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**UVM HOMEPAGE** 

#### **Feeding the Economy**



Serving the state: Cathy Donnelly (far right), Brian Norder (left), and culinary entrepreneur Mary Kamm celebrate an open house at NECFE last year. (Photo: Sally McCay)

Food manufacturing jobs are the second-largest source of manufacturing jobs in Vermont – and Cathy Donnelly, associate director of the Northeast Center for Food Entrepreneurship, is working hard to keep them cooking.

FULL STORY ▶

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A Class for One Season

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Remembering "An Imprudent Man"

**Getting Rural Areas Moving** 

Professors to Speak on the Middle East

Memoirist to Discuss His Craft

#### **Campus 2012**

President Daniel Mark Fogel, a seasoned manager who wears his love of detail on his suit sleeve, demonstrated a similar grasp of the expansive on Feb. 3 when he released a 3,000-word statement imagining the campus in 2012.

Balancing Facts Falls kill 10,000 seniors every year, and send many more into a downward spiral of injury, dependence and depression. UVM physical therapist Ge Wu is studying tai chi's potential to improve balance and reduce the chance of a catastrophic fall

#### **The Pringle at 100**

The Pringle Herbarium is many things: architecturally beautiful, scientifically vital and now, thanks to a recent gift, home to one of the world's best fern collections. This year, it is also 100 years old, and botanists here and everywhere are celebrating.

#### THE WEEK IN VIEW

Feb. 6 9 a.m.-8:30 p.m.. Trustees committee meetings, also Feb. 7 and 8: See Trustees Schedule.

Feb. 6 7 p.m.
Performance: Anna
Deavere Smith, "Race
in America:
Crossroads of
Ambiguity," Ira Allen
Chapel.

Feb. 79 a.m-noon Workshop: "Poverty and Classism," Jen Mathews, Vermont Livable Wage Campaign. Allen House, 461 Main Street, 656-8833

Feb. 73:30-5:30 p.m. Colloquium: "The Home Theater of Organized Cruelty: Endurance TV Anytime," David Jenemann, University of Minnesota. John Dewey Lounge, Old Mill. 656-3056

Feb. 10 4-5 p.m. Lecture: "How Many Neutrophils Are Enough?" Samuel Silverstein, Columbia University. Carpenter Auditorium. 656-2500.

Feb. 12 7-p.m. Film: The Wedding Banquet, part of Chinese and Vietnamese New Year Celebration, Allen House. UVM ID required. 656-7730.



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#### **NEWS BRIEFS**



Josh Farley (right), speaking to participants in the Gund Institute's 2003 workshop in January. Academics, activists, community members, government officials and students explored the ecological implications of replacing biodiverse mangroves with shrimp farms in and near Palawan, Philippines.

#### Dramatic Gund Workshop Explores Mangrove Ecosystem

In a Gund Institute for Ecological Economics field workshop more cinematic than course-like, three UVM students joined 80 academics and nongovernmental workers from six continents in early January to explore the ecological and economic implications of shrimp aquaculture on a sprawling, spectacular Philippine island that is a hotspot of biological diversity.

The cast of characters included a former crime lord turned crusading, gun-toting environmentalist mayor; an illegal shrimp farm hacked out of formerly pristine mangrove wetland; governmental agencies; environmental groups from the Philippines and abroad; and a diverse pool of academics that included Josh Farley, a Gund research assistant professor, and Roelof Boumans, an estuarine ecologist and associate research professor at the institute.

The theme of the production was to bring the talents of an international group of experts, ecologists, students and local people to bear on an ecological problem, weigh costs and benefits of different alternatives, and then take action. The Gund Institute calls these collaborative classes "scientific *ateliers*," borrowing a French term for artisan's workshop. The model encourages broad and diverse participation and tangible outcomes.

Even within that framework, Farley says, the group got more than they bargained for. At the end of his stay on the island, and after the students were safely home, a series of press

#### **INTERview: Betty Rambur**

Betty Rambur, dean of nursing and health sciences, joined the Fletcher Allen Health Care board in January. *the view* sat down with her recently to find out why she signed on and what she hopes to achieve for the hospial's patients and providers. We also discussed her goals for the college, and why now is a great (if difficult) time to be in a health profession.

## THE VIEW: Why did you join the Fletcher Allen board?

BETTY RAMBUR: I felt like I needed to use my time and energy to help Fletcher Allen move forward. I have spent most of my life in some kind of a role as a patient advocate, and I saw this as an opportunity to do that in the broadest of senses. I'm also very interested in bringing experiences of front-line providers to the board.

## What does Fletcher Allen have to do to regain the public's trust?

The actual trust between providers and their patients is very good. Patients love their physicians, nurses and physical therapists. In a larger sense, the process has already begun. We have a wonderful leader in Ed Colodny. We will become as transparent as possible in terms of leadership conversations and decision-making. Trust will be restored piece by piece.

## As the management and business of health care has grown more complex, how have the decisions and duties of nurses changed?

Nurses are central to quality patient care. Nursing is a very intellectually demanding profession, and a very intellectually rewarding profession. It is also a very emotionally demanding and rewarding profession. In many ways, with increasing levels of education of nurses, nursing is moving into its own.

