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Rudd Center's Brownell is on a Mission: Improve World's Diet, Prevent Obesity, Fight Weight Gain Stigma

Americans live in a culture that abounds with "diets that will change your life" and "breakthroughs in weight management." However, despite all the diet hype, CASE member Kelly Brownell, co-founder and director of the Rudd Center for Food Policy and Obesity at Yale University, says that "300,000 premature deaths a year can be attributed to obesity"—a number that he considers "high and alarming, and especially alarming in children." Brownell predicts that the United States will see a 40% increase in its already extremely high rate of diabetes over the next 25 years. Unfortunately, the United States is not alone in its battle with obesity. In a *New York Times* article published January 23, 2004, Brownell wrote, "The International Obesity Task Force estimates one billion people are overweight or obese. In all but the poorest countries, obesity and its consequences—rising rates of heart disease, and Type 2 diabetes—are overtaking malnutrition as major health problems." Furthermore, children, once considered unlikely candidates for heart disease, are currently at great risk, causing doctors, parents and schools alike to take a close look at the problem of obesity in an effort to find prompt and effective long-term remedies.



CASE member Kelly Brownell, co-founder and director of the Rudd Center for Food Policy and Obesity at Yale University (Photo courtesy of the Rudd Center)

The Rudd Center—made possible by a grant from the Rudd Foundation, a private, nonprofit organization funded in 1998 by entrepreneur and philanthropist Leslie G. Rudd—was launched in October 2005 with a mission to "improve the world's diet, prevent obesity, and reduce weight stigma through creative connections between science and public policy, targeted research, frank dialogue among key constituents, and a commitment to real change." Brownell and his colleagues "assess, critique, and strive to improve practices and policies related to nutrition and obesity in order to inform and empower the public, promote objective, science-based approaches to policy, and maximize the impact on public health." Brownell would like to see America's food concerns move away from beauty and towards health. His interest is fighting obesity without stigmatizing people who are overweight. In a November 2, 2006 *Washington Post* article written with colleague Rebecca Puhl, Brownell points out that many believe that it is an "acceptable and effective form of motivation to make people feel bad about their weight, when in fact the result will be just the opposite." Along with his colleagues, Brownell conducted a study of 2,000 people who were participants in a weight loss program and discovered that those who felt stigmatized reacted by eating more and giving up on losing weight. Brownell believes that weight stigma is so "ingrained in our culture that it's rarely seen as a problem." The Rudd Center website suggests three strategies for combating this perception; these include conducting research to demonstrate the effects of stigmatization, addressing it as a prejudice, and building a coalition to fight prejudice.

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News from the National Academies

The following is excerpted from press releases of the National Academies and from *Infocus Magazine* (www.infocusmagazine.org), a news resource of the National Academies.

◆ Low-Level Nitrogen Pollution More Harmful Than Thought

Nitrogen-rich fertilizers, widely used in agriculture, have been shown to reduce biodiversity in areas where they are applied, even in low amounts, according to a study appearing in the journal *Nature*. It has long been acknowledged that areas of concentrated nitrogen pollution can cause drastic changes in ecosystems, but the study shows a marked drop in the biodiversity of areas that were subjected to low-level nitrogen deposition, such as fertilized agricultural lands. The 20-year study examined the biodiversity of agricultural plots, some of which were subjected to slow fertilization with nitrogen, while others were left alone as a control. The plots deposited with nitrogen showed a 17% drop in the number of plant species, compared with the control plots. Plots showed significant signs of recovery when nitrogen deposition was stopped midway through the study, suggesting that much of the damage can be undone if fertilizer use is reduced or halted.

[<http://www.nationalacademies.org/headlines/20080215.html>]

◆ US Climate Change Research Program Making Progress in Documenting Changes, Lagging in Study of Impact on Humans

Climate change research directed by the federal government has made good progress in documenting and understanding temperature trends and related environmental changes on a global scale, according to a new report from the National Research Council. The ability to predict future climate changes also has improved, but efforts to understand the impact of such changes on society and analyze mitigation and adaptation strate-

(see National Academies, page 7)

A critical component of the work done at the Rudd Center is structuring public health messages so that valuable information can have the intended positive effect of changing attitudes toward food and eating. America is caught up in a fundamental paradox when it comes to food and diet: on the one hand, Americans are bombarded by messages promoting a sculpted body and encouraging diet trends, while at the same time other messages encourage us to eat more, resulting in an unhealthy relationship with food and body image. On March 25, 2006, Joe Nocera published the article, "Food Makers and Critics Break Bread," in the *New York Times*. In it, he quotes Brownell: "There is plenty of nutrition education done in this country. It is done by the food industry." Recognizing that the characteristics of a message and its communicator have a major impact on how a message is received and its resulting effectiveness, the Rudd Center is working with social scientists to frame public health information so that it promotes better nutrition and prevents obesity.

