Heath and Safety Consultation Program Making a Difference for Colorado Businesses

For almost 30 years, the Health and Safety Consultation Program at Colorado State University has been helping create safer and healthier work environments in Colorado. Originally funded by Congress in the 1970s, the program’s non-punitive, no-cost approach makes workplace health and safety a reality for small companies that otherwise may not be able to decipher or institute regulations as required by the Occupational Safety and Health Administration (OSHA).

“Each state has a consultation program specified to provide services to small businesses under OSHA,” said Del Sandfort, Director of the Health and Safety Consultation Program housed within the Department of Environmental and Radiological Health Sciences. “The state of Colorado designated Colorado State University as the responsible institution for the consultation program and we were awarded the contract in 1977.”

The program’s fundamental mission is to provide safety and health services to small businesses. It’s a free service, Sandfort said, and one where citizens can really see their tax dollars at work. The program involves five major steps. First, a business must make an initial request. Second, an on-site visit is conducted with an initial conference, walkthrough, and safety and health assessment. Third, the consultation program provides a detailed evaluation and report listing ways to improve on the company’s safety and health program. The company must then correct serious hazards with the on-going advice and assistance of the consultation program if needed. Follow-up visits are sometimes used to ensure that corrective actions have been taken. The program employs 13 consultants, in addition to Sandfort, and is funded annually through a $1 million contract with OSHA.

Businesses serviced by the consultation program include those that have fewer than 250 employees at a site, or fewer than 500 employees corporate-wide. The company must be under the jurisdiction of OSHA and be high-hazard as well as request the consultation service. Customers of the Colorado State program include veterinary hospitals, construction companies, microbreweries, long-term care facilities, manufacturing companies and others.

“People are aware that construction sites can be very dangerous places to work, but they may not understand the concerns of long-term care facilities, which can have high injury rates,” said Lee Smith, a consultant with the Health and Safety Consultation Program. “In these types of facilities, we see many injuries due to lifting so we spend a lot of time structuring a safety program to meet the special needs of lifting elderly and disabled residents. Some changes may be as simple

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Welcome

Welcome to the second edition of the ERHS Emitter and greetings from the Department of Environmental and Radiological Health Sciences. We are excited to get our fall edition completed and in the hands of our students, staff, faculty and alumni so we can share what is happening at ERHS.

Fall semester is off to a good start and I’m happy to report that we have a new class of Freshman Scholars set to start in our laboratories. This exciting program, which was introduced last fall, exposes a small group of outstanding freshmen to a research environment and challenges their minds while providing a supportive environment in which they can develop and mature. Thanks to Dr. David Gilkey for managing this program and to all our faculty mentors who are devoting their considerable talents and limited time to these students.

In this edition of the ERHS Emitter, we have a number of stories that are sure to catch your interest. The Department is actively developing its Health Physics graduate program with the assistance of a National Institute for Occupational Safety and Health (NIOSH) training grant. Dr. Thomas Borak and one of our new faculty members, Dr. Thomas Johnson, are working to increase enrollment in Health Physics and expand the scope of the program, as well as increase financial support for the program and its students. Health physics is an area in which we see much potential for growth as the nation’s current cadre of health physicists is retiring and few programs remain to create the next generation of scientists in this field.

I also hope you enjoy our cover story, an article on the Health and Safety Consultation Program located within our Department. For almost 30 years, this program has helped small businesses across Colorado get through a maze of regulations to create safer work environments resulting in reduced injuries and deaths. Del Sandfort is Director of the consultation program and leads a team of 13 consultants who fan out across the state to provide a no-cost service to clients who want to do the best for their employees, but often don’t know where to start. This year, the Health and Safety Consultation Program at Colorado State was recognized as one of four programs of excellence nationwide by the U.S. Department of Labor. Congratulations to all involved with this program and kudos on a job well done.

In this edition, you’ll also enjoy two faculty profiles and an alumni profile. Dr. John Reif is a name many of you will recognize, and many have had the pleasure to work and study with over the years. Dr. Lisa Zekas is relatively new to our faculty, and works in our diagnostic imaging section in the James L. Voss Veterinary Teaching Hospital. Our featured alumnus is Dr. Dean Lillquist, who recently took over as Director of the Salt Lake Technical Center, a branch of the Occupational Safety and Health Administration.

I look forward to hearing from you with your comments and questions about what is happening at the Department of Environmental and Radiological Health Sciences. We are very excited about what the future holds for us, and look forward to updating you in the next edition of the ERHS Emitter.

