

NEWSLETTER



DEPARTMENT OF FOOD SCIENCE AND TECHNOLOGY
THE FOOD PROCESSING CENTER

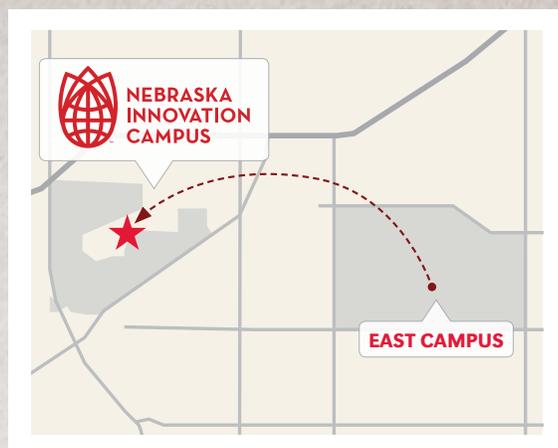
ON THE MOVE

These are exciting and historic times for the Department of Food Science and Technology.

We are moving our entire department from our present location in the Food Industry Complex on East Campus to the Food Innovation Center at the Nebraska Innovation Campus (NIC), a public-private research and technology park on the former state fair grounds. Our department, which will be located at the main entrance of Innovation Campus, will have more spacious research and teaching laboratories, a larger Pilot Plant space and expanded capabilities in many areas.

The move to NIC will provide new ways for us to serve Nebraskans as well as those around the world as we strive to make food safer and more nutritious and to improve human health. The newly named Food Innovation Center at NIC will house our department and The Food Processing Center.

ConAgra Foods, the university's first private collaborator at Innovation Campus, has joined us in this enterprise. Joint research projects between UNL faculty and ConAgra could include food sanitation, food safety, allergens and nutrition, and food product development.



Understanding nutrition and obesity at the molecular level



Amanda Ramer-Tait

The University of Nebraska-Lincoln has received an \$11.3 million grant from the National Institutes of Health (NIH) to establish a research center focused on understanding nutrition and obesity at the molecular level.

The five-year grant from NIH's Center of Biomedical Research Excellence (COBRE) program will support the Nebraska Center for the Prevention of Obesity Diseases through Dietary Molecules, or NPOD. The COBRE program is funded through the Institutional Development Award Program, which supports health-related research and fosters faculty development and research infrastructure. Amanda Ramer-Tait, an assistant professor in UNL's Department of Food Science and Technology, is one of the NPOD project

leaders. She studies the dynamic relationship between the immune system and the trillions of microbes that live in the gastrointestinal tract, known collectively as the gut microbiota. Ramer-Tait is especially interested in understanding how that partnership affects the development of obesity and metabolic syndrome, which can raise the risk for heart disease, stroke and type II diabetes.

"We understand from many human and animal studies that there's an association between the gut microbiota and obesity," she said.

On the move

ConAgra plans to conduct research in our expanded Pilot Plants in NIC. The Pilot Plants will be managed by The Food Processing Center using the same successful fee-for-service business model for entrepreneurs and industry collaborators.

Teaching laboratories designated for chemistry, microbiology and food product development, as well as three new classrooms and a state-of-the-art distance learning auditorium, will be part of our new facilities at NIC. In addition to the expanded food sensory facilities, we will have the first clinical facility in IANR to conduct food performance and nutritional studies. Food science classes will begin there in fall 2015. One of the many benefits of our move is that our students as well as faculty will be in close proximity to industry partners and collaborators.

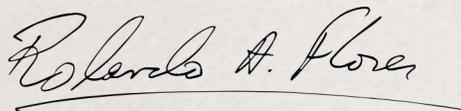
The 123,000-square-foot space in the former Industrial Arts Building — twice the size of our current space — will better accommodate our growth, which includes increasing our current enrollment of 78 undergraduate students to 140 and the 62 current graduate students to 100 within the next five years. You can follow the construction of our new building via Web cam at <http://www.truelook.com/clients/tetrad-webcam/>.