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In a further effort to meet these goals, the Rudd Center has formed a "Safe Space" where food industry leaders, legislators and public health advocates can meet and have an open and meaningful dialogue in an effort to find ways of promoting healthy foods while maintaining profitability. One goal of the Rudd Center is to help induce change in the economics of food. In our current market, healthy foods cost more than unhealthy foods. Safe Space meetings are designed to bring disparate groups together to "explore whether profitability can intersect with public health." At this time, Brownell notes that "food marketing is largely directed at kids," and while education is an important element for change, he observes that "education alone is largely ineffective; changing the environment is much more important." For example, Brownell would like to see physical education restored in those schools where it has been eliminated. He also believes that while kids can be taught all day long about trans fat, there can be no real impact on childhood obesity until it is taken out of their food.

Another key initiative of the Rudd Center is to monitor the impact of efforts by the food industry to encourage healthy eating and exercise trends, including making snacks available in vending machines, and lowering levels of sugar, salt and fat in foods. Brownell claims that although these efforts may be well intended, their outcomes have not been scientifically assessed. In the same 2006 *New York Times* article, Brownell states that attempts by the food industry to educate the public about nutrition are based upon "convincing us that fruit roll-ups are healthy, and that a cereal that is half its weight in sugar is part of a nutritious diet." The Rudd Center strives to evaluate whether or not various initiatives have positive or negative unintended consequences, since at the core of the Rudd Center's interest is "to praise real progress and critique efforts that have no impact, block progress, or increase consumption of unhealthful foods."

Some current issues that the Rudd Center is addressing include labeling and nutritional information for restaurants. In recent articles appearing in the *San Francisco Chronicle*, and the *Hartford Courant*, Brownell points out that restaurants are the new family dinner table, as increasing numbers of Americans are spending a significant portion of their food dollars on meals eaten outside the home, "increasing the consumption of fried foods." According to the Rudd Center website, Americans eat almost 30% of their meals outside the home each year. Although the National Restaurant Association may object to the type of scrutiny Brownell advocates, fearing that labeling foods will be too costly and infringe on freedoms, Brownell makes the point that 30,000 premature deaths can be linked to consumption of trans fat. This is evidence that food labeling for restaurants is a critical step towards improving American's health.

The Rudd Center for Food Policy and Obesity offers an award-winning website, www.yaleruddcenter.org, honored by Dorland Healthcare Information and voted one of the best in the industry. The website is easily navigated, and includes comprehensive information about a diverse range of food- and policy-related topics, including educational materials, food facts, and information on science, medicine, food and agriculture. A blog called Rudd Sound Bites, also featured in the July 28, 2006 issue of *Science* magazine, enables users to participate in a global dialogue about trends in food and diet, allowing ideas to be discussed and debated. Some recent blog titles include Food Marketing to Infants, The Social Meaning of Food and How Healthier Eating Could Save The World. The bloggers for the most part are closely involved with the Rudd Center, either as research associates or directors, but in all cases they are individuals committed to furthering a greater understanding of the dynamics of food, nutrition, diet and lifestyle.

(See Rudd Center, page 8)

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Business & Industry

NEW NONPROFIT TO DEVELOP LOW-COST DRUGS FOR WORLD'S POOREST. CURE, the New Haven-based organization that represents the biotech industry in Connecticut, has spun off a nonprofit company, **Developing World Cures, Inc.** to develop low-cost pharmaceuticals for people in the world's poorest countries. Developing World Cures would produce drugs that for-profit companies have found too risky for investments.

NEW PROGRAM AIDS FLEDGLING ENTREPRENEURS. The **University of New Haven's College of Business** has established a new Center of Excellence—**University-Based Enterprise and Development**—to help entrepreneurs through the process of starting an internet company. The flagship program—called **Venture Quest**—helps in the process of getting a venture going. It addresses such topics as sales, marketing, intellectual property, technology, product development and venture capital.

SIKORSKY SIGNS 5-YEAR DEAL. **Sikorsky Aircraft Corp.** has signed a five-year, multi-service contract for 537 H-60 Hawk helicopters. The contract is valued at \$7.4 billion and includes options for 263 aircraft, spares, and kits with a total potential value of \$11.6 billion. Actual production quantities will be set by funding allocations set by Congress and the Defense Department. Under the contract, Sikorsky will also provide technical publications and updates and training to Army and Navy maintenance personnel.

BLUE SKY COMES TO CONNECTICUT. **Blue Sky Studios**, a digital animation studio known for its production "Ice Age," is leaving its New York site to relocate to **Greenwich**. Blue Sky, a subsidiary of Fox Entertainment, plans to occupy 105,000 square feet and bring 300 jobs to Connecticut. The **State Department of Economic Development** is arranging an \$8 million low-interest loan to refurbish the company's new location and for new equipment.

POWER COMPANIES TO COMPETE FOR CT CUSTOMERS. **Direct Energy** and **ConEdison Solutions** have started selling electricity to customers of **Connecticut Light and Power** and **United Illuminating**. The companies would compete with the Connecticut utilities for the right to supply the actual electricity through the generation portion of the bill. Both companies offer a slightly lower rate than the established utilities.