John D. Zimbrick, PhD
Professor and Head
Department of Environmental and Radiological Health Sciences
When most people think of lasers, they imagine the giant death rays from old science fiction movies or new spy spoofs, like Dr. Evil in *Austin Powers* whose “laser” was going to destroy the planet unless a ransom was paid. Though lasers are used in weapons systems (i.e. Ronald Reagan’s Star Wars), they are more mundanely used in manufacturing, health care, consumer products and research settings. Because lasers are so common, it’s a concern to researchers at Colorado State University that more is not understood about the dangers of lasers to those working with them, how exposures can be limited, and how injuries can be prevented or best treated.

Dr. Thomas Johnson, a new faculty member with the Department of Environmental and Radiological Health Sciences, has been involved with laser research and education for much of his professional career and recently joined Colorado State University to help develop the Health Physics program and bring laser safety and injury research to CSU.

“Lasers are another way to make photons, just like x-rays, but they occupy a different wavelength on the electromagnetic spectrum,” said Dr. Johnson. “Lasers are used in everything from telecommunications to outdoor light shows to laser hair removal and surgery. What our lab is looking at is laser safety, developing laser safety standards and laser injury treatment. Laser safety standards in place now are based on a water model that is only adequate to overprotective, and not based on real-world usage. We want lasers to be safe, but we don’t want to unnecessarily limit their use. Part of our work involves proving or disproving current safety standards, as well as establishing new ones.”

Safety standards are important as the uses of lasers and laser technology continue to expand into everyday work and home life. Dr. Johnson notes that with new wavelengths, new lasers and new uses developing all the time, adequate safety standards are vital to the health and well-being of all those exposed to lasers. As an example, he shows a slide of a technician’s retina where a small white line defines damage to the eye caused by a brief glance at a laser beam. The technician will have a permanent blind spot from the damage to his eye. Safety goggles are only part of the answer, Dr. Johnson notes, as education and training are key, as is response to an injury. There is limited knowledge of how best to treat laser injuries to reduce acute and long-term damage.

In order to research laser safety and injury treatment, a large component of Dr. Johnson’s research work involves developing models for research and testing. Corneal testing has mostly been done on the eyes from animals euthanized for other purposes, while much skin testing was done on pigs. Dr. Johnson is working to determine if artificial skin and artificial corneas, as well as cell cultures, can garner reliable results making the use of animals unnecessary.

For Dr. Johnson, his research work in lasers is only part of a comprehensive program to help enhance and expand the Health Physics program at Colorado State University. He also is planning to begin a research program in ionizing radiation as well as other areas of non-ionizing radiation, particularly with concerns to Homeland Security and the Department of Defense. He and Dr. Thomas Borak, a Professor in ERHS, are working to increase enrollment in the Health Physics program to address a national shortage of health physicists, and he is teaching this fall. He has re-established a relationship with the United States Geological Survey enabling his students to borrow time on the agency’s TRI-GA nuclear reactor in Denver to conduct experiments.

“This is really an exciting time to be a part of this field,” said Dr. Johnson. “We are looking not only at reinvigorating our graduate program, but eventually establishing an undergraduate program in health physics.”

Dr. Johnson comes to Colorado State University from the Department of Preventive Medicine and Biometrics, Division of Environmental and Occupational Health, at the Uniformed Services University of Health Sciences in Bethesda, Maryland, where he was an Assistant Professor. While there, he participated in building the university’s health physics program, setting curriculum and developing courses, with the program eventually receiving accreditation.
as always requiring two people to assist when lifting a resident is necessary, or may involve incorporating mechanical devices to assist in lifting.”

Business for the consultation program is brisk. Clients come in via word-of-mouth, are referred to the program through OSHA, or attend conferences where consultants are guest speakers. Special programs include a 10-hour safety training course for construction workers that can save businesses thousands of dollars in worker’s compensation and lost productivity.

“For many of the businesses we work with, awareness of health and safety issues is the first thing we want to address,” said Sandfort. “Once we are able to facilitate the company creating awareness, we can move into helping create a safety and health management system. When companies ‘get it,’ they see that health and safety pay a huge dividend. This is especially true for smaller companies that can be hit hard with worker’s comp premiums, one of the reasons these companies have such a high failure rate. They understand they can get a discount on premiums when they take safety measures.”

Sandfort said the service is especially important to small businesses that often operate on extremely small margins and want to do the right thing, but don’t think they can afford it. The consultation program provides them free consultation services to help them deal with health and safety concerns in a cost-effective way, usually resulting in reduced operating costs in the long term.

