

# “Become A Disease Detective: Discover Public Health!”

*An event to raise the awareness  
of university students and  
educators about the field of  
public health*

Leanne H. Field<sup>1</sup>, Diane M. Kneeland<sup>1</sup>, Susan U. Neill<sup>2</sup>,  
Eva J. Perlman<sup>3</sup>, Allison J. Foster<sup>4</sup>;

<sup>1</sup>The University of Texas at Austin, Austin, TX,

<sup>2</sup>Texas Department of Health Bureau of Laboratories, Austin, TX,

<sup>3</sup>Association of Public Health Laboratories, Washington, D.C.,

<sup>4</sup>Association of Schools of Public Health, Washington, D.C.

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on Emerging Infectious Diseases 2004,  
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## ABSTRACT

**Background:** Educating and training the next generation of public health professionals to meet the challenges of global emerging infectious diseases is of paramount importance. University students are keenly interested in learning about emerging infectious diseases and current topics in public health, but they have little understanding about the educational pathways and training that lead to public health careers. Likewise, many university faculty members, advisors and career counselors are unaware of the diversity of opportunities within the field.

**Method:** Recently, an event was held on the campus of the University of Texas at Austin to significantly raise the awareness of students, faculty, and advisors about the field of public health. The one-day conference was sponsored by The University of Texas at Austin, The Texas Department of Health Bureau of Laboratories, and the Association of Public Health Laboratories. Conference activities included a luncheon program for academic advisors (presented by the Association of Schools of Public Health and the three accredited schools of Public Health in Texas), and an evening presentation for university and high school students. In the evening presentation, a keynote speaker and career panel of public health scientists addressed the breadth of opportunities available in public health at the local, state and international levels. Afterwards, students interacted with a variety of public health professionals and educators at exhibits located just outside the lecture hall. An informational website was created to archive the presentations and to serve as an ongoing resource for students ([www.sbs.utexas.edu/publichealth/](http://www.sbs.utexas.edu/publichealth/)).

**Results and Conclusions:** Approximately 500 students, faculty members, and academic advisors attended the conference. Post-event surveys were used to assess the effectiveness of the presentations, and results indicate that this approach was successful at raising the awareness of students, educators, and advisors about the field of public health.

*A University of Texas at Austin event to raise awareness about the field of public health*  
Sept. 16, 2003

### BECOME A DISEASE DETECTIVE *Discover Public Health!*

**EXHIBITS BY PUBLIC HEALTH PROFESSIONALS**  
WELCH HALL MAIN CORRIDOR 4:00-7:30 PM  
Center for Disease Control, Texas Department of Health, Texas State Laboratory, Association of Schools of Public Health, Council of State and Territorial Epidemiologists, The University of Texas Health Science Center at Austin, Texas Department of Health, Austin Travis County Health Department, The Texas A&M University System Health Science Center School of Rural Public Health, The University of North Texas School of Public Health, The University of Texas at Austin Health Professions Office, Natural Science Career Services, School of Nursing, and School of Biological Sciences.

**KEYNOTE SPEAKER**  
WELCH 2.224 5:15-6:30 PM  
Joe McCormick, M.D., speaking on "Disease Detectives in Action: From Ebola and HIV in Africa to TB in South Texas"

**PANELISTS**  
WELCH 2.224 5:15-6:30 PM  
Dr. Richard Respass CENTER FOR DISEASE CONTROL  
Dr. Susan Neill TEXAS DEPARTMENT OF HEALTH BUREAU OF LABORATORIES  
Dr. Dennis Perrotta TEXAS EPIDEMIOLOGIST  
Dr. Alicia Dorsey TEXAS A&M SCHOOL OF RURAL, PUBLIC HEALTH

**ACTIVITIES**  
WELCH HALL MAIN CORRIDOR 6:45-7:30 PM  
Early Refreshments and Network with Professionals  
A Reception will be held for an informational session of career advisors from the CDC  
Specialty of the University of Texas  
For more information, visit our website at [www.sbs.utexas.edu/publichealth/](http://www.sbs.utexas.edu/publichealth/)

**SPONSORS**  
College of Natural Sciences  
Career Services, Health Professions Office, School of Biological Sciences, and the University of Texas at Austin  
Texas Department of Health  
Division of Laboratories  
Association of Public Health Laboratories

## INTRODUCTION

The 2003 Institute of Medicine report *Microbial Threats to Health: Emergence, Detection, and Response* has outlined a complex set of factors that are contributing to the emergence of infectious diseases in the world and has offered recommendations to address these threats. One of the charges in this report is to educate and train a public health workforce that will meet the challenges of emerging microbial threats. The first step in training future health professionals is to provide university students across the United States with timely and reliable information about career options in the field of public health and the educational pathways that lead to these careers.

