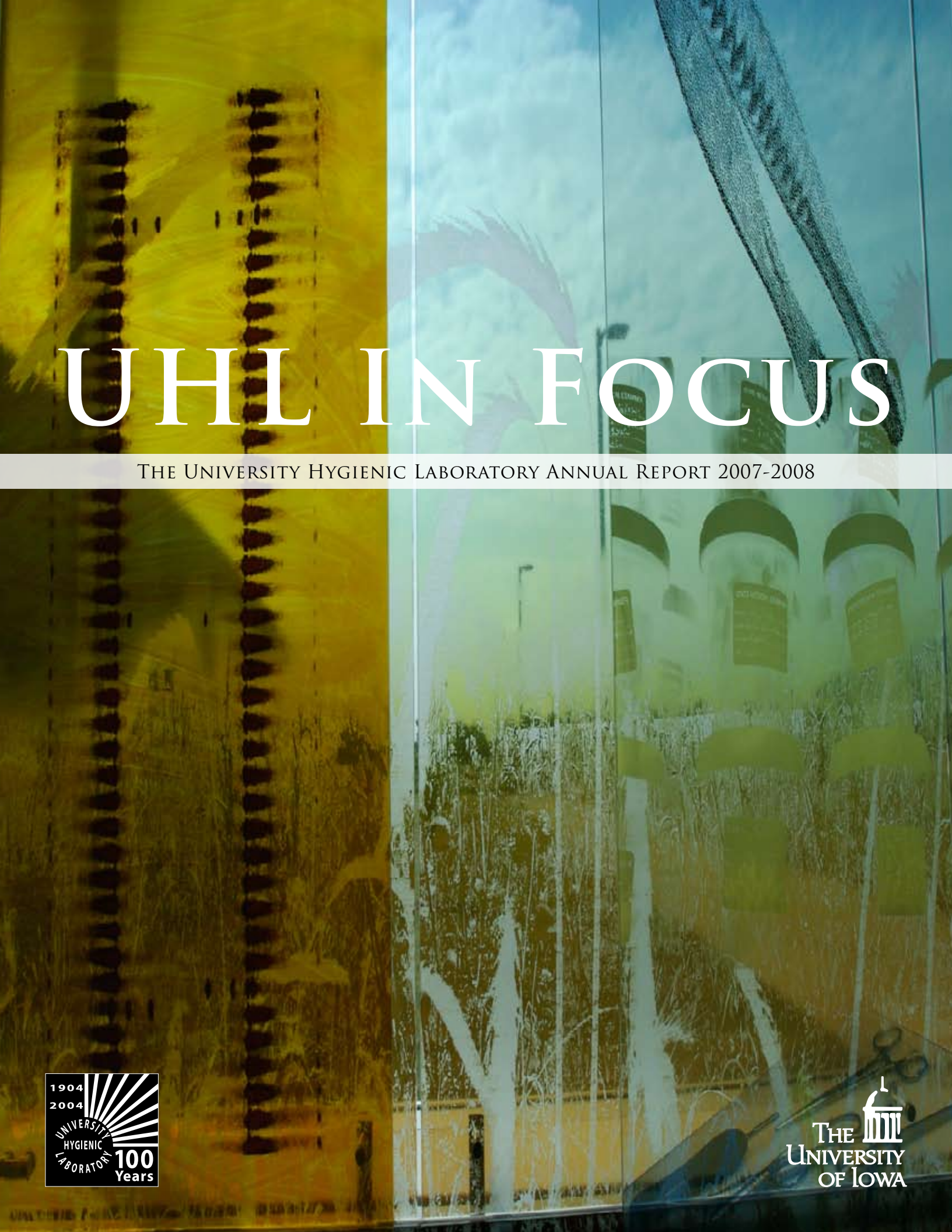


UHL IN FOCUS

THE UNIVERSITY HYGIENIC LABORATORY ANNUAL REPORT 2007-2008

1904 2004 UNIVERSITY HYGIENIC LABORATORY 100 Years

THE UNIVERSITY OF IOWA

A Message from the Director

Dear Friends,

It is with great honor that I introduce to you the University Hygienic Laboratory's 2007-2008 Annual Report. The report represents the re-establishment of a vital means for chronicling the work of Iowa's public and environmental health laboratory.

The University Hygienic Laboratory is one of only two state public health laboratories housed by law within the state's university system. As such, it provides a vital service mission by the University of Iowa to the state of Iowa. In addition, it provides the University with ready access to a primary component of our state's disease prevention and environmental quality system. We believe that this coordinating of the best of practice and the best of academia through active collaboration means that the UHL can affect not only Iowa but the rest of the nation.

We operate two facilities—one on the Oakdale Campus northwest of Iowa City and the other in Ankeny near Des Moines. The confirmatory testing and monitoring we conduct are in three core areas: infectious diseases, environmental monitoring and newborn screening.