## The merger of nursing and allied health sciences has been complete for a while. What kind of opportunities does the merger provide for students?

From the outside it may look like we have two schools that are now one college and it's as simple as that. But it is an enormous internal process, like moving every wall and fixture in your house, and it is taking an extraordinary effort of the faculty and staff. The benefit is that we now have synergy and momentum that you can't get in isolation. For example, we have a physical therapy faculty member whose research area is

conferences and reports calling attention to the mounting cost of the illegal farm culminated with the village mayor, local students and workshop participants tearing down the offending aquaculture with pickaxes.

"We always look for applied outcomes, but it's rarely this dramatic," Farley says.

The process that led to the farm's government-sanctioned destruction included 10 days of intensive work studying the function and economic impact of intact mangrove contrasted with that of the working farm. Different groups studied restoration costs, the economic impact of closing the farm, and the effect on the fishing economy if the shrimp farm was left to continue its expansion. The groups' work was informed by a previous Web component of the *atelier*, a distance-learning program exploring the ecological economics of mangroves along with sustainability and just distribution.

"It became abundantly clear that the mangrove was more valuable than the farm to the area and world," Farley says. "This is extraordinarily rich habitat. Mangrove sustains all kinds of systems, and is also the breeding ground for 85 percent of the commercial fish species caught in the area."

Of course, weighing ecological versus economic tradeoffs doesn't always yield such clear answers, and what is good for the global economy isn't necessarily good for a desperately poor local economy. So the Gund team and their workshop organizing colleagues were careful to involve local politicians, activists, citizens and students in every aspect of the process on the island.

Future projects, including a probable *atelier* next January to study the sensitive coral reefs of Southern Thailand, will continue the institute's drive to explore new ways of relieving the inevitable tension between global goods and local needs. One aspect Farley and his colleagues are exploring is finding better and more creative ways to get global resources to local communities that harbor crucial biodiversity and other environmental features.

But for now, there is one less illegal shrimp aquaculture poisoning a Philippine mangrove reserve, killing the commercial fish species so crucial to the region's economy, and one Philippine mayor turned expert mangrove advocate with a broadened understanding of how the ecosystem supports his community's economy.

For details on the course's goals, structure and academic underpinnings, see the <u>Gund 2003</u> <u>Workshop</u> site.

#### **Dummit Takes on Graduate Education**

David Dummit, professor of mathematics, was named special assistant to the provost for graduate education by Provost John Bramley. related to chronic disease in children and nursing faculty who have research around supporting families during chronic disease, and they didn't know about each other before.

## What are your personal goals for the college?

I want to be the best small college of this type in the nation. What does that mean? I would like to see that our graduates are absolutely exemplary practitioners, head and shoulders above the rest. To do that, they need to be leaders and thinkers.

We also need to get the message out to the public: If you have an interest in health care broadly, there's a profession to fit almost any set of fancies and abilities. These range from nursing to physical therapy to nuclear medicine technology to laboratory science and radiation therapy. ... All are critical and have pronounced and profound shortages.

Another goal is to accelerate our research. We have a unique contribution to make to the country's knowledge. ... How do we structure systems and services to support the multigeneration family in the 21st century, how do we comfort the dying? These are hugely important questions, but they're not asked by bench scientists. They are asked by us.

# It occurs to me that at a time when many doctors are feeling like it isn't a great time to be a doctor, nurses and other health professionals are enjoying fantastic opportunities...

I have been a nurse for 25 years. I started college in engineering, looked at a lot of things, and I am very happy and proud to be a nurse. I would encourage people who have a love of science, a love of the arts and a love of humanity to think about the health professions. I cannot imagine a better time to be in this area than now.

#### **Spring Service-Learning Fellows Tapped**

Six faculty have been selected as service-learning fellows for the spring semester and each will receive \$1,000 to integrate service learning into his or her curriculum. The funding will help participating faculty give students more opportunities to reflect on meaningful community participation and how it connects to their academic experience.

This semester's fellows are: Eileen Burgin, associate professor in political science; Susan Comerford, assistant professor in social work; Ann Greenan-Naumann, clinical assistant professor in physical therapy; Tom Hudpseth, associate professor in natural resources; Erica Hurwitz, lecturer in religion, Alison Pechenick, lecturer in computer science. Benjamin Schultze, a graduate student in higher education and student affairs, also will participate in the course.

Faculty fellows will engage in a series of learning circles focused on such issues as the philosophy Dummit, who was vice president of the faculty senate before resigning to take his new post, brings 19 years of experience at UVM to the position. A former winner of the Kroepsch-Maurice Award for Distinguished Teaching, his academic interests include algebraic number theory, arithmetic algebraic geometry and computational mathematics.

"I'm going to try to help drive a number of initiatives forward in the Graduate College that President Fogel has identified as priorities for the future," Dummit says. "My job, for the next 11 months or so, will be to investigate feasibility, address potential problems, and help advance the president's agenda for graduate programs."

