOR IMMEDIATE RELEASE
REF: 5-4-17-90
CONTACT: Chris Patterson

LUBBOCK -- Roger Beachy, professor of biology at Washington University in St. Louis, Mo., will discuss disease-resistant crops during a seminar scheduled for 7 p.m. Tuesday, April 24, in Room 113 of Texas Tech University's Chemistry Building.

The seminar, free and open to the public, is sponsored by Texas Tech's Institute for Biotechnology.

Beachy is internationally recognized for developing the world's first genetically engineered food crop resistant to disease. His technique to produce tobacco-mosaic virus resistance in tomatoes has been repeated by other researchers to produce plants resistant to other diseases.

Beachy also is the director of Washington University's Center of Plant Science and Biotechnology. He is the author of numerous research articles and has traveled the world as a lecturer on plant biology and genetic engineering research.

He is a member of many professional organizations including the American Society for Plant Physiology, the American Phytopathological Society and the American Association for the Advancement of Science.

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FOR IMMEDIATE RELEASE

REF:

CONTACT: Myrna Whitehead

LUBBOCK -- Author Joaquin Bestard Vazquez will present a free lecture titled "Apuntes sobre la literatura maya y yucateca" (Notes On Mayan and Yucatan Literature) at 7:30 p.m. Tuesday, April 24, in the Qualia Room in the basement of the Foreign Language Building at Texas Tech University.

The lecture, which will be presented in Spanish, will include a commentary on the significance of "Popol Vuh" and "El libro de los libros del Chilam Balam," two literary texts on ancient Maya.

Bestard Vazquez, born in Merida, Yucatan, Mexico, is recognized for his novels and short stories. He won the Jose Ruben Romero National Novel Prize in 1980 and 1989. The award is one of Mexico's most prestigious awards for fiction writers.

Bestard Vazquez's writing style is labeled "novela de la urge" (novel of the city). He is credited for creating the "Mayan novel," a genre inspired by the mythological past and historical realities of present day Maya.

The lecture is sponsored by the department of Classical and Romance languages, the Latin American Area Studies Program, the College of Arts and Sciences and the Office of International Affairs.

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FOR IMMEDIATE RELEASE

REF: 7-4-17-90

CONTACT: Margaret Simon

[Media Advisory: You are invited to cover the private opening of the Diamond M Fine Art Collection at the Museum of Texas Tech University scheduled for 6:30 p.m. Wednesday, April 25, in Gallery Three of the Museum.]

LUBBOCK -- Citizens of Lubbock and the South Plains soon will have the opportunity to view one of the most famous art collections in the Southwest when the Diamond M Fine Art Collection comes to the Museum of Texas Tech University.

Dignitaries from around the state will gather at the Museum April 25 to formally open the collection and honor members of the Diamond M Foundation Board of Directors who have loaned the collection to Texas Tech for two years. Originally housed in the Diamond M Museum in Snyder, the art was collected by late West Texas oilman and rancher C.T. McLaughlin and his wife Claire.

"Texas Tech is extremely fortunate to have such an outstanding collection on our campus. The Texas Tech Board of Regents and I salute the generosity of the Diamond M Foundation in allowing the collection to come to Lubbock where so many citizens have been eager to view it," said Texas Tech President Robert W. Lawless.

The Diamond M Collection contains more than 300 works of art, representing some of the country's finest western artists as well as 19 works by famous illustrator N.C. Wyeth. The collection also contains bronze sculptures by Frederick Remington and Charles Russell and a collection of ivory and jade, originally belonging to Helena Rubinstein.

The grand opening will highlight the first 68 works in the collection to be shown in Lubbock. Works covering two themes, "American Illustrators" and "Cowboys and Indians," will be exhibited in separate galleries at the Texas Tech Museum.

"American Illustrators" features 48 works of art produced by western illustrators and by members of the famous Brandywine School of Art in Chadds Ford, Pa. A total of eight artists from the Brandywine School are featured in the first exhibit.

Seventeen paintings by the most famous artist of the Brandywine School, N.C. Wyeth, appear in the show. Wyeth was the father of the great American artistic dynasty that included Andrew Wyeth, James Wyeth and Peter Hurd. Many of the Wyeth works included in the exhibit originally illustrated popular novels published by Scribners and Sons.

-more-

DIAMOND M FINE ART/PAGE 2

Bold heroes from such classics as "Last of the Mohicans" and "The Mysterious Stranger" appear along with Wyeth's creations from such diverse literature as the "Odyssey" of Homer and the short stories of Zane Grey.

Also in the show is a rare oil painting by Peter Hurd, student and son-in-law of N.C. Wyeth. Originally painted for a 1928 edition of "Last of the Mohicans," the subject of the work is Indian warriors in bold tones of red and orange.

The "Cowboys and Indians" exhibit features work by Lubbock artist Glenna Goodacre as well as the famous bronze "Bronco Buster," created in 1906 by Frederick Remington. Other notable western artists in the show include Harvey Dunn, James Boren, George Phippen, Charles Russell and Philip Goodwin.

Both shows will be exhibited for about six months at the Museum of Texas Tech. After that time, other shows will open featuring different themes well represented by pieces in the Diamond M Fine Art Collection.

Director of the Museum of Texas Tech University Gary Edson said the Brandywine School and its founder, illustrator Howard Pyle, flourished soon after the turn of the century when Americans were eager to be thrilled by heroic illustrations of cowboys, cattle drives and marshals in battle on the pages of popular magazines like Collier's, The Saturday Evening Post, Harper's Weekly and Scribner's.

Another important aspect of the "American Illustrators" exhibit is that during the time the art was created, government and private support for libraries was growing as never before and millions of Americans were reading novels for pleasure, Edson said. Many of these novels contained beautiful full-color plates that were produced as original oils on canvas by artists who earned handsome incomes as illustrators.

By the 1880s, photo-engraving began to replace wood engraving as a means of printing illustrations. The new technology made possible the halftone and the color separation which allowed accurate reproduction of a painting or drawing for the first time, he said.

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FOR IMMEDIATE RELEASE

REF: 9-4-17-90

CONTACT: Kim Davis

LUBBOCK -- Those perfectly plump peaches, ruby-red strawberries and shiny round apples may make our mouths water every time we walk through the produce section of our local supermarket. Yet environmentalists are telling us that our perfect produce is contaminated with harmful pesticides.

It's enough to make you lose your appetite.

Yet in the United States today, 91 percent of all households use at least one form of pesticide. And many of us use the products improperly -- giving way to potential hazards.

"If used properly, pesticides can be very beneficial," says Jack Hayes, director of the Texas Tech University Health Sciences Center National Pesticide Telecommunications Network (NPTN). "Unfortunately, many people are too quick to use the products before reading the labels."