Besides our public health testing duties for which we are most often recognized, we also provide biomonitoring services; environmental services; training and outreach; and research and development. In all these areas, the UHL has achieved national stature as a laboratory of excellence. We have attained this level despite the fact that our primary laboratory facility, located on the Oakdale Campus, is actually a 90-year-old building constructed to serve as a tuberculosis sanitarium. The achievement of excellence is due in large part to skilled and dedicated staff members who work tirelessly on behalf of the UHL's mission and are committed to continually renewing and upgrading our efforts.

One of the most exciting events that demonstrates this commitment took place in 2007 with the groundbreaking for our new facility due to be completed during the winter of 2009-2010. With the new facility, we are in an excellent position to provide greater leadership in the provision of timely, relevant and effective scientific information to prevent disease, and to protect the health and the environment for Iowa and Iowans.

This annual report both chronicles the past and sets the stage for a brighter future for public health and environmental science in Iowa. This future will be built on the development of a stronger laboratory with a staff committed to partnerships and systems thinking. We pledge to extend academic partnerships and community outreach efforts to move what we know into the community where it can produce benefit.

Thus, on behalf of the staff of the UHL, we offer this report and vision for Iowa, that together we will help make this great state the healthiest in the nation.

Sincerely,

Christopher G. Atchison, Director
University Hygienic Laboratory
UI Associate Dean of Public Health Practice

University of Iowa Organizational Chart

- Iowa Board of Regents
  - UI President
    - Government Relations
    - Office of University Relations
    - Intercollegiate Athletics
    - Special Assistant to the President for Equal Opportunity & Diversity & Associate Provost
    - Office of the Ombudsperson
    - Vice President for Research
      - Central Research Facilities
      - Central Microscopy
      - High-Field Nuclear Magnetic Resonance
      - Center for Biocatalysis and Bioprocessing
      - High Res Mass Spectrometry
      - Fermentation Policy
      - Clinical Trials Office
      - Conflict of Interest Officer
      - Corporate Partnerships
      - Environmental Health and Safety Office
      - Human Subjects (IRBs) Office
      - Iowa Advanced Technology Labs
      - Iowa Centers for Enterprise
      - Multidisciplinary Centers
      - Natural History Museum
      - Oakdale Campus
      - Oakdale Research Campus
      - Oakdale Research Park
      - Technology Innovation Center
      - Obermann Center for Advanced Studies
      - Office of Animal Resources
      - Old Capitol Museum
      - Public Policy Center
      - Research Information Systems
      - Research Integrity Officer
      - Sponsored Programs
      - State Archaeologist
      - UI Research Foundation
      - **University Hygienic Laboratory**
    - Vice President for Student Services
    - Senior Vice President and Treasurer
    - Executive Vice President and Provost
    - VP for Medical Affairs
    - VP for Legal Affairs and General Counsel

Biomonitoring paints a picture of Iowa health

Tiny pieces of filter paper are forming a mosaic of the health of Iowa families that eventually may lead to the early detection of metals poisoning. Researchers at the University Hygienic Laboratory are reviewing data collected from the state's neonatal screening program to help pinpoint geographic locations in the state with high levels of exposure to cadmium, mercury and lead.

This study conducted in UHL's Ankeny facility focused on these metals because of the well documented adverse health effects caused when they are present at elevated levels. Illnesses caused by these exposures can have a profound, long-term impact on health. Consequently, elevated levels of metals are tracked by the Iowa Department of Public Health.

When children are born in Iowa, filter paper is used to collect a few drops of blood that is tested for some 40 metabolic disorders. The Hygienic Laboratory performs these tests for the Iowa Neonatal Metabolic Screening Program. Researchers began studying these samples to determine if there is a link between areas of the state and incidence of exposure to heavy metals.

"Exposure to heavy metals represents the dose to the mother and the exposure passed on to the newborn," explains Dr. Don Simmons, UHL environmental program manager and study co-author. "Some children with higher levels of a particular metal are at higher risk of developing a significant body burden that might lead to neurological deficits. Also, the detection of heavy metals in blood spots could identify environmental conditions that place both the baby and the mother at higher risk of metals poisoning."

Some metals occur in the environment due to natural formations, such as the elevated levels of arsenic in Iowa groundwater thought to be caused by the Des Moines glacier lobe. Others are manmade from landfills, foundries, industries that use metals, or from smoke stack plumes that carry metals from these sites. By measuring the levels of metals and other contaminants in humans and animals (known as biomonitoring), scientists can determine the dosage that would potentially indicate a link to health problems, sometimes before they are noticed by those who are affectedtt.

"Human biomonitoring has been used for decades as a tool for better understanding environmental exposures by measuring chemicals in the human body," says Dr. Simmons, who developed the study with Dr. Brian Wels, chemist, and Marcia Valbracht, supervisor of newborn screening. "Public health benefits greatly from the information biomonitoring can provide by regularly assessing what is 'normal' in the population. That in turn provides a means to measure the effectiveness of prevention strategies."