NEW JERSEY FIRM OPENS NEW HAVEN RESEARCH FACILITY. **Molecular Biometrics** of New Jersey has opened a 2,200 sq. ft. research facility in New Haven. **Denny Sakkas**, associate professor at the **Yale School of Medicine**, has been appointed its chief scientific officer. Molecular Biometrics is developing technology to improve diagnostic tests in several areas, including reproductive health, neurodegenerative disease, and fetal medicine.

NEW HAVEN FIRMS WINS NSF GRANT. The National Science Foundation has awarded a \$97,000 research grant to **Carigent Therapeutics, Inc.** of New Haven for studies of paclitaxel, a chemotherapy drug, in treatment of ovarian cancer tumors. The products of Carigent are based on nanotechnology developed at **Yale University**.

METRO-NORTH CONDUCTORS TO ACCEPT CREDIT CARDS.

Metro-North has announced that its conductors will begin accepting credit cards on trains. The railroad developed its own software to plug into 750 scanners and printers. The devices, based on cellular technology, will also send conductors notices of delays and disruptions for dissemination to passengers.

DANBURY FIRM TO BOOST FUEL CELL PRODUCTION CAPACITY.

The **Connecticut Development Authority** has given final approval to a \$4 million loan for **FuelCell Energy** of Danbury to expand its facility in Torrington and increase its production capacity to 60 megawatts per year. FuelCell plans to invest between \$10 and \$15 million in the project.

PATENTLY "GREEN" VENTURE. **Pitney Bowes** of Stamford is one of the founding partners of an effort of the **World Business Council for Sustainable Development** to make environmentally responsible patents available to the public. Entitled the "Eco-Patent Commons," the venture is an online space available to the public. Other participants who have pledged to release patents into the "Eco-Patent Commons" include IBM, Nokia, and Sony. The goal of the "Commons" is for researchers and companies all over the world to have access to environmentally sound patents.



Communication

LICENSED PROFESSIONALS CAN RENEW LICENSES, PAY FEES ONLINE.

Workers in over 200 licensed professional and trade occupations, such as pharmacists and plumbers, can now renew their licenses with the **Department of Consumer Protection** over the internet and pay their licensing fees by credit card. State liquor permits are not renewable online. The **Department of Motor Vehicles** started to accept motor vehicle registration renewals online during 2007. Since then, more than 24,000 have used the internet to renew.

NEW HAVEN RESIDENTS CAN SUBMIT SERVICE REQUESTS ONLINE.

The **City of New Haven** went online in November with a "web 311" service to allow city residents to submit service requests and questions for city agencies over the internet. The website has over 156 pre-written service requests, for example to report trees in need of pruning or potholes that need to be fixed. City staff have also been asked to enter reports into the system, creating a city-wide database of what needs to be done. There also is a series of frequently asked questions about city services and regulations.



Education & Cognition

STATE LAUNCHES 'VIRTUAL LEARNING CENTER.' The state has started offering online courses for high school students who need credits to graduate. The **Connecticut Virtual Learning Center** offers basic courses as well as electives. The first offering of 21 courses began January 21. The program is only available to students if their local school district is enrolled in the program. Home-schooled or students from private schools can not yet take courses.

Items that appear in the In Brief section are compiled from previously published sources including newspaper accounts and press releases. For more information about any In Brief item, please call the Academy at (860) 527-2161, write the editors at CASE Bulletin, 179 Allyn St., Suite 512, Hartford, CT 06103-1422, or email us at acad@ctcase.org

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UCONN TO OFFER NURSING PRACTICE PHD. The **University of Connecticut** will offer a doctoral program in nursing practice beginning in the fall of 2008. It is designed for nurse practitioners, clinical nurse specialists, midwives, nurse anaesthetists, and administrators who prefer an alternative to doctoral programs that focus on research. The new PhD program will accommodate ten students per year. In addition, the **Master's Entry into Nursing** program is being expanded to the Waterbury and Stamford campuses. The 45-credit program takes 11 months to complete and is for students who hold bachelor's or other degrees in fields other than nursing and achieved a 3.0 average. Students take classes nine hours a week and work in a clinical setting at hospitals or clinics for 21 hours a week. Upon successful completion, a certificate is issued which allows the students to take the RN licensure examination.

WEB-BASED HOMELAND SECURITY PROGRAM. The **Center for Continuing Studies at the University of Connecticut** has received a \$1.3 million Competitive Training Grant from the US Department of Homeland Security to develop and deliver a **Collaborative Leadership in Home Security** program for state and local homeland security leaders throughout the nation over a three-year period. The eight-week leadership program, which will be mainly web-based, will be offered 15 times to a total of 660 participants.