The health sciences center's most visible environmental program, NPTN -- a toll-free, 24-hour hotline at 1-800-858-7378 -- provides a ready source of accurate, impartial information on pesticide products, poisoning recognition and management. The network also gives referrals for laboratory analyses, investigation of pesticide incidents and emergency treatment information.

Created in 1977, the network has been affiliated with Texas Tech since 1984 and recently was re-funded for a five-year term by the Environmental Protection Agency.

At the hotline, NPTN representatives encourage homeowners and businesses to be aware of potential pesticide hazards -- most of which can be avoided by simply following label instructions.

"Too many people think that if a pinch is good, a tablespoon is better and a handful will really do the job," Hayes said. "But that's simply not true. If the label calls for just a pinch -- use just a pinch."

Hayes said most of NPTN's calls come from the general public for information on pesticide products; protective equipment; safety, health and environmental effects; cleanup procedures; and disposal and regulatory laws.

-more-

PESTICIDES/PAGE 2

Answers, he said, are given on the telephone or in the next day's mail. Requested information that is outside the expertise of NPTN representatives is referred to a more appropriate source.

NPTN also maintains a library of updated technical reference materials on toxicity, human and environmental health effects, disposal and proper use of each pesticide. Additionally, the library includes cross-references of trade names, chemical and generic names and manufacturers of pesticide products.

Despite the growing number of anti-pesticide outcries from environmentalists, Hayes said, the public should keep from overreacting to the issue.

"Today's technology is often able to test parts per billion for pesticide residues," he said. "So the fact that a minuscule portion of a pesticide is found in our produce doesn't mean it's necessarily harmful to ourselves or our families."

The key, Hayes said, is to understand both the benefits and the risks of pesticides, and act accordingly.

NPTN funding is provided by the United States Environmental Protection Agency and the health sciences center's School of Medicine.

NEWS RELEASE

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University & Health Sciences Center

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Lubbock, TX 79409-2022

(806) 742-2136

FAX (806) 742-1615

FOR IMMEDIATE RELEASE

REF: 10-4-18-90

CONTACT: Steve Kauffman

(MEDIA ADVISORY: A student from your area is included in this release. Please use the information from the attached forms to complete this release.)

LUBBOCK -- Selected Texas Tech University scholars were inducted into Phi Kappa Phi honor society during an April 4 banquet with Texas Tech President Robert W. Lawless as the featured speaker.

Membership in the national honor society is open to students in any of the university's academic disciplines. Recipients must be senior, law or graduate students who rank in the top 10 percent of their class or juniors who rank in the top 2 percent of their class.

Among the 1990 honorees were:

(Names and information about the recipients in your area are attached.)

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FOR IMMEDIATE RELEASE
REF: 11-4-18-90
CONTACT: Kim Davis

[MEDIA ADVISORY: You are invited to attend the AIDS seminar from 8 a.m. to 1:30 p.m. Saturday (April 21) in the George M. Brewer Room of Methodist Hospital.]

LUBBOCK -- The ethical and legal issues associated with Acquired Immune Deficiency Syndrome (AIDS) will be the focus of a seminar from 8 a.m. to 1:30 p.m. Saturday (April 21) in the George M. Brewer Room of Methodist Hospital.

The seminar will identify the legal and ethical issues surrounding such areas as confidentiality and HIV testing, AIDS and discrimination within the workplace and AIDS patients as health care recipients.

Regional and local health experts also will discuss their perspectives on the ongoing AIDS issue. At 9 a.m. a lecture focusing on current legal issues related to AIDS will be presented by Dallas attorney M. William Nelson.

Registration is \$10 and includes lunch, professional credits and packet materials. Student registration is \$5 and covers lunch and packet materials.

The seminar is sponsored by Texas Tech University Health Sciences Center, St. Mary of the Plains Hospital, Methodist Hospital, University Medical Center and the Texas-Oklahoma AIDS Education and Training Center.

For information about the seminar or to register, contact the TTHSC Office of Continuing Medical Education at 743-2929.

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FOR IMMEDIATE RELEASE
REF: 12-4-18-90
CONTACT: Steve Kauffman

(EDITOR'S NOTE: For more information on this event, contact Tom Weis, sports club director at Texas Tech Recreational Sports, 742-3351.)

LUBBOCK -- Texas Tech University Recreational Sports and the Texas Tech Lacrosse Club are hosting the Southwest Lacrosse Association Championship Saturday and Sunday (April 21-22) on the university campus.

In semifinal matches Saturday, Texas A&M University will compete against Baylor University at 1 p.m. A contest between Texas Tech and the University of Texas will follow at 3:30 p.m.

The winner of each match will play for the championship at 11 a.m. Sunday.

All matches will take place at Texas Tech's sports club field at 18th Street and Hartford Avenue, directly south of the Student Recreation Center. Admission is free, and parking is available in the commuter parking lot west of the field.

For more information, contact Texas Tech Recreational Sports at 742-3351.

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FOR IMMEDIATE RELEASE
REF: 13-4-18-90
CONTACT: Margaret Simon

[EDITOR'S NOTE: For more information on this issue, contact Margaret Simon, director of the Office of News and Publications, at (806) 742-2136 or Don E. Cosby, vice president for fiscal affairs, at (806) 742-2196.]

LUBBOCK -- Across the country medical costs are rising at a rate of 17 percent per year. The situation is no different at Texas Tech. Administrators are looking at several methods to contain costs of health care for Texas Tech employees to avert a possible 25-30 percent increase in health insurance premiums in the new fiscal year beginning September 1.

To ensure that the key issues involved in the predicted increase are understood by faculty and staff, the Texas Tech Administration and the Benefits and Retirement Committee will conduct several forums to discuss the current health insurance plan and alternatives for the next fiscal year.

The first meeting is scheduled for 3-5 p.m. April 26 in the University Theater. A second meeting is scheduled for 3-5 p.m. May 2 in Room 5B148 at the health sciences center.

Currently, Texas Tech University and Texas Tech Health Sciences Center both have a traditional indemnity insurance plan. With the plan, an employee receives health care services, submits a bill for services to the insurance company and the bill is paid. Per plan year, 80 percent of costs are paid by the plan while the employee pays the remaining 20 percent. However, before the insurance company begins paying its percentage, the employee must meet a deductible of \$300 per individual or \$900 per family.

Employee health insurance for a family currently costs \$383 per month with the state paying approximately \$150 and the employee paying approximately \$233. The possible 25-30 percent increase would add an extra \$60 to the employee's monthly cost, according to Don E. Cosby, Texas Tech vice president for fiscal affairs.