Former graduate dean Anne Huot left the university in January to assume a system-wide vice chancellorship for the State University of New York.

of teaching and learning, fundamentals of service learning, integrating reflection into the curriculum, developing community partnerships, advanced models of community engagement and course design. The series is co-facilitated by Courtney Lamontagne, coordinator of community partnerships and the UVM/Burlington Community Outreach Partnership Center and Chris Koliba, research assistant professor in the John Dewey Project.

### theview

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Actor, author and professor Anna Deavere Smith will perform on campus on Feb. 6 at 7:30 p.m. in Ira Allen Chapel. (Publicity photo.)

## **Registration Open for Refugee Health Conference**

The second annual Northern New England Conference on Refugee Health will be held April 9-10 at the Radisson Hotel. Registration is open until April1, but conference organizers expect to reach their 250-person limit well before then. Fees are reduced for pre-March 7 registrants.

The conference is designed to provide human service professionals and community leaders with knowledge and skills to aid their support of refugees, immigrants and members of other marginalized groups.

Keynote speakers include:

- Mary Pipher, psychologist and author of Reviving Ophelia and The Middle of Everywhere
- Lavian Limon, executive director of Immigration and Refugee Services of America
- Dr. Richard Mollica, director of the Harvard Program on Refugee Trauma at Massachusetts General Hospital and associate professor of psychiatry at Harvard Medical School
- Loung Ung, author of First They Killed My Father: A Cambodian Daughter Remembers and survivor of the Khmer Rouge genocide.

Information, registration: 656-3888.

#### A Garden Cut-Up

#### A New V-Day is Dawning

"As V-Day benefit performances of *The Vagina Monologues* reach more people, as the V-energy spreads, 2003 must be the year when we envision a new world where violence has ended and V-World is finally born," says Eve Ensler, whose ground-breaking, Obie Award-winning play will be presented by the UVM Women's Center Friday and Saturday, Feb. 14 and 15 at 7 p.m., and Sunday, Feb. 16 at 2 p.m., in Ira Allen Chapel.

The Vagina Monologues, a montage of funny, poignant and courageous soliloquies, will be performed in more than 2,000 venues worldwide on and around V-Day (Valentine's Day, Feb. 14) to raise awareness and stop violence against women and girls. New this year is a monologue Ensler wrote about the experiences of women in Afghanistan.

"More than 2,300 people attended last year's soldout performances at UVM, and we raised over \$13,000 for the Women's Rape Crisis Center and Women Helping Battered Women," says Tim Shiner, production coordinator for the UVM Women's Center and the show's producer. This year's beneficiaries are the Campus Victims' Advocacy Program and SafeSpace, a local organization that advocates for gay, lesbian, bisexual and transgender victims of relationship violence and sexual assault.

The play is directed, produced and acted by UVM students, staff and community members. Codirectors Fritzie Charne and Kristi Lonardo, both graduate students in education, currently are rehearsing the 38-member cast. About half of the performers have theater experience, Lonardo says, while half are completely new to the stage. Two deaf actresses will perform monologues that will be interpreted to the hearing audience; an ASL interpreter will sign the rest of the show for hearing-impaired patrons.

"Being involved in *The Vagina Monologues* is a fantastic experience that allows me to combine my theatrical experience with my passion for social justice," says Lonardo, who studied theater as an undergraduate at New York University. Last year she helped out with production details, while Charne performed a monologue for V-DAY 2002.

Contrary to what the title might imply, *The Vagina Monologues* is not for women only. "Racism, sexism, homophobia and other forms of prejudice are related," says producer Shiner, one of the few men involved in the UVM production over the past three years. "I also do this for my mother and other women in my family," he notes.

Tom Vieth, who works as a professional artist to "support his gardening habit," is leading "Exercises in Color for Gardeners" on Feb. 13 at 6 p.m. in the UVM Horticultural Research Center.

Following a whirlwind encapsulation of hundreds of years of art color theory, participants will use magazines to cut and paste their way to discovering color combinations that might work in the garden. Participants are strongly encouraged to bring scissors, glue sticks and old gardening magazines (the ones you think you'll re-read but never do). Any magazines with strong color photos also will work.

The suggested donation for the class, which is sponsored by the Friends of the Horticulture Farm, is \$10. When he has a paintbrush instead of a trowel in hand, Vieth produces paintings that are in collections in the United States, France and England.

Information and required reservations: 864-3073.

Tickets are \$10 general admission and \$6 for students and seniors. Purchasing tickets in person and in advance is strongly recommended. They are available at the UVM Women's Center, 34 S. Williams St. and the Peace and Justice Center, 21 Church St. Information: 656-4637 or <a href="https://www.vday.org">www.vday.org</a>.

theview

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#### NOTABLES

Feb. 5 - Feb. 11, 2003

#### **Awards and Honors**

**Dieter Gruenert**, professor of medicine, was awarded \$50,000 by the Cystic Fibrosis Foundation to fund a research project titled "Targeted CFTR Replacement in CF Airway Epithelial Cells." He also has received two grants totaling \$50,000 from the Pennsylvania Cystic Fibrosis organization. Gruenert, whose research focuses on developing gene therapy strategies for treating cystic fibrosis, presented Lab Medicine/Pathology Grand Rounds at the University of California at San Francisco, last November, on "Sequence-Specific Modification of Genomic B-globin and CFTR: Implications for Stem Cell Gene Therapy."