YALE TO INCREASE SPENDING FROM ENDOWMENT. **Yale University** has announced that it will increase its spending from endowment by \$307 million next year. Among the university's top priorities for the increased revenue, according to **President Richard Levin**, is "strengthening scientific research that leads to benefits for all humanity as well as expanding access to Yale's resources and increasing student financial aid."

NEW GRADUATION REQUIREMENTS TO INCLUDE 3 YEARS OF LAB SCIENCES. The **State Board of Education** has endorsed a recommendation that would require high school students to complete an independent study, take at least 24 credits in specific subjects, and the pass end-of-course exams in order to earn a diploma. If adopted by the legislature, the changes would be implemented in the 2011-2012 school year. The new requirements would include three years of laboratory sciences and two years of languages.



Environment

BRISTOL PILOTS SINGLE-STREAM RECYCLING. The **City of Bristol** has become the first community in the state to experiment with single-stream recycling by allowing residents to throw all materials to be recycled—glass, paper, plastic, and metal—into one container, rather than requiring individual homeowners to do the separation. About 900 households are participating in the experiment, which in the first six weeks increased the amount being recycled from 23 tons the previous year to 37 tons for the same period. If successful, the experiment could lead to single-stream recycling for all 20,000 households in the city and a lowering of collection and disposal costs for the city.

STAMFORD FIRST TO SHRED, BALE TRASH. The **City of Stamford** has become the first municipality in the state to adopt a system that shreds garbage, compresses and wraps it in plastic for transportation for ultimate disposal. Use of the technology is expected to save the city \$11 a ton—which is an estimated \$400,000 at an annual rate. The one-ton bales are hauled away

to a central landfill in Ohio. Bailing is cheaper than the regular system of trash hauling because the trucks can haul materials to Stamford rather than run empty on the return trip. Stamford is the first city in the country to regularly use cylindrical bales, according to Transload America, Inc. which began a three-year contract with the city in December.

ONE-MILLION GALLON BIODIESEL MILESTONE. In November 2007, the state reached the energy milestone of having pumped one million gallons of biodiesel fuels into state-operated motor vehicles. In addition, **CTTransit** signed a contract to use a blend of ultra-low sulfur diesel and biodiesel. About 3.5 million gallons of the fuel will be used in buses and blended into heating fuel used in Connecticut Transit facilities.



Energy

FIRST BIODIESEL STATION OPENS. The first public-access retail biodiesel station in Connecticut opened last November at the **Berkshire Country Store** in **West Cornwall**. Store owners **Beth and Rick Cochran** approached representatives from Branford-based **Hale Hill Farm Biofuels** last August. "The Cochrans recognized the need for environmental activism and US energy independence and they felt that offering biodiesel at their retail pump fit their business model," said **Governor M. Jodi Rell** at the official ribbon-cutting ceremony. "The State of Connecticut supports the biodiesel industry, we support expanding the industry and we support doing all we can to create new renewable energy jobs in Connecticut. Building a biofuel industry in our state will also expand and advance Connecticut's agricultural economy. This will ultimately help preserve farmland and protect our diminishing supply of open space." The **Connecticut Department of Transportation** has been using a biodiesel blend for six years and commercial fleet owners have had access to a biodiesel station in New Haven for several years. However, until now, biodiesel has not been made available to the public at a Connecticut retail location. Hale Hill has already introduced **Salisbury** to biodiesel for use at the town's recycling center, making the town the first municipality in Litchfield County and the second town in the state to utilize biodiesel blends.

MILLSTONE 3 PLAN CLEARED BY NRC. The Nuclear Regulatory Commission has concluded that a plan to boost the output of **Millstone Unit 3** in Waterford by 80 megawatts will not create any significant hazards. The unit currently produces 1,165 megawatts of power.

WESTBROOK FIRM GETS SOLAR PANEL GRANT. The **Connecticut Clean Energy Fund** has given \$1.2 million to the Lee Company, a manufacturing firm in Westbrook, to help pay for installation of solar panels at its production facility. When completed, the 308 kilowatt solar photovoltaic system will be the largest of its kind at a Connecticut manufacturing plant, according to Connecticut Innovations, which administers the fund. The grant is expected to cover about half of the total cost of the project.

ALTERNATIVE ENERGY PROJECTS GETS DPUC OKAY. The **Department of Public Utility Control (DPUC)** has given final approval to seven alternative energy projects for long-term, subsidized electricity generation contracts. The projects will provide Connecticut with nearly 110 megawatts of renewable energy. The projects include: **Clearview Energy, LLC**, Biomass, 30.0 MW in Bozrah; **South Norwalk Electric Works**, Landfill methane gas, 30.0 MW in Norwalk; **Clearview East Canaan, LLC**, Biomass, 3.0

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MW in North Canaan; **Plainfield Renewable Energy**, Biomass, 30.0 MW in Plainfield; **DFC ERG Milford**, Fuel Cell, 9.0 MW in Milford, **Waterbury Hospital**, Fuel Cell, 2.4 MW in Waterbury; and **Stamford Hospital**, Fuel Cell, 4.8 MW in Stamford. The DPUC also gave contingent approval to the **Triangle Fuel Cell Project**, a 20 MW project to be located in Danbury if certain approved projects are unable to meet Department orders. The DPUC believes that the Milford project will be the largest fuel cell project in the world.