The increase is tied directly to the Texas Tech employee group's claims history. In the current fiscal year, the plan is projected to lose an estimated \$1 million. In other words, the Texas Tech employee group will experience \$1 million more in claims and administrative costs than will be collected in premiums, Cosby said.

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INSURANCE/PAGE 2

"There are many issues impacting decisions regarding insurance and illustrate that significant issues need to be resolved for university and health sciences center employees before September 1, 1990. The issues include a need for viable alternatives to the current plan. If none exist, an increase in the premium is anticipated. This could result in TTU/TTHSC's inability to purchase coverage that is in compliance with the Texas Higher Education Coordinating Board's minimum requirements and, more importantly, that is affordable to most employees," Cosby said.

One alternative to the traditional group health insurance policy is a managed care program, which can be custom-designed to meet the unique needs of an organization. Managed health care programs offer health care at a pre-determined cost to the plan member while offering choices.

Texas Tech administrators and the Benefits and Retirement Committee are currently investigating managed care options as a means of containing the escalating health insurance costs for employees. Of the 19 senior colleges operated by the state of Texas, 12 experienced losses, in which claims exceeded premiums, this year and some already have turned to managed care programs for relief, Cosby said.

"Cost containment through a managed care arrangement appears to be the most viable solution. Managed care programs are coming into more widespread use, by the private sector and government agencies, in an attempt to provide affordable health care in the presence of rapidly increasing costs," said Cosby.

All university and health sciences center faculty and staff are encouraged to attend one of the discussion sessions. The same information will be presented at both meetings.

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FOR IMMEDIATE RELEASE

REF: 15-4-19-90

CONTACT: Myrna Whitehead

(EDITOR'S NOTE: A student from your town is included in this release.)

LUBBOCK -- The department of English at Texas Tech University will present the Robert S. Newton Creative Writing Awards to students Shirley Lewter and John Maner during a special ceremony at noon Wednesday, April 25, in Room 216 of the English Building.

The awards recognize the best fiction and poetry writers in the creative writing classes at Texas Tech. A \$100 award will be presented to each author.

The awards, established in 1976 by O.V. and Fran Scott Jr., are presented annually through a contribution from Marjore Chronister of Los Angeles as a memorial to her late husband, Robert Newton.

Lewter, a senior from Waukon, Iowa, earned the fiction award for her series "Jimmy Crack Corn and I Don't Care" and "Minks." Lewter's "Jimmy Crack Corn and I Don't Care" also in February won the Charles Oliver Memorial Award for fiction, a statewide contest sponsored by the Texas Association for Creative Writing Teachers (TACWT).

Maner, a senior from Lubbock, won the poetry award for his selections "Father," "Spinning Backwards -- Into a Cloud," "I Drive Past Death," "Fisherman's Dock," "Nassau" and "Flight Rules." In February, Maner's "Father" also won the TACWT award for poetry.

The winners were chosen by Texas Tech's creative writing staff, Douglas E. Crowell, Ph.D., Barbara Rodman, Ph.D., and Walter R. McDonald, Ph.D. The entries were judged on energy, intensity, clarity and significance.

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REF: 16-4-19-90
CONTACT: Steve Kauffman

LUBBOCK -- Don T. Garnett, Ph.D., director of the Texas Academic Skills Program (TASP) at Texas Tech University, has received a Kellogg Institute Leader's Scholarship for 1990. He is one of only four recipients selected from a pool of developmental educators across the United States.

Garnett will attend the Kellogg Institute for the Training and Certification of Developmental Educators June 30 through July 27 in North Carolina. The institute, sponsored by the National Center for Developmental Education, is regarded as one of the nation's leading training programs for college and university developmental educators.

Garnett, Texas Tech's TASP coordinator since January 1989, oversees the university's efforts to comply with the state law requiring assessment of math, reading and writing skills for freshmen in state colleges. The program also requires academic counseling and skills development for students whose assessments are below average.

Among the programs Garnett has organized for the university are a staff/student mentor program, a TASP academic counseling bank comprised of trained faculty counselors and a tracking project to document student retention.

The Texas Tech TASP program has been nominated for the 1990 Excellence in Higher Education Award sponsored by the Association of Texas Colleges and Universities.

Garnett was awarded the 1989 Noel/Levitz Retention Excellence Award based on his retention efforts at Henderson State University in Arkadelphia, Ark. Garnett had been chairman of the department of communication arts and sciences at Henderson for 14 years before creating and leading a student development and retention program at the university in 1984.

Garnett currently serves on the statewide TASP implementation committee of the Texas Higher Education Coordinating Board. He also co-chairs the program committee for a statewide TASP advising conference.

The Lamesa (Texas) native received his bachelor's degree in speech from Harding University in Searcy, Ark. He earned a master's degree in speech from Texas Tech and a doctorate in speech and sociology from Louisiana State University.

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FOR IMMEDIATE RELEASE
REF: 17-4-19-90
CONTACT: Jennifer LeNoir

(EDITOR'S NOTE: A student from your area is included in this release).

LUBBOCK -- A Texas Tech University student engineering team recently received a \$4,000 cash prize after capturing second place out of 12 college and university teams that competed in the 1990 Society of Automotive Engineers (SAE) Methanol Challenge competition in April.

The competition involved a 200-mile road rally from Sarnia, Ontario, to Ann Arbor, Mich. In addition, engineering students participated in a nine-hour endurance drive on the Michigan International Speedway in Brooklyn, Mich., where the Texas Tech team placed first in fuel economy. The Texas Tech team converted a Chevrolet Corsica to operate on an M85 fuel, a mixture of 85 percent methanol and 15 percent gasoline.

To win the overall competition, teams were judged on fuel economy, performance and emissions. The University of Tennessee placed first, receiving a \$5,000 prize; Pennsylvania State University placed third, receiving \$3,500; Florida Institute of Technology placed fourth, receiving \$3,000, and California State University at Northridge placed fifth, receiving a \$2,500 prize.

"The competition was organized from the perspective of a hands-on teaching process that would allow students to learn how cars may run on alternative fuels and the kind of engine modifications that are necessary in order to burn methanol fuel," said Timothy Maxwell, the Texas Tech student team adviser and associate professor of mechanical engineering.

The U.S. Environmental Protection Agency (EPA) supports the competition as a way of exploring innovative automotive design ideas that do not destroy the environment, said Maxwell.

The Department of Energy (DOE) similarly is in favor of alternative fuel competitions because they encourage conserving energy and the development of new sources of energy, he said.

"The use of methanol fuel by vehicles is more advantageous for the environment. It doesn't produce the same level of emissions, which contribute to air pollutants," said Jesse Jones, one of the team's advisers and mechanical engineering lecturer at Texas Tech.