**Deb O'Rourke**, assistant professor of physical therapy, received one of two Partners in Care Awards from Parent to Parent of Vermont at their annual conference in Killington in December. The award honors individuals who exemplify and promote the ideals of family-centered care – a holistic philosophy that redefines roles traditionally held by health care professionals, families and educators. O'Rourke was nominated based on her invaluable and ongoing support to families of children with special needs and for the commitment and leadership she has displayed to the communities in which she lives and works.

The Class of 2005 in the College of Medicine has chosen **pathology** as the "Department of the Year" and **Gerald Silverstein**, lecturer in microbiology and molecular genetics, as the "Basic Science Teacher of the Year." Runners-up for the Basic Science Teacher of the Year award were **Bruce Fonda**, lecturer in anatomy and neurobiology; **Cynthia Forehand**, professor of anatomy and neurobiology; and Dr. **Sharon Mount**, associate professor of pathology. The American Medical Students Association Golden Apple Award for excellence in teaching went to **Bruce Fonda**, lecturer in anatomy and neurobiology. Runners-up for the Golden Apple Award were **Beth Hart**, professor of biochemistry; Dr. **Alan Segal**, associate professor of medicine; and Gerald Silverstein, lecturer in microbiology and molecular genetics. The American Medical Women's Association Gender Equity Award was given to Dr. **Diane Jaworski**, associate professor of anatomy and neurobiology.

**Tim Perkins**, director of the Proctor Maple Research Center, was named "Vermont Maple Person of the Year" by the Vermont Maple Industry Council. The council annually honors a person who has made an outstanding contribution to and impact on the Vermont maple industry.

**Ed Kusiak**, coach of track and field and cross-country, received the Vermont Leaders in Fitness and Sports Award, given annually by the Vermont Governor's Council on Physical Fitness and Sports. The award, for "Outstanding Contributions to Physical Fitness and Sports in Vermont," was presented by Gov. James Douglas in a special ceremony at the Statehouse on Jan. 30. Kusiak is in his 33rd year as drector of track and field. The women's track and field team has won three consecutive America East championships, in addition to the New England title in 2000. Kusiak was named America East Coach of the Year twice in 2000 and 2001.

UVM's **Miller Research Center** (Spear Street Farm) recently won an award for the highest quality milk in the Agri-mark Co-op.

Publications and Presentations

**Valerie Chamberlain**'s book *Creative Instructional Methods for Family and Consumer Sciences, Nutrition and Wellness*, was published by McGraw-Hill. It is

one of several books she has written about effective teaching, motivating learners and innovative approaches to education.

**Margo Thompson**, assistant professor of art, published "Finding the Phallus in Female Body Imagery" in the January issue of n.paradoxa, an international feminist art journal.

An article by **Dennis Clougherty**, associate professor of physics, appeared Feb. 3 in the *Virtual Journal of Nanoscience and Technology*, an edited compilation of links to articles from participating publishers, covering a focused area of frontier research. The article, titled "Endohedral Impurities in Carbon Nanotubes," contains a new theory for the quantum dynamics of atoms and molecules that are captured in nanotubes. The work, Clougherty says, would be relevant for researchers trying to make molecular fuel cells in the lab. Nanotubes, which can be made of elements other than carbon, range in diameter from a few Angstroms (one Angstrom is one-tenth of a nanometer, which is one-billionth of a meter) to a few nanometers. For the complete paper and other information, see <u>Clougherty's homepage</u>

**Thomas Patterson**, lecturer in community development and applied economics, gave the keynote lecture at Louisiana State University's agriculture teaching workshop on Jan. 16. His lecture was titled "Revitalizing the Curriculum."

Jan. 29 - Feb. 5

#### **Publications and Presentations**

**Will Miller**, assistant professor of philosophy, spoke on "The Missing Last Years in the Media Coverage of Martin Luther King's Life," as an invited speaker at Dr. Martin Luther King, Jr. Observance in Burlington City Hall on Jan. 20.

#### **Awards and Honors**

**Michele Cranwell**, a graduate student in the Masters in Public Administration program, and **Teresa Hill**, an undergraduate student double-majoring in women's studies and math, received scholarships from the Vermont Community Foundation to attend a women and public policy seminar in Washington, D.C. This conference was sponsored by the Public Leadership Education Network.

Jan. 22 - Jan. 28

#### **Awards and Honors**

**Sederick Rice**, a doctoral student in the department of pediatrics and an adjunct faculty member of Race and Culture, is featured in the February 2003 issue of *Ebony Magazine* as a recipient of the Ebony Young Leaders Award. Each year, the magazine selects 30 individuals who have reached an outstanding level of achievement at or before 30 years of age. Rice came to Vermont in 1996 and joined the laboratory of his mentor Dr. Barry Finette, professor of pediatrics. His doctoral research is focused on the genetic effects of chemotherapy in children treated for acute lymphocytic leukemia.