During the Academic Program Review of our department, which was March 30 through April 2, we had an opportunity to talk about our growth and our vision for the future with the review team. We got very good feedback and an excellent review from a highly qualified team.

We plan to add five faculty members before the move to Innovation Campus. We currently are in the process of filling a new faculty position for a food physics chemist, as well as for the gut microbiologist replacement. Two new faculty members in allergies, Philip Johnson and Melanie Downs, will start in the first two months of 2015. George Cavender, a food engineer who comes to us from Oregon State, began his work in The Food Processing Center in October this year. George started working on high pressure processing and has already taught several classes in the heat and mass transfer course this semester.

For those of you concerned about if or where you will be able to get Dairy Store ice cream after the departmental move — no worries. The Dairy Store and the Dairy Plant will remain on East Campus in the same location. The store is profitable and provides excellent real-life experiences for the students who work there. Read more about the Dairy Store on page 9.

Best wishes,



Rolando A. Flores
Head, Department of Food Science and Technology
Director, The Food Processing Center



FALL 2014
VOLUME 10, ISSUE 2

The Department of Food Science and Technology and The Food Processing Center Alumni Newsletter is published by the Department of Food Science and Technology and The Food Processing Center in the Institute of Agriculture and Natural Resources at the University of Nebraska–Lincoln under the auspices of the department head.

Written material may be reprinted, provided no endorsement of a commercial product is stated or implied. Please credit the Department of Food Science and Technology and The Food Processing Center, University of Nebraska–Lincoln.

To simplify technical terminology, trade names sometimes may be used. No endorsement of products is intended nor is criticism implied of products not mentioned.

Chancellor, University of Nebraska–Lincoln
Harvey Perlman

NU Vice President and Harlan Vice Chancellor, Institute of Agriculture and Natural Resources
Ronnie Green

Department Head, Department of Food Science and Technology, and Director of The Food Processing Center
Rolando A. Flores

LET US KNOW WHAT YOU THINK!

We'd love to hear from you! For any feedback or story contributions you'd like to see in future issues, email us at **FOODSCI@UNLE.U**.

Understanding nutrition and obesity at the molecular level

Although research hasn't proven that changes in the composition of the gut microbiota can cause obesity, there's clearly some "crosstalk" or communication between those microbes and the immune system that indicates a relationship, she said.

"Humans are born with a sterile gastrointestinal system, which quickly becomes colonized by gut microorganisms," Ramer-Tait said. The assembly of this microbiota occurs in a "fairly predictable" order until about the age of 3. However, "interruptions" in that process can affect the immune system and may make a person more susceptible to certain diseases. Examples of these "interruptions" include heavy antibiotic usage, formula feeding and cesarean sections.

This grant will allow Ramer-Tait to ask, "How does the appropriate assembly of gut microbes early in life prevent chronic lifestyle diseases such as obesity later in life?" To help answer that question, her team will take advantage of a unique resource, UNL's state-of-the-art Gnotobiotic Mouse Facility, which Ramer-Tait currently directs. Gnotobiotic (from the Greek words gnotos meaning "known" and bios meaning "life") mice can be kept "germ-free," meaning they have no microorganisms in their bodies. Working with germ-free mice allows scientists to create communities of gut microbes in a

controlled order at different stages of life. Researchers can then ask:

- "How do those microorganisms communicate with the immune system?"
- "Does the timing of adding microbes impact health?"
- "Do particular collections of microbes lead to obesity?"

"There are a lot of moving pieces" that Ramer-Tait hopes to understand better over the five-year life of the grant, of which \$450,000 goes toward her work. In addition to providing funds, the COBRE also builds research expertise. Experienced faculty will mentor early career scientists such as Ramer-Tait. Her COBRE mentors include Jennifer Clarke (Department of Food Science and Technology) and Etsuko Moriyama (School of Biological Sciences), two well-respected bioinformaticians with vast expertise in analysis of large data sets derived from genome sequencing projects. Answering molecular-level questions regarding obesity and related diseases is a crucial first step toward curbing what many consider to be a national health epidemic. NPOD builds on UNL's strength in nutrition and health research and includes collaborators from the University of Nebraska Medical Center. Ultimately, the center will establish a community of nationally recognized researchers in nutrition, genetics, biochemistry, food science, immunology and computer science.