STATE FACING GENERATION CAPACITY SHORTAGE.

Connecticut faces “a significant generation capacity shortage” over the next decade as aging, inefficient oil-fired power plants are shut down, according to the annual assessment by the **Connecticut Siting Council**. The report also predicts a shift in the next decade from oil to natural gas for generation, with oil accounting for only 1.7% of generation by 2016 while units employing natural gas will more than double from the current level of 19.9% to 50.3% in 2016. The state now has a 74-megawatt surplus, but the report forecasts a deficit of 766 megawatts.



Food & Agriculture

AGRICULTURE GRANTS AWARDED. The **Connecticut Department of Agriculture** has awarded \$823,636 in agriculture viability grants to 14 agricultural producers, two nonprofit agricultural organizations, and 16 municipalities in Connecticut. The competitive grants require matching funds from the applicant with the Department of Agriculture’s share of the budget capped at \$50,000. The awards to producers and nonprofits included funds for greenhouse development and enhancements, market nutrition programs, community-supported agriculture programs, farm market development and expansion, a goat dairy, varied diversification and efficiency technologies, and support for apiculture, maple syrup, and dairy operations throughout the state. Municipalities received grants for proposals including mapping farmland and open space, enhancing recreational shellfishing and commercial harvesting communications, promoting farmers’ markets and locally-grown foods, identifying and appraising farm preservation properties, and enhancing school nutrition education.

STATE SEEKS FARM LEASE PROPOSALS FOR TRAINING SCHOOL PROPERTY. The **Connecticut Department of Agriculture (DOA)** is seeking proposals for a farm lease for up to 10 years for all or portions of 350 acres at the **Southbury Training School**, with food and fiber production activities considered a priority. The DOA is also encouraging proposals that include production assistance in association with Connecticut citizens with disabilities where appropriate.

HUNTER FLIES FOUND IN CT GREENHOUSES. Small predatory flies called hunter flies (*Coenosia attenuata*) were observed on yellow sticky cards in poinsettia crops in greenhouses in Connecticut this past fall, according to a report by **Leanne Pundt** of the **University of Connecticut**. They were first found in the United States in October 1999 in upstate New York. These beneficial insects are originally from Europe and probably were introduced on plant material. They prey upon fungus gnats, shore flies, leafminers, moth flies, and whiteflies.

NEW CT-PROPAGATED POINSETTIA UNDERGOES TRIALS. After five years of propagation and small-scale testing, a new variety of poinsettia, developed by **Bob Shabot**, a horticulturist at

the **University of Connecticut (UConn) College of Agriculture and Natural Resources**, is undergoing trials in Germany and Colorado. The variety, which is almost a russet color and has bracts that point upward, was developed from mutations Shabot noticed on two branches of the variety Cinnamon Star being grown at UConn for teaching purposes.



Health

YALE NURSING SCHOOL GETS \$3.4 MILLION GRANT. The National Institute of Nursing Research has awarded \$3.4 million to the **Yale School of Nursing** to compare the effectiveness of Internet-based coping skills training versus an Internet education program for diabetic children. The goal is to improve type 1 diabetes management, metabolic control, and quality of life in adolescents. Leading the study are **CASE Member Margaret Grey**, dean of the nursing school, and **Robin Whittemore**, associate professor. The education program provides age-appropriate information about healthy eating, exercise, and preventing and managing sick days for youth with type 1 diabetes. The teen coping skills program provides information and exercises to assist teens with social problem-solving situations that may interfere with type 1 diabetes management or may be potentially awkward or difficult, such as telling a new friend about their diabetes. Grey said technological advances and access to the Internet have made cyberspace a viable tool for the delivery of coping skills training. It also allows health care practitioners to reach more adolescents.

VITAMIN E LEVELS LINKED TO PHYSICAL DECLINE IN ELDERLY. Researchers at the **Yale University School of Medicine** have linked a low concentration of vitamin E in blood with physical decline in older persons. The study, led by **Benedetta Bartali**, a nutritionist and Browne-Coxe Postdoctoral Fellow, included 698 people age 65 or older in two municipalities close to Florence, Italy. Blood samples were collected to measure levels of micronutrients including foliate, iron, and vitamins B6, B12, D, and E. Over a three-year period, physical decline was measured by testing walking speed, rising repeatedly from a chair, and standing balance. The odds of declining in physical function were 1.62 times greater in persons with low levels of vitamin E compared with persons with higher levels.

