Follow this and additional works at: http://digitalcommons.wustl.edu/record

Recommended Citation
http://digitalcommons.wustl.edu/record/1196

This Article is brought to you for free and open access by the Washington University Publications at Digital Commons@Becker. It has been accepted for inclusion in Washington University Record by an authorized administrator of Digital Commons@Becker. For more information, please contact engeszer@wustl.edu.
Junk-food binge alters gut microbes in less than a day

By Caroline Arbanas

Switching from a low-fat, shirt-based diet to one high in fat and sugar alters the collection of microbes living in the gut in less than a day, with obesity-linked microbes suddenly thriving, according to a new School of Medicine research.

The study was based on transplants of human intestinal microbes into germ-free mice. Mice that received the transplants, or humanized mice, on the junk-food diet became extremely obese. Their weight gain was in lock step with dramatic shifts in the types of intestinal bacteria present compared to mice on a low-fat diet.

Using the latest DNA sequencing technology, the researchers found that on the high-fat, high-sugar diet mice had more microbes that prefer to eat carbohydrates. The mice were switched to the diet in less than a day.

"Putting triggers of obesity or malnutrition in humans is hard because there's a host of factors — genetic, cultural and environmental — such as diet — that are extremely difficult to control," said senior author Jeffrey I. Gordon, M.D., director of the Center for Genome Sciences.

"Creating the gut environment in mice gives us a way to control these variables. The information gained from these studies will be critical to fighting obesity," said senior author Suresh Raman, M.D., Ph.D., professor of medicine and pediatrics.

The study was based on transplants of human intestinal microbes into germ-free mice. Mice that received the transplants, or humanized mice, on the junk-food diet became extremely obese. Their weight gain was in lock step with dramatic shifts in the types of intestinal bacteria present compared to mice on a low-fat diet.

Using the latest DNA sequencing technology, the researchers found that on the high-fat, high-sugar diet mice had more microbes that prefer to eat carbohydrates. The mice were switched to the diet in less than a day.

"Putting triggers of obesity or malnutrition in humans is hard because there's a host of factors — genetic, cultural and environmental — such as diet — that are extremely difficult to control," said senior author Jeffrey I. Gordon, M.D., director of the Center for Genome Sciences.

"Creating the gut environment in mice gives us a way to control these variables. The information gained from these studies will be critical to fighting obesity," said senior author Suresh Raman, M.D., Ph.D., professor of medicine and pediatrics.

The study was based on transplants of human intestinal microbes into germ-free mice. Mice that received the transplants, or humanized mice, on the junk-food diet became extremely obese. Their weight gain was in lock step with dramatic shifts in the types of intestinal bacteria present compared to mice on a low-fat diet.

Using the latest DNA sequencing technology, the researchers found that on the high-fat, high-sugar diet mice had more microbes that prefer to eat carbohydrates. The mice were switched to the diet in less than a day.

"Putting triggers of obesity or malnutrition in humans is hard because there's a host of factors — genetic, cultural and environmental — such as diet — that are extremely difficult to control," said senior author Jeffrey I. Gordon, M.D., director of the Center for Genome Sciences.

"Creating the gut environment in mice gives us a way to control these variables. The information gained from these studies will be critical to fighting obesity," said senior author Suresh Raman, M.D., Ph.D., professor of medicine and pediatrics.

The study was based on transplants of human intestinal microbes into germ-free mice. Mice that received the transplants, or humanized mice, on the junk-food diet became extremely obese. Their weight gain was in lock step with dramatic shifts in the types of intestinal bacteria present compared to mice on a low-fat diet.

Using the latest DNA sequencing technology, the researchers found that on the high-fat, high-sugar diet mice had more microbes that prefer to eat carbohydrates. The mice were switched to the diet in less than a day.

"Putting triggers of obesity or malnutrition in humans is hard because there's a host of factors — genetic, cultural and environmental — such as diet — that are extremely difficult to control," said senior author Jeffrey I. Gordon, M.D., director of the Center for Genome Sciences.

"Creating the gut environment in mice gives us a way to control these variables. The information gained from these studies will be critical to fighting obesity," said senior author Suresh Raman, M.D., Ph.D., professor of medicine and pediatrics.

The study was based on transplants of human intestinal microbes into germ-free mice. Mice that received the transplants, or humanized mice, on the junk-food diet became extremely obese. Their weight gain was in lock step with dramatic shifts in the types of intestinal bacteria present compared to mice on a low-fat diet.