"This award recognizes the strong research programs that UNL has built to address the health challenges in obesity and related diseases that our nation faces," said UNL Chancellor Harvey Perlman. "This is a significant expansion of our capabilities in biomedical research."

"Our long-term goal is to become a leader in nutrient signaling and the prevention of obesity and obesity-related diseases, including non-alcoholic fatty liver disease, cardiovascular disease and Type 2 diabetes," said center director Janos Zempleni, Willa Cather Professor of molecular nutrition in UNL's Department of Nutrition and Health Sciences.

"This combined focus makes NPOD unique in the U.S. and globally," he said. "Through this center, we will develop science-based strategies using dietary compounds to improve human health."

"Obesity is a national health crisis that costs the U.S. hundreds of billions of dollars annually in health care expenses and lost productivity," Zempleni said. "Our research will help address these issues."

Green chemistry, green technologies

Ozan Ciftci

Ozan Ciftci's research focuses on the use of green chemistry and green technologies for processing lipids to produce value-added food products. His goal is to develop an integrated green biorefinery based on supercritical fluids for value-added processing of grains and oilseeds.

His lab's current focus, as part of this biorefinery, is development of a novel green process for the formation of bioactive carrier solid lipid nanoparticles as functional food ingredients to improve the quality and health effects of foods. He is also working on the biocatalytic modification of lipids to produce health and wellness promoting

lipids. His lab is very interested in understanding the fundamentals associated with these processes.

Ciftci arrived at the University of Nebraska-Lincoln in April after finishing up post-doc work in bioresource and food engineering at the University of Alberta, Canada. Previously, he did post-doc work in chemistry and biochemistry at the University of Lethbridge in Canada. Ciftci received his doctorate, master's and bachelor's, all in food engineering, from the University of Gaziantep in his native Turkey.

Ciftci said his work fits into an emerging trend of green technologies

for processing foods of many types, particularly foods that can help prevent diet-related diseases.

"Global trends indicate that the world needs natural food products and alternative green technologies. Our target is to be one of the top research groups in the world in the green processing of lipids," he said.

Ciftci will teach the Food Engineering Unit Operations course next semester and Food Lipids next fall. "I'm happy to be here. I think it's a great place to learn and make a contribution," he said.

SELECTED GRANTS

OZAN CIFTCI

"Development of a Model Green Integrated Wheat Biorefinery: Formation of Novel Starch Aerogels"
\$88,340

BING WANG

"Mitigating the Risk of Campylobacter spp. in Broiler Chicken Supply Systems Using Quantitative Microbial Risk Assessment and Cost Effectiveness Approaches"
\$82,312

JEYAM SUBBIAH

"Radio Frequency Processing for Improving Microbiological Safety of Low Moisture Foods"
\$299,989

DEVIN ROSE

"Promoting Gastrointestinal Health and Reducing Subclinical Inflammation in Obese Individuals through Intake of Whole Wheat Products in Comparison with Fruits and Vegetables"
\$120,712

"Winter Wheat Varieties in Nebraska"
\$79,900

ANDREIA BIANCHINI

"From the 'Milpas' to Market: a Feasibility Study on the Use of Metal Silos for Safe and Better Storage of Guatemalan Native Corn"
\$39,050

"Tracking and Evaluating Heat-Resistant, Spore Forming Bacteria in the Fluid Milk Chain"
\$65,000

AMANDA RAMER-TAIT

"Corn-Derived Resistant Starches to Improve Obesity and Metabolic Syndrome"
\$36,723

"COBRE: Nebraska Center for the Prevention of Obesity Diseases through Dietary Molecules"
\$2,516,001

"Corn-Derived Resistant Starches to Improve Obesity and Metabolic Syndrome"
\$36,723

"Impact of Nutritionally Enhanced, Novel Soybean Oils on Metabolic Health and the Intestinal Microbiota"
\$65,000

CURT WELLER

"Manufacturing Extension Partnership"
\$600,000

Working to create a safer food supply chain



Bing Wang

There are a lot of steps in the food supply chain from the producer to the consumer, and food safety is critical in every step.