The American Medical Equestrian Association recently recognized **Betsy Greene**, associate professor of animal science, with an Executive Director's Award for dedicated service and support. She serves on the AMEA board of directors and as the technical editor of the *AMEA News*. The award was presented at the United States Eventing Association annual meeting in December, where she presented an invited talk, "Is Your Barn Really Safe for Horses and Clientele?"

#### **Publications and Presentations**

**Dan Baker**, lecturer in Community Development and Applied Economics, returned from a trip with students to Honduras saying, "CDAE/UVM is getting to be a household name." He was interviewed three times for radio and television about the GIS project he and student **Dave Chappelle** are working on.



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**UVM HOMEPAGE** 

#### Feeding the Economy UVM's Northeast Center for Food Entrepreneurship helps small businesspeople cook up success

By Lee Ann Cox



Serving the state: Cathy Donnelly (far right), Brian Norder (left), and culinary entrepreneur Mary Kamm celebrate an open house at NECFE last year. (Photo: Sally McCay) The aroma of maple syrup and melting chocolate fills the kitchen as Allan Sirotkin puts his old-fashioned labels onto rows of new glass jars. Sirotkin is the owner of Green River Chocolates, a tiny Hinesburg-based company striving to claim a piece of the \$40 billion national specialty food industry. Given the homey smells and the hand-written recipe book, one could imagine this production taking place in a farmhouse kitchen.

Luckily for Sirotkin, it's not. He's working in the Vermont Food Venture Center in Fairfax, a 3600 square-foot "incubator kitchen" partnered with UVM's Northeast Center for Food Entrepreneurship. The facility is relatively small by the mammoth standards of commercial food, but for the small businesspeople who use it, producing in a few hours what would have taken days to do at home, it's a giant leap toward success.

"The biggest thing for my growth was being able to come down here," says Marsha Phillips, a UVM alumna, owner of the Mapled Nut Company and president of the Vermont Specialty Food Association. Phillips went from making five pounds to a hundred pounds of maple sugar-coated nuts in an hour. Her products are now in gourmet food shops all over New England, and she has sold to Harrods of London.

For fragile food start-ups like Phillips's once was, the only thing more precious than time is money. The center saves both, by letting fledgling entrepreneurs increase their output and profits without investing in a facility, equipment or expensive consultants. Stirring an industrial-sized kettle or working with a giant mixer requires only nominal membership and per-hour fees, and that small investment buys expertise as well as equipment. The center nurtures business people with advice on product development, scaling recipes, sourcing ingredients, food safety concerns and regulatory red tape.

#### From recipe to market

Supporting Vermonters (or anyone in the Northeast) with a recipe and a dream – be it salad dressing or sheep's cheese – is the mission of NECFE, a partnership between the University of Vermont's Center for Food Science and the New York State Food Venture Center at Cornell. Begun in 2000, it's a project funded by a four-year, \$3.8 million grant awarded by the USDA's Fund for Rural America – the second-largest grant the USDA has ever awarded to an academic institution.

The idea is to promote sustainable economic development in rural communities, and drive support for agriculture, by providing comprehensive assistance to new and growing specialty food entrepreneurs.



#### **Campus 2012**

President Daniel Mark Fogel, a seasoned manager who wears his love of detail on his suit sleeve, demonstrated a similar grasp of the expansive on Feb. 3 when he released a 3,000-word statement imagining the campus in 2012.

#### **Balancing Facts**

Falls kill 10,000 seniors every year, and send many more into a downward spiral of injury, dependence and depression. UVM physical therapist Ge Wu is studying tai chi's potential to improve balance and reduce the chance of a catastrophic fall.

#### The Pringle at 100

The Pringle Herbarium is many things: architecturally beautiful, scientifically vital and now, thanks to a recent gift, home to one of the world's best fern collections. This year, it is also 100 years old, and botanists here and everywhere are celebrating.

"Food manufacturing jobs," says Catherine Donnelly, associate director of NECFE and professor of nutrition and food sciences at UVM, "are the second largest source of manufacturing jobs in Vermont, behind microelectronics." With the tech industry in trouble and a shaky state economy in general, she says, food production is an increasingly important source of employment. Not to mention a major source of fantasy.

"Every time that movie *Baby Boom* plays on cable we get a spike in phone calls," says Brian Norder, project director of the Vermont Food Venture Center, referring to the 1987 film in which Diane Keaton's character leaves a high-power, consulting career in Manhattan, moves to Vermont and finds a life of love and money making gourmet baby food. "Everybody has Aunt Jenny's recipe that people always tell them is the best they ever had, they ought to make it professionally."

But not everyone with a recipe from Aunt Jenny is prepared for the physical and financial toll of going commercial. To help would-be entrepreneurs evaluate their readiness, NECFE offers a reality-check workshop called "Recipe to Market." Susan Callahan, a NECFE marketing specialist, sometimes leads the classes.

"We ask the hard questions," says Donnelly. "Are you prepared to mortgage your home? Are you prepared to work this many hours a week? If you can leave this workshop saying 'yes' to these questions," she says, "then we want to work with you."

