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Insights

Utah State University

College of Science | Alumni Newsletter | Spring 2002 /Vol. 10 Issue 1

From the Dean's Office

Interim Dean Don Fiesinger

It is my pleasure to introduce another issue of *Insights*. The new year and the new semester have gotten off to a good start and our search for a new dean continues. The search committee is currently interviewing candidates.

I recently completed a review of ten faculty being considered for tenure and promotion within the College of Science and was greatly impressed by their accomplishments. If they are representative of the balance of our faculty, and I believe they are, we truly have an outstanding faculty, devoted to excellence in teaching and research. In addition, I have been working with the department heads on the compact planning process introduced by our new president, Kermit Hall. This process has given us the opportunity to enter into a dialogue with colleagues and units across campus, to establish collaborations and partnerships that will only improve our efforts in teaching and research, all to benefit the students we serve. It has been a lengthy (and sometimes frustrating) process that will not conclude until later this spring, but I think that we will eventually be able to reflect on this and value the experience.

DEAN'S OFFICE...
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R. Gaurth Hansen Symposium

Originally postponed due to the events of September 11, the R. Gaurth Hansen Symposium, "Genomics in the 21st Century," was held November 8, 2001, at the Eccles Conference Center auditorium. Hosted by the Department of Chemistry and Biochemistry, the symposium honored former USU Provost and Professor R. Gaurth Hansen.

The symposium provided "an outstanding educational opportunity for our community," asserted USU Trustee Professor of Biochemistry Ann Aust. "Having a slate of presenters of this caliber, all in Cache Valley at the same time, is just unheard of."

Genomics, the study of DNA sequences, has gained widespread media interest since the first draft of the Human Genome Project was completed just over a year ago. Scientists will contemplate the implications and the role of human genes for many years to come.

> **"With the Hansen professorship, we hope to attract a highly visible, well-established researcher to our biochemistry program."**
> – Associate Professor Lance Seefeldt

"It is indeed a revolution we are having the fun of living through," stated one of the presenters, Dr. Raymond Gesteland, distinguished professor of human genetics and vice president for research at the University of Utah. Other presenters included Dr. John E. Mullet, professor of Biochemistry and Biophysics at Texas A&M University; Dr. Joseph Ecker, director of the Salk Institute Genomics Analysis Laboratory at the Salk Institute for Biological Studies; and Dr. William Nierman, vice president for research, the Institute for Genomic Research.

Following the symposium, Dr. Hansen was honored at a banquet held at the Old Rock Church in Providence, Utah. Steve Scheiner, department head of Chemistry and Biochemistry, presented Hansen with a brick from the old Widstoe Hall Building. He also received a sketch of himself done by USU Emeritus Professor Glen Edwards. Speakers included USU Provost Stan Albrecht, Vice President for University Advancement James MacMahon, and former colleagues and students of Dr. Hansen. William J. Rutter, co-founder and former chairman of the board of Chiron Corporation and Dr. Hansen's former graduate student, announced the establishment of the R. Gaurth Hansen Distinguished Professorship in USU's Department of Chemistry and Biochemistry.

HANSEN SYMPOSIUM...
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HANSEN SYMPOSIUM

Continued from page 1

"With the Hansen professorship, we hope to attract a highly visible, well-established researcher to our biochemistry program," stated Associate Professor Lance Seefeldt, chair of the committee that will screen candidates for the position. "We're very grateful to Dr. Rutter for his generosity and vision in creating this position for our university."

> **"I think Dr. Hansen was genuinely touched by the whole event."**
> – Dr. Steve Scheiner

Dr. Aust observed that the symposium, although academic in nature, did attract individuals from the community, as well as attention from such media sources as *The Salt Lake Tribune* and *The Deseret News*. Dr. Scheiner commented that "I think Dr. Hansen was genuinely touched by the whole event."

Born in 1920, Dr. Hansen was a native of Cache Valley. He earned a BS degree in chemistry and MS and PhD degrees in biochemistry, all from the University of Wisconsin. Hansen then joined the faculties of the University of Utah (1948-50) and University of Illinois (1950-57) before becoming a professor/chair at Michigan State University (1957-68). Dr. Hansen accepted a position at Utah State in 1968 as provost/academic vice president, as well as being a professor of biochemistry. He gained emeritus status in 1986.

Dr. Hansen passed away on January 29, 2002, in St. George, Utah. *Please see the obituary on page 16.*

Symposium Topics

Dr. Raymond Gesteland,
"Recoding: Reprogramming the Genetic Code."

Dr. John E. Mullet,
"Plant Genomics- From Genetic Models to Target Species and Complex Functions."

Dr. Joseph Ecker,
"Arabidopsis: From Genome Sequence to Biology."

Dr. William Nierman,
"The Genomics of Microbial Pathogens." ♦

DEAN'S OFFICE ...

Continued from page 1

In this "winter" issue, we are recapping our development efforts from the previous year; introducing new faculty and our new College Development Director Joel Kincart; and highlighting some people who have made significant contributions to Utah State University and the College of Science over the years.

We appreciate your responses to this newsletter informing us of your activities, and we encourage you to maintain contact with the College of Science and especially with your respective major department. We would like to receive any suggestions for changes or improvements to this newsletter. You, our alumni and friends, are important. Your continued support of the College of Science and your major department is greatly appreciated.

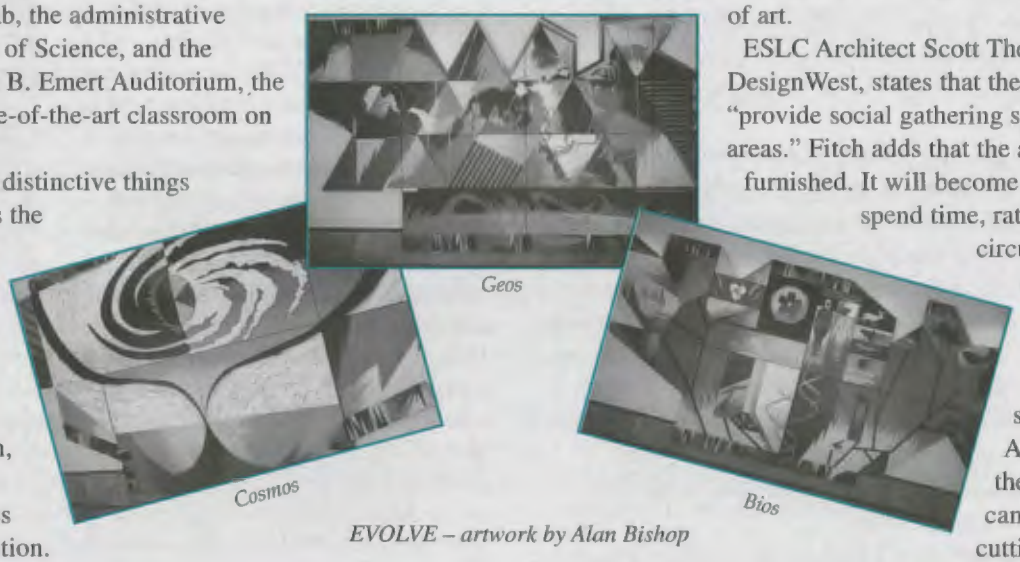
Sincerely,

The Eccles Science Learning Center

For a closer look at the Eccles Science Learning Center–
See photos on page 13.

On a technical and design level, the Eccles Science Learning Center (ESLC) is the jewel of the Utah State University campus, as well as one of the most functional and modern facilities of its kind in the nation. In the fall of 2001, the building opened its doors to classrooms, a student computing lab, the administrative office of the College of Science, and the George H. and Billie B. Emert Auditorium, the largest and most state-of-the-art classroom on the USU campus.

"One of the most distinctive things about this building is the atrium [connecting the ESLC to the Widtsoe Chemistry Building and the Maeser Chemistry Laboratory]," comments John Fitch, USU's project coordinator, Facilities Design and Construction. "The atrium establishes a relationship between buildings. It is what bonds these three buildings together. The purpose is to tie them because of their interdependencies." A translucent roof was designed to bring in the daylight. The hanging glass in the atrium is "unique" because "the colors you see are different than the light that comes through it," creating a visually aesthetic piece of art.



EVOLVE – artwork by Alan Bishop

ESLC Architect Scott Theobald, Architectural DesignWest, states that the atrium was meant to "provide social gathering spaces and study areas." Fitch adds that the atrium will be "nicely furnished. It will become a place to stop and spend time, rather than a place to circulate through. People can actually 'hang out' there instead of passing by."

The building's 500-seat Emert Auditorium is not only the largest classroom on campus, but a display of cutting-edge technology. "All the equipment is the latest and greatest," claims Rick Hughes, USU's chief engineer, Technical Support Services. Each seat provides interactive communication between the lecturer and the campus computer network. The intent is for students to be able to "download anything on the screen. And they can log onto the Internet from their seats. It is the first [auditorium] of its kind on campus." Furthermore, the instructor can save to a file what is on the whiteboard (electronic chalkboard) for students to access at a later time. Rick maintains "that system has the highest brightness and image resolution of anything else on campus." The Emert Auditorium's technological sophistication is "unique. I don't know that anyone else in the State is doing that."