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METHANOL CHALLENGE/PAGE 2

Methanol, however, vaporizes less easily than gasoline, which gives the fuel inferior starting characteristics in cold weather. Another problem is that twice as much methanol by volume is required as gasoline to provide about the same amount of energy, he said.

Although automobile emissions have decreased by 96 percent since 1970, most American cities now have increased problems with smog and pollution. The problem may be partially attributed to the fact that Americans now own and drive 70 percent more cars than they did 20 years ago, Jones said.

City officials in Denver, Los Angeles and Phoenix are considering mandatory use regulations of fuel blends containing methanol and gasoline during the winter months to help reduce carbon monoxide emissions from vehicles in their cities.

The four-person Texas Tech mechanical engineering students who participated in the competition included: Mike Walser, a senior from Canadian and team captain; Richard Taeuber, a senior from Houston; Gary Bourn, a sophomore from Slaton, and Mark Kasik, a senior from Chicago.

The Methanol Challenge event was sponsored nationally by the DOE, the EPA and the Canadian Department of Energy, Mines and Resources. The Society of Automotive Engineers organized the event. The primary local sponsors included: Scoggin Dickey parts department and DUBOSE Automotive Machine, both in Lubbock, and MAC'S Oldsmobile in Slaton.

For more information regarding the student competition or engineering research efforts related to alternative fuels, contact Maxwell or Jones at (806) 742-3563.

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FAX (806) 742-1615**FOR IMMEDIATE RELEASE****REF: 18-4-19-90****CONTACT: Steve Kauffman****(MEDIA ADVISORY: A student from your area is included in this release.)**

LUBBOCK -- The 1990-91 cheerleading squad has been chosen at Texas Tech University. The 14-member squad was chosen by a panel of judges evaluating 33 candidates on skill and enthusiasm during a cheerleading/dance routine and presentation during a personal interview.

Squad members represent the university at all varsity football games and home games of men's and women's varsity basketball teams. The cheerleaders will make their first home-game appearance when Texas Tech meets Baylor University Sept. 29 in Lubbock.

Members of the 1990-91 squad will be led by head cheerleader Missy Sulak, sophomore marketing major, daughter of Charles and Ellie Sulak of Arlington. Other members of the squad are: Angela Kay, freshman corporate fitness major, daughter of Robert and Karen Anderson of Lubbock; Brad Anderson, junior dietetics major, son of Mary Anderson of Little Rock, Ark.; Welton Blalock III, junior physical education major, son of Mary L. Blalock of Odessa; Paige Carrington, sophomore public relations major, daughter of Pam Carnathan of Ore City; Melanie Dyer, sophomore undecided major, daughter of Linda Dyer of Lumberton; Monica Fierro, junior marketing major, daughter of Esther Lynum of San Antonio; and David Frazier, junior education administration major, son of Kay Frazier of Melrose, N.M.

Also on the squad are: Michelle Harper, sophomore restaurant/hotel/institutional management major, daughter of Julian and Sandy Harper of Kingwood; John Harrington, freshman political science major, son of Kenneth and Mary Harrington of Dallas; Patrick Johnson, junior music major, son of Isaac L. Johnson of Huntsville; Bill Lewis, junior advertising major, son of Bob and Gail Lewis of Lubbock; Jerry Mauldin, junior psychology major, son of Janice Mauldin of Lubbock; and Jennifer McCarley, sophomore speech pathology major, daughter of Barbara and Jerry McCarley of Garland.

Alternates for the squad are Kelli Nicks, junior elementary education major, daughter of Janet and Ed Nicks of Lubbock; and Sonny Barrientes, sophomore arts and sciences major, son of Janey Barrientes of Lubbock.

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FOR IMMEDIATE RELEASE
REF: 19-4-19-90
CONTACT: Steve Kauffman

LUBBOCK -- Current teachers and graduating education students will have an opportunity to meet with representatives from more than 125 school districts throughout the nation during the 1990 Educational Job Fair April 24 on the Texas Tech University campus.

Sponsored by the university's Career Planning and Placement Center, the job fair -- the largest ever on campus -- will host Texas school representatives from areas as large as Houston to towns as small as Olney. Those professionals will be joined by representatives from New Mexico, Kansas, Illinois and the District of Columbia.

Exhibitors will provide school district information and job applications. They also will conduct informal job interviews during the day-long festival 10 a.m. to 4 p.m. in the University Center Ballroom and Courtyard.

According to Ginger Nicholas, associate director of the Career Planning and Placement Center, the job fair does not guarantee a job, but it does provide convenient access to a variety of school districts at one time.

Participants can attend the job fair at any time during the day without registering or paying an admission fee. Nicholas said participants should bring a current resume and be prepared for an informal interview with the school district representatives.

Many of the representatives will remain on campus April 25 to conduct formal job interviews in West Hall and the University Center Ballroom. People interested in the formal interviews can secure appointments during the job fair.

For more information about exhibitors or formal job interviews, contact Nicholas at the Career Planning and Placement Center, (806) 742-2210.

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CALENDAR WEEK APRIL 20-27

REF: 20-4-19-90

CONTACT: News and Publications

(MEDIA ADVISORY: This Texas Tech calendar is compiled to let you know of upcoming events and releases and to serve as a reminder of releases already sent. If you need more information, call News and Publications at 742-2136.)

APR 20

Conference -- "Pediatric Endocrinology for Primary Care Health Providers"
sponsored by the Texas Tech Health Sciences Center
8:30 a.m., University Medical Center McInturff Conference Center

Conference -- "Nursing Research: Clinical Application for the '90s"
hosted by the International Honor Society for Nursing
8:30 a.m., TTHSC Room 2B152

Interior design student awards ceremony
sponsored by the College of Home Economics department of merchandising, environmental design and consumer economics
3 p.m., Home Economics Building Room 169

College of Agricultural Sciences Honors Banquet
7 p.m., University Center Ballroom

Senior recital -- Mary Margaret Haraden, violin
7 p.m., Hemmle Recital Hall

Concert -- 23rd annual Jazz Band Festival
8:15 p.m., University Center Allen Theater

Junior recital -- Donna Garrett, soprano
8:15 p.m., Hemmle Recital Hall

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CALENDAR/PAGE 2

APR 21

Annual Family with Diabetes Day
sponsored by the department of pediatrics
8:30 a.m. to 4:30 p.m., TTHSC fifth floor auditorium
(release ref: 8-4-12-90)

Earth Day 1990 student march
from Texas Tech campus to Lubbock Garden and Arts Center
9 a.m., Texas Tech campus, 19th Street and University Avenue