In September 2003, a one-day conference was held on the campus of the University of Texas at Austin (UT) to significantly raise the awareness among UT students, Austin-area high school students, university advisors and other educators about the field of public health. This event was made possible by the collaborative efforts of both university and public health organizations. Sponsors included the College of Natural Sciences, School of Biological Sciences, Section of Molecular Genetics and Microbiology, Natural Sciences Career Services, and Health Professions Office at UT, The Texas Department of Health Bureau of Laboratories, and the Association of Public Health Laboratories.

The theme of the event “Become A Disease Detective: Discover Public Health!” was chosen to appeal to university and high school students who are keenly interested in Level 4 viruses such as Ebola virus, that cause hemorrhagic fevers in humans. Activities were designed for two distinct populations: 1) university advisors and career counselors and 2) university and high school students. A luncheon program was held to educate university advisors and career counselors about public health and to provide them with ongoing resources to effectively counsel interested students. An evening presentation for students included a keynote speaker and career panel of public health scientists who presented the breadth of opportunities available within the fields of epidemiology and public health laboratory science at the state, national and international levels. Before and after the program, students and advisors had opportunities to meet representatives from fifteen public health organizations at exhibits located just outside the lecture hall. Attendees at the exhibits participated in a raffle and received informational brochures about educational and career opportunities in public health. Pfizer, Inc. generously provided 250 copies of their book “The Pfizer Guide to Careers in Public Health,” which were distributed to students who visited the exhibits.

## CONFERENCE DESCRIPTION

### Luncheon for University Advisors

Professional advisors interface with students daily, counseling them about a variety of educational and career options. Educating these individuals about the exciting opportunities available in public health and providing them with current resources should be an effective way to impact large numbers of students in an ongoing way. Thus, forty-five academic advisors and career counselors from across the university were invited to a professional development luncheon, where representatives from the Schools of Public Health in Texas and Ms. Allison Foster, Deputy Executive Director of the Association of Schools of Public Health, outlined educational pathways and career opportunities in public health. Scientists working in different areas of public health, including education, research, epidemiology, and in state and federal laboratories also attended, and they shared their personal experiences, perspectives and excitement about the field of public health with the advisors. Each advisor was presented with an informational packet that contained a variety of resources, including a copy of the “The Pfizer Guide to Careers in Public Health”. The luncheon presentations were videotaped and archived in streaming video on the event website to serve as an ongoing resource. Advisors were provided with a CD containing the video and power point presentations for use in advising workshops.

Twenty-two academic advisors attended the luncheon. A follow-up survey was sent to participants three months after the event to determine if attending the luncheon made a difference in the way these individuals advised their students. Ten advisors responded to the survey. On average, each has in excess of 1500 student contacts per year with undergraduate students in the Colleges of Natural Sciences, Liberal Arts or Nursing. Advisors responding to the survey indicated that their prior knowledge of the field of public health was low (Figure 1) and that the luncheon presentations were informative and increased their understanding of the field (Figure 2). They responded positively to the resources they were given at the event (Figure 3) and indicated that they continue to use the information and resources to advise their students (Figure 4). Individual comments received also were very positive. These results indicate that attending the luncheon made a difference in the way advisors present information to their students about the field of public health.

## Comments from Advisors about the luncheon:

*“Fantastic! So many options for students interested in the science but for whom traditional medical school is not an option, for any reason: grades, temperament, etc. the information was presented in detail and from a student’s perspective”*

*“Learned a lot of useful, practical knowledge”*

*“Afterwards, I felt that had I known about this Public Health options as a student I would have followed that path in graduate school rather than cellular biology.”*

*“Very helpful to hear members from the various public health areas as they further discussed their clinical interests, practice, and outreach.”*

*“I felt the presentations were excellent and conveyed an excitement about the field that I could pass on to students.”*

*“Whenever I get students who express doubt about medicine, thinking this means they can’t “do” science, I am now able to show them a whole host of other options that utilize all their skills—languages, art, teaching. The reaction from students has been very positive.”*

