

FOCUS

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Kung What?

Enter the Fist comes to theaters, but you shouldn't expect greatness from this one. If you like mindless movies, see Page 20.

And they're off!

The Women's Swimming and Diving team sets records at their debut meet. For more on their promising season, turn to Page 32.



Eating on a student budget

Students everywhere love eating cheap, so the Technique shops around. Take a look at the best values around campus and learn...

How to eat lunch like a comparison shopper

By Jennifer M. Hinkel
Focus Editor

Whether sharing lunch or grabbing a Coke after class, purchasing food on campus is a daily task for students, faculty and staff alike. The campus consumer might not shop comparatively for Cokes and Powerades, but an extra quarter

of savings a day can make a huge difference in your collegiate finances. Save only 50¢ every day for five years of studenthood, and you would net over \$900 at graduation day. That could mean a spring break at Aspen, a down payment on a new ride or two months rent. And that doesn't even include interest.

| | Junior's | Vending Machine | Food Court | W. Side Market | Burdell's Store |
|---|--|--|--|-------------------------|---|
|  | \$1.10 Free refills for 20 oz. Coke & tea | \$1.10 20 oz. bottle | \$1.13 20 oz. bottle | \$1.09 20 oz. bottle | \$1.25 20 oz. bottle |
|  | \$0.50 or \$0.75 Free refills on coffee | Not Offered | \$1.05 or \$1.12 Refills cost extra | Not Offered | Not Offered |
|  | Not Offered | \$1.10 | \$1.34 | \$1.19 | \$1.25 |
|  | Not Offered | \$1.25 | \$1.64 | \$1.19 | \$1.25 |
|  | Not Offered | \$0.55 | \$0.89 or \$1.39 | \$0.99 | \$0.99 or \$1.50 |
|  | Not Offered | \$0.50 or \$0.65 Price differs between vending machines | Not Offered | \$0.69 | \$0.75 or \$1.00 Price differs between size of chocolate bar |

Cooking in your dorm (or 'Beyond Ramen Noodles')

By Kimberly Rieck
Staff Writer

A student has just survived another long day of sitting through endless lectures, studying, and working hard, and one of the last things she wants is a feast of mass produced, generic food at the dining hall. Even hard-core Brittain lovers sometimes seek a way out of devouring another slice of seafood pizza or meatloaf. If this sounds familiar, you are not alone. Many students fail to realize the various alternatives they have to eating at Brittain or Woodruff. All you need is a little creative money management and a handful of ingenuity.

Before anyone can start to cook, they need a few necessities—silverware, pots, and pans. If the costs of pots and pans seem high, you can negotiate around that obstacle. One option is to borrow pots and pans from people on your floor when you need to cook. Another option is to use microwavable safe bowls and dining ware.

Alternately, you can save the money that you would spend at the Student Center Food Court to afford a spiffy set of cookware from Wal-Mart. If you don't have a car on campus, try Target.com, or Wal-Mart.com to order a set to be delivered to your campus mailbox.

The culinary adventurers can simply forego the pots and pans idea all together and invest in a George Foreman grill.

Many students fail to realize the various alternatives they have to eating at Brittain or Woodruff.

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Tech's first Relay for Life scheduled for April weekend

By Narendbra Seshadri
Contributing Writer

According to the American Cancer Society (ACS), one in every three women and one in every two men are diagnosed with cancer at some point in their lifetime. In their continued efforts to support researching potential cancer cures, the ACS sponsors several main fund-raising programs, including the popular "Relay For Life." The event was initiated in 1985, when oncologist Dr. Gordy Klatt ran and walked solo around the track at the University of Puget Sound for 24 hours. This first Relay, held in Tacoma, WA, raised more than \$27,000 for the fight against cancer. What originally began as one man's dream is now a nationwide event that takes place in over 3000 communities across the United States and has now grown to encompass cancer-fighting organizations in seven different coun-

tries outside the country.

The American Cancer Society has many nationwide branches of Relay For Life committees. This annual event has provided a great foundation for cancer research and to date, has invested in more than \$2.2 billion in cancer research. Throughout the metro Atlanta area, and even in other parts of the country, Relay For Life has been a significant contributor to cancer research through its fundraising events. The number of volunteers participating in the event grows annually. Last year, 2 million people walked in Relays around the nation, with 350,000 cancer survivors walking at over 2700 sites. Since its debut in 1985, Relay for Life has raised in excess of 700 million dollars, making it one of the world's largest fundraisers.