The auditorium is named for former USU President and First Lady George H. and Billie B. Emert. "It is especially appropriate to name the auditorium for the Emerts," states USU Vice President for University Advancement and former Dean of the College of Science James A. MacMahon, because they "have been instrumental in bringing Utah State University to a new level of excellence as reflected in the president's attention to scholarships and improved facilities for our faculty and students."

Outside the Emert Auditorium are three pieces of art collectively entitled "Evolve," which were created by Utah artist Alan Bishop. Composed of acrylic paint on medium-density fiberboard, each piece "represents a different area of evolution," according to Bishop. The first one, located on the east side, is "Cosmos," a galaxy shape coming out of the big bang. In the middle is "Geos," which displays a map of the world and "the edges of the continental plates." The third piece is "Bios," which "represents evolution in the biological realm." The green on its left

ESLC...
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Inside *Insights*

ESLC...

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symbolizes the vegetative area, while the red on the right portrays the animal kingdom. These pieces are meant to pay homage to current ideas and interconnections within science.

On the second floor of the building is housed the administrative office of the College of Science. The individual offices have curved exterior walls, but Theobald points out that "we [initially] did not set out to do this. The office complex projected up from the auditorium, causing us to create a round wall that faces the Taggart Student Center. It created the opportunity for some wonderful office spaces with views to campus."

On the main floor of the ESLC, the Computer and Information Literacy Lab (CIL) is no ordinary computer lab. Referred to as a state-of-the-art lab, by CIL Director Stacie Gomm, the facility provides testing for computer literacy exams, now required for graduation. NetTest, the testing software, facilitates processing of the exams, which are graded immediately. This particular lab is the only place on campus where the CIL tests are administered. Furthermore, the site hosts other exams, such as Biometeorology and Business Information Systems tests. The CIL is also an open-access computer lab. "The uniqueness," according to Gomm, "is the software." Specializing in performance-based and concept-based tests, the NetTest "holds all kinds of possibilities."

The shape of the prefunctionary lobby, located on the northeast side of the building, was determined, in part, by a pair of specimen trees that the Facilities Design team attempted to save. The trees "dictated the shape..." according to Theobald. The root system of the trees in the construction area may have been disrupted. "We'll see in five years if we were successful," supposes Fitch.

Most chemistry buildings are "energy hogs" according to Theobald. All the air is circulated out and replaced with "no-return air." In the case of the ESLC, energy use was cut in half, based on the preliminary model. We cut the expected energy consumption by the utilization of such items as white steel sunshading devices, as well as ceramic dot patterns on all windows, which serve to reflect the heat, but still allow occupants to look through the glass, Theobald explained. Fitch lauds that the building "exceeded proposed energy savings. It is an economical building." The structure also has lighting controlled by motion sensors, another distinctive facet of the ESLC.

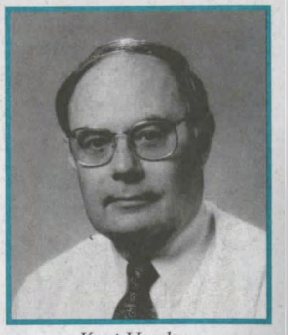
The interior was not the only issue Theobald considered. "It was very important to the design team that we create a visual edge to the campus." The team took the brick color from adjacent Old Main, USU's vintage crowning glory. "It was important to utilize the same colors as Old Main. We were not trying to duplicate styles. It needed to have that uniformity. Old Main also has some of those round edges."

An unparalleled campus project, the ESLC is able to boast the largest and most technically advanced classroom on campus, a cost-saving design, a state-of-the-art computer lab, and an atrium that serves both practical and aesthetic purposes. Notably, this structure achieves this stature, based solely on private donations. Not a state-supported project, the ESLC stands as an example of what can be accomplished through the generosity of private contributions from friends and alumni of the College of Science. ♦

Alumni Achievement Awards in the Department of Chemistry and Biochemistry

Drs. Izatt and Voorhees were the inaugural recipients of the Department's Alumni Achievement Award. The presentation, held October 19, 2001, was followed by a banquet in their honor.

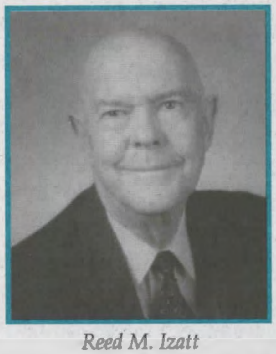
Kent Voorhees



Kent Voorhees

Kent Voorhees was born in Provo, Utah, in 1943. He lived in Spanish Fork, Utah, until 1961, when he entered USU. Kent received the full panoply of degrees in chemistry at USU–BS, MS, and PhD–and then did postdoctoral research at Michigan State University. He then came back to Utah, serving as an instructor, research associate, and research faculty member at the University of Utah. Dr. Voorhees then moved to Colorado and began as an assistant professor at the Colorado School of Mines in 1979, rising to the rank of professor in 1986. He has been active for many years in the American Chemical Society and has been elected to several of its national committees. His national recognitions include chairing a Gordon Conference; the R & D 100 Award, a prestigious research and development award from *R & D Magazine*; the Colorado ACS Section Award; and has served as editor for *The Journal of Analytical and Applied Pyrolysis*. Dr. Voorhees is co-author of 100 peer-reviewed publications and has edited a book entitled *Analytical Pyrolysis*. Holding six patents, he is the co-founder of Petrex, Inc., a Colorado corporation that commercialized a unique technology for oil and gas exploration and he serves on the Scientific Advisory Board of Amidex, Inc., a biomedical company. His hobbies include golf, fishing, boating, and country music. He is married to the former Tamara Lasson and has two children, Christian and Danielle.

Reed M. Izatt



Reed M. Izatt

Born in Logan, Utah, in 1926, Reed M. Izatt spent his early years on a ranch in Sumpter Valley, Oregon, where he attended a two-room school through the sixth grade. During this period, he developed an interest in geology and astronomy and, after moving back to Logan, attended Utah State Agricultural College majoring in chemistry. Delayed by a year of service in the U.S. Army and a two-year mission in Scotland for the LDS Church, he continued his education at Pennsylvania State University in the area of coordination chemistry, where he received a PhD. Dr. Izatt conducted postdoctoral work at the Mellon Institute in Pittsburgh, Pennsylvania. He spent most of his academic career at Brigham Young University, beginning with his appointment as an assistant professor in 1956. A highly prolific researcher, Dr. Izatt supervised more than 50 graduate and 100 undergraduate student research projects, and has authored more than 500 publications. He holds 20 patents and co-founded IBC Advanced Technologies, Inc., which develops supported ligands for separations. Dr. Izatt received numerous awards, including the American Chemical Society Award in Separations Science and the Utah Governor's Medal for Science. He enjoys family, travel, history, reading, pets, concerts, plays, and church activities. Firmly in the early development of Logan, his grandfather, Alexander S. Izatt, a member of the Logan City Council, was involved in establishing the Utah Agricultural College, the forerunner of Utah State University in 1888. ♦

Creating Legacies through Planned Giving

– By Mark Parsons, Director of Planned Giving

I am very pleased to be able to write for *Insights* for the first time as the director of Planned Giving at Utah State University. It has been an exciting first year here in beautiful Cache Valley and I feel very fortunate to have the opportunity to serve in this capacity at such a well-recognized and respected land grant university.

I came to Utah State University from a similar position at a smaller, private university in Minnesota. My career background includes fifteen years in a Christian ministry serving several churches in my home state, and I have a law degree earned while attending night law school at William Mitchell College of Law in St. Paul, Minnesota. Both of these career experiences have served me well in the field of planned giving and have made me more effective at working with donors and their advisors to achieve the best possible planned gift result for each situation.

"...by fully using the legal tax strategies and planned gift techniques, donors can create *"social capital"* and thereby help make this world a better place in which to live."

What attracted me to the field of planned giving was the unique opportunity that it affords individuals and families to fulfill their philanthropic dreams and goals for the charity of their choice. While donors are able to accomplish such results through planned giving, they also can frequently address personal financial needs for income and/or tax savings. Thus, planned giving creates a "win-win" approach to philanthropy in which all parties to the gift transaction receive a benefit except, of course, the Internal Revenue Service. Moreover, by fully using the legal tax strategies and planned gift techniques, donors can create *"social capital"* and thereby help make this world a better place in which to live.

While the purpose of this article is to introduce the concept of planned giving, I would like to highlight several techniques that could be used to benefit the College of Science.

1) the Basic Bequest
The charitable bequesst is critically important for higher education generally and, in fact, has consistently been the number one source of planned gift revenue for colleges and universities for several decades.

Merely by including the College of Science in your will or living trust you can make a tremendous difference in the quality of education for future generations of USU students. Or, if you already have your estate plan in place, you could add a codicil to your will or amendment to your living trust that provides support for the special mission of your College.

Also, an added benefit of charitable bequests is that they are fully deductible from federal estate taxes.

2) The Charitable Remainder Trust
The Charitable Remainder Trust ("CRT") is more complicated than the bequest strategy, but can provide many benefits in the right situation for donors and the College of Science.

Typically, a CRT is created to avoid capital gain on a significantly appreciated asset in a person's estate, such as real estate or securities. Besides providing that tax benefit, the CRT pays income to the donor and/or designated beneficiary for their life or a term of years (not to exceed twenty).