State FFA and District II Horse Judging Contest
7 a.m. to 5 p.m., Texas Tech Livestock Arena

Concert -- 23rd annual Jazz Band Festival
8:15 p.m., University Center Allen Theater

APR 22

Who's Who induction ceremony
1:30 p.m., University Center Courtyard

Concert -- 14th annual Orchestra/Choir Scholarship Concert
3 p.m., Hemmle Recital Hall

Senior Exit Dinner
sponsored by the Ex-Students Association
6 p.m., University Center Ballroom

Guest artist recital -- Monique Duphil, piano
8:15 p.m., Hemmle Recital Hall

APR 24

Texas Tech research series for National Science and
Technology Week begins
(release ref: 1-4-16-90)

Educational Job Fair
sponsored by the Career Planning and Placement Center
10 a.m. to 4 p.m., University Center Ballroom
(release will be mailed)

Lecture -- "Molecular Approaches for Development of Virus
Protection in Plants," by Roger Beachy, director of biotechnology
program at Washington University in St. Louis, Mo.
sponsored by the Texas Tech Institute of Biotechnology
7 p.m., Chemistry Building Room 113

-more-

CALENDAR/PAGE 3

- APR 24 (cont.) Lecture -- "Water Resources Outlook for the Southern High Plains,"
by Lloyd Urban, Ph.D., Texas Tech Water Resources Center
sponsored as part of the Texas Tech Earth Day 1990 lecture series
7:30 p.m., Holden Hall Room 75
(release ref: 19-3-29-90)
- Lecture -- "Notes on Mayan and Yucatan Literature," presented in
Spanish by novelist Joaquin Bestard Vazques
7:30 p.m., Foreign Language Building Qualia Room
(release ref: 6-4-17-90)
- Concert -- University Symphonic Band
8:15 p.m., Hemmle Recital Hall
- APR 25 Reception for seventh annual Faculty and Staff Book Exhibit
sponsored by the University Library
3:30-5 p.m., University Library Croslin Room
- Private opening of the Diamond M Fine Art Collection
6:30 p.m., the Museum of Texas Tech University
(release ref: 7-4-17-90; media invited)
- APR 26 Lecture -- "The Asian Rain Forest,"
by Robert Mitchell, Ph.D., department of biology
sponsored as part of the Texas Tech Earth Day 1990 lecture series
7:30 p.m., Holden Hall Room 75
(release ref: 19-3-29-90)
- APR 27 Last day of regular classes at School of Law
- Student Research Day at Texas Tech Health Sciences Center
- Lecture -- "Androgen Resistance Syndromes,"
by Jean D. Wilson, M.D., professor of internal medicine,
University of Texas Southwestern Medical Center
noon, TTHSC 5B148

NEWS RELEASE

TEXAS TECH
University & Health Sciences Center

News and Publications

Lubbock, TX 79409-2022

(806) 742-2136

FAX (806) 742-1615

FOR IMMEDIATE RELEASE

REF: 21-4-19-90

CONTACT: Steve Kauffman

(EDITOR'S NOTE: A student form your area is included in this release.)

LUBBOCK -- Fifty-one Texas Tech University students selected for the 1990 Who's Who in American Universities and Colleges will be recognized during an induction and reception at 1:30 p.m. April 22 in the University Center Courtyard.

Current Student Association President Doug English, one of the Who's Who designates, will speak during the induction ceremony attended by the students, their families and friends. The reception that follows is hosted by the Dean of Students Office.

The recipients were selected by a Texas Tech committee of faculty, staff and past recipients evaluating academic achievement, community service, leadership in extracurricular activities and potential for success.

Among the 1990 honorees from more than 1,400 higher education institutions around the nation and from several foreign countries are:

ARLINGTON: Lisa Michelle Absher, elementary education major, daughter of Dr. and Mrs. L.J. Absher; Brandee Lynn Bush, business administration major, daughter of Mr. and Mrs. Johnny Bush Jr.; Kristin Dee Petty, public relations and Spanish major, daughter of Mr. and Mrs. David E. Morgan; Michael Steven Telle, economics and finance major, son of Dr. and Mrs. James Thomas Telle.

DALLAS: Thomas Mel Buechel, accounting and finance major, son of Mr. and Mrs. A.F. Ueckert.

TYLER: Alea Leashawn Reed, home economics education major, daughter of Rena Reed.

SAN ANTONIO: Bridget Sheri Benninger, accounting and finance major, daughter of Mr. and Mrs. Ed Benninger.

RANSOM CANYON: Brenda Ruth Beaver, accounting major, daughter of Mr. and Mrs. Ricky Beaver.

-more-

WHO'S WHO/PAGE 2

RALLS: Alton Frederick Adkins, music education major, son of Mr. and Mrs. Weldon Williams; Rob Edwin Wilson, design communication major, son of Mr. and Mrs. George R. Wilson.

FREDERICKSBURG: Lucrecia Ann Allen, corporate fitness major, daughter of Dennis Allen and Joanne Allen; Holly Hartmann Shepard, animal science major, daughter of Mr. and Mrs. Dan Hartmann.

AMARILLO: Deana Louanne Avara, accounting major, daughter of Mr. and Mrs. Dean Avara; Jennifer Kay Lundgren, pre-med/human development major, daughter of Carol Lundgren Hale; Amy Elizabeth Hanshu, advertising and Spanish major, daughter of Mollie Hanshu.

FOLLETT: Amy Elizabeth Hanshu, advertising and Spanish major, daughter of Clinton Hanshu.

BOERNE: Gary Lee Bannister Jr., marketing major, son of Dr. Gary L. Bannister.

SAN DIEGO, CALIF.: Gary Lee Bannister Jr., marketing major, son of Lucy Kaelin.

LUBBOCK: Charles Homer Britton III, biochemistry major, son of Mr. and Mrs. Charles H. Britton Jr.; Anne Elizabeth Ellsworth, elementary/special education major, daughter of Mr. and Mrs. Paul Ellsworth; Douglas Lee English, finance major, son of Mr. and Mrs. David English; Shannon Lea Haragan, theater arts major, daughter of Dr. and Mrs. Donald Haragan; Dorothy Allison Jennings, marketing major, daughter of Mr. and Mrs. Richard Jennings; Julia Lynette Joplin, psychology major, daughter of Mr. and Mrs. Charles Joplin; Minal R. Mehta, political science/speech communication major, son of Dr. and Mrs. R.D. Mehta; Lisa Lynne McArthur, home economics education and biology major, daughter of Mr. Ike McArthur; Vicki Lea Newman, family studies major, daughter of Dr. and Mrs. Thomas G. Newman; Brian Ervin Simmons, chemistry major, son of Mr. and Mrs. James D. Simmons; Karen Leigh Tanner, psychology major, daughter of Mr. and Mrs. Jerry Tanner; James Arn Womble, civil engineering major, son of Mr. and Mrs. Arlan Womble.