#### **Support and safeguards**

For those determined to go for it, Callahan is highly available. She describes dozens of "e-mail buddies" that she corresponds with regularly to answer questions, trade ideas about marketing plans, and suggest new sources. Beyond the energetic Callahan, NECFE offers fledgling entrepreneurs a comprehensive set of resources. The incubator kitchen is just the beginning. Food safety is one of their primary areas of expertise –and a passion for many of the staff –so they offer a number of services aimed at addressing it. Just getting the word out is a major mission in Vermont, where there are no regulations for food producers (unless they make dairy or meat products, which puts them under federal authority), which may be a boon to entrepreneurs in the state but clearly concerns the scientists at NECFE.

"You can't just decide one day," Donnelly says, "that you're going to stop being a lawyer and start being a food producer and not appreciate the safety concerns."

For those who do fall under USDA control, NECFE helps people understand and address the often bewilderingly complex regulations that were essentially written for large-scale food processors. And that's where Donnelly also serves as an advocate for the mom-and-pop shops, calling herself "the little irritant" on national committees, pushing for regulations to be written in plain language.

"Government regulators focus their attention on the mainstream food industry and they forget that there are small scale food entrepreneurs who don't have PhDs in food science," Donnelly says. "They are as valid a source of jobs as Kraft or General Foods," she adds. "You know, Ben and Jerry started in a gas station and look where they went."

For more about the Center, see the Northeast Center for Food Entrepreneurship



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**UVM HOMEPAGE** 

#### The Campus in 2012

By Kevin Foley

President Daniel Mark Fogel, a seasoned manager who wears his love of detail on his suit sleeve, demonstrated a similar grasp of the expansive on Feb. 3 when he released a 3,000-word statement imagining the campus in 2012.

Fogel sees a University of Vermont larger and more academically selective than ever before, with a billion-dollar endowment and a gleaming rebuilt environment of totally renovated dorms, a bustling student commons, and new and renovated academic and research buildings. The institution Fogel sees will contribute more than ever before to the state's social and economic life – there will be a sports arena with thronged concerts and hockey games, and a business incubator spinning research into viable businesses.

This is, Fogel makes clear, a vision rather than a completed plan; a starting point for a conversation rather than a coda. In terms of provoking discussion, he has already succeeded: The statement was on the front page of the *Burlington Free Press* on Feb. 4, and aspects of the plan will no doubt dominate discussion at the on-campus trustees meetings Feb. 6-8.

"This is neither a blueprint nor a set of specific promises," Fogel writes. "Everything that follows is meant simply to be suggestive of a plausible, and in my view highly desirable, set of outcomes for the University of Vermont to achieve over the course of the next decade."

Using a horticultural metaphor appropriate for this agrarian state, and a Shakespearean one fitting his life as an English professor, Fogel argues that for UVM, right now, "ripeness is all." We are recruiting more and better students, beginning a comprehensive campaign for support, and our reputation is on the upswing. We can immediately seize and extend that opportunity, he argues, or we can lose it: fruit is sweetest before it falls.

"Make no mistake: if we do not seize this moment energetically and urgently, it will pass as a similar moment did 15 years ago during the era of the 'public ivy.' Furthermore, we may be at a more precarious point than we were [then]," Fogel writes.

#### The plan's priorities

Fogel outlines his general priorities for investment to keep the university successful, solvent and excellent over the next decade. They are: faculty and staff; student scholarships; programmatic initiatives like the Honors College; attractive residence halls that promote community; new academic and research facilities; a student commons and enhanced programming; intercollegiate athletics; maintenance and beautification of the campus; and instructional technology.

How will these priorities play out in times of specifics? (And how will a budget-constrained university pay for them?) The visionary portion of Fogel's communication, which takes readers on a tour of the campus in 2012, offers some ideas.

In Fogel's vision, the UVM of 2012 will have:

a stronger endowment, reaching \$1.2 billion by 2016, up from \$208 million today, bolstered by one completed campaign with another in process. The burgeoning endowment, Fogel writes, will generate \$54 million in spendable income each year and fund 280 endowed professorships.

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#### **Feeding the Economy**

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#### The Pringle at 100

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#### research funding of \$170 million, up from \$103 million today, fueled in part by a large new life science building near the Health Science Research Facility.

- about 9,600 undergraduate students, up from 7,600 today, and 2,400 graduate students enrolled in a more focused offering of master's programs and a larger selection of doctoral programs. Undergrads will be culled from the largest, best-qualified and most diverse applicant pool ever. The pool will yield a class with 30 percent of first-year students in the top 10 percent of their high school class, up from 18 percent today.
- more diversity, with ALANA enrollment of 13 percent, up from almost six percent now. The goal extends to faculty and staff as well: As an example, Fogel cited his aspiration to nearly triple African American tenure-track faculty to 41 from 15.
- completely renovated residence halls, a new "Vermont Commons" to enhance student life, updated engineering facilities, a universitycommunity sports arena, perhaps even an architectural showpiece to house admissions and the Gund Institute for Ecological Economics.
- a lower relative price tag, with tuition growing at half the national average.