Once businesses are involved in the program, some opt to participate in OSHA’s Safety and Health Achievement Recognition Program (SHARP). This program requires companies to comply with a set of standards and recognizes those employers who operate an exemplary safety and health management system. Once a company satisfies all SHARP requirements, it is nationally recognized and exempt from OSHA inspections as long as it maintains SHARP status. Companies in Colorado are recommended for final SHARP approval and certification by Sandfort.

“What we do is so important when you look at how workplace safety affects the citizens of this nation,” said Sandfort. “Every day in this country, 15 workers are killed on the job and 12,000 workers will suffer lost-time injuries. The number one cause of workplace deaths is motor vehicle accidents. In women, the number one cause is homicide. These are issues we are dealing with as well – working with companies to provide defensive driving classes to prevent motor vehicle accidents, and working with companies to install safety measures to protect all their workers.”

The Health and Safety Consultation Program at Colorado State has developed a national reputation as one of the finest in the country. This year the program was presented with a Program of Excellence Award from the Department of Labor. After the events of Sept. 11, 2001, the program was the first of its kind in the nation asked to journey to New York City to help manage on-site health and safety at the World Trade Center.

In addition to work in the business community, the Health and Safety Consultation Program has an academic face as well. Sandfort and program consultants teach in the undergraduate and graduate programs, the program employs graduate students, and students are able to gain field experience by working directly with clients. Graduate research projects often are identified through the course of the consultation project. Many students have gone on to conduct their research at former consultation clients. For additional information about the Health and Safety Consultation Program, you can visit their Web site at: www.bernardino.colostate.edu/public, or call (970) 491-6151.
Consulting Program Helps Local Brewery Keep Workers Safe

When Brendan McGivney, production manager for Odell Brewing Company in Fort Collins, Colo., went to a brewing safety seminar eight years ago, he learned that something he was doing at work could be a significant hazard to his health. Exposure to silica, an ingredient used in beer filtering systems, could lead to silicosis, a debilitating disease that damages the lungs.

“I was the one pouring the silica into the filtering system, so the potential for exposure to silica dust and the associated health risks really hit home,” McGivney said. To McGivney and the management at Odell Brewing, understanding the dangers of silica was just the first step of their journey to a safer brewery for their employees.

Smith and the Health and Safety Consultation Program helped Odell Brewing develop a safer tank cleaning method to eliminate exposure to carbon dioxide. Valves and fittings were attended to, making sure burns didn’t happen. Ear plugs and safety goggles became mandatory on the bottling line. Employees underwent lifting training, and a new vacuum system was developed to lift kegs off the line – kegs that were previously manually lifted and moved at a rate of 200 kegs per day, each at 165 pounds. The consultation program also is on call whenever Odell Brewing needs to fine-tune its program. Recently, an ergonomics program was put in place to help with back, knee and wrist problems and the company received assistance with forklift training.

“The really great part is that they help us get through the bureaucracy of OSHA,” said Odell. “There is so much government jargon in the guidelines, it’s hard to know what applies to us and what doesn’t. The consultation program is an on-going resource that helps us solve problems in a cost-effective and efficient way, protecting our workers and making for a safer work environment.”

Odell Brewing has improved its safety record to the point that it is now a SHARP company as recognized by the Occupational Safety and Health Administration (OSHA). OSHA’s Safety and Health Achievement Recognition Program recognizes small employers who operate an exemplary safety and health management system. Companies recognized as a SHARP site are granted one- to-two-year renewable exemptions from OSHA’s scheduled inspections and are formally recognized in a SHARP awards ceremony.

Odell Brewing Company was founded in 1989 by Doug Odell, his wife Wynne, and sister Corkie. Odell Brewing was the second microbrewery established in Colorado, the start of a microbrewery renaissance. Since its early days of selling 900 barrels a year, the company now sells more than 25,000 barrels a year creating the need for expanded brewing, bottling, labeling and packaging systems and the need for a comprehensive health and safety program.

“When we first started, we didn’t really have a health and safety program in place,” said Corkie Odell, co-CEO and part owner. “We did a few small things like ear plugs and non-slip boots, but not much more than that. As a result, our injury rate was higher than the average injury rate for our type of business.”

Looking to revamp its procedures, the company turned to the Health and Safety Consultation Program at Colorado State University and Lee Smith, a consultant with the program. Smith conducted an initial survey of the brewery, identifying areas for safety improvement and helped Odell Brewing solve major safety problems first. Safety concerns in breweries include oxygen deprivation when workers clean out tanks that have filled up with carbon dioxide; burns from hot water; hearing loss from noisy bottling lines; musculoskeletal injuries from lifting; falls on slippery floors; and inhalation of irritants including grain dust.