Preliminary results from the study indicate a few hot spots for each of the metals, valuable information that was shared with UHL health partners. Dr. Simmons notes, though, that further validation is required for the study to be definitive. A search for funding for that portion of the project is under way.

In the meantime, UHL continues to seek new ways to bring into sharp focus the picture of Iowa's health.

UHL isolates Salmonella in peanut butter

The food poisoning outbreak began with a few cases in fall 2006. The cause remained elusive as the number of cases increased. It was a classic mystery, but with a twist at the end. Who would have thought the culprit to be peanut butter?

At least 425 people in 44 states, including eight in Iowa, had become sick by the time the outbreak ended months later.

In February 2007, UHL was one of the first laboratories to isolate *Salmonella enterica* serotype Tennessee from an open jar of Great Value peanut butter provided to the health department by a sickened patient.

The U.S. Food and Drug Administration had advised consumers not to eat Peter Pan peanut butter or Great Value peanut butter with a 2111 product code.

The contamination was traced to a ConAgra plant in Sylvester, Ga. Moisture from a leaky roof and a faulty sprinkler in the plant mixed with dormant *Salmonella* bacteria to contaminate peanut butter before it was packaged in jars.

"The isolation of *Salmonella* from the open jar of peanut butter is extremely useful to the epidemiologists in their investigation of this outbreak," said Dr. Mike Pentella, UHL associate director of infectious disease.

The confirmatory tests were led by public health microbiologist Cathy Lord with the assistance of Dr. Jennifer Boddicker, former Emerging Infectious Diseases fellow, and public health microbiologists Alison Houston and Randy Groepper. They reported their findings to PulseNet, an international infectious disease computer database.

UHL extracted *Salmonella enterica* serotype Tennessee and pinpointed its DNA through a process called pulse-field gel electrophoresis. Once identified, the positive case of *Salmonella* was reported to PulseNet.

Through PulseNet, clinicians compare the strand of DNA they are reporting with others already in the database. When strands from one incident match that of others, clinicians know they are dealing with a potential illness outbreak.

Salmonella infections sicken about 40,000 people in the United States each year, according to the CDC. Salmonellosis, as the infection is known, kills about 600 people annually. The actual number of infections may be 30 or more times greater because many milder cases are not diagnosed or reported.

Children are most likely to get salmonellosis. The rate of diagnosed infections in children younger than five years old is about five times higher than the rate in all other persons. Young children, the elderly and the immunocompromised are most likely to have severe infections.

"The ability of this lab to be among the first in the nation to isolate the organism is a testimony to the high quality of work our staff routinely performs," said UHL Director Christopher Atchison. "Our staff is to be commended for their diligence in determing this result."

PulseNet helps solve mystery

Fingerprints not only identify people; they are used to pinpoint the source of illnesses.

An international database of infectious diseases known as PulseNet allows scientists to use DNA fingerprinting technology to quickly detect clusters of illnesses, and then pinpoint the source of the outbreak.

The 2006-07 peanut butter case involved sporadic events over several months. In some incidents, *Salmonella* was present in low concentrations that did not make consumers sick.

"If we wouldn't have had access to the national data, it may not have been determined that this was a national outbreak," said UHL microbiologist Alison Houston. Houston, formerly the PulseNet liaison in bacteriology, is now UHL's public health microbiologist for the TB/Mycology section.

The PulseNet concept grew out of a 1993 outbreak in which more than 700 people in the Northwest got sick from eating fast-food hamburgers. The CDC used genetic fingerprinting to show that the bacteria that made people ill matched the ones found in hamburger patties.

The system works like this: An ill patient's lab sample is forwarded to a public health laboratory where scientists determine the organism's genetic fingerprint using pulsed-field gel electrophoresis.

Scientists upload the DNA fingerprint to the CDC computer database. Laboratorians nationwide regularly perform database searches, looking for bacteria strains that are similar in ill persons, which could signal an outbreak.

Once an outbreak is identified, researchers alert state and local health officials. In the peanut butter case, the CDC alerted states in January 2007 after seeing reports of food poisoning from the *Salmonella enterica* serotype Tennessee strain over five months.

"Without (PulseNet), we wouldn't pick up near as many foodborne outbreaks," Alison said. "People would be sick and we would know it was probably related to food, but we wouldn't be finding these sources."

UHL rescues Louisiana lab destroyed by Hurricane Katrina

When Hurricane Katrina smashed into the Gulf Coast on August 29, 2005, the devastating flood waters that engulfed New Orleans caused a ripple effect in public health that impacted even Louisiana's youngest citizens. The Louisiana Office of Public Health (LOPH) laboratory and its newborn screening program, located in the heart of the Crescent City, were among the hundreds of thousands of structural casualties. If that program was not rescued, children born in the state would not be tested for metabolic disorders that, if left undiagnosed and untreated, could cause severe developmental delays, coma or death.