DUMAS: Mitchell Allen Black, landscape architecture major, son of Mr. and Mrs. Claude A. Black.

DEVINE: Amy Lynn Boyd, business and merchandising/foods and nutrition major, daughter of Mr. and Mrs. C.E. Boyd Jr.

WHO'S WHO/PAGE 3

AURORA, COLO.: Stacey Ann Verkest, elementary education major, daughter of Col. and Mrs. William A. Verkest.

FRISCO: Paige Len Weinberg, public relations major, son of Mr. and Mrs. John Weinberg.

HOLLAND: Rebecca Ann Williams, financial planning major, daughter of Mr. and Mrs. Frank W. Williams.

HOUSTON: Benjamin Alexander Finzel, history major, son of Mr. and Mrs. Bruce Director; Laura Christine Staffa, speech communications major, daughter of Mr. and Mrs. Charles Staffa.

LOS LUNAS, N.M.: Benjamin Alexander Finzel, history major, son of Mr. and Mrs. Roger Finzel.

KINGWOOD: Bryan Craig Fleener, marketing major, son of Mr. and Mrs. Richard Fleener; Christine Ann Farina, music education major, daughter of Mr. and Mrs. John Farina; Karen Anise Kennedy, chemical engineering major, daughter of Mr. and Mrs. Jim Kennedy.

LINDSAY: Wayne Edward Fleitman, chemistry major, son of Mr. and Mrs. Henry Fleitman.

PETERSBURG: Sandra Gutierrez, deaf education major, daughter of Mr. and Mrs. Amando Gutierrez.

SPEARMAN: Carlee Jane Dixon, journalism major, daughter of Mr. and Mrs. Perry Dixon.

SAN ANGELO: Jennifer Michelle Elliot, political science and accounting major, daughter of Mr. and Mrs. Bill Elliot.

BLOSSOM: Wendy Lynn Milford, agricultural communications major, daughter of Mr. and Mrs. Robert Milford.

TAYLOR: Douglas Lewis Moss, architecture design major, son of Mr. and Mrs. S.R. Moss.

COLORADO CITY: Anna Louise Sellier Nobles, home economics education major, daughter of Mr. and Mrs. Tim Nobles and Earline Sellier.

WHO'S WHO/PAGE 4

PANHANDLE: Lee Ann Reno, secondary education/English and speech major, daughter of Dr. and Mrs. W. Max Reno.

EAGLE PASS: Cynthia Ann Simmons, cell and molecular biology major, daughter of Mr. and Mrs. E. Carl Simmons; Lionel Herrera, cell and molecular biology major, son of Sara Escobedo Quinones.

AUSTIN: Lisa Lynne McArthur, home economics education and biology major, daughter of Karen Brown.

SHALLOWATER: Robin Dee McMenemy-Roth, family financial planning major, daughter of Mr. and Mrs. James T. McMenemy.

PLANO: Laura Elizabeth Merrill, broadcast journalism major, daughter of Mr. and Mrs. Kent Merrill.

LAMESA: Bernie Wayne Holt, mechanical engineering major, son of Mr. and Mrs. Donald N. Holt.

News and Publications

Lubbock, TX 79409-2022
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FOR IMMEDIATE RELEASE
REF: 22-4-19-90
CONTACT: Chris Patterson

LUBBOCK -- The Texas Tech University College of Agricultural Sciences will recognize this year's outstanding agricultural sciences students at its annual Agricultural Honors Banquet at 7 p.m. Friday in the University Center Ballroom.

The banquet, which is organized and hosted by the Student Agricultural Council officers, is held to honor exceptional individuals in the College of Agricultural Sciences.

Marvin Cepica, associate dean and director of academic and student affairs, said the honors banquet is the highlight of the year for students and faculty in the college.

"It is gratifying to see the quality of the students in the College of Agricultural Sciences and it is reassuring to know that they will be our leaders of tomorrow," he said.

During the banquet, an overall outstanding student in the College of Agricultural Sciences will be announced. Also recognized during the evening will be students who were elected throughout the school year as Aggies of the Month. Aggies of the Month are selected by the Student Agricultural Council, a student body comprised of representatives from each organization within the College of Agricultural Sciences.

Outstanding students and high academic achievement students from each of the departments in the college will be honored also. Outstanding students are selected by faculty members within each department. High academic achievement awards go to students with the highest grade-point-average in each department.

Two outstanding Agri-Techsans also will be announced. Agri-Techsans is a recruiting organization for the College of Agricultural Sciences.

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FOR IMMEDIATE RELEASE

REF: 23-4-19-90

CONTACT: Chris Patterson

LUBBOCK -- Students from 62 5A high schools in Texas will compete in regional University Interscholastic League (UIL) competitions Friday and Saturday (April 20-21) and April 27-28 at Texas Tech University.

Literary, speech and drama events will be held during the first weekend's events with athletic contests during the second weekend.

The initial round of debate competition will be from 4-6:30 p.m. Friday and will continue at 8 a.m. Saturday in Holden Hall. Final rounds will be from 11 a.m. to 4 p.m. Saturday in Holden Hall.

One-act plays will be judged beginning at 2 p.m. Friday at the University Theater. Admission is \$2 for students and \$3 for adults.

Academic events in ready writing, typing, calculating, science, spelling, shorthand, literary criticism, accounting and number sense are set for 8 a.m. to 2 p.m. Saturday in the English, Business Administration and Chemistry buildings.

Journalism events, including editorial writing, headline writing, news writing and feature writing are scheduled for 11:30 a.m. to 3 p.m. Saturday in the Mass Communications Building.

Speech contests will be held from 8 a.m. to 6 p.m. Saturday in the Mass Communications Building. Events include extemporaneous, informative and persuasive speaking and poetry and prose reading.

Competition in girls' and boys' tennis will be held April 27-28 at the Lubbock Municipal Tennis Center. Boys' and girls' golf will begin at 8 a.m. April 27-28 at the Shadow Hills Golf Course located at 6002 Third St.

Track and field events for boys and girls will begin at 8 a.m. April 27-28 at Texas Tech's R.P. "Bob" Fuller Track. Adults can attend for \$3 and students for \$2.

For more information, contact education Professor Ray Purkerson, director general of the Region I competition, at (806) 742-2350.

