



### Better Than the Tooth Fairy

"Most of the children we see come from low-income families, where a priority often is not placed on dental care for a variety of reasons," says Michael Kanellis, associate professor and head of pediatric dentistry in the College of Dentistry. "But, when we're talking about children, it's a very simple question—should children have access to oral care? Yes. Which children? All of them."

To fight the battle against decay and gain experience working in a community setting, Kanellis and other Iowa dental faculty, students, and

residents travel the state. They provide exams and cleanings at schools and clinics, and teach parents and local caregivers about oral hygiene. They also offer dental services for special populations around Iowa: about 40 children and young adults living in group homes in Forest City, dozens of children of migrant farmworkers each summer at camps in the Williamsburg area, and children of low-income families in Davenport. Another program sends a resident one day a week to St. Luke's Dental Clinic of East Central Iowa in Cedar Rapids. Yet another takes a resident to the Des Moines Health Center two days a week to see young patients. Closer to campus, the Johnson County WIC Clinic works with the University to offer preventive dental care—including dental exams, fluoride treatments, sealants, and simple fillings, all at no charge—for more than 600 infants and toddlers in the Women, Infants, and Children program.

"I would like to see us break the barriers to access to dentistry," says Karin Weber, visiting professor of dentistry. "Dental health is linked with the entire health of the child."

# On Campus: Service 2002-03

### Pharmacy Has Central Role in Public Health

The College of Pharmacy has joined forces with the College of Public Health to establish the Health Effectiveness Research Center.

Research has shown that wide variation exists in the preventive care and medical treatment provided to patients with similar health problems. The center's mission is to address this problem. Specifically, experts in both colleges will offer training, mentoring, and databases for research aimed at looking at the variation in use of preventive and therapeutic interventions. They also will study the consequences of this variation.

"As an example, in the 1990s approximately 77 percent of children enrolled in the Iowa Medicaid program who were diagnosed with middle ear infections initially received antibiotics," says center director Elizabeth Chrischilles, professor of epidemiology in the College of Public Health. "Is this rate of treatment too high or too low? Should policymakers stress increased use of antibiotics or more judicious use? Which children are most apt to benefit from antibiotic treatments? These are the types of questions that we hope to answer through our research."

### UI Press Preserves Regional Heritage

Michael Harker drove past old barns on gravel roads and blacktop highways for years. He generally dismissed them as obsolete outbuildings until November 1993, when he felt compelled to photograph a windmill in Clutier, Iowa. This single photograph launched him on a seven-and-a-half-year mission to document Iowa's barns and all they represent. The result is *Harker's Barns: Visions of an American Icon* (University of Iowa Press, [www.iowa.edu/uiowapress](http://www.iowa.edu/uiowapress)). Each of the 75 black-and-white images in *Harker's Barns* elegantly captures the glory and demise of one of rural America's most enduring icons. From square to round, wood to brick, Dutch to Swedish, occupied or abandoned, the barns documented in Harker's collection

testify to an era that's coming to a quick close in Iowa and the Midwest. Complementing Harker's photographs are vignettes by poet and writer Jim Heynen. Each vignette reveals the living history that can be found inside each rural structure.

"A good photograph can maintain an old barn through blizzards and hail storms and tornadoes," Heynen writes. "It is the best support beam and wood preservative an old barn can have."

A commercial photographer for more than 25 years, Michael Harker works as an ophthalmic photographer in University of Iowa Hospitals and Clinics. His barn photographs also were featured this year in the traveling exhibit *Barns Again! Celebrating an American Icon*, sponsored by Humanities Iowa and organized by the Smithsonian Institution's Traveling Exhibition Service and the National Building Museum.

### It's Just a Click Away

From Sioux City to Davenport, people all over Iowa can take advantage of library services at The University of Iowa—without leaving their homes.

By clicking the Live Reference button on the UI Libraries home page ([www.lib.uiowa.edu](http://www.lib.uiowa.edu)), visitors can get help with research and reference questions, find and use electronic journals and databases, and get support in locating information on the web and in InfoHawk, the libraries' online information system.