Two days after the hurricane, UHL made arrangements to temporarily adopt Louisiana's newborn screening program at its laboratory facility in Ankeny, home to Iowa's Neonatal Metabolic Screening Program. UHL worked with the Emergency Management Assistance Compact, an interstate mutual aid agency linking states facing a disaster with other states willing to help, and with Homeland Security to coordinate regular and rapid delivery of newborn blood specimens.

On Sept. 8, 2005, the first Louisiana specimens arrived, marking the beginning of an interstate collaboration that expanded in scope over the course of two years.

"During the first year, we were able to support Louisiana's decision to expand the number of disorders screened from 9 to 28," said Dr. Stan Berberich, program manager of UHL's newborn screening program. "These are conditions recommended for testing in newborns by the March of Dimes."

By the end of 2006, UHL was testing for 38 conditions on behalf of Louisiana, and would later add cystic fibrosis to the panel of tests.

Over the course of two years, staff tested more than 110,000 babies from Louisiana for congenital, metabolic disorders. Each year, the Lab performs testing for some 40,000 Iowa newborns and about 9,000 babies born in North Dakota. In June 2007, South Dakota also selected UHL to provide laboratory support for its newborn screening program.

To adjust for the surge in specimen volume and ensure testing was performed within the critical time frame, UHL added an additional shift in the Ankeny laboratory facility.

According to Dr. Berberich, at least one, on average, affected child is born every week in Louisiana. Consistent, ongoing cooperation between Iowa and Louisiana ensured that there was never a gap in this critical testing.

With screening well under way in the Hawkeye state, the Louisiana laboratory set to work on a new site for its program. The Jefferson Mental Health Clinic in the New Orleans suburb of Metairie was transformed into a state-of-the-art lab. Staffing the facility presented another challenge. All but two of the original newborn screening personnel left the area following the hurricane and did not return.

Laboratorians from other Louisiana programs were reassigned to fill the gap as the state prepared to bring infant screening back to the Gulf region. During the months that followed, the relationship that started as a response to an emergency quickly developed into professional collaboration. UHL's newborn screening staff shared their experiences in building the Ankeny facility with their Louisiana peers. The perspective of the Louisiana clinicians provided insight into UHL operations.

"When we entered into this collaboration, we expected it to be for two to three months. While we all realized that this would be a tremendous burden on the laboratory staff, we thought that it would be relatively short-lived," said Dr. Arthur Hagar, public health laboratory assistant director for the Louisiana Office of Public Health.

"I commend everyone involved in this effort for their dedication to ensuring that all newborns in Louisiana were screened for more than 25 diseases. This effort has undoubtedly saved a number of infants from severe morbidity and possibly even death. We could not have asked for a better group of people to work with on this important public health program."

Two years after adopting the Louisiana newborn screening program, UHL returned the program in November 2007.

"I want to express my sincere thanks to the staff of the University of Iowa Hygienic Laboratory for their unbelievable efforts over the past two years to perform newborn screening testing on babies born in Louisiana," Hagar said.

"The collaborative effort to rapidly bring the newborn screening program to Iowa exemplifies the best in partnerships across state and agency boundaries to benefit families in times of emergency," said UHL Director Christopher Atchison. "The commitment of the staff helped ensure that even amidst a time of rebuilding, this potentially life-saving service was continuously provided to the children of Louisiana."

Disease Control Division
Infectious Disease Diagnosis and Prevention

The Disease Control Division (DCD) section is divided into three areas: Infectious Disease testing, Environmental Microbiology and Public Health Medical Screening. Within these areas, the division offers a scope of services that include scientific, consultative and training services.

Infectious Disease

The primary functions of the Infectious Disease program are to provide the rapid identification of pathogens for practitioners, perform surveillance for emerging diseases of public health importance, and serve as the standard of excellence for laboratory performance. Program staff members serve as expert resources for clinical laboratories, healthcare providers, veterinarians and epidemiologists throughout the state.

UHL educates and trains laboratorians, healthcare providers and the public on testing, diseases and prevention. We report surveillance data such as influenza, chlamydia and gonorrhea to the CDC, and supply the CDC with influenza isolates for further strain typing and production of future vaccine.

Some of the DCD's recent accomplishments include improving test turnaround times and developing new molecular tests for Influenza A/B/H1/H3/H5/H7.

Environmental Microbiology

The Environmental Microbiology section analyzes the microbiological quality of water in the state. This service includes water from both public and private wells; surface water in lakes, rivers and streams; wastewater; recreational water in pools and spas; bottled water; and commercial ice. Environmental Microbiology also investigates waterborne and foodborne disease outbreaks with our local and state public health partners. These could range from cryptosporidiosis or legionellosis from a swimming pool to salmonellosis in a potluck potato salad.

Public Health Medical Screening

The mission of UHL's Public Health Medical Screening section is to reduce the emotional and financial burden of disability and death caused by genetic and congenital disorders. UHL is the sole provider of laboratory services for the Iowa Neonatal Metabolic Screening Program and the Expanded Maternal Serum Alpha-Fetoprotein Screening Program. The Iowa Department of Public Health (IDPH) provides administrative oversight for both programs.