In addition, the CRT qualifies for a current income tax deduction for the donor of the "present value" of the trust's remainder interest that could be designated for the benefit of the College of Science; and the CRT may also provide estate tax relief for the donor.

Clearly, these planned gift techniques create a "win-win" scenario that can benefit everyone involved. I have also found that planned gifts such as these offer another source benefit for donors, since they can create a legacy that bears their name, or the name of a special person in their life who can be memorialized through their gift. Donors can also use their planned gift to create an endowment that generates a source of social capital that will go on in perpetuity—and they can even help create the criteria, stating how the income from their endowment will be spent, such as for scholarships, faculty support, or research.

I hope that this article has accurately expressed my enthusiasm for the opportunities of planned giving and the many benefits that it may have for you or your family, as well as the College of Science. One additional benefit, also very important to mention, is the recognition provided by the University for those who have created legacies through planned gifts for the College of Science.

As many of you already know, the Old Main Society is the most prestigious donor recognition society at Utah State University. The types of planned gifts discussed above qualify donors for Old Main Society membership if they are valued at $50,000 or above. Furthermore, all planned gift donors, notwithstanding the amount of their gift, become members of the newly established Heritage Society—which exclusively recognizes those who have created planned gifts for USU. ◆

If you would like additional information about these or other planned gifts that may qualify you for Old Main or Heritage Society membership, you may call the Development Office at the College of Science at (435) 797-3510 or the University Planned Giving Office at (435) 797-1326. We would be glad to serve you in any way we can!

Archuletas Establish Endowments

The College of Science takes great pleasure in recognizing Salt Lake City residents **Tom K. and Esther G. Archuleta** who have established a planned gift that will ultimately result in the creation of the Archuleta Endowment for the Eccles Science Learning Center (ESLC). The endowment earnings will be used to purchase teaching equipment, enhance the facility, and for other uses benefiting teaching in the ESLC. The Archuletas have also created the Utah State University Archuleta Scholarship Endowment, awarded and administered from the office of Recruitment and Enrollment Services. The Archuletas' kindness is most extraordinary, considering they have no prior connection to Utah State University.

Tom & Esther Archuleta

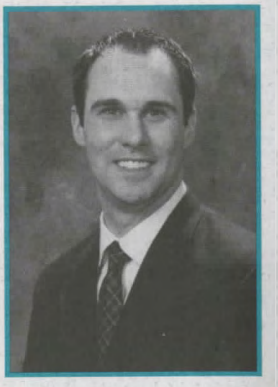
Mr. Archuleta, the great-grandson of immigrants from Madrid, Spain, was born in Montrose, Colorado, Mrs. Archuleta in Taos, New Mexico. They relocated from California Mesa, Colorado, to Salt Lake City, Utah, in 1959, where Mr. Archuleta worked for various construction contractors. Soon thereafter, he joined the Operative Plasterers and Cement Masons Local Union #68, serving as the vice president in 1968. Six years later, he obtained his concrete license and started A & A Concrete Company. In 1978, his union named him the recipient of the "Craftsman of the Year Award." In the meantime, he attended Utah Technical College, where he earned a general contractor's and general engineering license.

Mrs. Archuleta also contributed to the success of the A & A Concrete Company, taking on duties as the company bookkeeper, secretary, and treasurer of the corporation. Their six children also aided in all aspects of running the business. Perhaps their proudest accomplishment is the building of a two-story, split-faced block building and shop located at 328 West Whitney in Salt Lake City. This locale served as the headquarters for A & A Concrete Company's corporate office until the Archuletas' retirement in 1998.

Since retirement, the Archuletas continue to reside in Salt Lake City, with most of their immediate family living in the area. The walls of their home are decorated with pictures of their thirteen grandchildren and a great grandchild–their pride and joy.

"We are pleased to have this gift from the Archuletas to enhance the utilization of this beautiful building," stated Interim Dean Don Fiesinger. "It ensures the integrity of the technology in the classroom. It will benefit our students for years to come." ♦

The College Welcomes a New Development Director



Joel Kincart

Joel Kincart comes to Utah State University as the new **development director** for the **College of Science.** Originally from Bloomfield, Iowa, Joel graduated with a BS degree from Iowa State University in zoology (1995) with aspirations of going into the medical profession. He soon became involved in student activities and won a student scholarship to the Council for the Advancement and Support of Education (CASE) Conference. By 1997, he had received an MS degree in student affairs administration, also from Iowa State. Concurrently, Joel worked at Iowa State in the Student Affairs office, assisting in the recruitment of National Merit Scholars, and freelanced at the Alumni and Development Offices. His next step was a move to the University of Maryland at College Park, where he pursued a PhD degree in higher education administration, studying university administration, governance, and organization. Currently, he is completing his dissertation work. While at the University of Maryland, he worked in student affairs with The Parents' Association. Following his experience at the University of Maryland, Joel spent a year as the director of The Parents' Annual Fund, at Georgetown University, raising approximately two million dollars from nonalumni parents. Joel comes to USU from George Washington University, where he served as Associate Director of University Projects, raising money for various capital projects.

"It pays off to hold doors open." This is how Joel met his wife, Melissa, a graduate of the University of Utah, then studying higher education administration at the University of Maryland. The two married in June 2001 and have a daughter, Sydney. They chose to come back to Utah because "We both wanted to return to a public university. USU seemed like a great opportunity to use my science background, and I wanted to return to a land grant school. The more I was away, the more I appreciated what a land grant education means."

In his spare time, Joel enjoys cooking and outdoor athletics such as skiing, basketball, racquetball, and golf. As for Cache Valley, he is "impressed with the area. It reminds me of Ames, Iowa, other than the mountains." He feels the schools are similar, the communities are small, there is an emphasis on agriculture, and the people are friendly. He also finds it exciting to be at USU at a time "when so many exciting things are happening. Overall, I was impressed with the direction of the University and knew it was an environment I wanted to be associated with." ♦

Year 2001 Roll of Donors

We gratefully acknowledge the more than 600 donors who contributed in excess of $2 million to the College of Science in the fiscal year 2001 (1 July 2000-30 June 2001). Alumni, friends, foundations, corporations, faculty, and staff have all donated generously. Every department, several special programs and projects, and numerous scholarships benefited from your contributions. **Thank you** *for enhancing the College's commitment to excellence in science education and research.*

Your support is critical each year. You may contact Joel Kincart at (435) 797-3510 or **jkincart@cc.usu.edu** *for additional information on opportunities to support the College of Science.*

Anonymous Donors
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Heritage Society

The Heritage Society was established to recognize those individuals who have made bequests or other planned gifts for Utah State University. Such generosity and commitment honors the rich heritage of Utah State and helps prepare for a brighter future. Partnerships in philanthropy are increasingly vital to the future of Utah State as it fulfills its vision of becoming one of the nation's leading research and teaching universities. We invite you to join the Heritage Society.

If you would like more information about including USU and the College of Science in your will, or if you would like to make a planned gift, please contact ***Development Director Joel B. Kincart,*** *at (435) 797-3510 or jkincart@cc.usu.edu*

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USU Calendar of Events

College of Science Phonathan ..... 25 February - 9 March
Southeast Idaho Chapter Awards Banquet ..... 6 March
Founder's Day recognition (sponsored by Student Alumni Association) ..... 8 March
Eastern Idaho Chapter Awards Banquet ..... 27 March
Founder's Day Celebration Dinner ..... 29 March

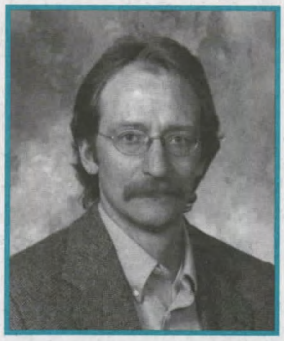
Alumni Chapter Presidents Conference ..... 13 April
Senior Celebration (sponsored by Student Alumni Association) ..... 17 April
"A" Day (Student Alumni Association) ..... 19 April
Spring Semester Final Exams ..... 29 April - 3 May

University Hooding Ceremony ..... 3 May
College of Science Graduation Open House ..... 3 May
University Graduation ..... 4 May
College of Science Graduation ..... 4 May

Golden Aggie Reunion-Class of 1952 ..... 25-26 July

** For specific information regarding alumni activities, contact the USU Alumni Relations Office at (435) 797-2055.*

College Welcomes New Faculty



Michael E. Pfrender

Department of Biology

Michael E. Pfrender joins the Department of Biology as an assistant professor. A native of Michigan, he received a BS degree in 1988 in biology from the University of Michigan, an institution he attended on an athletic scholarship, as a gymnast. After working in the health care industry, Dr. Pfrender returned to school to earn an MS degree in zoology, also at the University of Michigan (1992). His research on the origin and distribution of phenotypic and genetic diversity of tropical amphibians took him to Africa and to the islands of the Indian Ocean.

Dr. Pfrender earned a PhD degree from the University of Oregon and then served as a research assistant at Oregon State University until July 2001. His research involves quantitative and molecular genetics and the study of phenotypes and how they relate to natural selection and environmental sciences using *Daphnia*, the freshwater invertebrate, as a model system for his work. He studies organisms from "an ecological standpoint," and finds it compelling because it "gives us a chance to connect genetic studies with ecological studies in natural populations."