*“Students need more information about other health careers besides PreMed, which is all they know about when they come to UT.”*

*I have had more than one student ask to borrow the information that was given to us at the luncheon. I have also directed many students to view the video of the luncheon’s proceedings.*

*“Well done – very informative”*

## Evening Presentation and Exhibits

The evening presentation and exhibits were heavily advertised to attract both university and high school educators and students. A special invitation, created for high school teachers, was distributed electronically and by mail. Thirty-nine science supervisors working with the Region XIII Educational Service Center (serving central Texas) received written invitations for distribution to teachers; multiple invitations also were mailed to 50 Austin–area science teachers. Two hundred thirty nine electronic invitations were distributed to high school science teachers via the Region XIII e-mail list. The event was advertised on the UT campus with posters, an advertisement in the student newspaper, and through multiple e-mails distributed to 8,000 students in the College of Natural Sciences. Eighty

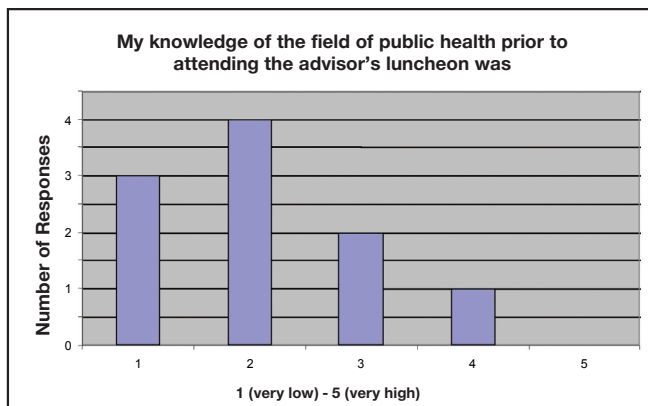


Figure 1. Advisors' prior knowledge of public health

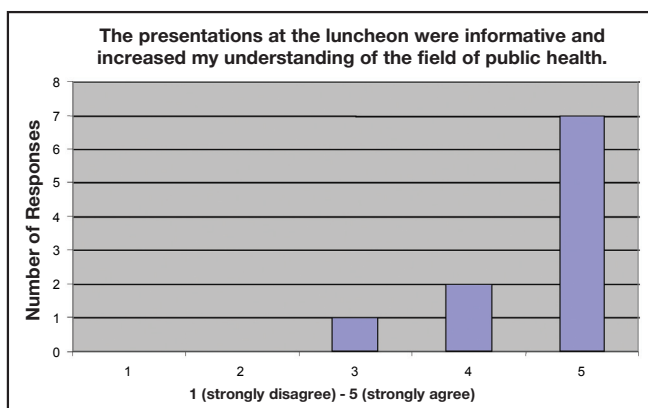


Figure 2. Effectiveness of the advisors' luncheon

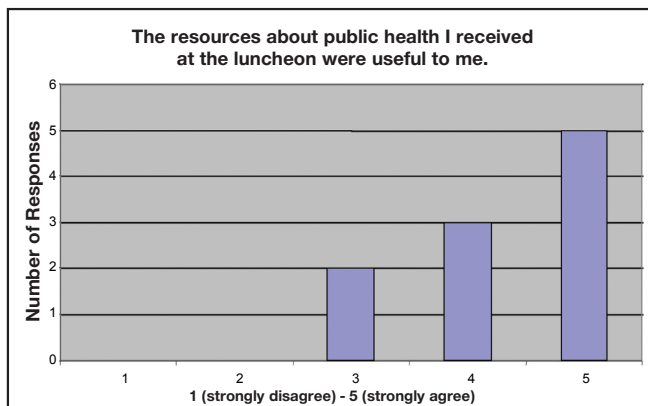


Figure 3. Usefulness of advisors' luncheon resources

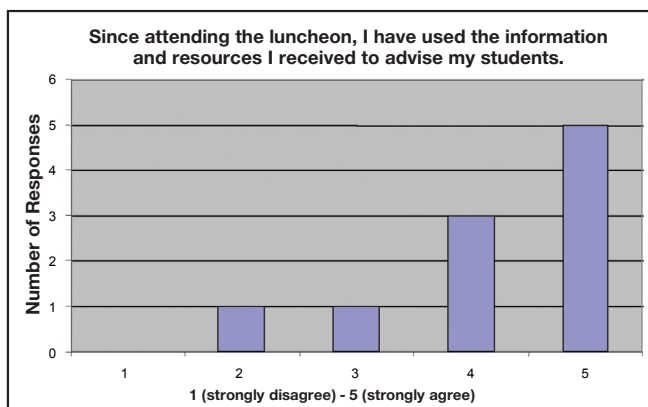


Figure 4. Actual use of advisors' luncheon information and resources

## Luncheon for University Advisors



Diane Kneeland



Leanne Field



Joe McCormick



Allison Foster



Dennis Perrotta



Eva Periman



Richard Respass



Alicia Dorsey



Diane Wynn



Peggy Amante



teaching faculty in the School of Biological Sciences also were given overhead transparencies and asked to advertise the evening presentations and exhibits in their classrooms. Thus, students in the College of Natural Sciences, including the 2,700 Biology majors on campus, heard about the event multiple times and in multiple ways.

Approximately 400-500 students attended the evening program. Joseph McCormick, M.D., opened the program with a keynote presentation, "From Ebola and HIV in Africa to TB in South Texas." In his thirty-year career at the CDC, Dr. McCormick served in roles that entailed extensive international travel and the study of viral hemorrhagic fevers and HIV. Currently, he is active in research and education, serving as the Assistant Dean at the UT Houston School of Public Health in Brownsville, TX. Dr. McCormick has authored nearly 200 scientific publications. Twenty autographed copies of his book, "Level 4 Virus Hunters of the CDC" were raffled off to students who attended the exhibits. Following this presentation, Drs. Dennis Perrotta, Texas State Epidemiologist and Bioterrorism Preparedness Director, and Susan Neill, Director of the Bureau of