Tim Rooney has a list.

In April, it's Augusta, Ga., for the Master's Golf Tournament. After that, it's a beach house vacation in Fort Morgan, Ala., with his wife, Karin, and their three grown children. A stack of biographies, smattering of presidential museums, triathlon training and a trip to Sweden could follow.

There are dozens of items to scratch off Rooney's "bucket list." The growing document saved on his computer desktop does not include one thing, however: Chloe, his 12-year-old bulldog.

"She complicates our travel plans since we treat her like royalty," Rooney, 62, said. "Finding someone to dog-sit can be really difficult."

For 10 years, the MU budget director has put his bucket list on the sideline to focus on managing lists of a far different kind — numbers, estimates, figures and, of course, budgets.

But in August, Rooney announced he'd try tackling his bucket list by retiring at the end of the year. In January, he'll hand the budget reins to Rhonda Gibler, current MU associate vice provost for MU Extension management.

"I love this university," said Rooney, who has worked at MU for 36 years. "But I need some separation from the campus to catch my breath. There have been a lot of numbers and a lot of math."

Moving out

Rows of neat manila folders form symmetrical lines behind Rooney's desk and alongside his printer. Labels, written in slanted style with a felt-tip pen, identify different areas of budgeting. A decorative pillow reading, "My goal in life is to be the kind of person my dog thinks I am," rests above his desk.

In 305 Jesse Hall earlier this month, moving boxes were nowhere in sight.

"I'll probably start thinking of packing in a few weeks," Rooney said. "There's no good time to transition. There is no down time. It's not like during spring break or semester break. Our work never changes or stops here."

The looming threat of fewer unrestricted operating funds, which consist mainly of tuition and state support, has Rooney crunching numbers instead of clearing out his office supplies.
Despite record-breaking enrollment, Missouri's Senate Bill 389 prevents the University of Missouri System from increasing tuition above the rate of inflation. That means that in recent years, MU has had to do more with less money.

Jim Spain, vice provost for undergraduate studies, said Rooney's retirement has left many people anxious.

"The announcement that he was going to be retiring created a great deal of uncertainty," Spain said. "Most were really anxious about the loss of his expertise and institutional memory."

Rooney said he thinks budgeting for less is the biggest issue MU will face in the spring.

"The financial situation of the university has not been good for so many years," Rooney said. "That's what I deal with. It's exhausting trying to figure out how we are going to put together a balanced budget under trying circumstances."

**Moving in**

Gibler, 43, has the experience to crunch numbers.

As associate vice provost for Extension management, Gibler led a committee that created a three-year plan to investigate fee generation and review revenue generation policy.

In her free time, she doubles as a math tutor for her three children. Her expertise? Fractions, equations and calculus.

Effective Jan. 1, she will succeed Rooney as MU's new budget director.

"This feels like it came together because it's how it was meant to be," she said. "The university needs people to stand up and say, 'I'm willing to take on new responsibilities.' I felt kind of called to serve. On the other side, I was ready."

Rooney said he was confident about his replacement.

"I'm really happy about Rhonda being selected," he said. "She is really analytical. She has a good way of assessing and thinking a situation through. The more I'm around her, the more I'm comfortable about leaving because she is going to do good."

**Moving on**

As Gibler makes the transition to handle larger numbers, Rooney said he plans to downsize to smaller ones — starting with Sudoku — although it isn't on his list.

"I am terrible at things like Sudoku," he said. "My wife is great at them, and she can't even do math as well as me. It's kind of ironic. Maybe I'll have the time now to learn how to do puzzles."

Rooney said he did not think parting from MU would be hard.

"I don't think it will be difficult to leave, but you can ask me after I'm gone," he said with a smile. "I've got a whole list of things to do to keep me busy."
White House Announces Winners of National Science and Technology Medals

President Obama on Friday named a dozen researchers and 11 inventors as winners of this year’s National Medal of Science and National Medal of Technology and Innovation, the country’s highest honors for scientists, inventors, and engineers. The recipients will receive their awards at a White House ceremony early next year.

Among this year’s winners are two researchers at the Massachusetts Institute of Technology: Sallie W. Chisholm, a biological oceanographer who received a National Medal of Science, and Robert S. Langer, a biomedical engineer who received a National Medal of Technology and Innovation.

The science medal honors researchers for making contributions to science and engineering. This year’s other winners, as announced by the White House, are as follows:

Allen J. Bard, director of the center for electrochemistry at the University of Texas at Austin.

Sidney D. Drell, a professor emeritus at Stanford University’s SLAC National Accelerator Laboratory.