"My family and I are adjusting to our move from Corvallis, Oregon, a city that is roughly the same size as Logan." He and his wife, Janet, have two sons, ages 3 and 2. In his spare time, Dr. Pfrender enjoys outdoor activities, particularly fishing and hunting. "This is the perfect place for that."

Hugo de Garis

Department of Computer Science

Hugo de Garis comes to the Department of Computer Science as an associate professor. He obtained a BS degree from Melbourne University in 1970, then worked in industry before receiving a PhD degree from Brussels University in 1992. Along the way, Dr. de Garis was a tutor in mathematics at Cambridge University. His career provided him the opportunity to live in six different countries in just over six years: Australia, the U.K., Holland, Belgium, Japan, and the U.S. He relocated to Utah from Brussels.

Dr. de Garis' name appears in the *Guiness Book of World Records* for creating the world's most powerful brain-building machine, a project that he has largely pioneered. He brings that foresight to Utah State University, where his long-term goal is to establish a brain-building center. Being more than a scientist and researcher, however, Dr. de Garis also takes into consideration the social, ethical, and political "problems facing humanity" as the consequences of the escalating power of artificial intelligence. He feels quite schizophrenic about this. On the one hand, he views the building of these artificial beings as a "magnificent goal for humanity to pursue." On the other hand, he is "terrified of how bleak some of the scenarios are that may ensue if brain-building becomes too successful, meaning that the artificial brains end up being more intelligent than biological brains. My dream in life is to build artificial brains with billions of artificial neurons and see brain-like computers become a trillion-dollar industry within twenty years. I believe that we live in an era in which current and near-future technologies will allow such goals to be reached."

Ironically, Dr. de Garis arrived in Logan on September 11, but remains positive about his new home, calling it "friendly." In the shadow of majestic mountains, Cache Valley "feels like Switzerland." Already, he has been a guest on Utah Public Radio program, "Access Utah." Rain or shine, he bicycles to work everyday. He enjoys classical music, traveling, and reading. His fiancee is currently in Japan and should arrive in Utah in April. As for his profession, Dr. de Garis is "passionate about science. Science is my religion, or the other way around."

Michael J. Taylor

Department of Physics

Michael J. Taylor comes to the Department of Physics as an associate professor. Born in Winchester, England, Dr. Taylor was raised in the Hampshire area. After obtaining a BS degree in physics (1971), he received an MS degree in electronics (1977), and a PhD degree in atmospheric physics (1986), all from Southampton University in the U.K.

Dr. Taylor is no stranger to Utah State University. His association with USU started when he met Dr. Doran Baker at a conference in Ireland in 1983. Upon discovering they were doing similar research on upper atmospheric dynamics, but with different instruments, they decided to combine their instrument capabilities. Dr. Taylor brought his low-light camera to USU and operated it on the roof of the Peterson Engineering Building, and later at the future site of the Bear Lake Observatory near Garden City, Utah. This project led him to move to Utah in 1991 for a joint endeavor with the Department of Physics and the Space Dynamics Laboratory (SDL). He later moved off campus with the SDL as a research professor. Along with his recent appointment in Physics, his night-sky imaging research is now associated with the Center for Atmospheric and Space Sciences (CASS), and he maintains an affiliation with SDL.

His new position in Physics has allowed Dr. Taylor to teach for the first time in approximately nine years. "I'm looking forward to it. I like interacting with students. I like communicating with them a lot. They ask very inquisitive questions. It keeps you alert. "

Dr. Taylor is married to Visnja, who he met at Southampton University. They have a seven-year-old son, Alexander. In his spare time, he enjoys traveling, skiing, and other outdoor activities. ◆

College of Science

Fall CoffeeBreak

Faculty and staff enjoy refreshments at the first Coffee Break in the new Eccles Science Learning Center.

Kandy Baumgardner, Dean's Office, and Tom Kent, Dean—School of Graduate Studies.

Russell Thompson, Mathematics & Statistics.

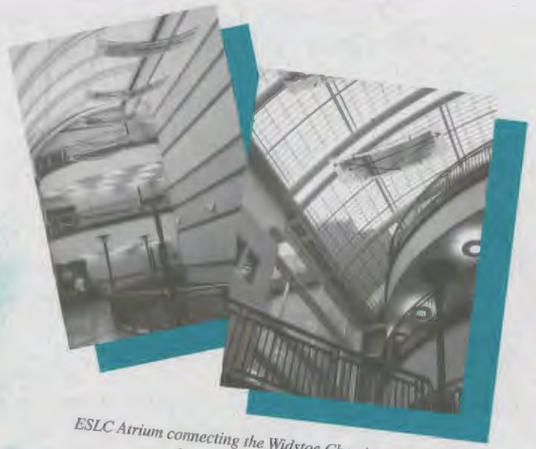
James MacMahon, Vice President for University Advancement, visits the College Coffee Break.

Left to right: Colette Yates, Dean's Office; April Zito, Mary V. Kolesar, Brandee Halverson, and Bob Wood, Computer Science.

Left to right: Don Fleming, Dean's Office/Geology; Beverly Ridenhour, Mathematics & Statistics; David Drown and David Wallace, Biology.

The Eccles Science Learning Center

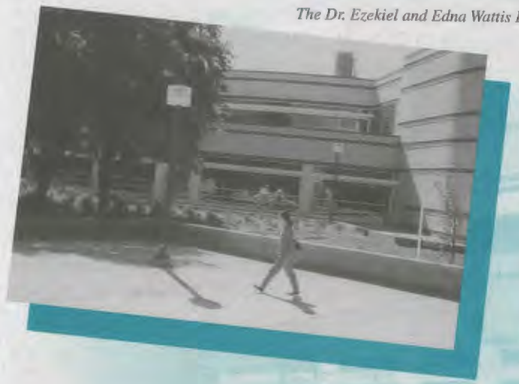
Computer Information Literacy Lab



ESLC Atrium connecting the Widstoe Chemistry Building and Maeser Chemistry Laboratory

George H. and Billie Bush Emert Auditorium

The Dr. Ezekiel and Edna Wattis Dumke Student Project Room



The College of Science Dean's office

Professor Emeritus Thomas Bahler: "I Always Knew I Wanted to Teach..."

– By Linda Finchum

Thomas Bahler

It was a late summer day in 1949 when the small trailer obediently followed the newlyweds' far-from-new car with Wisconsin plates into the driveway on Fifth North in Logan, Utah. Housing was at a premium, and they were feeling lucky to have Leonard Arrington's house for the school year while he was away on sabbatical. Leonard had even approved their taking "roomers" to help pay the rent. Salaries for professors were low at the time, especially for those recently hired. From this unheralded, and little noticed beginning, no one could have predicted the length, breadth, or depth of Biology Professor Thomas Bahler's influence at USU.

While his wife, Pat, put the house in order, Tom moved into his office in the Family Life building at "the AC" (Utah State Agricultural College). It was only the first of several he was to occupy over the years until his retirement in 1990. He quickly settled into academia, carrying a heavy teaching load of physiology and anatomy courses for the Zoology Department. Tom was a much-needed addition to a growing group of physiologists. Datus Hammond, the department head, had approved a year's advanced anatomy study for Clyde Biddulph at the University of Wisconsin and was very happy that Clyde had met Tom there and persuaded him to join them in Logan instead of going to Arizona. One of Tom's first students was Richard Shaw, who was to go on to become a botanist and later a USU Biology faculty member.

Tom had been an only child born in the rural Amish "Pennsylvania Dutch" country of Walnut Creek, Ohio. His father's brothers were both physicians, and Tom sometimes went along with them when they made house calls in the area. He often spent long, boring hours waiting for them in a cold car, and had decided that he did not want to follow in their footsteps.

His primary education was typical for the time, but he had a strong desire to continue his education, and subsequently enrolled at a liberal arts institution, Wooster College, in Ohio. "I always knew I wanted to teach. Initially, I thought it would be history, and I considered music for a time, but I wasn't good enough," he said, shaking his head. Ultimately he found his "home" in Biology at Wooster.

After completing his BS degree, he received a WARF Fellowship (Wisconsin Alumni Research Foundation) to attend the University of Wisconsin for graduate work. It was at UW's Presbyterian House (dubbed "Pres House" by the students) that he met Pat, an undergrad finishing a degree in occupational therapy.

After World War II, the burgeoning baby boom and the rapid advancement of medical science created a huge demand for more physicians. Wearing his signature white lab coat ("to keep the chalk dust off my clothes"), Tom taught two or three classes every quarter in various venues—from regular classrooms to the dark, cavernous auditorium in Old Main ("a dreadful place to teach," Tom said). He also participated in all of the other duties of a faculty member of the Department and later took a one-year sabbatical at the University of Florida to gain additional training in anatomy. When there was no opportunity for Pat to use her degree from UW locally, she finished a nursing degree at Weber State. Tom often took care of their two young children while she was in training.