The full text of Fogel's statement, which was e-mailed to the campus community, will be available on the Web soon.

Fogel concludes his rousing look at the future by writing, "I look forward to the thoughtful discussions that I hope these ideas will promote."

The time is, well, ripe for those conversations this week, with a Board of Trustees meetings this week. (Click here for a <u>schedule</u>.) Fogel's themes will inform many committee meetings, especially the Feb. 6 committee of the whole meeting in which he will present "a sustainable agenda for UVM." That meeting will take place at 2:30 p.m. in Memorial Lounge.

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#### **Balancing Facts**

By Lee Griffin



A steady hand for steady feet: Ge Wu, a biomedical engineering expert in physical therapy, is seeking ways to prevent falls in older people. (Photo: Bill DiLillo)

'Tis the season of slipsliding away.

Even if you're still on the receiving side of life's grace, you're as much in danger of taking a flyer on the ice as your granny, but the results likely will be remarkably different. Younger people have a better ability to react quickly and right themselves, stumbling more often than falling. And, even falling, they're more protected by denser bones and stronger connective

tissue, sentries ready to resist injury or impatient to heal it.

Older people approach life's slippery slopes with caution. And with more reasons than just fear for their senior bones. When they fall – and about one in three aged 65-plus does each year (not necessarily on ice) – the consequences can be life altering. For some 10,000 of them, the fall will be fatal. For many more, it will lead to a downward spiraling of mobility and health.

#### **Upright citizen**

Ge Wu, associate professor of physical therapy and a biomedical engineer, designs studies to find out why older people fall and what reduces their chances of falling or being injured. Statistics like an aging population and 340,000 broken hips annually suggest it's a worthy and challenging quest.

"Approximately 30 percent of people aged 65 and older in the United States fall at least once a year," Wu wrote in a recent review in the *American Geriatrics Society* journal. Half of those people have multiple falls each year, and the resulting immobility "can lead to severe depression, malnutrition and increased chance of infection."

Older people lose fast-twitch muscle fibers and no longer react quickly to an imminent fall. Or, Wu says, "they sometimes over-react" and cause a fall. Sensory systems decline, too, slowing feedback to the brain.

Wu says her interest in this problem is long-standing and began with studies on how we maintain balance – "the biomechanics of human movement, gait and postural control." The work was theoretical, using computer modeling. But Wu wanted "to not just understand but help to improve balance." In 1994, she received a National Institutes of Health grant for her study that looked at strength training. "But it's hard to find older folks, especially those most in need of it, to lift weights," she says. Even those who did try it couldn't stick to that kind of exercise regimen.

#### Ancient art, new application

Wu, from China, had studied tai chi there, and she thought that might be a workable alternative. The Chinese martial art promotes slow, continuous movements that gently exercise every body part. Two problems kept the study



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from taking place locally. Burlington didn't have many experienced tai chi practitioners, and Wu couldn't find a tai chi master. "I finally did find one, who was teaching faculty and staff at UVM, but a very modified version," she says. "Westerners can't handle something with 110 continuous movements," she laughs. They're just too busy. So, Wu connected with colleagues in Beijing, and the study proceeded, using retired university faculty for both the study and control groups. The former had practiced tai chi for at least three years; the control group had not. But, in other ways, the two groups were as similar as possible.

The tai chi people topped the control group in two ways. Their balance, tested both with eyes opened and closed, was better, as was their knee strength, gauged by simple extensor, flexor tests. Wu hypothesizes that lower muscle strength helps maintain postural stability, and the strength can develop through long-term practice of tai chi.

In Wu's Rowell lab, subjects stand on two force plates, atop a simple platform. The plates measure movement like a scale does weight, and also shear forces. No one stands completely still, but older people sway more than younger, particularly with their eyes closed. Wu's assistants rig each subject with reflective tape markers on various parts of the body and record and observe body sway via cameras with an optical electrical motion analysis system hooked to a computer monitor.

#### Trying tai chi

Wu's current study has focused on subjects who have diabetes, some of whom have peripheral neuropathy, damage to peripheral nerves as a result of reduced blood circulation due to diabetes. Those subjects have the added stability problem of reduced sensory input from their feet. Wu hopes to design an exercise regimen for them that might use, for example, hip sensors to compensate for what they can't feel in their feet.

In a pilot study Wu conducted in Franklin County, with a home health agency, she introduced a modified tai chi regimen to frail, homebound adults who had fallen within the past six months. They were fearful of going out and of trying to do things they'd done before they'd fallen; each needed some health aid assistance.

Wu and her team designed an intervention using videos of about 20 minutes each with simplified tai chi. Participants in that group received a new video weekly for 12 weeks. Another set of home patients was instructed in traditional exercises from a physical therapist. The latter group had a 90 percent drop-out rate, but the tai chi group persevered, and half of them asked to retain the tapes.

Wu says that group also had restored physical confidence and had renewed some physical activities. The researchers also observed "some qualitative change in their physical balance, strength and control," she says.

In addition to her research and teaching in the three-year master's program in physical therapy, Wu oversees student projects on various aspects of this problem. She and they are always looking for a few good subjects. If you can admit to being 65 or older, give Wu a call at 656-2556.