Using the latest DNA sequencing technology, the researchers found that on the high-fat, high-sugar diet mice had more microbes that prefer to eat carbohydrates. The mice were switched to the diet in less than a day.

"Putting triggers of obesity or malnutrition in humans is hard because there's a host of factors — genetic, cultural and environmental — such as diet — that are extremely difficult to control," said senior author Jeffrey I. Gordon, M.D., director of the Center for Genome Sciences.

"Creating the gut environment in mice gives us a way to control these variables. The information gained from these studies will be critical to fighting obesity," said senior author Suresh Raman, M.D., Ph.D., professor of medicine and pediatrics.

The study was based on transplants of human intestinal microbes into germ-free mice. Mice that received the transplants, or humanized mice, on the junk-food diet became extremely obese. Their weight gain was in lock step with dramatic shifts in the types of intestinal bacteria present compared to mice on a low-fat diet.

Using the latest DNA sequencing technology, the researchers found that on the high-fat, high-sugar diet mice had more microbes that prefer to eat carbohydrates. The mice were switched to the diet in less than a day.

"Putting triggers of obesity or malnutrition in humans is hard because there's a host of factors — genetic, cultural and environmental — such as diet — that are extremely difficult to control," said senior author Jeffrey I. Gordon, M.D., director of the Center for Genome Sciences.

"Creating the gut environment in mice gives us a way to control these variables. The information gained from these studies will be critical to fighting obesity," said senior author Suresh Raman, M.D., Ph.D., professor of medicine and pediatrics.
Dinosaurs

Walking and running a key factor in study – Erin Paglia

ison, an expert on dinosaur locomotion, who works with us on this project. By understanding the details of how animals move, we can learn about the evolutionary pressures that acted on different groups of land animals.

Studies of present-day animals have shown that animals can adapt to new environments by changing the way they move. By understanding why dinosaurs moved the way they did, we can begin to understand how they evolved.

To back up these estimates, the authors used a complex method based on estimating the actual volume of leg muscle dino- sours and running. They found that in order to move, using methods similar to that used in birds and dinosaurs previously developed.

Active movement leads to energy consumption, which may in turn require an endothermic- mechanism to maintain the activ- ing active muscle volume in an extinct animal. This mechanism is generally more complicated than mea- suring the length of the legs, however.

Second, how much muscle would be needed to support the energy needed to walk? Active dinosaurs had a lower muscle volume than expected from a bird's muscular mechanism, which is equivalent to the size of the bony levers they are attached to.

A third, how much energy would be needed to walk? This is important because, as in other animals, the cost of walking depends on the size of the bony levers they are attached to.

A fourth, how much energy would be needed to run? This is important for understanding the limits of endothermic and ectothermic animals.

The results of both the simple and complex method were very consistent with the expected energy costs for running and walking.
**School of Medicine Update**

**Scientists identify roots of diabetic tissue damage**

By Michael C. Perry

Results from comprehensive assessments of diabetic effects on cell metabolism may help efforts to reduce diabetic damage to nerves, blood vessels and muscle. Scientists at the School of Medicine and elsewhere have found that by blocking the sorbitol pathway, one of several pathways cells employ to use the sugar glucose, they could prevent diabetic damage to nerves and blood vessels in rats.

Prior clinical trials of blockers for this pathway have been disappointing, researchers said, but they say that helping them understand how the sorbitol pathway is inadequately regulated.

“What we’ve found should help fine-tune efforts to slow or prevent diabetic complications associated with hardening of the arteries, damaged nerves and reduced ability of muscle to perform,” said senior author Joe Wilkinson, M.D., retired professor of pathology and immunology.

“Evidence suggests that diabetic complications are caused by increased levels of superoxide, and our results point to the sorbitol pathway as the main source of this toxic molecule,” Wilkinson said.

The paper appeared online in the January issue of Innovation and Redox Signaling and will appear in print in the future.

Normally, cells use glucose mostly to make energy through a process called glycolysis. However, as glucose levels rise, cells begin to use glucose in a process called the sorbitol pathway. The high glucose levels associated with diabetes increase the use of glucose via glycolysis and the sorbitol pathway.

