O-Chem, Nerds, and a Natural Sciences Legacy

The Dr. Robert Williams Endowed Chair Will Make Chemistry More Accessible

by Erik Schmidt

Mention organic chemistry to an undergraduate and you’re likely to get a sour look. The subject has long been considered the ultimate test for budding researchers – a make-or-break point in any science curriculum.

It’s hard to learn. It’s just as hard to teach. Robert M. Williams, College of Natural Sciences University Distinguished Professor of chemistry, has made an impressive career out of shepherding students through “O-chem” and the related academic territory, and the college recently announced a campaign to fund a faculty endowed chair in his name. Williams, a 34-year CSU veteran, says that the chair isn’t really about him so much as it is about recognizing the accomplishments of his former students and postdoctoral co-workers. It will enable the college to recruit nationally prominent organic chemists or chemical biologists in perpetuity.

To help, Williams, along with his wife, Jill, has pledged an impressive seed donation: 10 percent of the $1.5 million required to endow such a chair.

It had a comedic beginning, actually. Williams recalls, with a laugh, the event at which the chair was announced by CNS Dean Dr. Jan Nerger. “My graduate team organized a symposium in my honor when I turned 60,” he says. “It was there that I said that I’d donate the first 10 percent – without first consulting my wife.”

She supported him fully, and the campaign is well underway today.

“Dr. Williams is an extraordinary scholar, and it’s fitting to recognize his influence in organic chemistry,” says Nerger. “Generations of scientists and educators across the U.S. and abroad can trace their knowledge and success to him.”

Williams has enjoyed such success in part because he knows how to reach students. Case in point: Confronted with the challenge of making complex chemistry more accessible and relevant, Williams created the Nerd Street Journal, an informal publication that has evolved into

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President Frank Shares Good News in Fall Address

Thanks to five years of building state-of-the-art facilities; a 13 percent increase in total faculty; and a 158 percent boost in University-funded need-based financial aid, Colorado State University has reached new heights – but it won’t settle for being anything less than “the finest land-grant research university in the country.”

Among highlights cited from the past five years:

- CSU has added six new academic departments/units, 13 graduate degrees, 12 undergraduate majors, and 17 undergraduate minors to its already-diverse lineup of academic offerings.
- During a period of record enrollment, the student-faculty ratio has been held to 17:1.
- Three million gross square feet of space has been constructed, including the first new academic classroom buildings in decades – Behavioral Sciences, Computer Science, Rockwell Hall West, and Suzanne and Walter Scott, Jr. Bioengineering – and new residence halls designed as living-learning communities.
- CSU has funded dramatic increases in scholarship and financial aid to counter increases in tuition costs, including an 80 percent increase in scholarships and a 158 percent increase in need-based aid funded directly by the University.
- Despite state support shrinking by 30 percent, CSU’s four-year graduation rate rose by 14 percent.
- An emphasis on retention has resulted in 86 percent of first-year students returning – an all-time record for CSU.

In his 2014 Fall Address, CSU President Tony Frank delivered that message and peered ahead at the coming challenges and opportunities facing the University. The annual all-University event is held on CSU’s historic Oval.

Frank noted that when he became CSU’s 14th president, the country was newly in the throes of a devastating economic and debt crisis. An ever-shrinking level of state support was hindering the University’s ability to maintain its position, let alone commit to making campuswide improvements. Despite the economic outlook, Frank said, “The University instead rose to its feet, looked that future directly in the face, focused on the fundamental reasons we exist, and embarked on a period of extraordinary progress.”

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Chemistry tends to be taught from the bottom up," Williams says. "You start with atoms, bonds, molecules. So I use the *Nerd Street Journal* to go from the top down.

“We’ll consider, say, a new experimental drug to combat the Ebola virus. I’ll find an article in the *Wall Street Journal* or *New York Times*, and then I’ll write about the chemistry behind it. This gets students engaged in something that is immediately relevant to them.”

The *Nerd Street Journal* has been around for 15 years now and has typically welcomed articles written by students in Williams' classes.

Williams is still teaching and researching actively, but he’s not afraid to reflect on his time at CSU. “The products I produce are educated scientists,” he says. “I’ve had grad students and postdocs go on to very successful careers in pharmaceuticals, academia, and even patent law. My legacy isn’t just in the papers my lab has published.”