Relay For Life has a significant number of branches throughout the country, and has even spread as far

as Melbourne, Australia. Recently, with the help of M.O.V.E and The American Cancer Society, Relay For Life launched its very own division at Georgia Tech. The Tech effort is headed by Ellen Niedlinger (chair),



Courtesy of American Cancer Society

Estee Liebross (ACS staff representative), David Prophitt (M.O.V.E advisor) and a committee of thirteen students. M.O.V.E and the American Cancer Society initiated the project; Tech's Relay has also received funding support from the Georgia Tech Student Foundation. Relay relies chiefly on the philanthropy of community businesses and schools, also welcoming cosponsors as philanthropic partners.

Although Relay For Life is in its first year at Tech, other Atlanta universities have participated in the event for several years. Both UGA and Emory sponsor their own Relays.

On Tuesday, January 29th, the M.O.V.E office and the ACS hosted two Kickoff sessions at the Student Center Ballroom to introduce Relay into the Georgia Tech community. Many attendees found this to be beneficial and commented on the elaborate presentation.

"The entire presentation was well

executed; it even convinced me to become a team leader to get more people involved," said Freshman Kenny Cheng.

Other students felt moved or inspired by the Kickoff event.

"I'm really looking forward to participating in this event; it reminded me of an old co-worker who lost her battle with breast cancer," said Industrial Engineering Major Tina Denq.

The presentation included several speakers, as well as a video presentation about the Relay's history and current scope.

"It was inspiring to watch the video—I'm going to participate because it looks like fun and it's for a good cause" said freshman Carol Hsu. Other students commented on their shock in learning some cancer statistics.

"It's pretty interesting," said

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Research Review: Dr. Nael McCarty

On ions and cystic fibrosis

By Madhu Adiga
Contributing Writer

At the corner of Atlantic and Ferst Drive sits the Cherry-Emerson Biology building, unbeknownst to many. We have a biology building, you ask?

Although the School of Biology is one of Georgia Tech's smaller academic programs, it is home to some of the campus' most interesting faculty research.

Dr. Nael McCarty is one of the newer biology professors at Tech, coming from the Emory University School of Medicine and is currently focusing on a unique area of biomedical research.

Many students remember having to learn about channels in cell membranes in one introductory biology class or another. Certain gated channels transport specific ions back and forth across the cell membrane to maintain the electrochemical balance important for many biological reactions.

What happens when one of these channels is defective? This is what occurs in the lethal genetic disorder cystic fibrosis. The gene for cystic fibrosis transmembrane conductance regulator (CFTR), when functional, codes a protein for a chloride ion channel in the surface cells of tissues like the trachea and pancreas. By regulating other ion transport channels, specifically one for sodium absorption and a separate chloride secretion channel, the CFTR

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Relay

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Abhishek Pandey. "[Relay for Life] is a good opportunity to do something good for humanity."

At the Kickoff, a student survivor of spoke on his experience fighting cancer. Noah Randolph, a STAC major, recently battled with melanoma. The American Cancer Society sponsors a scholarship that he receives. The scholarship, given to anyone who has been diagnosed with cancer before the age of 21, grants \$1,000 for every year that a student applies. Tech offers its own scholarships for survivors named the John C. Schaffer Scholarship.

When someone learns of a cancer diagnosis, "it's a pretty sure thing that they have a long road ahead of them no matter what type it is," said Randolph.

Randolph also talked about the difficulties of managing both academics and cancer treatments while undergoing surgery.

"I am talking about going to 3 or 4 different doctors every month for a year, getting prodded or poked with a shot every time you go in. It is very important for a patient to know that there are thousands of other people who are going through the same process.

"By knowing that, you do not feel as lonely as you would waiting for all those hours in the doctors' offices, and especially waiting in the examination room, where you are completely by yourself," he said.

"I did the Relay For Life last year and it felt good to meet other people like myself who were experiencing what I experienced. I'm really glad there is a Relay For Life, but it would be better if we didn't need it at all," Randolph said.

"Although this is a first year event, both the GA Tech community and the midtown community have embraced Relay with resounding excitement and enthusiasm," said ACS representative Liebross. "We had 99 people last night in an atten-

"I did the Relay For Life last year and it felt good to meet other people like myself who were experiencing what I experienced. I'm really glad there is a Relay For Life, but it would be better if we didn't need it at all"

Noah Randolph

Relay participant and melanoma survivor

dance—a room full of student groups, faculty and staff, businesses, church members, and other community groups. It is clear that philanthropy and school spirit are synonymous among the GA Tech community. I have high hopes for an extremely successful event thanks to the leadership of a dynamic and hard working student run committee. Relay For Life is much more than a fund-raiser. It is a Celebration of Life," she said.