“Both processes alter a molecule called fructose 6-phosphate (a metabolic intermediate) by adding a hydrogen atom (NADH). To keep glucose signaling in check, the cell converts NADH back to NAD. If NADH levels overwhelm NAD, a metabolic imbalance occurs that can limit energy production for normal cell function and survival,” Wilkinson said.

Peroxynitrite, an antioxidant produced by glycolysis, normally helps facilitate conversion of NADH into NAD. However, the sorbitol pathway does not produce peroxynitrite. Wilkinson and his colleagues theorized that when diabetes increases sorbitol pathway use, it places an increased burden on the cell by creating more NADH but leaving it with relatively less peroxynitrite to help change it back into NAD, noted that a cell faced with too much NADH and too little peroxynitrite can’t achieve the conversion, and that these enzymes produce nitric oxide, as a product, making them an important source of diabetic tissue damage.

In testing the first component of this theory in a mito-diabetic model, the researchers found that inhibiting either of two specific steps in the sorbitol pathway increased tumor vascular function and reversed impaired motor neuron conduction velocity, or the speed at which nerves transmit electrical signals to muscles. Sorbitol pathway inhibitors similar to those used by the researchers have been tested previously with disappointing results in clinical trials. But Wilkinson said recent studies in animals suggest those inhibitors may inhibit some important portion of the sorbitol pathway.

“We’ve demonstrated that inappropriate signaling in the sorbitol pathway is when the levels affect different aspects of cell metabolism, and we are working to block the sorbitol pathway effectively. This is a significant step forward in our efforts to treat bone and muscle diseases," said Larry J. Silvers, M.D., orthopaedic vice chancellor for medical affairs and dean of the School of Medicine. "As our researchers continue to make new discoveries and to translate those discoveries into better patterns, combining the efforts of scientists from multiple institutions will improve communication and cooperation in this field to speed the pace of discovery."

The center will support and expedite the creation and clinical translation of preclinical models relevant to musculoskeletal biology and disease. Investigators will be organized into two research cores: one for musculoskeletal structure and function; one to analyze molecular structures of both healthy and diseased tissues; and one to use genetic engineering techniques to create mouse models of various muscle, bone and connective tissue populations. Traditionally, the majority of research on muscle and bone function has been conducted by investigators to the schools of Medicine, of Pathology and Immunology, and Orthopedic Surgery, but recently, those investigators have launched collaborative efforts with scientists in anatomy and neurobiology, bioengineering, cell biology, developmental biology, genetics and pediatrics. Part of the reason for creating the new center is to improve communication between all of these researchers from different, and often unrelated, areas of the University.

The center will support and expedite the creation and clinical translation of preclinical models relevant to musculoskeletal biology and disease. Investigators will be organized into two research cores: one for musculoskeletal structure and function; one to analyze molecular structures of both healthy and diseased tissues; and one to use genetic engineering techniques to create mouse models of various muscle, bone and connective tissue populations. Traditionally, the majority of research on muscle and bone function has been conducted by investigators to the schools of Medicine, of Pathology and Immunology, and Orthopedic Surgery, but recently, those investigators have launched collaborative efforts with scientists in anatomy and neurobiology, bioengineering, cell biology, developmental biology, genetics and pediatrics. Part of the reason for creating the new center is to improve communication between all of these researchers from different, and often unrelated, areas of the University.

In addition to Sandell, the center’s leadership includes Steven Teitelbaum, M.D., the Messing Professor of Pathology and Immunology, and Matthew Silva, Ph.D., associate professor of orthopedic surgery.

$37 million to extend biodefense research

By Carolyn Arrabas

The National Institutes of Health (NIH) has extended funding for the Midwest Regional Center for Excellence in Biodefense and Emerging Infectious Diseases (MRCBE), anchored at the School of Medicine. The center received a five-year, $37 million grant from the National Institute of Allergy and Infectious Diseases (NIAID) to continue to support basic and translational research in biodefense and emerging infectious diseases throughout the Midwest.

The MRCBE, established in 2003, is one of 11 Regional Centers of Excellence (RCBEs) dedicated to developing new and improved ways to treat, diagnose or prevent diseases that could be used for terrorism, such as anthrax, or infectious diseases, like West Nile fever, plague and dengue fever. The RCBEs also provide scientific expertise to first responders in the event of a bioterrorism-related emergency.