UHL collaborates as a partner within a larger Public Health Medical Screening system to ensure that the full benefits of these screening programs are realized. The comprehensive system consists of education, laboratory testing, follow-up, diagnosis, treatment, case management and ongoing program evaluation.

UHL serves as the hub for the collection, distribution and management of program-related information. UHL's primary partners for these programs are IDPH, the UI Department of Pediatrics, the UI Department of Obstetrics and Gynecology, the UI Hospitals and Clinics as well as other hospitals, practitioners and parents.

Iowa is one of the leaders in the nation in providing newborn screening services and is implementing new strategies to provide the best prenatal maternal screening possible.

Environmental Health Programs

The UHL Environmental Health Programs (EHP) encompass analytical testing and sampling support and perform testing of diverse substances from air to wastewater. These may include clinical specimens of blood, hair, teeth and urine; fish; food; soil and sediment; and unknown powders. Much of the work is a result of federal and state regulations and/or environmental monitoring programs. The UHL is an accredited testing laboratory for drinking water, wastewater, underground storage tanks and solid waste testing; for asbestos identification; and for industrial hygiene services.

UHL is responsible for the analysis of water related to the Clean Water Act and Safe Drinking Water Act. The EHP also provide analytical support for environmental monitoring and research activities as requested by the Iowa Department of Natural Resources (IDNR), the University of Iowa and Iowa State University. Field and laboratory support is provided for the IDNR air monitoring network, several IDNR water monitoring programs and the state Radiation Emergency Response program. Consultation and laboratory support to the Iowa Bureau of Labor, as well as laboratory support to the Missouri and Nebraska departments of agriculture also are provided. In addition to serving as a CDC biological terrorism response laboratory, the UHL is also a CDC Level-Two+ Chemical Terrorism laboratory.

UHL's Environmental Health Programs are divided into multiple areas, including Air Quality, Blood Lead, Industrial Hygiene, Radiochemistry, Limnology, Sample Preparation, and Inorganic, Organic and Volatiles analysis.

Radiological Emergency Response Team

The Radiological Emergency Response Team (RERT) provides field monitoring and technical consultation to the Iowa Department of Public Health and the Iowa Homeland Security and Emergency Management Division of the Iowa Department of Public Safety in the unlikely event of an accident at one of the four nuclear power plants in or near Iowa. UHL maintains a radiochemistry laboratory with trained staff ready at all times to provide laboratory measurements of field samples. The laboratory can evaluate the extent to which radioactive materials have been released from a power plant accident as well as monitor the release of these materials during the plant's normal operations. UHL also provides trained scientific volunteer staff for three RERT teams and a coordination team that deploys in the event of a release or potential release of radioactive material from either a nuclear power plant or a transportation accident.

Laboratory Certification

UHL provides technical support to the IDNR for the Laboratory Certification program. It is administered by UHL under a contract with IDNR. There are 200 laboratories in the Iowa program: 150 are Iowa wastewater treatment plant laboratories, 20 are in the drinking water program, and the remaining 30 are large laboratories that are involved in one or more programs (drinking water, underground storage tank monitoring or wastewater testing). Services provided include auditors who conduct technical and data onsite audits and overall program coordination. A unique feature of the Iowa program (versus other states) is that UHL provides training as needed or directed by IDNR. Onsite audits are usually conducted biannually by UHL providing a team of auditors that prepares reports and recommendations for IDNR. Another service provided is microbiology proficiency testing, which is required to be performed annually.

Ankeny Laboratory Facility

What was initially termed "The Des Moines Laboratory Branch" was established in 1951 with staff from the State Health Department's water engineering group. In 2005, this branch of UHL, along with the Newborn Screening program, relocated to the newly constructed Iowa Laboratories Facility on the Ankeny Des Moines Area Community College campus.

Services are provided for agencies and clients that submit samples for the Iowa Neonatal Metabolic Screening Program, IDNR via the Ankeny Limnology Group (from sites in western Iowa), inorganic chemistry (metals, drinking water, wastewater, industrial hygiene, blood lead and biomonitoring), water microbiology and molecular biology.

In 2007, the Ankeny facility added a new Biosafety Level Three laboratory to test, in a safe and controlled environment, for infectious agents that could cause serious or potentially lethal diseases. This specialized lab provides the capability for rapid testing for diseases such as tuberculosis and avian influenza, and other agents that may be used in bioterrorism.

Support Services within UHL

Clinical Laboratory Improvement Amendment Program

Since 2002 UHL has been responsible for the administrative oversight of the Clinical Laboratory Improvement Amendment (CLIA) program in Iowa and has served as the State Agency representative for the Center for Medicare and Medicaid Services (CMS) CLIA program.