RESEARCHERS LINK GENE TO HEART DISEASE. Researchers at the **University of Connecticut Health Center** have identified a gene that they believe plays a significant role in the development of heart disease. Lead investigator **Lixia Yue**, assistant professor of cell biology, says the TRPM8 gene provides a conduit that enables calcium to get into fibroblasts, which are a type of heart cell. Abnormal levels of calcium can lead to cardiac fibrosis, which is associated with a variety of heart diseases, including irregular heartbeat, enlarged heart, heart failure and sudden cardiac death.

EAT YOUR [STEAMED] BROCCOLI! Steamed broccoli might boost the ability of the body to reduce the risk of a heart attack by fighting off cell damage, according to research at the **University of Connecticut Health Center**. **Dipak Das**, director of cardiovascular research, fed steamed broccoli extracts to rats for one month. He found rats had improved heart function with better blood pumping ability and less heart damage when deprived of oxygen. This was due to increased production of several proteins that maintain the heart’s ability to function normally. The key nutrients of broccoli include selenium and sulforaphane,

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which may also curb cancer. If the broccoli is overcooked, it loses its effectiveness.

ANTI-TOBACCO GROUP DROPS CT RANKING. The annual report of the Campaign for Tobacco-Free Kids' dropped Connecticut from 36th in 2006 to last for 2007 because no tobacco settlement money was set aside for tobacco prevention in the 2008 fiscal year. Connecticut has spent less than \$10 million on smoking prevention according to the Washington-based organization. **Secretary of the Office of Policy and Management Robert Genuario** said the state spent \$3 million in 2007 and plans to spend \$4 million in 2008, but the group does not count that money because it isn't directly from the tobacco settlement. According to the group, Connecticut has received almost \$1 billion from its share of the 1998 tobacco settlement. \$140 million went into the state's general fund last year. The American Lung's Association gave the state an "F" for tobacco use prevention, but an "A" for preventing youth access to tobacco and two "B's" for the high cigarette tax and smoke free air laws. The **Connecticut Cancer Partnership** is asking for the state to commit \$25 million to anti-smoking strategies and cancer control in the two-year budget.

YALE STUDY SHOWS BLACK PATIENTS CONTINUE TO GET LESS CANCER TREATMENT. A decade after a report that indicated that black patients receive less cancer treatment than white patients, **Yale** researchers studied 143,512 Medicare patients and found that the disparity continues. Treatments for breast, colorectal, lung, and prostate cancers were included in the study of Medicare records from 1992-2002. **Cary P. Gross**, associate professor of medicine, and his co-authors found that black patients were less likely to receive radiation, surgery, or chemotherapy treatments than white patients. The reason is not because of differences in health insurance, because all in the study were covered by Medicare. Possible explanations include less access to care, lack of willingness to undergo certain therapies, and a distrust of doctors, most of whom are white.



High Technology

COAST GUARD'S CLASSIFIED CLASSROOM A FIRST. The **US Coast Guard Academy** has become the first US military academy to have a secure classroom for cadets to view classified materials and discuss national security topics with guest speakers. Although second class (junior) cadets were able to obtain security clearances, the institution had no facilities for them to use classified materials in the past. The classroom, in an academic building, uses a limited-access computer network that can transmit classified information. It cost about \$250,000 to set up the classroom and secure network.

NEW HAVEN TO GET HIGH-TECH GUNSHOT LOCATOR. Federal funding has been approved for a \$376,000 high-tech gunshot locator system for the **City of New Haven**. Once installed, the system will detect gunshots using audio sensors to triangulate the location for police dispatchers. Each sensor is about the size of a coffee can and can differentiate gunshots from similar sounds such as vehicle backfires and fireworks. The location appears on a screen within seconds of the gunshot.

KEEPING WATCH OVER CT DAMS. The **State of Connecticut** is now using an electronic, internet-based system to monitor the safety of 234 state-owned dams during adverse weather conditions. Dam-watch, developed by **US Engineering Solutions Corp.**

of Hartford, gives the **Department of Environmental Protection** access to all plans, inspection reports and records related to the dams as well as realtime access to gauges that monitor rainfall and water levels near the dams. The system will also assist in monitoring of many of the state's 4000 privately-owned dams because many are located in the same watersheds as the state-owned dams being monitored.



Transportation

BRIDGES GET CLOSER LOOK. The **State Department of Transportation** is recalculating the load capacity of six bridges that are similar in construction to an interstate highway bridge that collapsed last year in Minneapolis. Federal inspectors found that gusset plates used to connect the beams of bridge trusses were undersized on the bridge that collapsed. Ten bridges in Connecticut with similar designs had been inspected, but four of them did not use gusset plates. The bridges in Connecticut under study are Route 7 over the Housatonic River in **Salisbury**; Route 8 over the Housatonic River in **Shelton** (Commodore Hull bridge); Route 169 over the Shetucket River in **Norwich**; I-95 over the Thames River in **Groton and New London** (the Gold Star Memorial bridge); and Route 82 over the Connecticut River in **East Haddam**.