MRCBE researchers have focused their efforts on understanding innate immunity, a type of built-in protection against certain microbial assaults, and exploring infections caused by West Nile virus and pneumonias. Additionally, they have worked to improve the safety of vaccines, discover new viruses and develop new antiviral therapies.

Herbert "Skip" Virgin III, M.D., Ph.D., is the director of the MRCBE and professor of pathology and medicine at the School of Medicine and of molecular microbiology, and director of the MRCBE and Michael Diamond, M.D., Ph.D., professor of pathology and immunology at Washington University School of Medicine, and of molecular microbiology, is co-director.
Sixth Annual Children's Film Symposium Nov. 21

Washington University's Center for the Humanities and Program in Film and Media Studies, both in Arts & Sciences, will host the Sixth Annual Children's Film Symposium on Saturday, Nov. 21, in Brown Hall Auditorium. "An Exploration of Children's Films and Their Audiences," the daylong symposium is presented in conjunction with Cinema St. Louis.

The festival will feature four full-length screenings as well as a Q&A with four filmmakers, an animation and comics historian and author of "The Animated Man: A Life of Walt Disney." All events are free and open to the public.

The festival begins at 10 a.m. with "Princess of the Sun," directed by Philippe Leclerc and released in 2007, this funny, visually stunning film centers on Akhenaton, a 4,000-year-old princess who doesn't have the slightest idea that one day she will rule Egypt. But after uncovering a plot to kill her father, Pharaoh Tremחבn, Akhenaton enlists his future husband, Tut, journey to visit Queen Nefertiti, who has been exiled to Elephantine Island. Both Akhenaton and Tut grow from pampered children to independent and mature adults.

The film is in French with subtitles and is recommended for ages 10 and older.

At 1:15 p.m., the festival screens "Tahaa: A Boy With a Grenade," directed by Samsudin Suriyan and released in 2008, this thoughtfully photographed live-action film follows 8-year-old Tahaa as he journeys across a difficult, war-ravaged country to find his beloved pet dog Tony.

The film is in Hindi with subtitles and is recommended for ages 12 and older.

At 5 p.m in "Tigas & Donci," Directed by Adam Magware and released in 2007, the main characters Egon and Donci live together in an idyllic village on a small planet far, far away. Though both are aliens, Egon has a strong resemblance to a human boy, and Donci is best described as a strange-looking cat. But their simple existence becomes considerably more complicated when when 3 flies intrude into their lives, carrying a message from Earth.

The language spoken is alien, and there are no subtitles. The film is recommended for ages 12 and older.

The festival continues at 5 p.m. with "West," Directed and written by Henry Bernared and Myranda Vermeulen and released in 2008, this film follows a handful of working-class teenagers over a period of 24 hours. Things begin innocuously enough with a series of class presentations but soon turn more serious, touching on issues of teenage boredom, unrequited love and sexual awakening.

The film is in French with English subtitles and includes adult language and situations. It is recommended for high school ages and older.

The festival concludes at 8 p.m., with both "An Exploration of Children's Films and Their Audiences" receiving a lecture titled "The Hollywood Costume," with屏障er giving a guided tour of six favorite cartoons from the Walt Disney, Warner Bros., and MGM studios and will take questions from the audience.

Exhibits


Films

Thursday, Nov. 19

6:30 p.m. "The Pursuit of Ethos: Animated Volumes Vol. 1"" by Chuck Jones. Homer Civic Center. (Continues throughout the week at various locations.)

Saturday, Nov. 21

10 a.m.-3:15 p.m. Sixth Annual Children's Film Symposium. "An Exploration of Children's Films and Their Audiences." Brown Hall. Box 1035-5130.

Inclement weather information

Should weather conditions create potentially hazardous travel conditions, Washington University will evaluate the situation and take into consideration the safety of University faculty, staff and students as well as the services that must be provided despite the inclement weather.

In the unlikely event that the University alters the normal work schedule, an announcement will be posted on the University's home page (www.wustl.edu), and a number of media outlets will also air an announcement.

Separate announcements will be made regarding the Schrader Campus (which includes all campuses other than the Medical School Campus), the Medical School Campus and evening school classes. These announcements will apply only to Washington University students, faculty and staff.

The media outlets that would air such an announcement are KTVI-TV Channel 2, KMOM-TV Channel 4, KSDK-TV Channel 5, KPLR-TV Channel 11, WSEE-FM (88.7) and KRMU (AM 1410).

