HONORARY DOCTORATE AWARDED TO AEROSPACE PIONEER

Ruth L. Novak

In her very first math class at Utah State University, **Ruth L. Novak** no doubt stood out among her peers—she was the only woman in the room. The year was 1955, times were rather different, and taking "Introduction to College Algebra" just was not on the radar for most female undergraduates. But Ruth decided to make a switch from her art studies—after she concluded that she wasn't destined to be an artist—and try math, something she had been good at in high school, even if the curriculum at her school in the small farm community of Francis, Utah, had been a bit limited. At Utah State, Ruth's math professor saw her potential and advised her to stick with it. So she started down a rather uncharted road, one that would lead her to receive a BS degree in 1958, majoring in mathematics with a minor in physics, and two years after that, to earn a master's degree from USU in mathematics and statistics. Ruth returned to campus this past commencement to receive one more degree from Utah State University, an honorary doctorate, in recognition of the many professional achievements and community contributions that she has made in the ensuing years.

"Ruth L. Novak is an innovative scientist whose career in the aerospace industries spans decades," read Richard Shipley, member of the USU Board of Trustees, during graduation ceremonies. "She has influenced the development of new technologies and products that have contributed to national security, and that are vital to the safety of the space program." Ruth's role as an innovator and contributor to US space program successes began soon after graduation. In 1960, she went to work for Hercules Aerospace Corp., in Magna, Utah, just as the company was entering the Minuteman missile program. (A few brushstrokes of history surrounding the times: Sputnik 1 was launched by the Soviet Union in 1957; in 1958, the US launched an overdue Explorer 1; also in that year, NASA was founded; the accelerating "space race," under the veil of the Cold War, was on.) And talented individuals who could bring an inventiveness to the aerospace industry were much in demand.

Receiving degree from President Kermit Hall at Commencement 2004.

Ruth began at Hercules as a statistician, and contributed to the company's quality-assurance programs as they worked with the US Air Force to construct a third stage of the three-stage Minuteman missile. During the 1960s and '70s, she supervised measurement and instrumentation processes and was later named manager of quality assurance. Her ingenuity and leadership abilities took her higher into management levels. She contributed to a team that successfully designed a solid-propellant rocket motor and was selected as program manager for the development of motors for the Pershing II missile system. She oversaw many scientists and engineers, and was ultimately a part of almost every strategic weapons system in production at the company.

Working on both Army and Navy programs, Ruth became manager and later vice president of Navy programs at Hercules, and was responsible for directing the Navy Fleet Ballistic Missile Programs. In 1987, she was named general manager of the corporation, heading up all operations—from strategic & space to science & technology—with approximately 3,800 personnel to oversee. And in the early '90s, three decades after the space race began, with the reunification of Germany and the fall of the Soviet Union, she was charged with implementation of the Strategic Arms Reduction Treaty at Hercules. Now retired, Ruth continues to work as an aerospace management consultant and serves on several boards, including for the Charles Stark Draper Laboratory and the Aerospace Corporation.

AND IN THE EARLY '90S, THREE DECADES AFTER THE SPACE RACE BEGAN, WITH THE REUNIFICATION OF GERMANY AND THE FALL OF THE SOVIET UNION, SHE WAS CHARGED WITH IMPLEMENTATION OF THE STRATEGIC ARMS REDUCTION TREATY AT HERCULES.

In addition to building an impressive career for herself, Ruth has also helped create opportunities for the careers of others. She was a co-founder and served as president of the Utah Math/Science Network, an organization that encourages and enthuses young women to consider career options in math and science fields. Traveling with the Network to high schools and educational conferences throughout the state, and sharing her experiences and knowledge with countless students, Ruth has been an inspiration for many aspiring young scientists.

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Her dedication and energy has been directed towards other civic contributions as well, including stints on the Governor's Clean Air Commission, the Governor's Aerospace Council, and the Utah Safety Council. She received the Governor's Medal for Science and Technology in 1991 and was chosen as a Utah Business Magazine Woman of the Year in 1988.