> **"What I could have done with a classroom like that!"**
>
> – Professor Thomas Bahler

Year after year, he encouraged students and advised those in pre-med and pre-dent on courses they should take, arranged visits to the U of U Medical School, helped them fill out applications for medical schools, and spent countless extra hours preparing individual letters of recommendation for each of them to all of the schools where they had applied—much of this in the years before electric typewriters, to say nothing of photocopiers or computers.

Often when the Biology coffee group gets together in the basement of BNR, they posit that Tom most likely spent more hours in the classroom than anyone else ever had in the Department. Ultimately, hundreds of students every year

were to benefit from Tom's disciplined classroom, clear and concise lectures, high standards for achievement, and superior instruction. A large cadre of physicians, dentists, nurses, and other health-care professionals owe much of their success to the personal mentoring of Thomas Bahler. On a recent visit to the Eccles Science Learning Center he said, "What I could have done with a classroom like that!" when he saw the new auditorium with all of its state-of-the-art technical accoutrements. We can only marvel at what he accomplished with the few resources available to him when he began. He helped lay the groundwork for USU students consistently achieving one of the highest success rates for admission to medical and dental schools anywhere.

When alums from biology are in contact with the College of Science, one of the most common questions asked is, "What is Tom Bahler doing now?" Although he has retired as the organist of the local Presbyterian church because of visual problems, he still enjoys playing. He and Pat travel to visit their daughter, Kathy, and their two grandchildren in the northwest. Son, David, an MD and PhD, lives nearby in Salt Lake City, where he is on the faculty of the University of Utah's School of Medicine. Tom loves gardening, especially growing roses, and also recently took a computer course so that he could use the Internet. And, of course, he still joins the "boys" in Biology for coffee once a week or so.

Most people do not have the opportunity to see the impact that their lives have had on the lives of others as George Bailey did in *It's A Wonderful Life*, but consider this: Datus Hammond hired Clyde Biddulph, Clyde Biddulph recruited Tom Bahler, and THAT made all the difference to the Department of Biology, Utah State University, and the thousands of students who were to benefit. ♦

Alumni In Memorium

The College of Science
extends its deepest sympathy
to the families of the following alumni ~

Byron T. Shaw- BS **1930**, Mathematics

Fred B. Bailey- BS **1933**, Zoology

Wendell O. Rich- BS **1935**, MS **1948**, EDD **1954**, Physics

Glen L. Allan- BS **1940**, Physiology

Christian Champ Lee- BS **1940**, Zoology

James Arthur Olsen- BS **1940**, Botany

Clark Thomas Rogerson- BS **1940**, Botany

Reuel E. Lamborn- BS **1941**, MS **1950**, Chemistry

John E. Olson- BS **1948**, Zoology

Wayne M. Fonnesbeck- BS **1950**, Geology

Robert Henry Peterson- BS **1950**, Zoology, MS **1952**, Physiology

Curtis B. Campbell- BS **1951**, Mathematics

Sherwin W. Howard- BS **1960**, Mathematics

Robert Dalton Wheeler- BS **1960**, Mathematics, PhD **1968**, Physics

Brent C. Palmer- BS **1961**, Botany

Antaraguttu Subbayya Shetty- MS **1965**, PhD **1969**, Botany

Charles R. Cragun- BS **1966**, Pre-Dental Biology

Shauna Skidmore- BS **1983**, Applied Biology

Boyd Cyril Welch- BA **1992**, Chemistry

Douglas D. Chavez- BS **1997**, Mathematics

Faculty In Memorium

Charles Roger Gaurth Hansen
(1920-2002)


R. Gaurth Hansen

Charles Roger Gaurth Hansen, emeritus professor of Nutrition and Food Sciences and Chemistry and Biochemistry, passed away peacefully in his home January 29, 2002, in St. George, Utah, at the age of 81. He was born August 18, 1920, in Smithfield, Utah, to Willard Alton Hansen and Sybil Toolson. He married Anna Lou Rees in the Logan LDS Temple August 14, 1943.

He graduated from North Cache High School and then attended Utah State University. After serving an LDS mission in New England/Eastern Canada, he graduated with a PhD from the University of Wisconsin. He was subsequently on the faculty at the University of Utah and the University of Illinois. Gaurth was chair of the Biochemistry Department at Michigan State University before he returned to USU in 1968 and served as provost for seventeen years. He retired from USU in 1984.

As a consultant to the U.S. Public Health Service, he reviewed the health and nutrition status of several countries: Turkey - 1957; Ecuador - 1959; Thailand - 1960; Venezuela - 1963; and Nigeria - 1965. Gaurth enjoyed traveling with Anna Lou, friends, and family, and particularly loved the scenic beauty of southern Utah.

He received many awards including the Sesquicentennial Award (Honorary Alumnus of the University of Michigan); Borden Award (American Institute of Nutrition); Robins Award (USU); Honorary Doctor of Science (Southern Utah State College); Resident Scholar - Rockefeller Center, Bellagio, Italy (Rockefeller Foundation); and the Conrad A. Elvehlen Award for Public Service in Nutrition (American Institute of Nutrition). Recently, the Department of Chemistry and Biochemistry at USU named an endowed professorship in his honor.

"He really had an interest in his graduate students," recalls Richard Swenson, the Vice Provost during Dr. Hansen's time as provost. "He also had a great interest in the success of the institution over the success of himself. He respected each person that he knew as an individual. He was an excellent scientist and an excellent administrator."

He is survived by his wife, Anna Lou, and three sons, Roger, Ted, and Lars.

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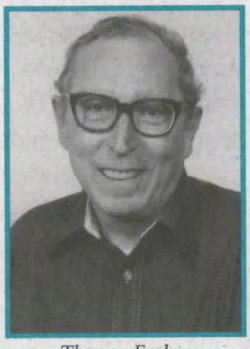
the Logan *Herald Journal.*

The Gaurth Hansen Distinguished Professorship was recently established in the Department of Chemistry and Biochemistry. The professorship will be awarded to an outstanding scholar in research, who has demonstrated excellence in the training of professionals and undergraduates. Those interested in contributing to the professorship may make donations to:
The Gaurth Hansen Professorship
The Development Office
Utah State University
1420 Old Main Hill
Logan UT, 84322-1420

Thomas Farley
(1937-2001)


Thomas Farley

Thomas Farley, emeritus professor of the Department of Chemistry and Biochemistry, passed away on July 29, 2001, at the age of 64.

Farley was born February 4, 1937, in Jamestown, North Dakota. He received bachelor and master's degrees in chemistry from North Dakota State University, then earned a PhD degree from the University of Wisconsin at Madison. He served as a postdoctoral fellow at the Stanford Research Institute before joining the faculty at Utah State University.

Tom was a loved and respected teacher at USU. Dr. Steve Scheiner, professor and department head of Chemistry and Biochemistry, relates that "Tom spent many years at Utah State University where he was known for his lively and inspiring lectures. Indeed, even after his formal retirement, he was a frequent visitor to the Department, and was kind enough to teach courses for us when we had a particular need of his services."

Widely known for his performances in local musicals and in the pagaent of the Festival of the American West, Tom loved local theater, dance programs, and concerts. He also enjoyed old-time radio shows, traveling, fishing, and sports.

Tom is survived by his wife, Mary, and two sons, Mike and Scott.

A scholarship has been established in honor of Dr. Farley to recognize outstanding achievements by students in the general chemistry class. Those interested in contributing to the scholarship may make donations payable to the
T. M. Farley Scholarship Fund
Department of Chemistry and Biochemistry
Utah State University
0300 Old Main Hill
Logan UT, 84322-0300

Awards, Honors, and Publications

Please mail announcements to Insights, *Office of the Dean, College of Science, Utah State University, 0305 Old Main Hill, Logan, UT 84322-0305, or use the ALUMNET form on the back cover. If available, please include book covers. Announcements may also be emailed to colettey@cc.usu.edu or faxed to (435) 797-3378.*

Alumni Awards, Honors, and Publications

We encourage you to submit your professional activity announcements to the address above.

Faculty Awards, Honors, and Publications

Brett Adams, Department of Biology, along with Karim Melliti and Ulises Meza published "RGS2 Blocks Slow Muscarinic Inhibition of N-type Ca2+ Channels Reconstituted in a Human Cell Line" in the *Journal of Physiology* 532.3:337-347.

Vicki H. Allan, Department of Computer Science, and Xiaoxin Chen published "Convert2Java: Semi-Automatic Conversion of C to Java" in *Future Generation Computer Systems, Java in High Performance Computing* 18(2)201-211.

Diane G. Alston and Sherman V. Thomson, Department of Biology, with Michael E. Reding and Anchalee V. Stark published "Association of Powdery Mildew and Spider Mite Populations in Apple and Cherry Orchards" in *Agriculture, Ecosystems and Environment* 84:177-186.

Anne J. Anderson, Department of Biology, with Kristopher A. Blee, Young-Cheol Kim, and Joseph Robins published "OXyComTM Under Field and Laboratory Conditions Increases Resistance Responses in Plants in the *European Journal of Plant Pathology* 107:129-136.

Anne J. Anderson, Department of Biology, along with Gilberto U. Braga, Charles D. Miller, Wesley S. Mortensen published "The rpoS Gene in Pseudomonas Syringae Is Important in Surviving Exposure to the Near-UV in Sunlight" in *Current Microbiology* 43(5):374-377.