The CLIA program is a self-funded, "user fee" Federal program responsible for ensuring clinical laboratories in Iowa are providing quality testing. Some of the key areas of concentration are laboratory surveys (inspections), proficiency testing reviews, the certificate of waiver (COW) survey project, the State Agency Performance Review (SAPR), surveyor training, publications and education.

The 2007 SAPR review of the Iowa CLIA program determined that the Iowa CLIA program met or exceeded all 13 criteria.

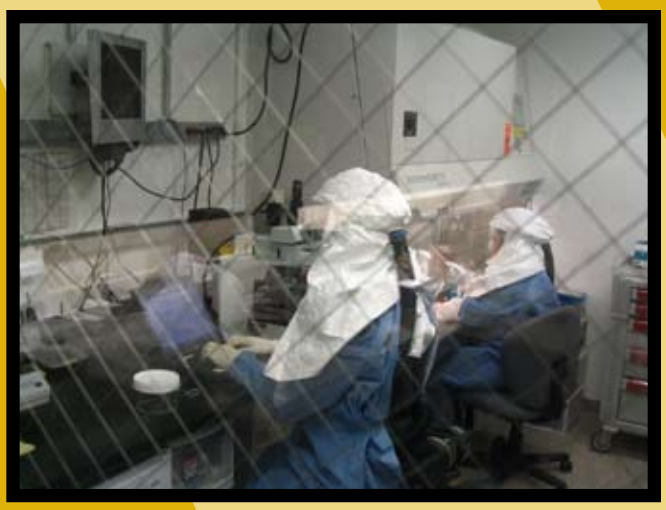
Communications Division

The UHL Communications division was formed in October 2006 in response to the changing nature of public and environmental health in order to enhance the two-way exchange of ideas and information. It is a resource to state agencies, policymakers, public health partners and the general public. Activities supported by the group include emergency response, media inquiries/press communications, internal and external communications, website updates and collaboration with public health partners. One of

the main goals of the division is to establish and maintain peer relationships with members of the University community, public health and environmental health partners across the state and media representatives.

Emergency Preparedness Program

UHL provides training to perform standardized protocols and serves as Iowa's only reference level laboratory to perform confirmatory testing for biological and chemical threats in the CDC's Laboratory Response Network. The program is responsible for analyzing emergency samples in response to natural disasters, man-made catastrophes, environmental spills, suspicious biological or chemical threats and other infectious disease outbreaks. The Emergency Preparedness Program is not only responsible for ensuring that UHL has the internal capabilities to respond to these unexpected events, but is also required to provide training, education and appropriate resources to external emergency response agencies and clinical (sentinel) laboratories throughout Iowa.



To ensure a successful emergency response, the UHL Emergency Preparedness Program coordinates emergency response planning, training and conducting of exercises with a diverse and broad group that reaches partners at the local, state and national levels. From a national perspective, UHL's Preparedness Program is recognized as a model for small population states. Several of the initiatives completed here have become national models. Iowa is one of few states to provide on-site training to all 142 sentinel laboratories, 1,031 laboratorians and other response professionals.

Education and Outreach

The Education and Outreach division of the Hygienic Laboratory connects every corner of the state with information to promote health and protect the environment. Some of the programs offered include:

"Passport" is the Hygienic Laboratory's internship program that gives students from Iowa's universities and colleges working experience in the state laboratory. This new program has matched students with mentors in the fields of infectious disease, environmental health, communications and administration. Fellowships, practicums and job shadowing are part of the student experience at the Hygienic Laboratory.

IPTV Connections links classrooms from kindergarten through grade 12 using the Iowa Communications Network for live broadcasts of educational material. The Hygienic Laboratory scientists and specialists present several topics, including "Germy the Germ," "Edible Aquifers," "Mom, Why Can't I Eat Hamburgers?" and other programs designed to educate while entertaining.

Workshops, forums and conferences are coordinated and sponsored for internal and external laboratory staff, and other public and environmental health partners. These include the Influenza Teleconference Series, Annual CLIA Update, the Infertility Prevention Program and the Annual Laboratory Symposium for water treatment professionals.

Additionally, the Hygienic Laboratory participates in many educational programs, including Iowa Academy of Science and the Science, Technology, Engineering and Mathematics (STEM) conference.

Information Technology

Information Technology (IT) provides efficient, reliable data management 24 hours a day, seven days a week. IT provides services for data acquisition, specimen tracking, data reporting and client billing that are reliable, secure and convenient for both staff and clients.

In addition to data management, IT staff members provide long-term software design and development to manage all aspects of laboratory operations. The IT group helps clients readily access information. Turnaround time for test results has been improved, and information is now available via the web and Internet, allowing clients 24-hour access to test results.

The Hygienic Lab is moving toward more partnerships with hospitals and clinics, other public health laboratories and government agencies, including the Centers for Disease Control and Prevention. The IT group is extensively involved in implementing these partnerships. Collaborations with these partners contributes to the UHL Continuity of Operations Plan that is used in the event of emergencies. IT staff also collaborates with other public health laboratories to provide backup services during national disasters and emergencies.