How to submit 'University Events'

To submit "University Events," please see instructions online at wustl.edu/calendars.html.

Lectures

Thursday, Nov. 19

9 a.m.-4:30 p.m. GIS Symposium (Includes keynote address and panel discussions.) Whirlpool Auditorium. Registration required at wustl.edu/events.

Nov. Genetic Seminar: "Modeling the Systems Biology of Complex Traits in the Fruit-Flies." By Yves Allegre, lnstitut Pasteur, Paris, France. Kemper Medical Sciences Building, 4550 Children's Hospital Dr. 935-3215.


4 p.m. Vision Science Seminar Series. "Visual processing and the role of higher-order cortical areas in the context of visual attention." By John A. Hudspeth, Warner-Lambert/Parke-Davis Pharmaceuticals, New York, NY. Kemper Medical Sciences Building, 4550 Children's Hospital Dr. 935-5501.

10:45 a.m. Earth & Planetary Sciences Colloquium. "Synthesis of water and organic compounds in the Galapagos-Crater lake in island Hawaii and its implications for life in extraterrestrial locations." By Seong H. Kim, University of South Florida. Kemper Medical Sciences Building, 4550 Children's Hospital Dr. 935-5501.

4 p.m. Earth & Planetary Sciences Colloquium. "Synthesis of water and organic compounds in the Galapagos-Crater lake in island Hawaii and its implications for life in extraterrestrial locations." By Seong H. Kim, University of South Florida. Kemper Medical Sciences Building, 4550 Children's Hospital Dr. 935-5501.

4 p.m. Freedom From Smoking Class. "Seminar to enable people to quit smoking and help them stay smoke-free. For more information on the smoking cessation program please call: 362-7844.

Monday, Nov. 22

Monday, Nov. 23

Monday, Nov. 24

Monday, Nov. 30

Nov. Molecular Microbiology & Microbial Pathogenesis Seminar. "Protection of Mycoplasma pneumoniae from Macrophage Phagocytosis." By Andrew O. Ewton, instructor in pediatrics, Calif. Med. 8-6580. Kemper Medical Sciences Building, 4550 Children's Hospital Dr. 935-5501.

5 p.m. Freedom From Smoking Class. "Seminar to enable people to quit smoking and help them stay smoke-free. For more information on the smoking cessation program please call: 362-7844.

5 p.m. Student Recreation." "The Hollywood Costume," with屏障er giving a guided tour of six favorite cartoons from the Walt Disney, Warner Bros., and MGM studios and will take questions from the audience.

Music

Friday, Nov. 20

9 p.m. American University Center, Chamber Music Series. "A Monk's Tale" by Dariusz Mikolajewski, piano. Busch Hall, Rm. 103. 935-3366.

Saturday, Nov. 21

4 p.m. Concert, Chamber Winds, Eastern States Conference. Busch Hall, Rm. 350.

Sunday, Nov. 22


And More

Towards On Stage

Thursday, Nov. 19

6:30 p.m. "Ragtime." (The Philharmonic."

Friday, Nov. 20

4 p.m. "Walt Disney's "The Magic of Baseball.""

Saturday, Nov. 21

7 p.m. "Beethoven's String Quartet No. 14.""

Sunday, Nov. 22

4 p.m. "Walt Disney's "The Magic of Baseball.""

Green Your Office

Go by the Policy: Get rid of the paper. One who would automatically use two of paper towels, sheets of cleaning product, etc.
Brass ensemble of Saint Louis Symphony to perform at DUC

The trombones of the Saint Louis Symphony are one of the nation's leading brass chamber ensembles, dedicated to elevating the status of the trombone quartet repertoire. At 8 p.m. Friday, Nov. 20, the group will present a free concert of music spanning the 18th through 21st centuries in the Tisch Commons of the Danforth University Center.

The program will open with "Toccata and Fugue in D minor," a masterpiece by Johann Sebastian Bach. Next will be "Myths and Legends," a contemporary work for four trombones, by composer Eric P scott. After a brief intermission, the program will continue with "The Overture to The Magic Flute" by Wolfgang Amadeus Mozart, fol lowed by three short works from Claude Debussy: "Minstrels," "Trombone quartet repertoire."