It’s true: When the Dr. Robert Williams Endowed Chair is in place, his legacy will include untold numbers of future students who’ll strive to contribute to the field just as he has done.

“I’ve had a great career, and this is one small way to give back to the University considering all the great opportunities I’ve had here at CSU,” Williams says.

**Watch a video of President Frank’s full address at** http://source.colostate.edu/fall-address.

**To join Robert Williams and help propel countless future chemistry students, visit** https://advancing.colostate.edu/WILLIAMSCHAIR, or contact Simone Clasen, (970) 491-0997, simone.clasen@colostate.edu.
Man’s Best Friend: Canine Cancer Leads to Breakthroughs in Human Medicine

By Coleman Cornelius

“Innovation is always the focus of the comparative oncology trials at the center,” said Page. “It’s all about improving the bottom line of cancer treatment. We have trials that are conducted for cancer drugs, radiation, new diagnostic tests, and all are part of moving the profession forward for the benefit of pets and people.”

Case in point: The limb-sparing surgery for cancer patients that was advanced by Withrow and Dr. Ross Wilkins, a human orthopedic surgeon. It has allowed patients, primarily children, to keep their limbs when undergoing cancer surgery and is recognized as the standard for children with bone cancer. Another example is the development of a product that stimulates the immune system and has resulted in an improvement in survival for children with bone cancer by delaying metastasis.

“I hope I can carry on Steve’s legacy by continuing to foster compassion for clients and their pets, and I hope I can emulate Steve’s focus and understanding about what’s important,” said Page. “The core values of the center are vision, integrity, and compassion. Nearly 800 donors have joined in support of those values to make this endowment possible.”
Colorado State University’s multidisciplinary Vehicle Innovation Team has been selected as one of only 16 teams to participate in EcoCAR3, a national automotive engineering program sponsored by the U.S. Department of Energy and General Motors. More than 300 university teams applied for the national competition, which kicked off this fall.

Donor support from CSU alumni, industry partners, and the College of Engineering helped give the CSU team application a boost. According to Clinton Knackstedt, student engineering manager on the Vehicle Innovation Team, “This project simply would not exist without sponsor support.” Thanks to private giving, “hundreds of new engineers have been given specialized training in the automotive industry and hybrid vehicle technology,” Knackstedt said.

Being chosen for the EcoCAR3 competition is really exciting, said Dr. Thomas Bradley, CSU mechanical engineering associate professor and EcoCAR adviser. “We will be competing with schools that are considered the premier automotive engineering schools in North America.”

To learn more about the CSU EcoCAR team, visit the team’s Facebook page or www.engr.colostate.edu/me/ecocar.

This is the second time CSU has been selected for the EcoCAR program. Last June, the team traveled to Washington, D.C., where their redesigned hydrogen-electric hybrid Chevrolet Malibu was evaluated in the EcoCAR2 contest.

The EcoCAR3 program requires student teams to revamp a GM vehicle. Over the next four years, CSU students will convert a Chevrolet Camaro into a hybrid electric car that gets better gas mileage and emits fewer greenhouse gases but still maintains the performance of the iconic American muscle car. Competitions are scheduled each year throughout the four-year project.

The CSU team consists of undergraduate and graduate students in mechanical, electrical, and computer engineering, as well as journalism and business students. The team’s application was evaluated on its potential for success, as well as CSU’s institutional knowledge and commitment to the project. Strong
A Tribute to CSU’s Legacy Families: The Weinland “Aggies to Rams” Wall

In honor of the many multigenerational family members who have walked its halls, Colorado State University’s newly renovated Lory Student Center will soon feature a new display. The Weinland “Aggies to Rams” Wall will serve as a tribute to these loyal alumni whose pride in, and gratitude for their CSU experiences, were passed on through several generations.

Designers who planned the 200,000-square-foot renovation of the Lory Student Center wanted to not only renovate the building, but also enhance the experiences people have within it. Working with CSU stakeholders, the team developed tributes to “tell the story” of Colorado State University, including “Pride and Traditions,” “Land-Grant Heritage,” and “Research that Transforms our World.” The “Aggies to Rams” story captured the heart of CSU alumnus Jason Weinland (liberal arts, Class of 1987). Jason’s own family has multiple connections to Colorado State’s history.