“During the last eight years, we have gone from being a brewery with an above-average injury rate and no safety program, to a SHARP (OSHA’s Safety and Health Achievement Recognition Program) company with one of the best safety records in our industry,” said McGivney. “Safety is so much a part of our culture at this point that it’s just second nature to us.”
Department Receives Health Physics Training Grant

Recognizing the need to reinvigorate admissions into health physics programs nationwide, the National Institute for Occupational Safety and Health has awarded Colorado State University the first training grant to support graduate students in the Department of Environmental and Radiological Health Sciences’ Health Physics program.

“With the renewal of our training grant in Industrial Hygiene, NIOSH added a component to expand the training grant to support students in the Health Physics program,” said Dr. Thomas Borak, a Professor with ERHS. “NIOSH realizes the importance of attracting more students to this field, particularly as demand outstrips supply for health physicists in governmental agencies and private industry. Our students have no difficulty finding positions when they graduate, and demand for their skills and training is high.”

Dr. Borak said the decline of students going into the field of health physics has been due to several factors including lack of student knowledge about or interest in the field, few federal programs to support graduate students in the field, and few comprehensive health physics graduate programs in universities across the country. NIOSH has taken the first step toward reversing this trend by awarding CSU a $50,000 training grant that will support two graduate students during the next five years.

Student Organization Promotes Environmental Health

Among the missions of the Environmental Health Student Association (EHSA) are such noble goals as promoting unity among environmental health students, bettering of the nation’s health through control of the environment, improving environmental health professional education and more. Nowhere in its mission statement does the EHSA make mention of improving the health of women and children in Honduras by monitoring air quality, or raising funds to assist victims of the Christmas tsunami in 2004. But service to the global community is the heart and soul of the organization, as it helps students understand their place in the world and develop an appreciation of how much they can truly accomplish in the diversity of fields encompassed by environmental health.

As a result of fundraising efforts during the last two years, EHSA was able to offer environmental health students research assistance funds for the summer of 2005. The three recipients were Maggie Clark, Shannon Oliver and Lori Cragin. Clark and Oliver went to Honduras to gather preliminary data for Clark’s research project related to indoor air quality and intervention effectiveness on the respiratory health of Honduran women (See related story on page 7).

Cragin’s research looks at menstrual cycle characteristics and reproductive patterns in women exposed to atrazine in drinking water. Cragin traveled to Illinois this summer to study a population exposed to atrazine through the municipal water supply. EHSA raised funds for the projects with corporate donations, including a $500 gift from Sam’s Club, and Spring Fest, hosted this year by Odell Brewing Co., as well as other fundraising activities. In addition to its support of research, in February the group organized a garage sale and raised more than $1,100 for tsunami victims, donating the funds to Mercy Corps.

“EHSA had languished as an organization for a number of years,” said Kevin Bolton, President of EHSA and a graduate student in epidemiology. “When Tom Luben came on as president a couple

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Summer in Honduras Enables Student to Experience Field Work

It is the kind nature of the Honduran people that Shannon Oliver remembers fondly when he recounts his summer adventures in Honduras. Women with barely a roof over their heads, and usually one or two children at their feet, reached out to offer a stranger food, drink and words of friendship.

Oliver was in Honduras during the summer with graduate student Maggie Clark to do field work on Clark’s research project looking at air quality in homes with traditional cook stoves as well as homes retrofitted with a more modern stove known as a Justa (pronounced husta). Clark’s and Oliver’s work was supported with a grant from the Environmental Health Student Association (EHSA), as well as funds from the Department of Environmental and Radiological Health Sciences and the Environmental Protection Agency. The two also worked with Trees, Water and People, a Fort-Collins based non-governmental agency dedicated to helping people build sustainable communities, partnering with AHDESA (Honduran Association for Development).

The project this summer involved going to both urban and rural households as selected by the AHDESA Justa project, and taking air samples as well as conducting interviews and getting a blood sample.

“The traditional wood stove in the Honduran home is very inefficient and puts out a tremendous amount of smoke,” said Oliver, an undergraduate student in environmental health and vice president of the EHSA. “The walls are just covered with soot, and you can imagine what the lungs look like of the women and children who spend a lot of time around these stoves during the day. We saw a lot of chronic coughs, as well as eye and skin problems.”