The program will open with "Concertino in tre tempi in C major for Harp and Orchestra" by Francois-Adrien Boieldieu, a French composer whose best-known operas are such as "La Dame Blanche." Party of the program will be two excerpts from music composed by Jules Massenet in 1900 for Bernardin de Saint-Pierre's production of Racine's "Phedre." The selections are based on research by Eric Brooks, a doctoral candidate in musicology who is writing her dissertation on Berlioz and French incidental music. Brooks will introduce each of the musical selections.

In addition, because several compositions incorporate spoken text directly over music, Anita Hagerman, who recently defended her dissertation in the Department of English in Arts & Sciences, will perform brief excerpts from Berlioz's libretto.

The concert will close with music from Gustav Holst's "The Planets," one of the most frequently performed works of 20th-century English music. Holst was deeply interested in astrology, and each of the work's seven movements corresponds to a planet while also showcasing the composer's ability to move fluidly between the rhythmic propulsion of "Mars, Bringer of War" to the extended sections of "Jupiter, Bringer of Jollity" to the plodding resignation of "Saturn, Bringer of Old Age." For more information, call 935-5566 or e-mail kouchta@wustl.edu.

Washington University Symphony Orchestra in concert Nov. 22

Nov. 21, in Highland Hills, Ohio. The women's race begins at 11 a.m., with the men to follow at noon.

Women's soccer advances to Sweet 16

Senior Alyssa Marulli scored the game-winner five minutes into the overtime to lead the No. 12 DePaul women's soccer team to an 88-53 win over MacMurray College at the WU Field House. Thompson hit 9-of-19 from the field, including 5-of-11 from three-point range, in the victory. He scored a career-high 12 tackles to lead the defense, while sophomore Dylan Richter added 12 points with two dunks.

WUSTL (1-0) returns to action Saturday, Nov. 21, at 6 p.m. against Ohio Wesleyan University in the Tip-Off Tournament held at Illinois Wesleyan University in Bloomington, Ill.

First losing season in 17 years for football

With a 28-8 loss to No. 7 Case Western Reserve University on Nov. 14, the Bears (4-6-1) were eliminated from contention for a conference championship. The team had been ranked as high as 23rd in the weekly Associated Press poll.

Sophomore Alyssa Marulli battles for the ball in the NCAA first-round game against Webster University Nov. 14. The Bears won both a first- and second-round game to advance to the Sweet 16.

The Bears (1-0) return to action in the Illinois Wesleyan University Tip-Off Tournament Saturday and Sunday, Nov. 20 and 21, in Bloomington, Ill. The Bears open with No. 12 DePaul University at 5 p.m. Nov. 20.

Men's basketball defeats MacMurray

Senior guard Austin Thompson scored a game-high 24 points to lead the No. 1 ranked men's basketball team to an 88-53 win over MacMurray College at the WU Field House.

Senior Bryce Buchanan had a career-high 12 tackles to lead the defense, while sophomore Dylan Richter added 12 points with two dunks.

WUSTL (1-0) returns to action Saturday, Nov. 21, at 6 p.m. against Ohio Wesleyan University in the Tip-Off Tournament held at Illinois Wesleyan University in Bloomington, Ill.

First losing season in 17 years for football

With a 28-8 loss to No. 7 Case Western Reserve University on Nov. 14, the Bears (4-6-1) were eliminated from contention for a conference championship. The team had been ranked as high as 23rd in the weekly Associated Press poll.

Sophomore Alyssa Marulli battles for the ball in the NCAA first-round game against Webster University Nov. 14. The Bears won both a first- and second-round game to advance to the Sweet 16.
Annual Faculty/Staff Appreciation Event at Campus Store Dec. 2

BY JESSICA DAVIES

The Campus Store will give WUSTL faculty and staff members an opportunity to do some last-minute shopping. The store will hold its 12th annual Faculty/Staff Appreciation Event Dec. 2 and will offer a 30 percent discount to Washington University faculty and staff members from 8:30 a.m. to 6 p.m.

The store will offer a wide range of gifts, such as books, coffee mugs, pens, backpacks, scarves, and stationery. The store also offers gift cards for travelers, such as airline and hotel gift cards.

To receive the discount, faculty and staff members will need to show their id at the store. The discount is valid in-store and online, but not valid with other discounts or promotions.

For more information, contact the Campus Store at 935-5500.