FEEDER BARGE SERVICE STUDY UNDERWAY. The **City of New Haven** and **Logistec, Inc.** and **Coastline Terminals**, the two major port operators in New Haven, have started a three-month study of a feeder barge service for New Haven. The service, similar to one that has been proposed for Bridgeport, is intended to have goods delivered by barges from the Port of New York and New Jersey and then loaded for trucking to the final destination rather than using highways for the entire trip. The Bridgeport plan has been under study for four years. A total of \$7 million has been approved by the state to help create such a service aimed at easing congestion on Connecticut highways.

STATE TO FIGHT REDESIGN OF FLIGHT PATHS. Officials from lower Fairfield County and nearby New York state have agreed to fight a Federal Aviation Administration (FAA) redesign of regional flight patterns. **Greenwich, New Canaan, Darien, Wilton, Stamford, Norwalk, Weston, Westport, Redding, Ridgefield,** and Pound Ridge, NY are planning on hiring a law firm, lobbyist, and advocacy firm to oppose the plans of the FAA to shift arrivals for LaGuardia Airport east over Fairfield County and parts of New York. **State Attorney General Richard Blumenthal** also plans to oppose the plans from a statewide perspective.

SNOWSTORM TRAFFIC JAM PROMPTS PLANS FOR STAGGERED RELEASE. After massive traffic tieups in the Hartford area on December 13 when business and government employees were dismissed early due to a snow storm, **Governor M. Jodi Rell** announced she is trying to establish a coordinated release time with the 12 largest employers in Greater Hartford to stagger the release of employees in the case of future major storms.

FREE BUS PASSES DESIGNED TO BOOST RIDERSHIP. In an effort to increase bus ridership statewide, the **Connecticut Department of Transportation** distributed free 10-trip bus passes for state-owned **Connecticut Transit** divisions and transit districts throughout the state. The promotion includes express bus service to Hartford and service between **Stamford** and White Plains, NY.

— Edited and compiled by Paul Gough

gies are still relatively immature, added the committee that wrote the report. Moreover, the US Climate Change Science Program (CCSP), which oversees federal research in this area, has made inadequate progress in supporting decision making, studying regional impacts, and communicating with a wider group of stakeholders.

The committee noted that adjustments will have to be made in the balance between basic science and applications if CCSP is to achieve its vision of producing information that can be used to formulate strategies for preventing, mitigating, and adapting to the effects of climate change. It did not offer recommendations for how to sustain and improve the program's basic science while strengthening its applications, something expected to be considered in a follow-up report.

[http://infocusmagazine.org/7.3/rp_ccsp.html]

◆ New Study Examines Benefits of the Satellite Age

A new National Research Council report catalogs many of the scientific achievements and corresponding benefits to society made possible by the first five decades of the satellite age. The single scientific accomplishment probably most appreciated by the general public, the report notes, is the ability to watch the weather in motion. These weather movies are made possible by “geostationary” satellites that stay over the same point on the equator, taking frequent images from the same vantage point. Geostationary satellites were first launched in the 1960s, and since then, no hurricane anywhere in the world has gone undetected.

Satellites also have been invaluable to climate science researchers. Satellite radiometers measure energy entering and leaving Earth; as these devices improved, fluctuations in this energy “budget” could be measured and linked to particles from volcanic eruptions or atmospheric greenhouse gases. Data from satellites also provided an important record of global ocean and air temperatures, and led to new revelations of ice sheet flow. The report echoes concerns raised in earlier Research Council studies that current delays and cancellations in US satellite missions are a setback for science.

[http://infocusmagazine.org/7.3/eng_satellites.html]

◆ Report Cites Success of US Plant Genome Sequencing Initiative, Urges Broader Mission

A new report by the National Research Council concludes that the first decade of the National Plant Genome Initiative (NPGI)—a unique, cross-agency funding enterprise for plant genomics coordinated by the federal, multi-agency Interagency Working Group on Plant Genomes—has seen revolutionary breakthroughs in genome sequencing for various plants and their pathogens. However, the report notes that these breakthroughs are only the first step to understanding how plants work and ultimately producing plants that can overcome environmental limitations.

Plant genome sciences, and plant biology as a whole, contribute significantly to human health, energy security, and environmental stewardship, the report notes. Basic plant genome research serves a wide diversity of agricultural and environmental purposes, as well as contributing to basic scientific discovery. NPGI has been successfully funding and coordinating plant genome research among agencies for nine years, the report concludes, contributing to a better understanding of how plants function and how to develop desirable plant characteristics. Far more than just genomics, the technologies and information developed by NPGI and the National Science Foundation's (NSF) Arabidopsis 2010 Project are the primary platforms for basic research in fundamental plant science—including genetics, biochemistry, physiology, developmental biology, evolutionary biology, and population biology.

Important research breakthroughs such as how plant immune systems control pathogen defense are evidence that these programs should continue in order to increase the contribution of plant science to vital areas of national interest, according to the committee that wrote the report. Recommendations include steps to significantly broaden NPGI's mission to include the basic biology of economically relevant traits in model and crop species, deeper investigations into plant diversity and adaptation to various ecological niches, and continued expansion of translation to breeders and farmers.