Laboratories at the Texas Department of Health spoke about their careers in public health. They described three public health challenges faced by the state within the last year – West Nile disease, monkeypox and Sudden Acute Respiratory Syndrome – and emphasized the cooperation between epidemiologists and laboratorians in meeting these emerging microbial threats. Dr. Richard Respass, a Senior Research Microbiologist with the Global AIDS Laboratory Support Program, Centers for Disease Control (CDC) then presented the global opportunities and challenges faced by CDC scientists working in the national and international arenas. Finally, Dr. Alicia Dorsey, Assistant Dean for Student Affairs and Administrator of Academic Programs at Texas A&M University School of Rural Public Health, invited all attendees to visit the exhibits and meet representatives from the graduate schools of public health and public health employers.

University and high school students who attended the presentations were asked to evaluate their experience and to provide comments about the event. Surveys were analyzed to collect demographic information about the attendees and to determine their responses to the presentations and exhibits. Figures 5 and 6 summarize the classification and majors of university students who attended. Results indicate that the event attracted mostly university seniors, majoring in some area of the biological sciences. Students responded positively to the presentations indicating that the speakers were informative and increased their understanding about the field of public health (Figure 7). Student responses to the exhibits also

were very positive (Figure 8). Many positive individual comments were received.

Despite efforts to extend invitations to all central Texas high school science teachers, we are aware of only three teachers who attended and brought their students. Demographic data collected from the teachers indicated that they taught Biology courses, including Biology, Pre-AP Biology, AP Biology, IB Biology, Medical Microbiology and Anatomy and Physiology. The twelve students who responded to the survey were high school seniors. Two students each expressed interest in studying pre-medicine, biology, or microbiology, one each stated their interest in nursing, dietetics, or education in college. Three others were undecided about their area of study after high school. Both high school teachers and students responded very positively to the evening presentations and exhibits (data not shown). Several students expressed their appreciation for the event. One of the three teachers indicated that it was very difficult for high school students to give up their after-school activities to attend a university presentation and suggested a Saturday time might be preferable to a weekday time. Whatever the reason, it is evident that other avenues need to be pursued to educate high school teachers and students about the opportunities in public health.