Sandra M. Faber, a professor of astronomy and astrophysics at the University of California at Santa Cruz.

S. James Gates, a professor of physics at the University of Maryland at College Park.

Solomon W. Golomb, a professor of electrical engineering and mathematics at the University of Southern California.

John B. Goodenough, a professor of engineering at the University of Texas at Austin.

M. Frederick Hawthorne, director of the institute of nano and molecular medicine at the University of Missouri at Columbia.

Leroy Hood, president of the Institute for Systems Biology in Seattle.

Barry C. Mazur, a professor of mathematics at Harvard University.
Lucy Shapiro, a professor of developmental biology at Stanford University’s School of Medicine.

Anne M. Treisman, a professor of psychology at Princeton University.

The National Medal of Technology and Innovation recognizes those who have helped to improve the United States’ economic competitiveness and the country’s technological work force. The other individuals honored this year are:

Frances H. Arnold, a professor of chemical engineering, bioengineering, and biochemistry at the California Institute of Technology.

George R. Carruthers of the U.S. Naval Research Lab, in Washington, D.C.

Norman R. McCombs of the AirSep Corporation, in Buffalo, N.Y.

Gholam A. Peyman of Arizona Retinal Specialists, in Sun City West, Ariz.

Arthur H. Rosenfeld of the Lawrence Berkeley National Laboratory, in Berkeley, Calif.

Jan T. Vilcek, a professor of microbiology at New York University’s Langone Medical Center.

A team of three researchers at the IBM Corporation was also honored, as well as Raytheon BBN Technologies, a company based in Massachusetts.
President Obama on Friday named 12 scientists as winners of the National Medal of Science. The honor was created in 1959 and annually salutes excellence in chemistry, engineering, computing, mathematics, or the biological, behavioral/social and physical sciences. This year's winners and their institutions:

- Allen Bard, University of Texas at Austin
- Sallie Chisholm, Massachusetts Institute of Technology
- Sidney Drell, Stanford University
- Sandra Faber, University of California at Santa Cruz
- Sylvester James Gates, University of Maryland at College Park
- Solomon Golomb, University of Southern California
- John Goodenough, University of Texas at Austin
- M. Frederick Hawthorne, University of Missouri at Columbia
- Leroy Hood, Institute for Systems Biology in Washington State
- Barry Mazur, Harvard University
- Lucy Shapiro, Stanford University
- Anne Treisman, Princeton University

President Obama also named individuals, a team and a company as winners of the National Medal of Technology and Innovation.

Individuals:

- Frances Arnold, California Institute of Technology
- George Carruthers, U.S. Naval Research Lab
- Robert Langer, Massachusetts Institute of Technology
- Norman McCombs, AirSep Corporation
- Gholam Peyman, Arizona Retinal Specialists
- Art Rosenfeld, Lawrence Berkeley National Laboratory
- Jan Vilcek, New York University Langone Medical Center

Team: Samuel Blum, Rangaswamy Srinivasan and James Wynne, all from the IBM Corporation

Company: Raytheon BBN Technologies
Obama names 23 scientists and innovators as medal winners

By Alan Boyle

President Barack Obama has named 12 researchers and 11 inventors as recipients of the federal government's highest honors in their fields: the National Medal of Science, and the National Medal of Technology and Innovation.

The newly named recipients will receive their awards at a White House ceremony next year.

"I am proud to honor these inspiring American innovators," Obama said Friday in a White House statement. "They represent the ingenuity and imagination that has long made this nation great — and they remind us of the enormous impact a few good ideas can have when these creative qualities are unleashed in an entrepreneurial environment."

The National Medal of Science was established in 1959 and is administered for the White House by the National Science Foundation. The National Medal of Technology and Innovation was created in 1980, under the auspices of the Commerce Department's Patent and Trademark Office. Committees select nominees for each of the medals — the science medal for contributions to research, and the technology medal for contributions to American competitiveness and quality of life.