HEALTH TIPSHEET
from
TEXAS TECH HEALTH SCIENCES CENTER
April 20, 1990

GOOD THERAPY -- As medical science helps more people overcome severe injuries or major disabilities, it offers major challenges to the rehabilitative sciences like occupational therapy. Without proper occupational therapy, people likely will not realize their full potential. To recognize these health care professionals, April has been declared National Occupational Therapy Month. For a look at the profession and its growing role in today's health care, contact Patricia A. Crist, Ph.D., who chairs the TTHSC occupational therapy department, at (806) 743-3240.

SCIENCE & TECHNOLOGY WEEK -- To highlight the week's theme of global environmental change, TTHSC has scheduled two media opportunities on environmental issues. At 10 a.m. Monday (April 20), Jack Hayes, Ph.D., director of the National Pesticide Telecommunication Network, will be available to discuss pesticides in the environment and the tough choices we as a society must make in their use. At 10 a.m. Tuesday physiology Chairman James McGrath, Ph.D., an air quality researcher, will be available to discuss the problems of automobile pollutants, gases and dust in the atmosphere. For interviews, contact Kim Davis on pesticides or Preston Lewis on air quality at (806) 743-2143.

STUDENT RESEARCH DAY -- You are invited to cover Friday's (April 27) activities, including a guest lecture, student research displays and a contest for the best scientific paper by a student. Jean D. Wilson, M.D., of the University of Texas Southwestern Medical Center, will speak at noon in TTHSC Room 5B148. The poster display of 14 different student research projects is scheduled 1:30-3:30 p.m. on the fifth floor of TTHSC. Research day will provide an opportunity for high school and college students to see firsthand the opportunities and challenges in biomedical research careers. For details or to arrange coverage, contact Preston Lewis at (806) 743-2143.

For assistance on these or other stories,
contact Kim Davis or Preston Lewis at TTHSC
News and Publications, (806) 743-2143.

24-4-20-90

News and Publications

Lubbock, TX 79409-2022

(806) 742-2136

FAX (806) 742-1615

FOR IMMEDIATE RELEASE

REF: 25-4-20-90

CONTACT: Pearl Trevino

LUBBOCK -- Application deadline is May 15 for persons wishing to enroll in the School of Nursing at the Texas Tech Health Sciences Center's Lubbock campus this fall.

Applications are being accepted for the fall semester from registered nurses, entering freshmen and transfer students from other colleges or nursing programs.

The School of Nursing offers a bachelor of science in nursing degree. Registered nurses and licensed vocational nurses are eligible to receive credit for their previous nursing education.

The Texas Tech Health Sciences Center School of Nursing offers programs in Lubbock and the Permian Basin. For information about the Lubbock program and the application process, contact the School of Nursing Student Services Office at (806) 743-2737.

The Permian Basin campus only accepts applications from registered nurses for admission in June of each year. For additional information about the Permian Basin program, contact Associate Dean Ella Herriage at (915) 335-5150.

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FOR IMMEDIATE RELEASE

REF: 26-4-20-90

CONTACT: Preston Lewis

LUBBOCK -- Fourteen graduate student research projects will be highlighted at the Texas Tech Health Sciences Center Friday (April 27) during Student Research Day activities which will include a talk by one of the nation's leading endocrinologists.

Student Research Day, the final activity in Texas Tech's observance of Science and Technology week, is designed to provide an opportunity to high school and college students to see the opportunities and challenges available in biomedical research careers.

Activities will begin at noon in Room 5B148 with a lecture by Jean D. Wilson, M.D., chief of the endocrinology division at the University of Texas Southwestern Medical Center. Wilson, who is president of the Endocrine Society and a member of the National Academy of Science, will speak on "Androgen Resistance Syndromes."

From 1:30-3:30 p.m. poster displays and booths will be manned by graduate students who will explain their research projects and answer questions about biomedical research from interested students. The displays will be set up in the hallways on the fifth floor of the health sciences center building.

The science papers and background information in the displays will be judged by panel of faculty who will recognize the top papers with special awards.

Students participating in the displays are working on master's or doctoral degrees in cell biology-anatomy, biochemistry-molecular biology, physiology, microbiology and pharmacology.

Student Research Day 1990 marks the second such observance at the health sciences center to focus attention on the sophisticated research conducted by graduate students.

Said health sciences center research Vice President Kenneth Barker, "Our graduate students make vital contributions not only to the health sciences center but also to expanding our medical knowledge. Student Research Day is our way of acknowledging those contributions and providing the public a glimpse into the research these young scientists are conducting."

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FOR IMMEDIATE RELEASE

REF: 27-4-20-90

CONTACT: Preston Lewis

LUBBOCK -- Texas Tech Health Sciences Center Allied Health Dean Shirley McManigal, Ph.D., has been named educator of the year by the Texas Society for Medical Technology.

The award is presented annually to a medical technology educator who has made significant contributions in curriculum development, continuing education and administration.

McManigal received the award in Austin at the society's annual meeting. As the Texas recipient, McManigal is eligible for the national Sherwood Career Achievement Award to be presented this summer in Los Angeles by the American Society for Medical Technology.

McManigal has been Texas Tech's allied health dean since 1987. Prior to that, she was the first chairman of the health sciences center's department of medical technology.

She is a member of the American Society of Medical Technology, the American Society of Allied Health Professions and the American Society for Microbiology.

McManigal holds a master's degree and a doctorate in medical microbiology and immunology from the University of Oklahoma Health Sciences Center. She received a bachelor's degree in biology from Arkansas State University.

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FOR IMMEDIATE RELEASE

REF: 28-4-20-90

CONTACT: Chris Patterson

(EDITOR'S ADVISORY: A student from your area recently was recognized as an outstanding student at Texas Tech University.)

LUBBOCK -- The Texas Tech University College of Agricultural Sciences recently recognized this year's outstanding agricultural sciences students during its annual Agricultural Honors Banquet in the University Center Ballroom.

The banquet, which is organized and hosted by the Student Agricultural Council officers, is held to honor exceptional individuals in the College of Agricultural Sciences.

Marvin Cepica, associate dean and director of academic and student affairs, said the honors banquet is the highlight of the year for students and faculty in the college.

"It is gratifying to see the quality of the students in the College of Agricultural Sciences and it is reassuring to know that they will be our leaders of tomorrow," he said.

Donna Smith, of Littlefield, was named the 1990 overall outstanding student of the college. The senior agricultural finance major also was recognized as the outstanding student of the agricultural economics department. With a grade-point-average of 3.89, she also received the award of highest academic achievement in the department of agricultural economics. Smith is the daughter of Mr. and Mrs. Delbert Smith of Littlefield.