Quality Assurance

UHL believes that the validity of medical and environmental decisions made by data users are, to a major extent, determined by the reliability of laboratory data. UHL is committed to providing relevant testing in a timely fashion. The validity and reliability of the information generated is maximized by adherence to documented quality control and quality assurance protocols that are based on principles of data quality indicators. The Quality Assurance (QA) program at UHL encompasses all aspects of operation, from sample/specimen collection to reporting and customer service. The entire staff is accountable for the QA program and its implementation in the daily operation of UHL.

The main responsibility of the quality assurance officer is quality assurance oversight and ensuring that all personnel understand the QA policy. The QA program includes completing an annual affirmation of confidential and ethical statements; documenting appropriate training and adequate experience; tracking and documenting indicators monthly; documenting follow-up actions; completing an internal audit program; reviewing documents; performing proficiency testing samples; and defining roles and responsibilities.

Taking the LEED

Science and stewardship combine in the construction of the new University Hygienic Laboratory facility on the Oakdale campus.

The new building is the first University of Iowa construction project to seek certification for Leadership in Energy and Environmental Design (LEED). The LEED Green Building Rating System™ is a certification program that is a benchmark for sustainable construction practices. It provides independent verification that the new laboratory will be built in an environmentally responsible manner and that the facility will be a healthy place to work. The goal is for the new building to achieve the LEED Silver rating.

This state-of-the-art facility is made possible through appropriations from the state of Iowa, which will help protect the health and preserve the environment of our citizens for generations to come.

After decades of working in a former tuberculosis sanitarium that was adapted to support testing, the UHL is expected to move into the new facility during the winter of 2009-2010. LEED features will include:

- Optimization energy performance including maximization of daylight use.
- Construction waste management.
- Use of recycled and regional materials.
- Low-emitting gases.
- Water efficiency.
- Construction practices that protect the health and preserve the environment for all Iowans.

Staff Snapshots

UHL employs individuals from a variety of different backgrounds. The diverse workforce includes chemists, microbiologists, limnologists, computer scientists, educational specialists, graphic designers, communications specialists, accountants, grant and contract managers, environmental and clinical microbiologists as well as clinical laboratory scientists.

UHL Staff

Full-time 220
Part-time 38

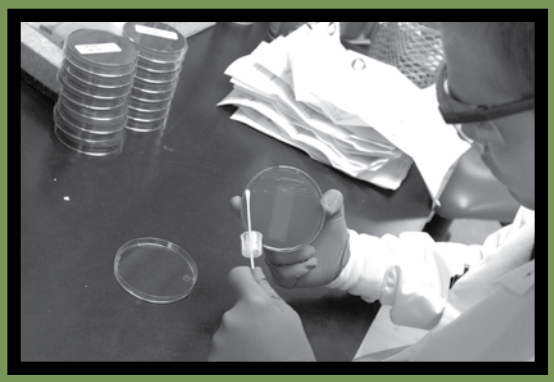
Iowa City 177
Ankeny 81

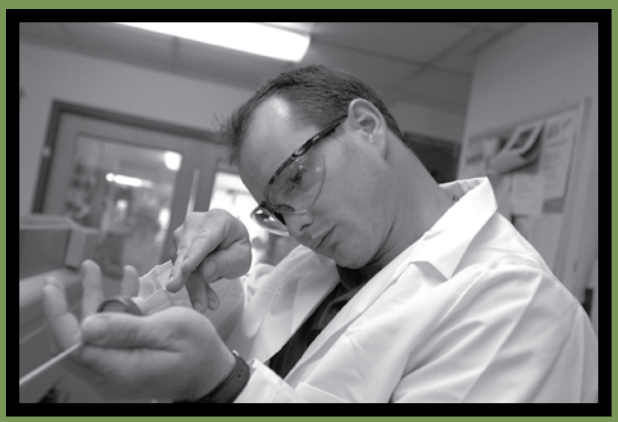
Professional and Scientific 202
Merit 56

Ph.D. 13
Masters 28
BS 65
BA 32
AA 3
AS 3

Students 9
Temporary 16
Adjunct faculty 5

Environmental Health Programs 115
Disease Control Division 62
Iowa Metabolic Screening Program 12
Information Technology 11
Support Services 81





2007-2008 UHL By the Numbers

561 Number of students learning about health issues in UHL classes through the Iowa Public Television K-12 Connection Series.

801 Participants, including those from international sites, in the Annual Clinical Laboratory Improvement Amendment (CLIA) Update sponsored by UHL and the National Laboratory Training Network (NLTN).

1,326 Number of external clients who accessed results via the web provided by the IT department.

3,150 Participants in UHL's Training and Outreach programs.

23,707 Miles that CLIA staff members traveled to conduct laboratory inspections.

130,000 Total number of newborn screening tests UHL provided for four other states and three other countries.

$2,163,242 Amount from the grant received from the U.S. Centers for Disease Control and Prevention for Biological and Chemical Terrorism response and emergency preparedness.