Free vehicle inspections offered Dec. 5

WASHINGTON UNIVERSITY IN ST. LOUIS

Veterans, faculty, and staff from the George Warren Brown School of Social Work, the School of Law and Olson Business School are working together to allow children through the Marine Corps Reserve Toys for Tots Program.

Washington University WUSTL drivers to top off these other vehicle fluids to allow for more time before traveling.

SUGGESTED READING

The researchers also noted that gut microbes in humanized mice have been transplanted successfully into the mice using either fresh or frozen stool samples from a human donor. The ability to use frozen stool samples has broad implications because it means that humans around the world could have their stool samples stored and analyzed.

Donations can be placed in collection bins at three locations on campus: in the Goldfarb Student Commons, in the Hall of Flaps in Simon Hall and at the Student Center.

For more information, contact Dan Stivers, SUV faculty liaison, at sufv@gwbmail.wustl.edu; the Olin Veterans Group at olinveterans.wustl.edu; and Monica Matthaus, SUV executive director, at mmatthaus@wustl.edu. For more information, contact Steve Cash Nickerson, SUV projects manager, at nickersons@wustl.edu.
Notables

Sackett a finalist for prestigious Marshall Scholarship

By NEIL SCHONBERGER

Senior Chase Sackett, majoring in Classics and economics in Arts & Sciences, was named a finalist for the Marshall Scholarship. Though he was not awarded the scholarship, earning a finalist position is a great accomplishment.

"This is a highly competitive and presti- gious National scholarship," said Joe Kueker, Ph.D., assistant dean in the College of Arts & Sciences. Students compete for WUSTL nomination and then are forwarded on to compete at the national level in one of eight regions. Chase was forwarded on to the Chicago region.

"This region received over 200 applications and only interviewed 26 students," Kueker said. "For Chase to be one of just 26 finalists is quite an honor and speaks very highly of his aca- demic and personal achievements."

Marshall Scholarships finance Young Americans of high ability to study for a post- graduate degree in the United Kingdom. Up to 40 scholars are selected each year to study at a graduate level at a U.K. institution in any field of study.

Marshall Scholarships are widely recog- nized as among the most prestigious awards that American undergraduates can receive. Currently, there are approximately 1,500 Marshall Scholarship alumni, including 190 in the United States.

Sackett is a member of the Chiota Junior Honorary and Congress of the South 40. He also is speaker of the senate in Student Union. He is a WUSTL Distinguished Scholar and was awarded a Howard Nemerov Writing Award his junior year.

Following graduation, Sackett hopes to work in public office helping to reform trans- portation law.

Becker a Rhodes finalist

Senior Emily Becker, majoring in international studies and area studies in Arts & Sciences, was named a finalist for a Rhodes Scholarship. Thirty-two U.S. winners of that prestigious scholarship will be announced Nov. 21.

Becker will interview in Kansas City.
Jeff Michalski, M.D. (left), talks with patient Phillip F. Dressel and Diane Ross, nurse coordinator in radiation oncology, at a recent appointment. “I want to make sure (patients) get answers to all their questions,” says Michalski. “If a patient comes in with a spouse or family member, I make sure they are included in the conversation. And we carefully discuss effects of the various therapies that may impact their quality of life.”

At home

He and his wife, Sheila, have three children. Sheila Michalski is a clinical research monitor and radiographer, and their son, Jeffrey, works as a research assistant. “We make a point of eating as a family as often as we can,” she says. “We sit down and talk about our day. My wife and I travel a lot, but whenever we are home, we’re together for dinner.”

Jeff Michalski is the main cook in the family, and he considers cooking one of his hobbies, often improvising a quick meal based on what looked best at the grocery store. Recently, he discovered the enjoyment of beer-making and can cite from memory a recipe for no-knead bread that he says is as good as any bread at Saint Louis Bread Co. The recipe calls for a little beer for a yeasty flavor. If he wished, Michalski could add a bit of his own home brew. He has won several beer-brewing competitions, including some national championships. A French-Belgian sour beer he once crafted only took first place in a master’s championship of amateur brewers.

His hometown of Milwaukee is known as the beer capital of the world, so beer-making is a natural for him. But it also taps into his educational background. “I think about it — Milwaukee, St. Louis, bread, beer — it’s all about the yeast. I was a biochemistry major as an undergraduate, and it’s frustrating not to get to use the principles I learned about — beer-making lets me do that,” he says, only half joking.