In the study, Oliver and Clark would travel to a home (transportation and driver provided by AHDESA), to set up for the day. They would install indoor and outdoor air monitors, as well as have the woman who lived in the home wear a personal air monitor. At the end of the day, the group would return to take down equipment, preserve data, fill out a questionnaire with the woman, as well as take a drop of blood from a finger prick to determine levels of C-reactive protein (a marker for inflammation).

Women participating in the study were to receive a Justa stove. The Justa burns wood more efficiently, reducing need for wood fuel and ventilates smoke out of the house.

On several occasions, Oliver was able to be present when the new stove was installed and share in the joy of the household.

“We returned to one home that had the new stove, and the walls had been cleaned and were just sparkling white,” said Oliver. “You could already tell that everyone’s health was improving as chronic coughs had cleared up and everyone seemed to be breathing easier.”

While living in Honduras was a challenge – security at night was a concern, as was being immersed in the Spanish language – Oliver, who is getting a minor in Spanish, said the experience gave him greater clarity as to which direction he might head with his education in environmental health.

“I was thinking water quality but now I am looking at forming a biodiesel cooperative and doing more with alternative energy,” said Oliver, who will be graduating from Colorado State University in the spring. “I would love to get a job with the World Health (Organization) or with a non-governmental agency, but I need to pass biochem first.”

For more information on Trees, Water and People, you can go to their Web site at: www.treeswaterpeople.org.

Student Organization Promotes Environmental Health

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years ago, he revitalized the organization. We are now building on what he started, and plan to have an active and involved student group. It was pretty exciting for us to be able to support the Honduras project this summer as well as organize a fundraiser for tsunami victims, and we hope to do more this year.”

EHSA hosts a variety of events during the year. Weekly meetings comprise of work planning sessions as well as special sessions on internships, guest speakers, a luncheon for board members of the Colorado Environmental Health Association, and special events including Ram Welcome and Spring Fest.

“This year we also hope to revitalize a program to bring our environmental health message into the high schools and junior highs,” said Bolton. “We’ll talk with students about how environmental health affects their daily lives, from clean air and water to safe food, and also provide them with information about careers in environmental health.”

For more information about EHSA, visit their Web site at: www.cvmbs.colostate.edu/erhs/acadprog/undergrad/EHSAframe3.htm
It was a Dear Abby column from not so many years ago that brought a smile to Dr. John Reif’s face. A woman was writing to Dear Abby to relay a small miracle of sorts. Her husband, a lifelong smoker, had been unwilling to quit for his own health and unwilling to quit for the health of his wife, but when he read a study that showed secondhand smoke may increase the risk of cancer in household pets, he quit smoking for the health of his dog. Though it is just a small example of the impact of Dr. Reif’s work in epidemiological studies, it is one Dr. Reif likes to relay with a certain amount of satisfaction.

Dr. John Reif’s research projects include dolphin studies.

Dr. Reif, a Professor in the Department of Environmental and Radiological Health Sciences, started his professional career as a small animal practitioner after receiving his DVM from Cornell University. He was interested in graduate work and pursued advanced training in epidemiology and internal medicine at the University of Pennsylvania, Graduate School of Medicine. He held an NIH post-doctoral fellowship in cancer epidemiology and was on the faculty at the University of Pennsylvania before coming to Colorado State University in 1979. At CSU, Dr. Reif served as Chairman of the Department of Environmental Health, as well as Assistant Dean for Curriculum for the College of Veterinary Medicine and Biomedical Sciences. In 1987, Dr. Reif was awarded a Fogarty Senior International Fellowship from NIH for studies of cancer in farmers in New Zealand.

In his environmental epidemiology studies, Dr. Reif pioneered the establishment of animal models for health effects of environmental exposures. His research has targeted air pollution, secondhand smoke, pesticides, low-level radiation, non-ionizing radiation, radiofrequency radiation and more. He has worked on a series of studies at the Rocky Mountain Arsenal in Denver and served as a technical advisor on numerous Superfund sites. Dr. Reif also is widely recognized for his work on evaluating the effects of exposure to water disinfection byproducts on reproductive disorders and cancer.

“A consistent theme in my work is identifying potentially harmful exposures to environmental agents,” said Dr. Reif. “If these agents are contributing to disease, then we need to see if they are amenable to intervention. But in order to do that, we have to identify and understand risk. To that end, we have done numerous studies in domestic pet animals to see what they can tell us about the potentially harmful effects of environmental exposures. The question we’ve been asking is can pet animals be used as sentinels to predict harmful effects on humans exposed to the same potentially dangerous environmental contaminants? What we have found is that, in a general way, animals appear to respond similarly to humans.”