Johnny Petty, of Olney, was named outstanding Agri-Techsman for the 1989 fall semester. Agri-Techsmen is a recruiting organization for the College of Agricultural Sciences. Petty is the son of Darlene Armstrong of Olton and Charles Petty of Midland. He is a junior agricultural communications major.

Tommy Roach, of Justin, was given the same award for the 1990 spring semester. The senior animal science major also was recognized as the outstanding student in the department of animal science. He is the son of Don and Joyce Roach of Justin.

Eight "aggies of the month" also were honored during the banquet. The Student Agricultural Council, a student body comprised of representatives from each organization within the College of Agricultural Sciences, elects an outstanding agricultural sciences student for each month.

-more-

AG HONORS/PAGE 2

Aggies of the month are: September, Karie Kollar, senior agricultural economics, daughter of Mike and Janie Kollar of Clint; October, Chandra Montgomery, senior agricultural communications major, daughter of Dr. Ted and Lorita Montgomery of Canyon; November, Brad Davis, senior agricultural education major, son of Mr. and Mrs. S.E. Davis of Ransom Canyon; December, Denise Green, senior agricultural communications major, daughter of Robert and LeEtta Green of Brighton, Colo.; January, Andy Plunkett, senior agricultural education major, son of Joe and Margie Plunkett of Plano; February, Amanda Plank, senior horticulture major, daughter of Mr. and Mrs. Pete Plank of Hillsboro; March, Russell Laird, senior agricultural economics major, son of Mr. and Mrs. Weldon Laird of Lubbock; and April, Neal Parnell, senior range management major, son of Mr. and Mrs. Doyle Parnell.

Also honored during the banquet were the outstanding students of each department. These students were nominated and selected within each department of the college. They are: department of agricultural economics, Smith; department of agricultural education and mechanization, Judy Fait, senior agricultural communications major, daughter of Mr. and Mrs. James Fait of Edna; department of agronomy, horticulture and entomology, Plank.

Also, department of animal science, Roach; department of park administration and landscape architecture, Gary David Stephenson, senior landscape architecture major, son of Charles and Margie Stephenson of Richardson; and department of range and wildlife management, Chad S. Boyd, senior wildlife management major, son of Jim and Velda Boyd of Stephenville.

Students with the highest grade-point-average within each department were honored with the Highest Academic Achievement award from their departments. They are: agricultural economics department, Smith, 3.89 grade-point-average; agricultural education and mechanization department, Wendy Milford, 3.96 grade-point-average, senior agricultural communications major, daughter of Mr. and Mrs. Robert Milford of Blossom; agronomy, horticulture and entomology department, Mark Hanna, 3.9 grade-point-average, senior horticulture major, son of Mark Edward Hanna of Concord Township.

Also, animal science department, Holly Hartman Shephard, 3.82 grade-point-average, senior animal science major, daughter of Mr. and Mrs. Dan Hartman of Fredericksburg; park administration and landscape architecture department, Mitch Black, 3.45 grade-point-average, senior landscape architecture major, son of Claude and Susan Black of Dumas; and range and wildlife management department, Phillip Scott Carter, 3.43 grade-point-average, senior wildlife management major, son of Joe and Carolyn Carter of Ira.

TEXAS TECH

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FOR IMMEDIATE RELEASE
REF: 29-4-20-90
CONTACT: Myrna Whitehead

LUBBOCK -- The department of communication studies of Texas Tech University will present an awards and scholarship banquet for students and alumni from 5-7:30 p.m. April 28 in the Lubbock Room of the University Center. Among the honorees will be Travis S. Ware, criminal district attorney of Lubbock County, and Harvie M. Pruitt, Ed.D., former president of Lubbock Christian University.

Ware received his bachelor's degree in speech communication and doctorate of jurisprudence at Texas Tech in 1972 and 1978, respectively. He practiced law with now State Sen. John T. Montford (D-Lubbock) from 1978-79. Ware was a felony prosecutor with the Lubbock County Criminal District Attorney's office from 1979-81.

He operated a private law office, Ware and Rosas, from 1982-86. He was elected criminal district attorney in 1981.

Pruitt received a bachelor's degree in speech and Bible from Abilene Christian University in 1951. He received his master's degree in speech and English from Texas Tech in 1952 and a doctorate in secondary education and speech in 1963 from Texas Tech.

Previously, he taught at Lubbock High School and Abilene High School. Pruitt has served as a minister of education at Broadway Church of Christ, a minister at Green Lawn Church of Christ and director of Smithlawn Maternity Home.

At Lubbock Christian, Pruitt held the positions of instructor, academic dean and executive vice president prior to becoming president in 1976. He served as president for six years. Pruitt has continued to teach part-time at the university as well as fulfill administrative tasks on a part-time basis.

Pruitt returned to the ranks as a student in 1987 by enrolling in Texas Tech School of Law.

Among the awards to be presented will be certificates of recognition for undergraduates and graduates who have been named to the President's Honor List, the Dean's Honor List and to Who's Who. Students who earn a 4.0 grade-point-average while enrolled in 12 or more semester hours of class work qualify for the President's List. Students finishing 12 or more semester hours with a grade-point-average of 3.5 to 3.9 qualify for the Dean's List. These awards will be presented by Janet Metzger, Ph.D., assistant professor of communication studies.

-more-

BANQUET/PAGE 2

Undergraduate adviser Katherine W. Hawkins, Ph.D., will present the Distinguished Service Award, the Superior Academic Achievement Award and the Outstanding Undergraduate Student Award.

Graduate adviser G.H. (Bud) Morris Jr., Ph.D., will present the Graduate Student Research Awards, the Outstanding Graduate Student Award, the Speech Communication Association Membership Award and the International Communication Association Annual Outstanding Graduate Teaching Assistant Award.

Scholarship presentations will be conducted by John Bliese, Ph.D., assistant professor of communication studies.

Robert Iltis, Ph.D., assistant professor of communication studies, will present the Distinguished Alumnus Award to Ware. Robert Stewart, Ed.D., associate professor of communication studies, will recognize Pruitt as the Outstanding Educator.

The banquet is sponsored by Sigma Theta Kappa, the honorary student organization of communication studies.

The Texas Tech Board of Regents in March approved changing the name of the department of speech communication to the department of communication studies. The name change reflects the diversity of disciplines within the communications field, said Dan O'Hair, Ph.D., department chairman.

"We requested a departmental name change to remain in step with the rest of the discipline, and to more accurately reflect the type of teaching and research within our department," he said. "The communication discipline has expanded rapidly in the last 20 years encompassing a wide range of topics other than just speech.

"Communication studies is a name which represents both contemporary and traditional areas including interpersonal communication, organizational communication, nonverbal communication, rhetoric and public address, instructional communication, communication and aging and health communication among others," O'Hair said.