Michelle A. Baker, Department of Biology, was awarded the 2001 Hynes Award for New Investigators by the North American Benthological Society. The award recognizes excellence in benthic research by an investigator who has recently completed a degree program. Her paper titled "Organic Carbon Supply and Metabolism in a Shallow Groundwater Ecosystem" was published in *Ecology* 81:3133-3148. Co-authors were H. Maurice Valett and Clifford N. Dahm (her PhD advisors at the University of New Mexico).

Mary E. Barkworth, Department of Biology, with Maria Amelia Torres published "Distribution and Diagnostic Characters of Nassella (Poaceae: Stipeae) in *Taxonomy* 50:439-468.

Alex 1. Boldyrev, Department of Chemistry and Biochemistry, with Alexey E. Kuznetsov, John D. Corbett, and Lai-Shen Wang published "Aromatic Mercury Clusters in Ancient Amalgams" in *AngewwandteChemie International Edition* 40:3369.

Alexander 1. Boldyrev, Department of Chemistry and Biochemistry, along with Aleksey E. Kuznetsov, Xi Li, Lai-Sheng Wang, Hai-Feng Zhang published "Observation of All-Metal Aromatic Molecules" in *Science* 291:859-861; and "On the Aromaticity of Square Planar Ga42- and In42- in Gaseous NaGa4- and Naln4- Clusters" in the *Journal of American Chemical Society* 123:8825; and with Nathan A. Cannon, and Lai-Shen Wang published "Experimental and Theoretical Observation of Aromaticity in Hetero-cyclic XA13- (X=Si, Ge, Sn, Pb) Systems" in *AngewwandteChemie International Edition* 40:1867.

James H. Cane, Department of Biology, published "Habitat Fragmentation and Native Bees: A Premature Verdict?" in *Conservation Ecology* 5(l):3. http://www.consecol.org/vol5/issl/art3

James H. Cane, Department of Biology, along with Linda J. Kervin and Robert L. Minckley published "Sampling Bees (Hymenoptera: Apiformes) for Pollinator Community Studies: Pitfalls of Pan-Trapping" in the *Journal of the Kansas Entomological Society* 73:225-231.

James H. Cane, Department of Biology, and T'ai H. Roulston published "The Effect of Diet Breadth and Nesting Ecology on Body Size Variation in Bees (Apiformes)" in the *Journal of the Kansas Entomological Society* 73:180-193.

James H. Cane and Vincent J. Tepedino, Department of Biology, published "Causes and Extent of Declines Among Native North American Invertebrate Pollinators: Detection, Evidence, and Consequences" in *Conservation Ecology* 5(l):1. http://www.consecol.org/vol5/iss1/art1

Cheng-Wei T. Chang, Department of Chemistry and Biochemistry, along with Terri Clark and Mumbi Ngaara published "Novel and Convenient Method for the Synthesis of Joseph 2,6-Dideoxypyranoses, 3, 6-Dideoxypyranoses, and Azido (amino) Analogs of 3, 6-Dideoxypyranoses" in *Tetrahedron Letter* 42:6797-6801.

Cheng-Wei T. Chang, Department of Chemistry and Biochemistry, along with Bryan Elchert and Yu Hui published "Studies of the Stereoselective Reduction of Ketosugar (Hexosulose)" in *Tetrahedron Letter* 42:7019-7023.

Daryll B. DeWald, Department of Biology, along with Amanda R. Cangelosi, Hiroko Hama, Christopher A. Jones, Glenn D. Prestwich, Joseph C. Shope, James E. Thompson, and Javad Torabinejad published "Rapid Accumulation of Phosphatidylinositol 4,5-Bisphosphate and Inositol 1,4,5-Trisphosphate Correlates with Calcium Mobilization in Salt-Stressed Arabidopsis" in *Plant Physiology* 126:759-769.

Daryll B. DeWald, Department of Biology, along with Suzanne Stratford and Scott Summers published "Ceramide Dissociates 3'-Phosphoinositide Production from Pleckstrin Homology Domain Translocation" in *Biochemical Journal* 354:359-368.

Scott A. Ensign and John W. Peters, Department of Chemistry and Biochemistry, with Daniel D. Clark, Se Bok Jang, Mi Suk Jeong presented "Crystallization and Preliminary X-ray Analysis of a NADPH 2-Ketoproply-Coenzyme M Oxidoreductase/Carboxylase" in *Acta Crystallography* D57:445-447.

James A. Gessaman, Department of Biology, was selected to serve on the Board of Trustees and to be the Chairman of the Science Committee of Hawkwatch International, a Salt Lake City-based organization that works to protect eagles, hawks, and other birds of prey and their environment through research, education, and conservation. Both positions are three-year appointments.

James A. Gessaman, Department of Biology, and John P. DeLong published "A Comparison of Noninvasive Techniques for Estimating Total Body Fat in Sharp-Shinned and Cooper's Hawks"in the *Journal of Field Ornithology* 72:349-364.

Timothy A. Gilbertson, Department of Biology, with John D. Boughter, Jr., David V. Smith, and Huai Zhang published "Distribution of Gustatory Sensitivities in Rat Fungiform Taste Cells: Whole Cell Responses to Apical Chemical Stimulation" in the *Journal of Neuroscience* 21:4931-4941.

Alvan C. Hengge, Department of Chemistry and Biochemistry, published "Isotope Effects in the Study of Enzymatic Phosphoryl Transfer Reactions" in the *FEBS Letters* 501:99-102.

Alvan C. Hengge, Department of Chemistry and Biochemistry, with Richard H. Hoff, and Paul Larsen published "Isotope Effects and Medium Effects on Sulfuryl Transfer Reactions" in the *Journal of the American Chemical Society* 123:9338-9344.

Kevin Hestir and James P. Evans, Department of Geology, with Jane S. C. Long, Stephen Martel, Peter D'Onfro, William D. Rizer, and Junming J. Yang published "Use of Conditional Simulation, Mechanical Theory, and Field Observations to Characterize the Structure of Faults and Fracture Networks" in the *American Geophysical Union Monograph* 61-75.

Allen Q. Howard, Center for Atmospheric and Space Sciences, published "Petrophysics of Magnetic Dipole Fields in an Anisotropic Earth" in *IEEE Transactions on Antennas and Propagation* 48(9):1376-1383.

Piotr Kokoszka, Department of Mathematics and Statistics, and Lajos Horvath published "Change-Point Detection with Non-Parametric Regression" in *Statistics* 35:1-29 and "Large Sample Distribution of ARCH(p) Squared Residual Correlations" in *Econometric Theory* 17:283-295; and with Gilles Teyssiere published "Empirical Process of Squared Residuals of an ARCH Sequence" in *The Annals of Statistics* 29:445-469.

Piotr Kokoszka, Department of Mathematics and Statistics, with Murad Taqqu published "Can One Use the Durbin-Levinson Algorithm to Generate Infinite Variance Fractional ARIMA Time Series?" in the *Journal of Time Series Analysis* 22:317-337.

Bradley R. Kropp, Department of Biology, and Brandon P. Mattheny published "A Revision of the Inocybe Ianuginosa Group and Allied Species in North America" in *Sydowia* 53:93-139.

Bradley R. Kropp, Department of Biology, with Stephan D. Flint, Martyn M. Caldwell, and Peter S. Searles, published "The Influence of Solar UV-B Radiation on Peatland Microbial Communities of Southern Argentina" in *New Phytologist* 152:213-221.

Joseph K.-K. Li, Department of Biology, was awarded the Distinguished Service Award at the 9th International Symposium of the Society of Chinese Bioscientists in America (SCBA) at the Academia Sinica in Taipei, Taiwan, August 5-11, 2001. He also served as organizer of the meeting.

Joseph K.-K. Li, Department of Biology, in conjunction with D. H. Chen, Canhua Huang, Q. J. Wu, L. C. Xiao, J. H. Zhang, and L. R. Zhang published "Purification and Characterization of White Spot Syndrome Virus (WSSV) Produced in an Alternative Host: Crayfish, Cambarus clarkii in *Virus Research* 76:115-125.

Joseph K.-K. Li, Department of Biology, along with A. Kent Hauck, Russell Lee, and Michael R. Marshall published "A New Finding and Range Extension of Baculovirus in the Freshwater Crayfish Cherax Quadricarinatus in Utah, North America" in the *Journal of Aquatic Health* 13:158-162.

Joseph R. Mendelson, III, Department of Biology, was selected to serve on the Board of Directors for the Society for the Study of Amphibians and Reptiles. His term begins January 1, 2002, and continues through December 31, 2004.

Joseph R. Mendelson, III, Department of Biology, published "A Review of the Guatemalan Toad Bufo ibarrai (Anura: Bufonidae), with Distributional and Taxonomic Comments of Bufo valliceps and Bufo coccifer" in *Mesoamerican Herpetology: Systematics, Zoogeography, and Conservation 10*-19.

Joseph R. Mendelson, III, Department of Biology, and Christopher A. Sheil published "A New Species of Hemiphractus (Anura: Hylidae: Hemiphractinae), and a Redescription of Hemiphractus johnsoni" in *Herpetologica* 57:189-202; along with Helio R. da Silva published "Phylogenetic Relationships of the Species of Neotropical Homed Frogs, Genus Hemiphractus (Anura: Hylidae: Hemiphractinae), Based on Evidence from Morphology" in *Herpetologica* 57:203-214.