Recently, Dr. Reif started working on a project in Florida looking at the incidence of a rare skin disease found in Indian River Lagoon dolphins. The lagoon, an inland waterway, receives large quantities of agricultural run-off, and scientists are trying to understand if this is in part the cause of the outbreak of lobo mycosis. The disease, which only occurs in humans and dolphins, had previously had five confirmed cases in the developed world. In the Indian River Lagoon, nine dolphins have been confirmed and 35 are suspected from photo surveys. The study will help researchers assess environmental risk factors so that mitigation can be undertaken to not only protect the dolphins, but to preserve the health of all marine and aquatic life in the lagoon, as well as the humans who call the area home.

In addition to his research, Dr. Reif notes that working with and mentoring students has been an enjoyable component of his faculty position. “It is very rewarding to work closely with students and help them in their professional development, and then see them succeed,” said Dr. Reif. “Their success is your success. The most important part of who you are is the people you influenced along the way.”

Dr. Reif also has worked with students away from academia and research, volunteering for a number of years as an assistant coach for the CSU women’s tennis team. “My personal philosophy is one has to maintain balance with work, physical activities and family,” said Dr. Reif. “You have to work hard and play hard, you need to be physically and mentally active, as well as give back to the community if you find yourself fortunate enough to be able to do so.”

Ask Dr. Reif if humans are better off today thanks to epidemiological studies and you get an emphatic yes, but with a caveat.

“In the 50s and 60s, men were dropping dead in the streets from acute myocardial infarction,” said Dr. Reif. “Sudden death from heart disease was epidemic and people really didn’t understand why. Control of this was not due to heroic rescues in the operating room, but to understanding and controlling risk factors like high blood pressure, screening and interventions for blood lipids, maintaining ideal body weight, exercise and quitting smoking. This happened because of epidemiological research.”

But, Dr. Reif notes, other diseases march on relatively unchecked, or are increasing in per capita incidence. Breast cancer, prostate cancer and Alzheimer’s disease are just a few of the diseases for which epidemiological studies are trying to establish environmental risk factors. With so many questions yet to be answered and problems to be solved, Dr. Reif continues his work.
Dr. Zekas Gets the Inside Scoop as Patients Reveal Their Innermost Selves

Given the opportunity, it seems most dogs would eat just about anything. Some eat inedible objects out of boredom, some to make sure that whatever they’ve got in their mouths their owners won’t take away, and others out of what appears to be an inexplicable desire to self-destruct.

Whatever the explanation, Dr. Lisa Zekas, an Assistant Professor in the Department of Environmental and Radiological Health Sciences, has pretty much seen it all. Dr. Zekas is on the faculty of the Diagnostic Imaging Section at the James L. Voss Veterinary Teaching Hospital where radiographs, ultrasounds and nuclear medicine provide a good look inside to assist veterinarians in making an accurate diagnosis of their patient’s condition.

“We see a lot of dogs eating things they shouldn’t,” said Dr. Zekas. “Carpet seems to be especially popular. Cats eat shoelaces, which can cause an obstruction. In large animals, particularly cows and sometimes horses, we often find wire. It makes for some very interesting radiographs.”

While “you won’t believe what we found in this dog” does make for interesting talk in the breakroom, for Dr. Zekas it’s only a small part of her day-to-day work in the VTH. The images supplied by the Veterinary Diagnostic Imaging Section help clinicians diagnose and treat animals with pneumonia, congenital defects, cardiac problems, fractures, tumors and more. Patients include everything from cats and dogs, to horses and cows, to parrots and ferrets. Dr. Zekas’ research work reflects her clinical interests.

“The research I conduct is primarily to answer clinical questions,” said Dr. Zekas. “One project involves angular limb deformities in foals. We are trying to determine if the view we get affects how we interpret the severity of the deformity. If different views make no difference, than we don’t have to be as concerned about getting the same exact shot each time.”

Dr. Zekas also is working with Dr. Richard Park, a Professor in the Department of Environmental and Radiological Health Sciences, on a canine project involving dogs with problems in the stifle. Using radiographs, MRI and arthroscopy, clinical cases are followed over time to detect subtle changes that could make a difference in treatment and outcomes.

In addition to her clinical and research work, Dr. Zekas spends much of her time teaching. She teaches on the clinical floor, in senior rounds, reviews pre-made cases, and works in small groups and one-on-one with students during the diagnostic imaging rotation.

Dr. Zekas received her DVM from the University of California-Davis. Following her graduation, she interned at an equine practice in Lexington, Kentucky, before completing an equine residency at the University of Florida in Gainesville. She was in private practice in Washington for a year before completing a residency in radiology at the University of Wisconsin, Madison. She stayed in Wisconsin as a clinical instructor before joining the faculty of Colorado State in January 2004.