$4,869,735 Funding amount from contracts between UHL and the Iowa Department of Natural Resources.

Total Number of Tests Performed in Iowa 2007-2008

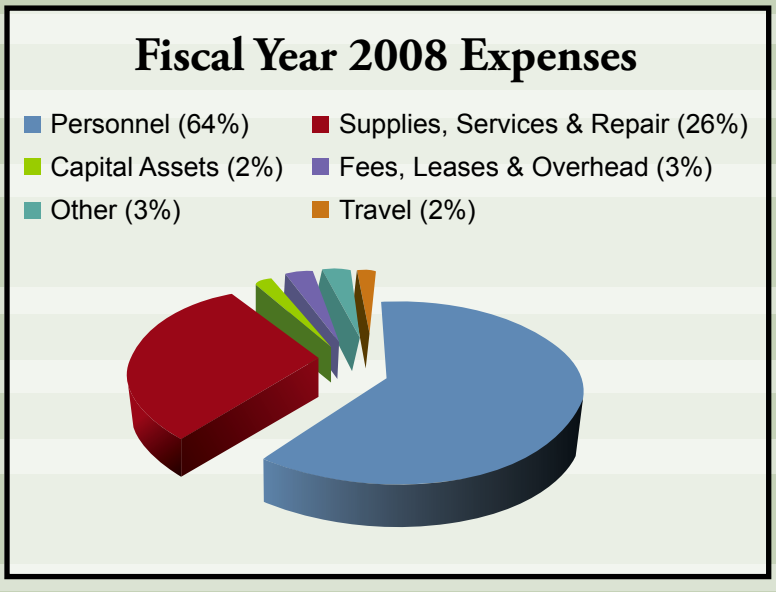
2007-2008 Financial Report

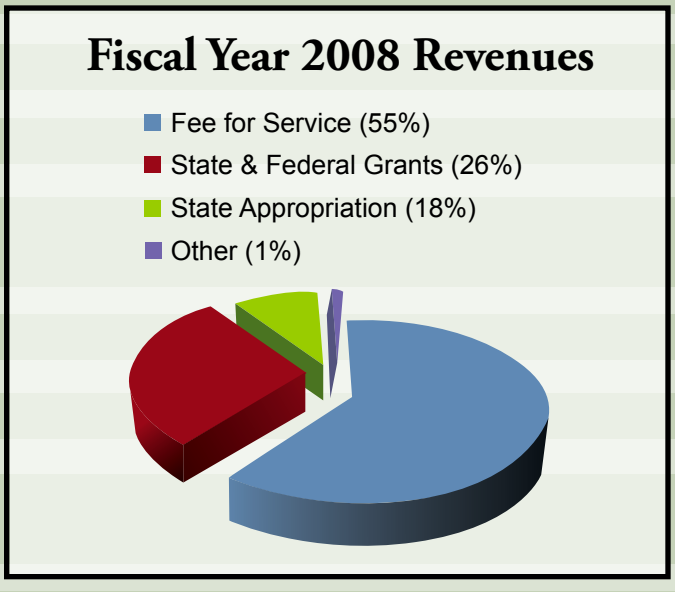
Statement of Financial Position June 30, 2008 (accrual basis)

Assets		
Current (Cash & Accounts Receivable)	$4,342,072	
Fixed, Net of Depreciation	$3,579,589	
Total		**$7,921,661**
Liabilities and Fund Balance		
Current (Salaries, Leases & Accounts Payable)	$1,599,181	
Fund Balance – Net Investment in Equipment	$2,747,664	
Fund Balance – Grants, Contracts, Restricted Funds	$3,574,816	
Total		**$7,921,661**

Statement of Activities June 30, 2008 (budget basis, interdepartmental transfers eliminated)

Revenues from Fee for Service, Grants and Appropriations		**$23,039,345**
Less Expenses		
Personnel	$ 14,702,520	
Supplies, Services & Repairs	$ 6,067,426	
Capital Assets	$ 400,741	
Fees, Leases & Overhead	$ 722,526	
Other	$ 667,697	
Travel	$ 368,344	
Total Expenses		**$22,929,254**
Net Operating Income (Revenues – Expenses)		**$ 110,091**
Net Fund Balance at the Beginning of the Year		**$ 2,637,573**
Net Fund Balance at the End of the Year		**$ 2,747,664**





On The Covers

The artwork featured on the front and back covers of this report are photographs of "Slides," original art on glass panels created by Norie Sato for the Iowa Laboratories Facility, home to the UHL Ankeny Laboratory.

University Hygienic Laboratory
102 Oakdale Campus, H101 OH
Iowa City, IA 52242-5002
319-335-4500 or 800-421-IOWA
Fax: 319-335-4555

Ankeny Laboratory
2220 S. Ankeny Blvd
Ankeny, IA 50023-9093
515-725-1600
Fax: 515-725-1642

www.uhl.uiowa.edu

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