Frank J. Messina, Department of Biology, and Charles W. Fox, published "Offspring Size and Number. Evolutionary Ecology" in *Concepts and Case Studies* 113-127.

Frank J. Messina, Department of Biology, and Suzann M. Sorenson published "Effectiveness of Lacewing Larvae in Reducing Russian Wheat Aphid Populations on Susceptible and Resistant Wheat" in *Biological Control* 21:19-26.

David Peak, Department of Physics, along with Jeong-Young Ji published "The Vacuum Excitation and Squeezing Properties of Two Quantum Oscillators with Delta-Kicked Interactions" in the *Journal of Physics A: Mathematical and General* 34:3429-3435.

John W. Peters, Department of Chemistry & Biochemistry, was elected to Stanford Synchrotron Radiation Laboratory Users' Organization Executive Committee.

John W. Peters, Department of Chemistry and Biochemistry, along with Jennifer Christiansen, Dennis R. Dean, Brian J. Hales, Brian J. Lemon, and Morten Sorlie published "Structural and Mechanistic Interpretation of the EPR Signals Observed During Acetylene Reduction by the A-H195Q Mutant of Nitrogenase" in *Biochemistry* 40:1540-1549; with Brian J. Lemon, published "Iron-Only Hydrogenases" in the *Handbook of Metalloproteins* 738-750.

John W. Peters and Lance C. Seefeldt, Department of Chemistry & Biochemistry, along with Hsiu-Ju Chiu, James B. Howard, William N. Lanzilotta, Douglas C. Rees, and Matthew J. Ryle published "MgATP-Bound and Nucleotide-Free Structures of a Nitrogenase Protein Complex Between the Leu 127 Delta-Fe-Protein and the MoFe-Protein" in *Biochemistry* 40:641-50.

Michael E. Pfrender, Department of Biology, with Justin Hicks, Leigh Latta, Michael Lynch, Kendall K. Morgan, Marco Ottone, Ken Spitze, and Casse Weaver and published "Patterns of Genetic Architecture for Life history Traits and Molecular Markers in a Subdivided Species in *Evolution* 55:1753-1761.

Frederick J. Post, Department of Biology, and Susan G. Kelley published a book entitled *Basic Microbiology Techniques.* 4th edition. Star Publishing.

Bradley D. Ritts, Department of Geology, with Nick Arnaud, Marc Brunel, Maurice Jolivet, and Edward Sobel published "Jurassic Exhumation History of the Altyn Tagh, Northwest China. Paleozoic and Mesozoic Tectonics of Central Asia—From Continent Assembly to Intracontinental Deformation" in *Geological Society of America Memoir* 194:247-268.

Bradley D. Ritts, Department of Geology, with Ulderico Biffi published "Mesozoic Northeast Qaidam Basin: Response to Contractional Reactivation of Qilian Shan, and Implications for Extent of Mesozoic Intracontinental Deformation in Central Asia. Paleozoic and Mesozoic Tectonics of Central Asia—From Continent Assembly to Intracontinental Deformation" in the *Geological Society of America Memoir* 194:293-316; with Andrew Hanson, Micheal Moldowan, and David Zinniker published "Upper Oligocene Lacustrine Source Rocks and Petroleum Systems of the Northern Qaidam Basin, Northwest China" in *American Association of Petroleum Geologists Bulletin* 85:601-619.

Bradley D. Ritts, Department of Geology, with Tim Cope and Brian Darby published "Early Jurassic Extensional Basin Formation in the Daqing Shan Segment of the Yinshan Belt, Northern North China Block, Inner Mongolia" in *Tectonophysics* 339:235-253.

John W. Shervais, Department of Geology, published "Birth, Death and Resurrection: The Life Cycle of Suprasubduction Zone Ophiolites" in *Geochemistry, Geophysics, Geosystems 2.*

Vijendra K. Singh, Department of Biology, published "Neuro-immunopatho-Genesis in Autism" in *New Foundation of Biology* 447-458.

Sedonia D. Sipes and Paul G. Wolf, Department of Biology, published "Phylogenetic Relationships within Diadasia, A Group of Specialist Bees" in *Molecular Phylogenetics and Evolution* 19:144-146.

Kimberly A. Sullivan, Department of Biology, was selected as a Fellow in the American Ornithologists' Union. Fellows are chosen for their eminence in ornithology.

Jon Y. Takemoto, Department of Biology, along with John R. Forney, Mark C. Healey, Karl A. Werbovetz, and Shi-Guang Yang were issued a patent in October 2001 entitled "Method of Controlling Protozoan Infections Using Syringomycin-Family Lipodepsipeptides." U.S. Patent #6,310,037.

Charles Torre, Department of Physics, was selected as an ITP Scholar for 2002-2004. This award supports visits to the Institute for Theoretical Physics at the University of California, Santa Barbara.

John R. Tucker and T.-C. Shen, Department of Physics, published "Fabrication an All-Epitaxial Silicon Quantum Computer" in *Quantum Information and Computation* 1:129-133.

Yuriy Y. Vilin, Esther Fujimoto, and Peter C. Ruben, Department of Biology, published "A Novel Mechanism Associated with Idiopathic Ventricular Fibrillation (IVF) Mutations R1232W and T1620M in Human Cardiac Sodium Channels" in *Pfliiegers Archives* 402:204-211 and published "A Single Residue Differentiates Between Cardiac and Skeletal Muscle Na+ Channel Slow Inactivation" in *Biophysical Journal* 80-2221-2230.

Yuriy Y. Vilin and Peter C. Ruben, Department of Biology, published "Slow Inactivation in Voltage-gated Sodium Channels: Molecular Substrates and Contributions to Channelopathies" in the *Journal of Cell Biochemistry and Biophysics* 35:171-190.

Carol D. von Dohlen and William R. McManus, Department of Biology, along with Skylar T. Alsop and Shawn Kohler published "Mealybug 8-Proteobacterial Endosymbionts Contain y-proteobacterial Symbionts" in *Nature* 412:433-436. (This article was also the cover of this issue.)

Zhi-Qiang Wang, Department of Mathematics and Statistics, published "Nonlinear Boundary Value Problems with Concave Nonlinearities Near the Origin" in *Differential Equations and Applications.* 8:15-33.

Zhi-Qiang Wang, Department of Mathematics and Statistics, along with Thomas Bartsch and Alexander Pankov, published "Nonlinear Schrödinger Equations with Steep Potential Well" in *Communications in Contemporary Mathematics* 3:1-21.

Zhi-Qiang Wang, Department of Mathematics and Statistics, and Florin Catrina published "Asymptotic Uniqueness and Exact Symmetry of k-bump Solutions for a Class of Degenerate Elliptic Problems" in *Discrete and Continuous Dynamical Systems.* Added Vol. 80-88; and published "On the Caffarelli-Kohn-Nirenberg Inequalities: Sharp Constants, Existence (and nonexistence) and Symmetry of Extremal Functions" in *Communications on Pure and Applied Mathematics. Liv.*: 229-258.

Zhi-Qiang Wang, Department of Mathematics and Statistics, along with Shujie Li and Zhaoli Liu published "Positive Solutions of Elliptic Boundary Value Problems without (P.S.) Type Assumption" in the Indiana University *Mathematical Journal* 50:1347-1369.

Paul G. Wolf, Department of Biology, published "Number Crunching: Statistical Analysis Software Aids Date Interpretation" in *The Scientist* 15:22-26.

Paul G. Wolf, Department of Biology, published "Profile: Buying Used Lab Equipment" in *The Scientist* 15:27-28.

Paul G Wolf, Department of Biology, with Robert C. Fleischer, Michael T. Murphy, and Diane L. Rowe published "High Frequency of Extra-pair Paternity in Eastern Kingbirds" in *Condor* 103:845-851.

Paul G. Wolf, Department of Biology, along with Jeffrey S. Hunt, Metaxya Lanosa, Kathleen M. Pryer, Alan R. Smith, and Hanna Tuomisto published "A Second Species in the Genus and Fern Family Metaxyaceae" in *Systematic Botany* 26:480-486.

Paul G. Wolf, Department of Biology, with Tom A. Ranker and Harald Scheneider published "Geographic Distributions of Homosporous Fern Taxa: Does Dispersal Obscure Evidence of Vicariance?" in the *Journal of Biogeography* 28:263-270.

Paul G. Wolf and Vincent J. Tepedino, Department of Biology, along with Jenny K. Archibald, and Janet Bair published "Genetic Relationships and Population Structure of the Endangered Steamboat Buckwheat, Eriogonum ovalifolium var. williamsiae (Polygonaceae)" in the *American Journal of Botany* 88:608-615.

Rock and Fossil Day
hosted by Geology Department

How does a mountain stream impact its surrounding landscape? What kind of mystery rock do you have in your own backyard? These questions and more were addressed at the Geology Department's popular Rock and Fossil Day, held November 17th at USU's Geology Building. Attended by more than three hundred visitors, the open house was a showcase for research and geological studies at Utah State University.