Dr. Zekas is a member of the American Veterinary Medical Association and of the American Association of Equine Practitioners. She is a diplomate of the American Board of Veterinary Practitioners (Equine) and of the American College of Veterinary Radiology. In her free time, she enjoys bicycling, horseback riding, and spending time with her dog, Molly.

“Carpet seems to be especially popular. Cats eat shoelaces, which can cause an obstruction. In large animals, particularly cows and sometimes horses, we often find wire.” – Dr. Zekas
Dr. John Zimbrick Recognized by Alma Mater

Dr. John Zimbrick, Head of the Department of Environmental and Radiological Health Sciences, was honored with a Distinguished Achievement award from his alma mater, Carleton College. Dr. Zimbrick, a 1960 alumnus, was presented with the award at the Carleton College Alumni Convocation earlier this summer.

Carleton College noted Dr. Zimbrick’s many achievements during the course of his career including leadership positions at the University of Kansas, National Institutes of Health, National Academy of Sciences, Battelle/Pacific Northwest Laboratories, Washington State University and Purdue University. He is a member of, and highly involved with, a number of professional associations, including the Radiation Research Society, Biophysical Society and the American Association for the Advancement of Science.

Dr. Zimbrick also has served Carleton College as an assistant class agent for more than 10 years and as an alumni admissions representative.

Faculty Member Receives OSCAR from DOL

Del Sandfort, an Assistant Professor in ERHS and Director of the Health and Safety Consultation Program, was honored in May by the Department of Labor’s OSCAR Award - the OSHA Consulting Achievement Recognition Award. His group was one of four groups out of 57 from across the nation to receive this prestigious recognition.

The Health and Safety Consultation program is available to any business with one or more employees and helps businesses meet current OSHA job safety and health regulations while developing an ongoing, effective safety and health program. The service, funded through OSHA, is available at no charge to business.

Students Receive Industrial Hygiene Scholarships

Bradley Lester and Angela Dartt, both graduate students in the ERHS Industrial Hygiene program, have received $5,000 scholarships from the 3M Company for the 2005/2006 academic year. Dartt also was awarded the 2005 James DeField Memorial Scholarship and the 2005 American Industrial Hygiene Foundation-TSI/Abrams Endowed Scholarship.

3M is a $16 billion, diversified technology company with positions in health care, safety, electronics, telecommunications, industrial, consumer and office and other markets. Headquartered in St. Paul, Minn., the company has operations in more than 60 countries and serves customers in nearly 200 countries.

Students, Faculty, Staff Honored at CVMBS Scholarships and Awards Ceremony

Numerous students and faculty in the ERHS were honored last spring during the College of Veterinary Medicine and Biomedical Sciences 2005 Scholarships and Awards ceremony. Following is a list of students and the honors they received.

- Environmental Health Outstanding Graduate Student Award: Maggie Clark
- Environmental Health Outstanding Graduate Student Researcher Award: Yusong Lu
- Environmental Health Scholarships: Erin McGuinn, William Wallace and Tiffany Weiss
- ERHS Freshman Scholars Program Scholarships: Jayci Adams, Luciana Nelson, Andrea Rush, Kristin Spencer, Elizabeth Yeomans and Sarah Yoder
- Colorado Environmental Health Association Scholarship: Amanda Draine
- Dr. Reginald L. Gotchy Memorial Scholarship: Amanda Ashley
- John R. Bagby Award: Sarah Smith
- Kirke L. Martin Memorial Scholarship: Tracy Nichols
- Radiological Health Sciences Outstanding MS Candidate Award: Philip Trueil
- Radiological Health Sciences Outstanding PhD Candidate Award: Wendy Kuhne
- EHSA Outstanding Professor: Dr. Kenneth Blehm
- Outstanding Academic Advising Award, Undergraduate Education: Dr. David P. Gilkey
- EHSA Outstanding Internship Site: Kodak of Windsor

ERHS Freshman Scholars Program Scholarship recipients: Jayci Adams, Luciana Nelson, Andrea Rush, Kristin Spencer and Sarah Yoder, with Drs. John Zimbrick and David Gilkey.
Father Gives Inspiration to ERHS Graduate Who Found Calling in Industrial Hygiene

There aren’t too many young people who grow up wanting to be an industrial hygienist. In fact, there aren’t too many young people who are even aware such a field exists. Dr. Dean Lillquist had more than a passing familiarity with the field—he had received his master’s degree in public health from the University of Minnesota—but it still took a little something more to push him into industrial hygiene.