National Medal of Science recipients include:

- Allen Bard, chemist focusing on artificial photosynthesis, University of Texas at Austin
- Sallie Chisholm, biologist focusing on marine organisms, Massachusetts Institute of Technology
- Sidney Drell, physicist and arms control expert, Stanford University
- Sandra Faber, astronomer focusing on evolution of galaxies and cosmic structure, University of California at Santa Cruz
- Sylvester James Gates, physicist focusing on supersymmetry and string theory, University of Maryland
- Solomon Golomb, mathematician and the inventor of polyominoes, University of Southern California
- John Goodenough, physicist credited for development of lithium-ion rechargeable batteries, University of Texas at Austin
- **M. Frederick Hawthorne, chemist focusing on boron hydrides, University of Missouri**
- Leroy Hood, biologist focusing on DNA medicine, Institute for Systems Biology
• Barry Mazur, mathematician focusing on geometry and number theory, Harvard University
• Lucy Shapiro, biologist focusing on developmental biology, Stanford University School of Medicine
• Anne Treisman, psychologist focusing on visual attention, perception and memory, Princeton University

National Medal of Technology and Innovation:

• Frances Arnold, engineer focusing on directed evolution, California Institute of Technology
• George Carruthers, inventor, physicist and space scientist, U.S. Naval Research Lab
• Robert Langer, engineer focusing on biotechnology and medical technology, Massachusetts Institute of Technology
• Norman McCombs, engineer focusing on oxygen therapy, AirSep Corp.
• Gholam Peyman, retina surgeon credited with invention of Lasik eye surgery procedure, Arizona Retinal Specialists
• Art Rosenfeld, physicist focusing on energy efficiency technologies, Lawrence Berkeley National Laboratory
• Jan Vilcek, microbiologist focusing on the immune system, NYU Langone Medical Center
• IBM: Samuel Blum, Rangaswamy Srinivasan and James Wynne, co-inventors of the ultraviolet excimer laser
• Raytheon BBN Technologies, R&D company focusing on military as well as civilian applications, represented by CEO Edward Campbell

The White House says the affiliations are the awardees' most recently identified employers. Some of the awardees are now retired.
WASHINGTON, Dec. 21 (UPI) -- U.S. President Barack Obama has named 12 eminent researchers and 11 extraordinary inventors as recipients of national medal awards, the White House said Friday.

The National Medal of Science and the National Medal of Technology and Innovation are the highest honors bestowed by the U.S. government upon scientists, engineers, and inventors, the announcement said.

"I am proud to honor these inspiring American innovators," Obama said. "They represent the ingenuity and imagination that has long made this Nation great -- and they remind us of the enormous impact a few good ideas can have when these creative qualities are unleashed in an entrepreneurial environment."

The National Medal of Science, created in 1959 and administered by the National Science Foundation, recognizes individuals who have made outstanding contributions to science and engineering.

It be awarded to Dr. Allen Bard and Dr. John Goodenough, University of Texas at Austin; Dr. Sallie Chisholm, Massachusetts Institute of Technology; Dr. Sidney Drell, Stanford University; Dr. Sandra Faber, University of California, Santa Cruz; Dr. Sylvester James Gates, University of Maryland; Dr. Solomon Golomb, University of Southern California; Dr. M. Frederick Hawthorne, University of Missouri; Dr. Leroy Hood, Institute for Systems Biology, Wash.; Dr. Barry Mazur, Harvard University; Dr. Lucy Shapiro, Stanford University School of Medicine; and Dr. Anne Treisman, Princeton University.

The National Medal of Technology and Innovation, created in 1980 and administered by the U.S. Department of Commerce's Patent and Trademark Office, is given to those who have made lasting contributions to America's competitiveness and the strengthening of the technological workforce.

It will be awarded to Dr. Francis Arnold, California Institute of Technology; Dr. George Carruthers, U.S. Naval Research Lab; Dr. Robert Langer, MIT; Dr. Norman McCombs, AirSep Corporation; Dr. Gholam Peyman, Arizona Retinal Specialists; Dr. Art Rosenfeld, Lawrence Berkeley National Laboratory; Dr. Jan Vitek, NYU Langone Medical Center; the IBM Corp. team of Dr. Samuel Blum, Dr. Rangaswamy Srinivasan and Dr. James Wynne; and the company Raytheon Raytheon BBN Technologies.
The energy industry and Big Agribusiness are distorting academic research by wielding corporate influence.

In 1862, the federal government created the land-grant university system to produce critical agricultural research. Since then, America has relied on these schools to inform and guide independent scientific advances in areas like food production and energy development.

Yet public funding for that kind of research has eroded over recent decades, and these schools have turned to corporations to augment their budgets. The consequences of increasing dependence on profit-driven research in academia are becoming troublingly clear. The recent exposure of numerous sham scientific reports generated by biased individuals at supposedly objective institutions should draw intense public scrutiny to this new era of corporate-funded science.

While drug makers and other industries have spent heavily in academia for years, a relatively new player in corporate-influenced “research” is the natural gas business. Awareness has grown recently of the serious environmental and health dangers associated with fracking — the highly controversial drilling process that has opened up millions of acres of domestic land to shale gas production by blasting water and toxic chemicals underground at great pressures. In response, the industry has become extremely aggressive in its attempts to influence academic reporting on the subject.