At Utah State, Ruth has served on the National Advisory Board Round Table, and, in 1984, when she was the recipient of an *Alumni Merit Citation* from the Utah State University Alumni Association, the award was presented with these words: "While others have sought to advance themselves with great fanfare and notoriety, you have chosen a less ostentatious route, but one with great substance. The quiet capability which has been your watchword and your hallmark has allowed you to achieve your goals." Goals which began for Ruth at Utah State, where she believed enough in herself to eschew convention and instead pursue a career in mathematics, and so becoming a notable pioneer in her field. The College of Science proudly welcomes Ruth Novak into the distinguished circle of honorary doctorate recipients. ■

DR. MELVIN C. CANNON...
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"I cannot remember any faculty member ever making negative remarks about Mel," said Moore. "He was and is a wonderful human being."

Mel turns 91 this year. He and Anne still live in Logan. They have four children, 10 grandchildren, and four great-grandchildren. ■

2004 GRADUATION DAY

Karen Perry, Valedictorian, with her faculty escort, Vicki Allan, Department of Computer Science, Graduation Day, May 2004.

WHERE THERE'S A WILL, THERE'S A WAY

MAKING TIME FOR ESTATE PLANNING

Almost everyone intends to write a will, but many of us never do. The most common reason is not a lack of money, knowledge, or opportunity—it is a matter of making time. Take the time to organize your affairs and prepare a will. By planning for the future, you can ensure that your loved ones and the charities that you care about are provided for, even after you are gone.

People often think they only need a will if they possess substantial wealth, but those with modest assets have every reason to plan their estates. A will can waive bonding expenses from your executor, and may save other fees that would be incurred in the absence of one. The worst outcome is passing away without a will. If no will exists, the probate court applies state law, essentially involving an all-purpose will that is drafted by the state legislature. And this "generic" will may not reflect your wishes. Financial needs, tax planning, or other important factors are not taken into account, and no provisions are made for friends, charitable interests, or other important beneficiaries.

There are several options that are available for making gifts through your estate:

1. Fixed Amount: A specific dollar amount to be given is named.
2. Percentage: Naming a percentage of your estate allows the size of the gift to remain in proportion to the size of your estate.
3. Specific personal and real property: It can be good tax planning to use securities, real estate, or other property, such as a valuable collection, to make a gift.
4. Contingent: A contingent gift only occurs in the case that other beneficiaries are pre-deceased or in the event of a specific condition. Without a contingent beneficiary, your property might pass to beneficiaries in whom you have no interest. Utah State University is often named as a contingent beneficiary in wills, living trusts, and other estate plans.
5. Residue: This is a gift of whatever property remains after other distributions have been fulfilled.

Prospective donors should not make final gift decisions without first consulting their personal legal and financial advisors.

If you have already included the College of Science in your estate plans, or if you wish to receive estate and gift planning materials, please contact Dean Don Fiesinger at 435-797-2478 or don.fiesinger@usu.edu. ■

BY ANGELINA M. WILKINSON,
USU DIRECTOR OF PLANNED GIVING

"FOLLOW YOUR PASSION"

ALUMNI BIOTECHNOLOGY EVENT PROVIDES INSIGHTS—AND ADVICE

The question seemed as relevant—and red hot—as any: "What are the emerging and growing areas in biotechnology?" Asked by a student during last fall's College of Science Biotechnology Roundtable, the query was directed at a 12-person panel of distinguished alums, a diverse group made up of CEOs, software specialists, patent attorneys, and others involved in the field of biotechnology, who had graciously returned to Utah State to share their combined experiences and industry knowledge. During the event, a session entitled "My Road from USU to Today and the Future of Biological Science" provided those in attendance an opportunity to direct questions to the panel, and certainly the "Next Big Thing" was on the minds of many eager to make the school-to-workforce transition.