“After graduation, I took a position with the National Institutes of Health in Bethesda, Maryland,” said Dr. Lillquist. “I worked for two years in health, safety and environment on the research campus. But then, my dad developed asthma. He had been working as a commercial electrician and changed jobs to become a facilities electrician at a company that manufactured wood products. His health problems soon followed. That got me refocused on industrial hygiene and occupational health.”

Realizing he needed additional graduate-level education, Dr. Lillquist applied to the Industrial Hygiene Program at the Department of Environmental and Radiological Health Sciences at Colorado State University. His primary advisor was Dr. Roy Buchan, with Dr. Kenneth Blehm advising as well. His research advisor was Dr. Fred Applehans. After graduation, Dr. Lillquist worked on-site at the OSHA-funded Health and Safety Consultation Program where Del Sandfort was his advisor.

After a year with the consulting program, Dr. Lillquist joined the faculty at the University of Utah’s Rocky Mountain Center for Occupational and Environmental Health. He had the opportunity to research and publish in the areas of exposure assessment and airborne hazards, and also had a hand in training dozens of industrial hygienists who are now practicing professionally. Dr. Lillquist eventually became director of the center’s Industrial Hygiene Program before resigning earlier this year to take over leadership of the Salt Lake Technical Center (SLTC), Directorate of Science, Technology and Medicine (DSTM), a unit of the Occupational Safety and Health Administration (OSHA).

“SLTC is the lead facility in OSHA for analytical chemistry in industrial hygiene,” said Dr. Lillquist. “We house the national field emergency response team specializing in health and engineering.

“Nanotechnology is particularly difficult because we don’t yet have a full understanding of its hazards.” – Dr. Lillquist

We also are home to members of OSHA’s specialized response team that provides a field response to large-scale disasters or terror attacks.”

In his new position, Dr. Lillquist is more involved with management and participates in the national dialog of health and safety issues. The station affords him a vantage point from which to assess emerging issues in health and safety.

“We still must address the traditional concerns of health and safety,” said Dr. Lillquist. “But we have additional challenges with emerging issues including nanotechnology, globalization, complex exposures and low-dose exposures. Nanotechnology is particularly difficult because we don’t yet have a full understanding of its hazards.”

Dr. Lillquist lives in Utah with his wife and two children and enjoys skiing, mountain biking, fishing, hunting and hiking. He also likes catching up with his colleagues from Fort Collins at professional conferences.

“I thoroughly enjoyed my time at Colorado State University,” said Dr. Lillquist. “All my professors were great mentors, and the graduate program provided me with the tools I needed to pursue a highly rewarding and interesting career in industrial hygiene. For my dad, I feel like I did make a difference in workplace safety and maybe made things a little better for those who came after him.”
ERHS Calendar

The Robert and Mary Flint Animal Cancer Center (ACC) hosts a series of seminars on Mondays, 3-4 p.m., at the James L. Voss Veterinary Teaching Hospital. For a complete schedule, go to www.cvmbs.colostate.edu/erhs/whats_new/seminars/seminars.htm. The ACC also hosts a series of teleconferences from the University of Colorado Health Sciences Center on Tuesdays, noon-1 p.m.

Oct. 4 – Graduate and Professional School Fair, 11a.m.-4 p.m., Lory Student Center Main Ballroom

Oct. 7-9 – Homecoming and Family Weekend

Oct. 16-19 – Radiation Research Society’s 52nd Annual Meeting, Colorado Convention Center, Denver. For more information visit: www.radres.org

Dec. 16-17 – Commencement Ceremonies

Alumni News

The ERHS Emitter welcomes alumni news including academic achievements (graduate degrees, fellowships, residencies, etc.), honors and awards, and employment updates. To submit an item to Alumni News, contact Carol Borchert at: carol.borchert@colostate.edu. In your submission, please include your contact information and pertinent details of your announcement.

Career Help Available to CSU Alumni

The CSU Career Center’s online job posting system, Career RAM, is available to alumni. Are you in career transition? You can search for jobs here at no cost. Each year, 7,500 jobs and 4,500 internships are posted for positions in Colorado, as well as nationally and internationally. Are you looking to hire a CSU student or alumnus? Employers can post jobs for free. To learn more, visit the Career Center’s Web site at www.career.colostate.edu and go to Career RAM Student. You also can contact Erin Reichert, Career Liaison, at (970) 491-0526 or ereichert@careermail.colostate.edu with any questions.