Exhibits included ground water and stream displays; rock, mineral, and fossil specimens; optical microscopes; and mineral identification. Videos covered such topics as dinosaurs, earthquakes, and volcanoes. Children also learned how pollution travels through

lakes and streams into ground water. "But what will happen to the fish and animals when they drink the dirty water?" queried one child. Perhaps the most popular demonstration was the identification of visitors' rocks, minerals, and fossils by USU Geology faculty and students.

The traveling exhibit, "Earthquakes of the Intermountain West," featured photographs, newspaper articles, and individual accounts of earthquakes which have occurred in the last 80 years. Developed by Earthquake Education Services at the University of Utah Seismographic Stations, the display explained what earthquakes are, why we have them, and how to react to them.

Although many of the displays targeted children, "rockhounds" of all ages attended the open house. "We were pleased with the turnout and especially encouraged by the large number of children who participated," stated Dr. Thomas Lachmar, associate professor and coordinator of the event. "Our intention was to have something for everyone. Kids seemed to have a really good time and the adults seemed to learn and enjoy it as well."

Rock and Fossil Day is a biannual event that goes back a decade in the Geology Department. "It was bigger than anything we have done in the past," Dr. Lachmar continued. "The gathering was a great way to introduce kids to geology and let the public know more about our programs. We had quite a few people coming through. It was jumping." ◆

USU Alumni Reunion
Class of 1952

July 25-26, 2002

Utah State University
will host a reunion this summer
for graduates of the class of 1952.

Class members are invited to attend
the following activities ~
a luncheon, a campus tour,
the musical production, The Sound of Music,
brunch with a guest speaker,
and the Golden Aggie Reunion Banquet.

Living USU Science graduates from 1952 are listed below.

If you (or someone you know) is not listed,
please contact Alumni Relations at
alumni@cc.usu.edu *or 1-800-291-ALUM*

Robert Dell Adamson
Franklin C. Ainsworth
Harold B. Allen
Robert W. Balliger, Sr.
Alphalus Bateman
Merrill David Beal
Gay Eloise Bond
Don Borgholthaus
Vance D. Campbell
John W. Carlisle
Don L. Chadwick
Joseph A. Clayton
Blair Hendrix Cooper
William Bennett Douglass, Jr.
Robert L. Ezell
Earl Leroy Fillmore
Kay Jean Finch
Thomas F. Green, Jr.
Jay E. Gunderson
Richard E. Guth
Dee Porter Halls
Robert C. Hansen
Leo Dale Haws
Don Lamar Healey
Marcus Martin Jensen
Melvin Keith Jensen
Elbert Johnson
Donald Carl Laub
Paul Kelly Litz
Robert G. Marvin
Brian McDonald
Reed M. Merrill
Ned N. Nalder
Phil Nyborg
Wayne L. Pack
Nathan Taylor Packer
Orson Dee Perkes
Mary A. H. Peterson
Lloyd Robert Pierson
Virginia Lee Rawley
Ted W. Rich
De Van Robins
May S. Rogan
Daniel P. Schadle
Bill Eugene Slabaugh
William Arlo Trost
Robert Hugh Vanderpool
Carole B. Warner
Joseph T. Woolley

ALUMNET Responses

1940s

Arthur Wallace (BS 1943, Chemistry) received a PhD degree from Rutgers University in 1949 before going on to a forty year career at the University of California at Los Angeles. Dr. Wallace was the editor of the book "Soil Conditioner and Amendment Techologies." He was recently honored by the "International Symposium on Iron Nutrition and Interactions in Plants."

Melvin J. Bryson (BS 1946 Bacterology, Chemistry, Mathematics) gained an MS degree in 1948 from the University of Utah, followed by a PhD degree from Texas A&M in 1952. He worked at the University of Utah Medical Center OB-GYN Department until 1983. Dr. Bryson has published 56 scientific articles and developed the Inter West Endocrine Laboratory located in Salt Lake City. He currently resides in Salt Lake City.

1950s

James Richard Hasler (BS 1957, Bacteriology) received his DVM degree in 1961 from Kansas State University. Now retired, he worked for the U.S. Department of Agriculture, Meat and Poultry Inspection. In his spare time, he served as a leader in the Boy Scouts, enjoys hiking and fishing, and teaches wood carving for senior citizens. Currently, he resides in Frankfort, Kentucky.

1970s

Larry Reed McCullough (MS 1974, Psychology) taught and was a counselor for 31 years at Idaho State University in Pocatello, where he also served as the director for Counseling and Testing. He has published numerous professional articles. Married with one son, he now lives in Halfway, Oregon.

Jeff Jurinak (BS 1976, Mathematics) received a PhD degree in mathematics education in 1982 from the University of Wisconsin at Madison. He is now an engineering manager for Conoco, Inc. in Houston, Texas.

1980s

Karen Cinsavich Rice (MS 1987, Geology) received a PhD degree in environmental sciences from the University of Virginia in May 2001. She works as a research hydrologist for The U.S. Geological Survey where she does acid rain research, trying to solve "the puzzling worldwide decline of amphibians." Her husband, **John B. Rice** (MS 1987, Geology), works for the Piedmont Environmental Council. They reside in Madison County, Virginia.

Carol Jean Campbell (PhD 1988, Chemistry) is a program manager for Thiokol Propulsion. She lives in Ogden, Utah.

1990s

McKay Mildenhall (BS 1993, Computer Science) is currently working in a nonprofessional field, but is "striving to reapply myself and achieve pursuant to my c.s. field." McKay, who is considering a master's degree, now lives in Provo, Utah.

Shinichi Miyake (BS 1994, Physics) now works as a patent searcher for the WISEL Corporation. "I search and pick up patents and now-patent literatures which our clients are interested in." Shinichi resides in Tokyo, Japan.

Ramie Beck Hatch (BS 1998, Mathematics Education) is currently a mathematics teacher for the Holbrook School District in Arizona. She married John Hatch on June 29, 2001.

2000s

Ryan T. Sharp (BS 2001, Physics) received the Golden Key National Honor Society Award. He works at Wendy's and is currently looking for full-time employment. He lives in Brigham City, Utah.

The USU College of Science
undergraduate and graduate level degrees

Department of Biology
435-797-2485 *www.biology.usu.edu*

Biology: BS, BA-Options: Biology, Cellular/Molecular , Ecology/ Biodiversity, Environmental MS, PhD
Composite Teaching-Biological Science: BS, BA
Public Health: BS-Options: Public Health Education, Environmental Health, Industrial Hygiene
Ecology: MS, PhD
Toxicology: MS, PhD

Department of Chemistry and Biochemistry
435-797-1619 *www.chem.usu.edu*

Chemistry: BS-Options: Professional Chemistry, Biochemistry, Chemistry Education, Life Science BA, MS, PhD
Biochemistry: MS, PhD

Department of Computer Science
435-797-2451 *www.cs.usu.edu*

Computer Science: BS, BA-Options: Science, Digital Systems, Information Systems MS, PhD

Department of Geology
435-797-1273 *www.usu.edu/~geoldept*

Geology: BS, BA-Options: General Geology, Hydrogeology, Geoarchaeology MS
Composite Teaching-Earth Science: BS, BA

Department of Mathematics and Statistics
435-797-2809 *www.math.usu.edu*

Mathematics: BS, BA-Options: Mathematics, Actuarial, Computation Mathematics MS
Mathematics Education: BS, MM
Statistics: BS, BA, MS
Dual Majors: BS-Mathematics and Physics, Mathematics and Statistics, Mathematics and Electrical Engineering
Industrial Mathematics: MS
Mathematical Sciences: PliD-Options: Pure, Applied, Statistics, College Teaching, Interdisciplinary

Department of Physics
435-797-2857 *www.physics.usu.edu*

Physics: BA, BS-Options: Physics, Professional, Applied MS, PhD
Physics Teaching, Composite Teaching-Physical Science: BS
Physics (Upper Atmospheric Physics): MS

Utah State University

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A L U M N E T

Dear College of Science Alumni and Friends,

We always enjoy hearing from you and hope you will take a moment to complete and mail this alumni information form. Please note the postage-paid format—simply cut off this last page of the newsletter, fold along the lines marked on page 23, tape it shut, and drop it in the mail. You can also email your information to **scido@cc.usu.edu** *or fax it to us at (435)797-3378.*

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Insights, *the alumni newsletter of Utah State University College of Science, is published twice a year. Its purpose is to inform alumni and friends of current events, projects, and changes within the College. The newsletter also provides a forum for alumni to follow one another's careers and professional development. This issue of* Insights *was produced under the direction of Tracey Smith, co-editor and technical writer, and Colette Yates, project coordinator and editor. Contributors include Interim Dean Don Fiesinger and Development Director Joel Kincart. Special thanks to Ann Aust, Alan Bishop, Beth Blaser, Geri Child, Linda Finchum, John Fitch, Stacie Gomm, Rick Hughes, Tom Lachmar, Scott Olson, Mark Parsons, Steve Scheiner, Lance Seefeldt, Richard Swenson, Scott Theobald, Deneil Tippets* (Alumni Records Management), *Gene Underwood, and USU Photo Services for photographs and other services. Special thanks also to Associate Dean Kandy Baumgardner and Linda Keith for editorial assistance. Printed at Watkins Printing.*

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