**Comments from university students about the evening presentations:**

*“I have never heard of a Disease Detective before and was very unaware of Public Health. This presentation has introduced many new concepts for me. It has taught me a lot about public health and made me appreciate the people that put out the effort to help explore disease.”*

*“Before attending the seminar I was completely unaware of the profession of public health. This helped me understand the need for public health and a little more about what it entails.”*

*“There was sooo much I learned and enjoyed. I learned that a Disease Detective is actually like a detective, instead of finding the criminal and learning more about a criminal, it’s the virus that’s the criminal!”*

*“I was enlightened on the limitless efforts that individuals and teams of health organizations orchestrate in order to find a start to stopping the spread of disease, curing disease, etc... This event opened my eyes to the various opportunities that are available to those interested in healthcare, such as myself.”*

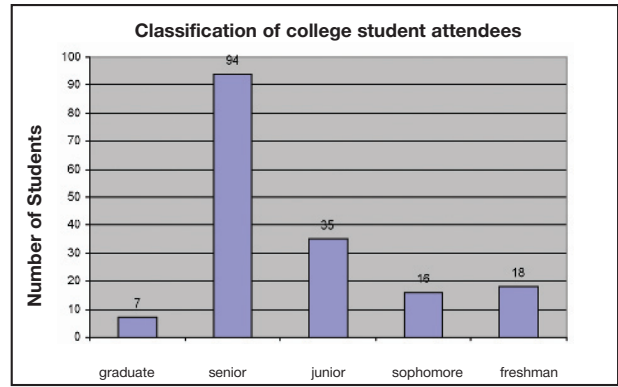


Figure 5. College student demographics: classification

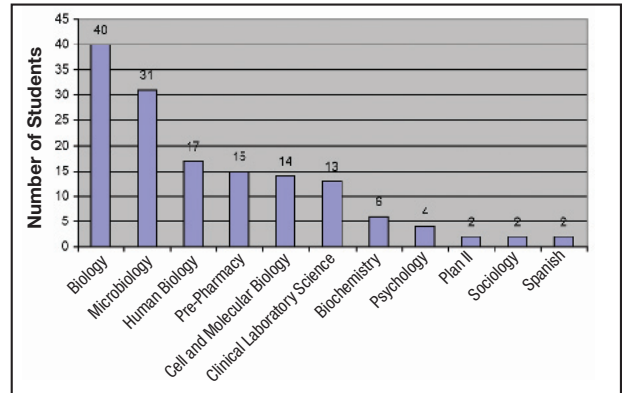


Figure 6. College student demographics: majors

One student from each of the following majors also filled out evaluations: Anthropology, Biomedical Engineering, Business, Chemical Engineering, Chemistry, Demography, Finance, Geology, Health Education, History, Neurobiology, Nutrition

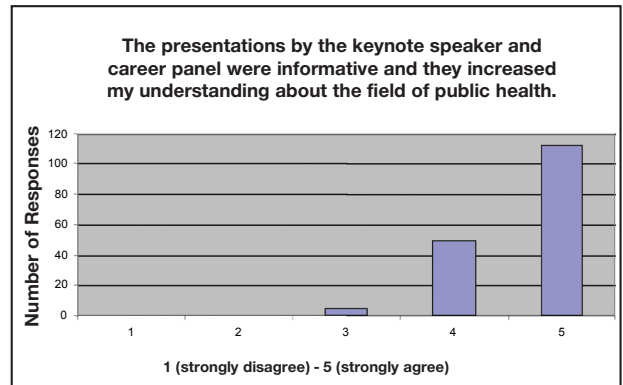


Figure 7. Effectiveness of evening presentations for university students

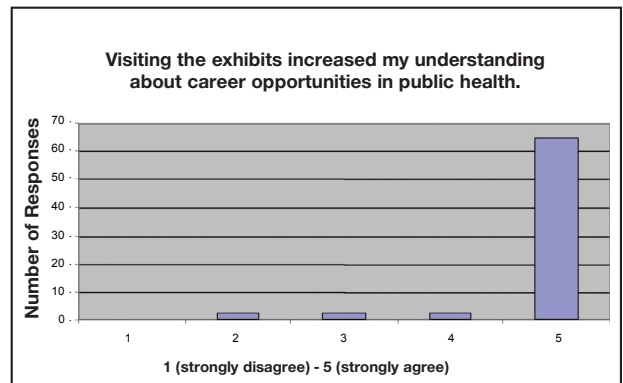


Figure 8. Usefulness of exhibits for university students

The most valuable part of this event to me was:

*"...the job opportunities and the information on infectious disease. I want to become a disease detective."*

*"...hearing from people high up on the various public health totem poles. Each speaker was so accomplished in his field-not to mention well spoken. Thank you very much!"*

*"I did not know that Texas had such an amazing testing facility for infectious diseases (and it's here in Austin!). Dr. McCormick's presentation was incredible and motivating. You could tell he loves what he does and really cares about stopping viruses and improving health conditions. I liked how Dr. Perrotta said that infectious diseases are not just problems in third world countries but they are problems here at home too."*