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#### A Big Birthday, and Gift, for the Pringle Herbarium

By Cheryl Dorschner



Professor David Barrington is the director of the Pringle Herbarium, which is celebrating a huge gift of materials from two eminent fern scholars along with its 100th birthday. (Photo: Bill DiLillo) A small, circa-1865, brick building stretches upward three stories, as if trying valiantly to be noticed among the formidable chapel, student center and engineering buildings shouldering it on central campus. But with its ornately bracketed mansard roof and arching white-trimmed six-over-six windows, Joseph Torrey Hall's handsome architecture makes up for its pint size.

A visitor entering the double doors immediately sees glass cases showing off "Tropical Fruits of Panama." At the same time, the sounds of a Spanish language course waft from the adjacent classroom. The words fit with the homeland of these oversized pods, nuts and seeds that were collected not long after this building was constructed. Off to one side of the entry is the stairway leading to the Pringle Herbarium. Its walls are bedecked with extraordinarily detailed paintings of arching fern fronds, mushrooms and lilies.

A few dozen steps away is the quiet world of science – the science practiced before the era of the electron microscope. It is the place of exquisitely detailed botanical prints, painstakingly preserved plant specimens and mellifluous Latin monikers. Yet this is not a dead archive, but a vital area where past and present informs scholarly enterprise.

#### A renowned resource

The Pringle Herbarium of the University of Vermont botany department is a working resource for researchers worldwide. It is a growing collection and library. It is a classroom and a meeting place for regional botanical groups. It is the workspace of plant systematists and Professors David Barrington and Cathy Paris. It is also the home base of one of the state's top floristicians, Elizabeth Thompson, a member of the continuing education faculty.

And it is an expansive resource: Its total of more than 310,000 plants makes this the third largest herbarium in New England after Harvard and Yale. The building's namesake, Joseph Torrey, a botanist and past president of UVM, also contributed a significant collection to the herbarium, but Cyrus Guernsey Pringle's own collection forms the backbone of the Pringle Herbarium.

"Because Pringle was so prolific, his contribution almost dwarfs earlier contributions," Barrington says.

Pringle became the university's first herbarium director when his collection was brought to the university and endowed in 1902. To mark the century of that occasion and the formation of UVM's botany department, the university is celebrating with several events. Four Cyrus Pringle botany walks and workshops will be offered to the public beginning in May – leading naturalists will offer trips to Vermont areas that Pringle himself collected and wrote about

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Barrington will speak at the Vermont Institute for Natural Sciences in Montpelier on March 12 at 7 p.m. on the Pringle Herbarium and Pringle's plant explorations, at an event sponsored by the Hardy Plant Club.

#### As the world ferns

The herbarium is also celebrating the recent acquisition of the library collection of eminent fern biologists Rolla and Alice Tryon, who for years taught at Harvard University. Their book "Ferns and Allied Plants with Special Reference to Tropical America," is the definitive work on American tropical ferns. Alice wrote a companion book with Robbin C. Moran in 1997: "Ferns and Allied Plants of New England."

Known as the Tryon Pteridophyte Library, this collection of 700 books and 10,000 scientific paper reprints detail the evolution and diversity of ferns found through the world. Pteridophyes are ferns, club mosses and horsetails. The Tryons assembled their library over the course of 70 years of active research on fern biology and systematics. Their collection includes the bulk of Danish botanist Carl Christensen's library. Christensen is one of the 20th century's greatest fern biologists.

In addition to donating the collection, Alice Tryon, now of Pensacola, Florida, provided perpetual support for this library. Rolla Tryon died in 2001. "It was his wish also to find a good environment for this library, that it remains intact and to see it grow," says Barrington.

Barrington has known the Tryons and this collection since he studied under them for four years as a doctoral student at Harvard University in the early 1970s. "I maintained a close relationship ever since. Their favorite students were their family," says Barrington. "This is unquestionably a world-class collection. What sets it apart is: It is big. It covers the entire world. It is heavily annotated – their handwritten notes about the history of each publication are important for us to know."

Indeed, some texts include handwritten indices from the author. Others include not only Rolla's handwritten corrections in the margins, but even the receipts showing where and when he purchased the books.

"Pringle was especially interested in ferns, and I am, and Vermont is a ferny place," says Barrington. "With the Tryon collection here, it solidifies our position as  $\it the$  place for fern study."

Prominent Vermont botanist Art Gilman agrees. "Certainly the Tryon library is a unique resource unrivalled in the region, perhaps anywhere in the United States."

Thomas Vogelmann, chair of botany, sees the gift and the herbarium's public esteem as signs of good things to come. "This magnificent gift beautifully reinforces the fact that the plant sciences at UVM are of world-class standing. Our planned investments in new faculty positions and a new plant science building over the next few years will further prove that point."

For more information, see the <u>Pringle Herbarium Webpage</u>. A March story in *the view* will describe the colorful life of UVM alumnus and collection cornerstone Cyrus Pringle, and include a more precise calendar of the events surrounding the Pringle's anniversary.