[http://www.nap.edu/catalog.php?record_id=12054]

◆ NASA's K-12 Education Program Falling Short

Even though NASA is uniquely positioned to interest students in science, technology, and engineering, the elementary and secondary education programs of NASA's Office of Education are not as effective as they could be, concludes a new National Research Council report. To improve effectiveness, NASA should work to develop a culture of ongoing improvement, cultivate sustained partnerships that bring in outside experts in education, and use information and communication technology more effectively, the report recommends. In addition, some programs should be restructured to capitalize on the agency's own expertise and on new technologies.

Education and contributing to public understanding of science—important components of NASA's mission since its creation by the 1958 Space Act—are receiving increasing attention in light of the need to support public understanding of science and to develop a strong scientific and technical workforce in a competitive global economy. NASA does not, however, have the lead federal role in (STEM) education, which is the responsibility of the National Science Foundation and the US Department of Education. Instead, NASA, like other federal science agencies, has an important complementary role which is closely linked to and guided by the core scientific, engineering, and exploration missions of the agency.

[http://www.nap.edu/catalog.php?record_id=12081]

◆ New Web Resource for Drinking Water

The National Academy of Sciences and the Global Health and Education Foundation have joined together with science, engineering, and medical academies around the world to launch “Safe Drinking Water Is Essential”—a new online resource designed to provide decision makers with easily accessible, peer-reviewed scientific and technical information about the options available to enhance the safety and availability of drinking water supplies.

The website—www.drinking-water.org—is an interactive site that provides in-depth information on the sources of drinking water, common naturally occurring and human-induced contaminants, distribution problems, and treatment options. Users will find case studies on problems and conditions specific to different regions of the world. Other case studies provide details on household water treatment options or distribution solutions such as community pumps in Niger. An atlas provides global and regional views of access to safe water in urban and rural areas.

To ensure that this vital knowledge reaches people who need it most, more than 125 science, medical, and engineering academies worldwide are disseminating information about Safe Drinking Water Is Essential, which is available in five languages. In addition, those who don't have easy access to the Internet can obtain a CD-ROM version; 10,000 free CDs have been produced for distribution to the Peace Corps and other nongovernmental organizations working to improve water quality.

[<http://infocusmagazine.org/7.3/spotlight.html>]

Science Center UPDATE

Teachers Planning Field Trips to Center Invited to Summer Planning Workshops

As the new Science Center gears up for opening, preparations for field trip visits are well underway. Teachers planning a field trip to the Center are invited and encouraged to attend professional development workshops offered this summer by the Center. These workshops are opportunities for teachers to learn about the field trip programs at the Science Center and the pre- and post-visit materials for use in their classroom. These resources complement the exhibit experiences and align with the Connecticut State Science Framework Standards. To learn more about these workshops and field trips, please visit www.learn.ctsciencecenter.org/Educator/Info

Teachers will have web access to pre-visit, visit and post-visit materials on the Science Center's website when they book a field trip. The Center's website will also include classroom lessons, literature links, integrated lessons, performance tasks, embedded tasks, career connections, website links and more!

The Science Center anticipates a student admission fee of \$8.00 which will provide access to all of the exhibit galleries and science demonstrations. Various science programs or theatre show options will be available for an additional charge. All teachers will be admitted free of charge and chaperones will be admitted at student pricing rates with a recommended ratio of one chaperone per eight students.

Rudd Center (from page 2)

The Rudd Center and the work being performed by Kelly Brownell are making a difference. In April, 2006, *Time* magazine named Brownell as one of the 100 most influential people in the world, placing him among other great leaders such as Bill Gates and Pope Benedict. Republican presidential candidate Mike Huckabee, endorsing Brownell in *Time* on April 30, 2006, said "I agree with Brownell that children and their parents need better food choices and that it's important for kids to get outside for some regular exercise. I thank him for putting us all on the right track."

Even restaurants are beginning to make significant changes in the portion sizes and food choices offered on their menus. A November 2007 article from Reuters Live on the Rudd website highlights a poll conducted by the National Restaurant Association which found that "Small servings of food, such as small plates, tapas, mezze and bite-sized desserts, have become the hottest new trend in US restaurants after years of big being best."

Brownell does see some very positive signs for change in restaurants, schools and supermarkets. He notes that the organic food industry is catching on with mainstream America, adding that this demonstrates that people are "growing more concerned about food sources and gravitating towards foods that have fewer ingredients and are locally grown."

Americans once found it acceptable to have television advertising promoting the relaxing benefits of cigarettes. The nation's culture has changed, and Americans now want information, rather than a sales pitch, about the effects of cigarettes. Perhaps, through the crusading efforts of scientists like Kelly Brownell, Americans will soon demand the same truthful and comprehensive advertising about the foods they eat.—**Wendy Millstein, freelance writer.**

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