Biology faculty member Daryll DeWald (standing at far conrner) makes introductory remarks to initiate discussion at the Biotechnology Roundtable in October 2003.

After several industry-specific replies from the panel (i.e., "there's a shifting from 'data production' to 'knowledge production,'" creating more emphasis for "a need to integrate information that's already been generated"), **Dr. David J. Ecker,** a co-founder of Isis Pharmaceuticals Inc., imparted this: "Don't chase the latest bubble." Instead, he encouraged students to focus on building a "basic, broad fundamental education in science," as opposed to tailoring one's area of specialty to the market. "And when you come to a fork in the road, take it," he added, employing a quote of Yogi Berra's and suggesting that during the course of one's career, there will be many trends, many changes, and many forks in the road, and a broad-based education is the key—in the name of moving forward—to navigating any and all roads.

Dr. Raymond "R.J." Tesi, formerly a senior vice president at SangStat Medical Corporation, a global biopharmaceutical company, echoed this sentiment. "Follow something you're passionate about," he said. "And remember that failure isn't failure, it's a bump in the road," indicating that there will always be a "Next Big Thing," but it is important to stick with something that matters to you—regardless of the shifting demands of the industry. An ability to adapt and grow with an evolving field was a common thread. "There are 12 of us here and we've probably had over 50 jobs," said **Henry Nowak,** CFO and executive vice president of legal affairs at Caprion Pharmaceuticals. Former USU biology professor **Dr. Rex Spendlove,** founder and president of HyClone Laboratories and Spendlove Research Foundation, advised students to be "well read in a variety of fields and be ready to change fields."

Those in attendance received an abundance of advice as well as practical information during the session. The panel stressed the ability to communicate well, emphasizing a need for writing and presentation skills; one of the panelists even opined that a strong communicator with weak technician skills will go further than a strong technician with a limited ability to communicate. They encouraged an exposure to business experience—dealing with budgets and grants. "You're going to have more receptivity if you know the lingo," said Nowak, in reference to seeking project funding. "None of what you do is done independently, you do it as a team," added **Dr. Annemarie Moseley,** CEO of Cognate Therapeutics, alluding to the importance of having collaboration skills, and taking management and other skill classes. "Along the way, everyone up here has been taking and teaching classes," she added. "It's ongoing."

Questions ran the gamut, with the audience asking about everything from industry ethics to investment strategies. Perhaps the most pointed query of the day was, "What are your career regrets?" Following a sustained silence—and then a collective laugh from the panel—**Jane B. Maxwell,** vice president of sales for SciTegic, shared this: "I stayed in a job too long and got comfortable... I stopped taking risks." Hearing these valuable lessons from alumni who have had myriad career changes, and managed to cope with industry flux—while experiencing a great deal of work satisfaction—was a great way for Utah State biotechnology students to better prepare themselves for their next step. The event also featured a two-part seminar in securing patents and handling intellectual property (offered by Henry Nowak and **Ned A. Israelsen,** managing partner at Knobbe, Martens, Olson & Bear), which drew an audience of both faculty and students and covered topics such as investment capital, identifying conflict of interest, and the nature of royalties for university-based researchers.

THOSE IN ATTENDANCE RECEIVED AN ABUNDANCE OF ADVICE AS WELL AS PRACTICAL INFORMATION DURING THE SESSION.

Thanks to the alumni participants, the Biotech Roundtable was a major success and will be offered again. It was an excellent example of how College of Science alumni are giving back to their University—offering their time and insight while making a genuine difference in peoples' lives. ■

PARTICIPANTS IN THE 2003 COLLEGE OF SCIENCE BIOTECHNOLOGY ROUNDTABLE:

J. DONALD DEBETHIZY
DAVID J. ECKER
NED A. ISRAELSEN
JANE B. MAXWELL
ANNEMARIE MOSELEY
KEN MOSELEY
HENRY NOWAK
ALAN K. SMITH
REX SPENDLOVE
R.J. TESSI
RICHARD D. THOMAS