The research of Bing Wang primarily focuses on food safety risk assessment and epidemiology of foodborne pathogens along the food supply chain and relevant environmental niches.

“My work involves supplying independent evidence-based opinions to assist decision making in food policy and food safety management systems for regulatory agencies and the food industry,” said Wang, assistant professor in the Department of Food Science and Technology. “This will facilitate a safer food supply chain.”

Wang has been primarily using quantitative risk assessment (QRA) in her research. QRA is an evolving approach, which has been employed by many national-level food agencies to address risks posed by food safety issues. The international endorsement of QRA is important because managing food-related risks involves every step in the supply chain and food safety is no longer the responsibility of a single sector.

“As a whole food chain approach, QRA is able to facilitate the collaboration among all relevant sectors to manage public health risks associated with contaminations in food products,” she said.

QRA takes advantage of mathematical modeling to investigate the complex dynamics of pathogens along the food supply chain. It also is used to systematically identify and evaluate all potential control measures by relating the effects of different control measures — either individually or in combination — to the risks to consumers.

In conjunction with cost-effectiveness analysis, QRA supplies integrated evidence for weighing risk management options on the level of public health protection in relation to costs to stakeholders, she said.

Systematic review (SR) and meta-analysis (MA) are two other major tools in Wang’s toolbox. For Wang’s research, SR and MA are commonly used to study the ecology and transmission of foodborne pathogens in food systems, and to supply scientific evidence for QRA model parameterization with quantified uncertainty.

SR is a relatively new evidence-synthesis approach to address complex — and even controversial issues — in agri-food public health. SA uses a structured research protocol to select published independent studies with relatively high-quality data and less bias relevant to research questions of interest. Data from selected studies are then synthesized via statistical methods, which is meta-analysis.

Wang has applied the principles of these disciplines to diverse fields, including risk assessment of foodborne pathogens and antibiotic-resistant bacteria along the animal protein production chain and risk-benefit analysis of nutrient fortification in grain food. Another focus is characterization of the risks of sparsely tested chemicals to improve the use of scientific information in risk management decisions to understand how risk perception influences decisions about health and safety.

In spring 2015, Wang will be teaching a new graduate level course, Food Safety Risk Analysis. The course will provide an introduction to risk analysis principles, quantitative tools for risk assessment, risk-risk trade-off analysis, and methods for framing risk management questions and risk communication applied in food safety issues through real-world examples of microbial, food allergen, nutritional and chemical risk assessments.

NE MEP and FPC = manufacturing success

Curtis Weller, professor of food and bioprocess engineering in the Department of Food Science and Technology, is the new director of the Nebraska Manufacturing Extension Partnership.

The new partnership, involving UNL's College of Engineering and the Institute of Agriculture and Natural Resources as well as Central Community College in Grand Island, will help small and medium-sized manufacturers fuel Nebraska's economy.

The vision of Nebraska MEP is to be a catalyst for strengthening Nebraska manufacturing, accelerating the state's ongoing transformation into a more efficient, powerful engine of innovation that drives economic growth and job creation, Weller said.

Manufacturing is the second largest industry in Nebraska behind agriculture, and food processing is the leading manufacturing activity in the state.