Consider the State University of New York at Buffalo and its now-defunct Shale Resources and Society Institute. In May, the institute released a report claiming that improving technologies and updated regulations were making fracking safe. But to SUNY Buffalo faculty, students and community members, something smelled fishy. The nonprofit Public Accountability Initiative, based in Buffalo, scrutinized the report and did some additional digging. What it found was alarming.

Despite the report’s conclusion stating the contrary, an analysis of its data actually showed that gas fracking is causing more environmental contamination than ever. Even more telling, researchers determined that the report’s authors had all done previous work directly funded by the oil and gas industry, and that significant portions of the report had been copied directly from a previous industry-funded paper.

Under intense pressure from the university community, including the Board of Trustees, the institute that had released the skewed report was shut down by SUNY Buffalo’s president in November.

An isolated incident? No. The University of Texas at Austin announced on Dec. 6 that the head of its Energy Institute had resigned over allegations of conflicts of interest, ethics violations and industry
influence regarding another pro-fracking study its institute had released in February. In the fallout, the university is currently updating its conflict-of-interest policies.

As for agriculture, corporate influence now appears to be routine. Beginning in 1982 with the Bayh-Dole Act, our land-grant schools have been encouraged to partner heavily with the private sector. By 2010, almost a quarter of all the grant money for agricultural research came from industry, with companies like Walmart, Monsanto, Cargill, Tyson Foods, Coca-Cola, and McDonald’s receiving unencumbered access to and exerting great influence on many campuses nationwide.

The integrity of the “science” produced under this funding regime is troubling, but not surprising. The nutrition school at the University of California, Davis is researching the health benefits of chocolate with funding from the Mars candy corporation. A study supported by the National Soft Drink Association found that soda consumption by school children wasn’t linked to obesity. An Egg Nutrition Center-sponsored study determined that frequent egg consumption didn’t increase cholesterol levels.

More broadly, corporate funding steers agricultural research toward the goals of industry. It discourages independent analyses that might be critical of the many hormones used in industrial meat and poultry production, and genetically engineered crops that are now widely grown.

With the health and safety of our families and our communities hanging in the balance, it’s time to demand more transparency and less corporate influence from our research universities.
Overweight kids may need a vitamin D boost: study

Obese adolescents absorb vitamin D in their fat stores, preventing it from being utilized in the blood, and are about half as efficient as their leaner counterparts at metabolizing its benefits, researchers explain.

A new study finds that overweight and obese children are more likely to have a vitamin D deficiency.

A new study published December 24 reveals that overweight and obese children and teens are more likely to be deficient in vitamin D than kids who are at a healthy weight.

Published in the journal Pediatrics, the study by researchers from the University of Texas Southwestern Medical Center analyzed data from more than 12,000 kids aged six to 18.

About 21 percent of kids with healthy weights were vitamin D deficient but nearly 50 percent of those who were severely obese were deficient in the mineral. Overweight children were 29 percent deficient in vitamin D, while obese children were 34 percent deficient.

A study published last year found that obese teenagers need significantly more vitamin D than their leaner counterparts. Researchers at the University of Missouri-Columbia suggest that teenagers who are obese need a daily dose of at least 4,000 IUs (International Units) to meet dietary requirements -- that's nearly seven times more than the current daily recommended intake of 600 IUs, as set out in guidelines by the Institute of Medicine, the health arm of the National Academy of Sciences.

Obese adolescents absorb vitamin D in their fat stores, preventing it from being utilized in the blood, and are about half as efficient as their leaner counterparts at metabolizing its benefits, researchers explain.
The best way around the problem? If your child is overweight or obese, talk to doctor about a test for checking vitamin D levels. Also, serve low-fat milk, advises study researcher Christy Turer, MD, a pediatrician at the University of Texas Southwestern Medical Center and Children's Medical Center in Dallas. And be sure your child moves away from the television and gets outside to play -- since the sun is one of the main sources of vitamin D.

Access the new study: http://pediatrics.aappublications.org/content/early/2012/12/19/peds.2012-1711
A University of Missouri researcher hopes her work to sort out four species of primates will help to save them.

One of the newly identified species of slow loris is the Nycticebus kayan. (Photo credit: Ch’ien C Lee)

The slow loris has large, brown eyes like its relative the lemur, a second, serrated tongue and an extra vertebrae that makes it very limber.