*"The Public Health speech opened my eyes to the importance of this career in our country, and the world. From Ebola in Africa to West Nile in Texas, public health is dealing with possibly devastating problems everywhere. Public Health work is needed here and around the world, with the lives of countless in the balance."*

*"Dr. Dennis Perrotta was a great speaker and was very animated with the information he presented. I enjoyed learning about public health in the state of Texas and how he emphasized that most virus-related diseases have just now become rampant and are all fairly recent within the past year. I liked hearing about how the Texas Dept of Health is preparing and facing the new challenges that West Nile, Monkey Pox, and SARS bring. I did not realize that public health is constantly changing and adapting to how often viruses and bacteria change. Overall, I thought the lecture was very educational because I had not known very much information at all about public health and I thought the lecture provided a good overview on the different aspects of public health on a state wide to global level."*

*"One of the best things about Dr. Perrotta was that he showed how current everything was and how these diseases are not just problems in other nations, there are dangerous diseases here as well."*

*"...I realized that science can't just stay in the classroom."*

*"All in all, I'm extremely glad I went and especially liked any discussions on HIV/AIDS because I've always been interested in that and yearning to hear more. Thanks for the opportunity."*

*"I'm glad to have learned about public health because you never really hear about other areas of the medical field. Learning about how important public health is to our state of Texas has truly*

*interested me in either taking a public health class next semester or participating in a public health internship or research program after I graduate."*

### **Comments from university students about the exhibits:**

*"The table setup outside in the hallway was a great resource of varying societies and organizations involved with disease awareness and volunteer opportunities."*

*"I really found the exhibits/booths worthwhile since I received a lot of needed and also extra information that I could use to better my future in the job search ahead. I liked the whole booth setup and the variety of ones available."*

*"As for the booths, very interesting, lots of information, and the refreshments were a definite plus!"*

*"The exhibitors in Welch Hall provided a lot of relevant information about different opportunities in the field of public health. We were able to talk in person about the specific questions we had and to know more about the focus of each institute."*

*"Lastly, the free cookies and drinks made me come home and smile!"*

### **CONCLUSIONS**

This approach was highly successful at raising the awareness of university educators, advisors and students about the field of public health because of the collaborative efforts and support of individuals within the university and public health communities. We believe this event continues to have a lasting impact on campus for the following reasons:

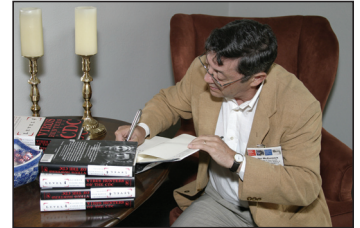
- A new student organization, *The Society of Public Health Students*, was formed as a result of this event. Students in the organization are promoting public health on campus in a variety of ways. They have created a website (<http://studentorgs.utexas.edu/publichealth>) to be a source of information about graduate education, interdisciplinary courses on campus that relate to public health, and links to additional information about public health. This organization has already sponsored a trip to School of Public Health at the University of Texas Health Science Center at Houston, and is inviting public health professionals on campus twice monthly to address many different facets of public health.

- A website ([www.sbs.utexas.edu/publichealth/](http://www.sbs.utexas.edu/publichealth/)), created as a result of this event, continues to serve as a resource for UT faculty and students. The website contains the luncheon and evening presentations (archived via streaming video), biographies of the presenters, and links to international, national, state, national and on-campus advising and career resources.

- There are ongoing commitments by university faculty, advisors and career counselors to educate students about public health.

- There is a new collaborative effort between UT and The Texas Department of Health (TDH) to develop internships for UT students at TDH. The goal of this initiative is to provide students with opportunities to work on semester-long projects under the supervision of public health scientists in the Bureau of Laboratories and the Bureau of Epidemiology. We hope to launch these internships in the Fall of 2004.

- Students continue to ask when the next “Become a Disease Detective” event will be held!



**Evening Presentation and Exhibits**



Dennis Perrotta



Joe McCormick



Richard Respess



Susan Neill

## **CONTACT**

Leanne H. Field, Ph.D.  
The University of Texas at Austin  
School of Biological Sciences  
Section of Molecular Genetics and Microbiology  
1 University Station (A5000)  
Austin, TX 78712-0162

Phone: 512-475-8897  
FAX: 512-471-7088  
Email: [field@mail.utexas.edu](mailto:field@mail.utexas.edu)