Jason’s father, Donald Weinland (1965), was a student on campus when the Lory Student Center first opened its doors. Jason’s maternal grandfather, William Ernst (1939), played baseball for Colorado A&M. And now, Jason’s son, Cole, is a sophomore and the fourth generation in his family to attend the University.

Jason’s lineage also includes the senator who carried the legislation for the name change from Colorado A&M to Colorado State University. While not a CSU alumnus himself, Jason’s grandfather, Sen. Ernest Weinland from Loveland, did much to contribute to CSU. Sen. Weinland was cited by former CSU President Bill Morgan in his memoirs as deserving “full credit for enabling the institution to break the barrier that held us down at a lower plateau.”

Jason’s gift to the Lory Student Center project will name the Weinland “Aggies to Rams” Wall and allow CSU to tell his family’s story, as well as the stories of other multigenerational families, through a tribute of glass, art, photography, and quotes that will be displayed outside the new Grand Ballroom.

Jason envisions the wall as a way to celebrate CSU’s legacy families. “It’s important to honor and recognize the individuals who came before you and made your experience possible. Therefore, when your time comes, it becomes your obligation to stand up for future generations to ensure they have an even better experience than you.”

For more information about the Weinland “Aggies to Rams” Wall, contact Alexis Kanda-Olmstead, director of development for the Lory Student Center, at (970) 491-8217 or Alexis.Kanda-Olmstead@Colostate.edu.

Upcoming Events

Webinar – Functional Foods for Life
Elizabeth Ryan, assistant professor, Department of Environmental and Radiological Health Sciences
1 p.m. MT, Jan. 22, 2015

1870 Dinner
Feb. 13, 2015

Webinar – University Update
CSU President Tony Frank
2 p.m. MT, March 16, 2015

1870 Club Exclusive
Ceremonial Tapping Party for CSU’s Brewing Science and Technology Course
April 2015

GIVING Newsletter – Published by the Office of Gift Stewardship
(970) 491-6539 or ua_donor_relations@colostate.edu

Special thanks to contributing writers: Coleman Cornelius, Lana Hoff, Erik Schmidt
Members of the 1870 Club visited CSU’s Powerhouse Energy Campus for a reception and private tour on Nov. 11. Powerhouse transformed a 1930s municipal power plant into 65,000 square feet of laboratory, meeting, classroom, and business incubator space where students and researchers are solving some of the world’s most pressing concerns. Following the tours, members attended a lecture on “Adventures in Global Energy Innovations,” presented by Dr. Bryan Willson, professor in the Department of Mechanical Engineering and founder/co-director of CSU’s Engines and Energy Conversion Laboratory.

Watch a video of the lecture at http://source.colostate.edu/community-lecture-series-bryan-willson.

Colorado State University Foundation Investment Summary for FY14

The Colorado State University Foundation Board of Directors and Investment Committee have reported an investment return of 13.90 percent for the fiscal year ended June 30, 2014. The following is a recap of the portfolio performance for the year ended June 30, 2014.

$375,670,000 \{ \text{Total Invested Assets as of 6/30/14} \}

$325,414,000 \{ \text{Total Invested Assets as of 6/30/13} \}

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(50% S&P 500; 20% MSCI EAFE; 30% Barclays US Aggregate – this represents a benchmark comparison to the CSUF portfolio.)

For the fiscal year ended June 30, 2014:

Within the Wilshire Universe of Endowments, Foundations, and nonprofit organizations, CSUF exceeded the average performance of peer organizations for the five- and 10-year periods. Long term, CSUF achieved roughly the same return as the 10-year performance of the market (as measured by the S&P 500) with one-third the risk. Over the last one- and three-year periods, CSUF has slightly lagged the performance of its peers due to a higher weighting in alternative investments, which have underperformed more traditional investments in the strong equity market rally of the last few years. We continue to work hard to maximize the returns on our investments, and we expect that our alternative investments will yield strong results in the future.
Thank you for another record-breaking year!

Alumni and friends continue to break records with their gifts of financial support to the people and programs they are passionate about at Colorado State University. Last fiscal year, CSU enjoyed a record number of gifts, a record number of donors, and the highest rate of alumni participation in more than a decade. Thank you!