The service is available from 9 a.m. to 5 p.m. An experimental cooperative agreement with the University of New Castle in Australia will expand the service's hours this summer. Taking advantage of the time difference, questions asked after 5 p.m. by users in Iowa will be directed to librarians at the University of New Castle; likewise, UI librarians will handle after-hours requests from Australian users from 9 a.m. to 5 p.m. in Iowa.



## Biomass for the Masses

Staking a claim at the forefront of the state's—and possibly the nation's—renewable energy efforts, the UI Power Plant since January 2003 has been adding oat hulls to the coal it normally burns to produce energy. Why? To lower the University's energy costs and reduce harmful emissions into the atmosphere.

No other public power plant in the state is so heavily engaged in the use of biomass materials for energy production, according to David Osterberg, associate professor of occupational and environmental health in the College of Public Health.

"Wherever this happens across the United States, it's uncommon to have 20 to 25 percent of all energy produced by wind or biomass or something that is not a fossil fuel," Osterberg says. "This project is pretty substantial."

The oat hull project began about a year and a half ago, with a phone call from Quaker Oats. Converting the UI plant to accommodate Quaker Oats' discarded oat hulls took months of tinkering and planning, and now the plant is burning an average of 60 tons of oat hulls per day. Ultimately, the plan is to burn an average of 50,000 tons of oat hulls per year, which would reduce the University's annual reliance on coal by about 25 percent. The substitution also lowers carbon dioxide emissions.



## Tobacco Cure

The Roy J. and Lucille A. Carver College of Medicine will collaborate on a nationwide project to develop and implement state-of-the-art teaching materials related to tobacco use and cessation.

"Evidence suggests that teaching physicians how to advise patients about tobacco early in their education increases the likelihood that they will build on these skills throughout their careers," says Kristi Ferguson, director of the college's Office of Consultation and Research in Medical Education and the project's director at the University. She is also an associate professor of community and behavioral health in the UI College of Public Health.

The UI Carver College of Medicine is one of 12 medical schools from across the United States to take part in a project funded by a \$1.5 million grant from the National Cancer Institute.

Tobacco users often cite advice from a physician as having been very influential in the decision to quit smoking. Jeffrey Wilson, a pulmonary specialist and associate professor (clinical) of internal medicine, notes that learning skills such as how to elicit a smoking history from patients, how to educate patients about the risks of smoking, and how to advise patients about successful quitting strategies should help physicians become more comfortable in dealing with these issues in medical practice.

## Helping Teachers Teach

The College of Education has received nearly \$270,000 in federal grants to help K-12 teachers across Iowa—particularly those in low-income schools—learn to teach math and science more effectively.

Funding comes from the state's Improving Teacher Quality State Grant Program, part of an effort under the federal No Child Left Behind Act of 2001.

The state of Iowa and the Board of Regents, State of Iowa, awarded a total of six grants statewide, including three submitted by members of the College of Education's Science Education Center: professor Robert Yager and graduate assistant Todd Campbell; professor Ed Pizzini; and faculty member John Dunkhase.

## Water Proof

The Iowa campus is now home to the first model of its kind to replicate the conditions of a lake. On one floor in the College of Engineering's IIHR-Hydroscience & Engineering Model Annex, researchers have built a basin about the size of a small swimming pool to study the problem of cold water intake at a California power plant.

Iowa experts hope to help technicians at a Prattville, Calif., hydroelectric power plant learn how to withdraw more cold water without threatening the ecological health of Lake Almanor, the plant's site about 120 miles north of Sacramento. The project uses the first-ever laboratory model of a large, thermally stratified reservoir or lake, according to lead investigator A. Jacob Odgaard, professor of civil and environmental engineering. The model measures about 50-by-75 feet. Researchers also are using a computer model.

"Our challenge is to design a water intake system that uses cold water only when necessary," Odgaard says. "Continuous withdrawal of only cold water could deplete the lake's cold water supply, resulting in harm to animal and plant life in the lake."