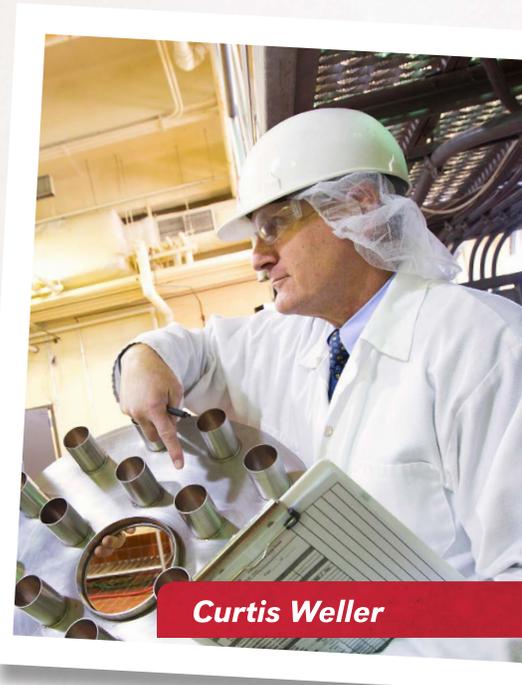
A key provider of services to Nebraska food manufacturers is The Food Processing Center.

The Food Processing Center, a UNL-based partner of the MEP network from its start, will continue in the repositioned Nebraska MEP.

Weller said Nebraska MEP is geared to provide services, such as profitable growth, continued improvement, technology accelerations, supply chain, sustainability and workforce development.

"In a way, we're kind of a connector organization," Weller said. "While the FPC is well equipped to help with most of these, we might be able to help with somewhat different aspects of the supply chain, for example."

Weller said Nebraska MEP anticipates helping the FPC in marketing its services to Nebraska manufacturers. While Nebraska MEP's focus is small and medium-sized manufacturers, it isn't restricted to that. Its focus is within state boundaries, so it would be restricted to Nebraska manufacturers only and manufacturing only. This would not include retail, for example, Weller said.



Curtis Weller

AWARDS

DEVIN ROSE
AACCI Young Scientist Research Award

RANDY WEHLING
Southeast Community College 2014 Distinguished Alumni Award

STEVE TAYLOR
National Hall of Agricultural Achievement Honor; selected to deliver the William C. Frazier Memorial Lecture at the University of Wisconsin Madison

Food science brings professional challenges, personal growth

Yulie Meneses always wanted a career that gave her happiness and satisfaction, but also wanted to do something that made an impact on people's lives.

Food science has done that.

"Since ancient times, food has had an inextricable relationship with the development of society," Meneses said. "Nowadays, people demand safer, nutritious, convenient and accessible food that has been produced with efficient resources without affecting the environment. Food science is a wholesome career that continually brings professional challenges but also brings personal growth."

Meneses, a second-year doctoral student in food science and technology from Quito, Ecuador, focuses her research on food safety and water conservation for food industry plants.

Meneses isn't new to UNL. As part of her study program at Zamorano University in Honduras she was required to have a four-month internship during her senior year. She was offered the opportunity of an internship at The Food Processing Center. During that internship, she developed a product called Husker Cheese Puffs, which are still for sale at the UNL Dairy Store.

"Everything started from that one opportunity," she said.

Meneses received her bachelor's degree from Zamorano and her master's from UNL, both in food science and technology.

Before starting her Ph.D. program, she worked for two years at a vegetable oil company, where she conducted product development and processing improvement activities.

"I had the opportunity to work for the industry as a research and

development specialist, and I loved the experience," she said.

However, her Ph.D. research has developed a new interest in sustainability.

"I strongly believe that the most efficient solutions to develop processes and alternatives for sustainable food processing should come from food science professionals who understand the whole picture," she said.

After Meneses completes her Ph.D. program, she would like to join a sustainability consulting group or another organization working in this area.

"I want to combine my current knowledge of food safety, food processing and water conservation to promote better sustainable operation practices in different sectors of the food industry."

Yulie Meneses

NE MEP and FPC = manufacturing success

As a program supported by the U.S. Department of Commerce, Nebraska MEP offers a range of effective resources to help manufacturers identify opportunities that will accelerate and strengthen their growth and competitiveness in the global marketplace.

It is one of a national network of MEPs, with at least one in each state, and Puerto Rico.

An aim of the UNL-based partnership is to boost the university's efforts with Nebraska manufacturers and convert innovations from researchers' lab benches into products for the marketplace.