On the Indonesian island of Borneo, doctoral student Rachel Munds and her colleagues determined that what was thought to be one species of slow loris is actually four different species. The team observed differences in body size, fur thickness, habitat and facial marking among the island’s loris population.

Munds says all four species are threatened by humans through deforestation, trade as pets and uses in traditional medicine by the native population.

She says lorises do not make good pets.
“They’re nocturnal, we don’t really know exactly what they eat, they are social ... and when you take them out of the wild the people who capture them often rip their teeth out because of that venomous bite that they have.”

In one example of lorises being endangered by traditional Asian medicines, study co-author Anna Nekaris says the tears of the big-eyed loris are thought to be useful to treat eye diseases in humans. In some cases the way those tears are extracted involve skewering the animal and burning it alive.

Nekaris says popular internet videos of lorises doing things like holding umbrellas or eating with forks are also misleading in their innocence. She says lorises in these videos are desperate to hold something, as they would normally spend their whole lives in trees clutching to branches.

Munds hopes the distinction between the four species will earn each one endangered status.

“Because we only thought there was one loris species on Borneo, that species was originally presumed to be vulnerable, but when you divide a species into four, all of a sudden you’re looking at a totally different story because now there’s four species on Borneo, each with their particular habitats, and it makes them probably ... possibly endangered. We haven’t actually changed their conservation status yet, but there’s a good chance that they would be endangered.”

Munds says she will follow-up her work with a genetic study at the University of Missouri.
David L. Steward, the founder of an international technology company based in St. Louis and the author of a book on faith and values in business, will be the featured speaker at the Missouri Governor’s Prayer Breakfast, on Thursday, Jan. 10 at the Capitol Plaza Hotel and Convention Center in Jefferson City.

The Prayer Breakfast is an annual inter-faith event for all leaders and citizens of Missouri; its purpose is to seek God’s guidance for the state’s political leaders as they begin the legislative session.

Steward is the chairman and founder of World Wide Technology, a market-leading systems integrator and supply chain solutions provider. Started in 1990 with a handful of employees and a 4,000 square-foot office, the company now has more than 2,000 employees and two million-plus square feet of facilities contributing to generate more than $4 billion in annual revenue. In 2011, World Wide Technology was ranked #50 on the FORTUNE 100 Best Companies to Work For list.

Steward is well-known for applying his strong faith to business. He is the author of a book on the importance of faith and values in business, Doing Business by the Good Book: Fifty-Two Lessons on Success Straight from the Bible, with the foreword written by former President George H.W. Bush.

His company, World Wide Technology, believes that a critical component of the strength of a community is the commitment that its resident businesses show toward that community. That belief is the foundation of WWT’s proactive involvement in the community. The company has invested in several community service organizations, primarily those that serve families and children, such as United Way, Ronald McDonald House, the Minority Scholarship Foundation, and the American Red Cross.

Steward is both Chairman of the Greater St. Louis Area Council and President of the Central Region of the Boy Scouts of America, as well as Chairman Emeritus of Variety the Children’s Charity of St. Louis. He also serves on the Executive Committee of the United Way and is Chair of their Planned Giving Committee, in addition to serving on the board of several other civic, academic and charitable organizations.

Steward was appointed by Gov. Nixon to serve on the University of Missouri Board of Curators, which oversees the operation of the four-campus University of Missouri.
David Steward grew up in Clinton, Mo., and is a graduate of Central Missouri State University (now the University of Central Missouri). He and his wife Thelma, a registered nurse, have been married for 36 years. Their family includes son David II, and his wife, Mary; and daughter Kimberly.

In addition to the keynote speaker, the breakfast will also feature prayers, scripture verses and special music. The theme of the annual breakfast is from Romans 8:31: “If God is for us, who can be against us?”

Proceeds from the Governor’s Prayer Breakfast support the Governor’s Student Leadership Forum on Faith and Values. The forum brings together select Missouri college students for a three-day study of faith and leadership. Participants explore the role faith has played in the lives of business executives, sports figures and government officials.

The Missouri Governor’s Prayer Breakfast, established in the 1950s, is an annual observance welcoming participants from around Missouri at the beginning of the General Assembly’s legislative session. It was established as an extension of the National Prayer Breakfast, which was first held in 1953.

Tickets for the Governor’s Prayer Breakfast are $30 per seat or $300 per table, and may be purchased online at www.missourigpb.com. Questions about the breakfast or about ordering by mail may be sent to breakfast@missourigpb.com; the event also has a Facebook page. Seating of guests the morning of the event will start at 7:10 a.m., with the breakfast beginning at 7:30 a.m. and ending at 9 a.m.