Prior to UNL leading the Nebraska partnership, the Nebraska Department of Economic Development directed

the National Institute of Standards and Technology affiliate in the state.

Currently, more than 93,000 Nebraskans are employed in manufacturing. Nearly 90 percent of the manufacturers in Nebraska are considered small or medium-sized companies with less than 500 employees each.

Manufacturers interested in these services through the Nebraska MEP can visit nemep.unl.edu for more information or contact Weller at 402-472-9337 or cweller1@unl.edu.

BRAIN FOOD

As alumni of the Food Science and Technology program you understand the importance of scholarships to students in the program.

To make a gift, contact Ann Bruntz, abruntz@nufoundation.org, 402-458-1176.

CAMPAIGN for
NEBRASKA
UNIVERSITY of NEBRASKA FOUNDATION



Dairy Store's home will continue to be East Campus

I scream, you scream, we all scream for ice cream.

No need, though, to scream out of fear that the University of Nebraska-Lincoln Dairy Store is leaving its familiar spot on East Campus.

Although the rest of the Department of Food Science and Technology and The Food Processing Center will be moved to Nebraska Innovation Campus, the Dairy Plant and the Dairy Store are staying put.

"It's always been here, it's a landmark here and it's going to stay," said Kathy

Vokoun, manager of the store. Not only is the Dairy Store a landmark, but it will celebrate its centennial in 2017. Generations of Nebraskans – and visitors from beyond – have known to stop there to satisfy their cold sweet tooth.

The Dairy Store has made some changes over the years. A lunch menu brings in customers looking for something beyond ice cream. It caters university gatherings, including ice cream socials.

But the core of the business remains ice cream. And don't come in looking

for sugar-free fare, or frozen yogurt. "We are an ICE CREAM store," Vokoun emphasized, noting that some have come in looking for lower-cal treats. Keep moving, folks, there's nothing to see here.

The Dairy Store is known for keeping 16 flavors available – eight regular and eight rotating. Over the years, it has produced special flavors for special occasions – for example, for this year's Cooperative Extension Centennial, it added some chocolate chunks to its Scarlet and Cream flavor.



A Cup and a Cone

Those polar vortex temps can chill you to the bone, but ice cream is always in season, so pull on that parka and head over to the Dairy Store.

If the idea of ice cream in winter leaves you cold, don't forget about our fresh-brewed coffee. A cup of coffee and a cone are a perfect cold weather combo.

The Dairy Store | dairystore.unl.edu

Department of Food Science and Technology | The Food Processing Center

Located at 38th & Holdrege on East Campus | 402.472.2828 | marketplace.unl.edu/dairystore

Cheese, please

Favored for its ice cream flavors in the summer, Dairy Store business heats up before the holidays as customers seek gift boxes filled with handmade cheeses and meats, locally sourced honey and prepackaged crackers. During the four-week rush, the store sells nearly 3,200 gift boxes, which is more than 90 percent of the 3,500 gift boxes the store sells annually.

“We hit the ground running the week after Thanksgiving,” said Kathy Vokoun, manager of the Dairy Store. “We’ve already started to get ready for the rush by filling our storage shelves with gift boxes. In December, we have workers filling orders all day long.”

Prep work for the rush began months in advance as Jonathan Hnosko, manager of UNL’s Dairy Plant, and student workers started handcrafting and aging Dairy Store cheeses. The store offers seven regular cheeses and other specialty varieties — including New York cheddar with spiced cranberries, this year’s holiday-exclusive creation.

“We actually make more cheese than ice cream annually,” Hnosko said. “This year, we will make around 17,000 pounds of cheese and 15,000 pounds of ice cream. And, demand for cheese continues to grow. Next year will probably be the first time we will make cheese twice a month between February and September.”

Husker, a mild, white-colored cheese, is the most popular with more than 3,200 pounds produced annually. Husker-N-

Gold, a yellow and white mix of Husker and Colby cheeses, ranks second with about 2,500 pounds crafted each year.

Students also help make the gift box meats, which are produced through the Animal Science department and sold in UNL’s Loeffel Meat Laboratory. Also, some of the honey offered through the Dairy Store is provided by UNL’s student-led Insect Science Club.

“We feel it’s important to use products made with the help of UNL student employees,” Vokoun said. “The work is a great learning experience for the students, and customers like knowing that by buying these gift boxes, they are supporting UNL education.”

Overall, 14 gift box options ranging in price from \$13.99 to \$56.99 are offered. The standard gift box selections include 10 options with different cheese/meat combinations and are delivered in a red box adorned with a silver academic “N.” The store also offers four Nebraska baskets, which come shrink-wrapped in a handmade basket shaped like the Cornhusker state and filled with cheeses, meats and other items.

“We added the Nebraska baskets a few years ago,” Vokoun said. “They are a popular option as the basket makes a gift that can be used year-round.”



Jonathan Hnosko (left) and Andrew Donovan, a student employee, load a 25-pound block of Husker-N-Gold cheese into a bag that will be vacuum-sealed.

The Dairy Store — which is associated with UNL’s Department of Food Science and Technology and The Food Processing Center — sells the gift boxes through the [UNL online marketplace](#) and in its East Campus store. A list of gift box options is available online. The boxes can be shipped to any United States address.

“In my 25 years here, the number of gift boxes ordered has increased slightly,” Vokoun said. “We get orders from all over the nation, from alumni seeking items they remember eating in college to businesses that buy the boxes as gifts for customers and employees.

“It’s a crazy month, but I love every minute of it because we get the opportunity to provide great customer service and help others with their holiday celebrations.”

Smith finds right major at UNL

Kristin Smith

It was a job right out of high school that convinced Kristin Smith she had chosen the right major.

That job was working in The Food Processing Center's product development lab for Laurie Keeler, senior manager, Product Development.

"Ever since then, there hasn't been a doubt in my mind," she said.

Smith, a senior from Omaha, is working on a degree in food technology for companion animals and food science.

While Smith always knew she wanted to be a "food doctor" like her food scientist father, Gordon Smith, she didn't originally want to come to UNL.

"It was around the time I was a senior in high school that I still wasn't a fan of living in Nebraska," she said.

Her dream school was the University of Tennessee-Martin, which both of her parents attended and where her grandfather taught.

However, out-of-state tuition was going to be very expensive.

After touring UNL's East Campus and meeting some of the Food Science and Technology professors, she was amazed by the size of the department.

She also realized she wouldn't have to "settle" and major in chemistry like she would have if she chose UTM.

It was a clear choice.

Smith is in her fourth year at UNL, but has one more semester left after this year. After she finishes her undergraduate studies, she plans to attend graduate school.

Internships at Oxbow Animal Health as well as Purina Pet Foods have both shaped her education and expanded her interests, she said.

"I have learned to love the pet food industry and the two rabbits I accrued while working at Oxbow," she said.

In her free time, Smith said she loves to read, cook with her roommates and take care of her rabbits.

The importance of alumni contributions

Private support is essential to recruit outstanding undergraduate and graduate students, provide timely and applicable research, and expand our outreach to small businesses and entrepreneurs across the state. In these times of shrinking budgets and decreasing state support, donations from our alumni and friends are critical. We hope you will consider making a gift to assist us in these efforts. Contact the University of Nebraska Foundation to contribute to the following funds:

Food Science & Technology Student Scholarship

Fund No. 1359: This fund provides much needed financial support to our undergraduate students, an invaluable aid to our recruitment and retention efforts.

Food Science & Technology Research Fund No.

1452: This fund sponsors research activities with the Department, including undergraduate student research and travel support for graduate students to attend scientific meetings.

Food Science & Technology Development Fund

No. 4312: This fund provides general support to the Department and is specifically used to enhance undergraduate student recruitment efforts (high school visitations, etc.)

To make a gift, contact Ann Bruntz, 402-458-1176, abruntz@nufoundation.org.