"No one is exempt from cancer—each and every one of us knows someone who has had his or her life changed because of a battle with this disease," said Liebross.

The Georgia Tech Relay For Life 2002 will be held April 5 and 6 at the Student Athletic Complex (SAC) Field. Students can participate

through forming or joining teams or through contributions to Relay teams. Tech's Relay is currently seeking Team Captains to lead teams during the event. Team Captain packets and other registration information can be obtained from the M.O.V.E. office.

At the event, cancer survivors participate in the opening Relay lap, honoring their fight with cancer. The Relay event also includes a luminary service during the night, when hundreds of luminary candles are lit in honor of those who have survived cancer and in memory of those who died from the disease.

"These candles are placed in bags with the name of the person being honored or remembered, and the luminaries will burn throughout the night. This is a very special time for

anyone who has ever had his or her life touched in some way by this dreaded disease," according to the American Cancer Society.

The ACS offers information about Relay via their Web site and representatives. "Relay For Life is a fun-filled overnight event designed to celebrate survivorship and raise money for your American Cancer Society.

During the event, teams of people gather at schools, fairgrounds, or parks and take turns walking, jogging, or running laps. Each team tries to keep at least one team member on the track at all times. Relay For Life is also a fund-raiser. Each team member is asked to raise a minimum of \$100 before the event. Teams solicit donations, have garage sales, hold car washes, and more," according to the ACS.

"Relay For Life is all about having fun, doing something good for your community and doing something good for yourself. It's like shooting a bird with 3 stones," said Irene Gung, the Team Recruitment Co-Chair of this Relay.

"It is a team effort and a community being brought together," said co-chair Pooja Kadire. "Relays are one of the most emotional events that you'll ever participate in. I don't think I've ever seen a dry eye at a relay luminary ceremony. It really does bring communities together...after an entire night of sharing your joy and grief with other people you can't help but feel closer to them."

"[Relay is] a life altering experience that I envision will change the humanity on this campus," said Ellen Niedlinger, Relay chair. The Relay for Life 2002 aims at raising over \$120,000, forming over 60 teams and recruiting at least 60 survivors to participate in the event.

For more information on Relay For Life, please contact Estee Liebross at the American Cancer Society at 404-315-1123 (ext 112) or David Proppitt at the M.O.V.E. office at 404-894-2002.

Relay for Life Web sites

The American Cancer Society
• www.cancer.org

North Georgia College & State University's Relay
• www.ngcsu.edu/Resource/staff/relay/relayfor.htm

University of Georgia's Relay
• www.uga.edu/relay

University of North Carolina's Relay
• www.unc.edu/~mhuber/rfl

Mahoney County's Relay
• www.relayforlife.cboss.com

Relay for Life logo courtesy of American Cancer Society





By Kimberly Hinckley / STUDENT PUBLICATIONS

ULC resident Sharita Jenkins shops for produce at the West Side market. Cooking can offer a healthier, cheaper, and more convenient alternative to dining out in Atlanta or eating at Britain, Woodruff or the Food Court.

Cooking

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The grill will enable you to save cook meals without using the stove, pots, or pans. They retail from \$30 to \$60 depending on size.

The next step is to buy groceries. Instead of paying over \$2000 for a 14-meal a week plan each year, you can save money by buying groceries at any of the convenient locations near campus such as Kroger, Publix, or West Side Market.

While grocery shopping may seem like a hassle at first, you can spend less than 50 cents for a large pack of ramen noodles or you can pay over five dollars to eat food that may not be your cup of tea. Also, the savvy student needs only a few essential ingredients, such as vegetables, milk, eggs, ramen noodles and pasta, to make a plethora of delicious and appetizing meals.

Many students on campus already experiment in the kitchen with a variety of meal and dessert ideas.

Since Joseph Pugliese arrived on campus last fall, he has created many culinary delights, ranging from Key Lime Fudge to pasta creations.

“Usually it’s spaghetti, easy stuff that doesn’t really take a lot of attention, anything that really doesn’t require a lot of appliances,” said Pugliese. For his PSYC 1000 class last year, he prepared Key Lime fudge for the entire class. He has also cooked homemade pizza with friends, where they bought the pizza dough and put their favorite toppings on it.

Other campus chefs-in-residence include Chelsea Morrissey. “You can do things with pasta, you can add vegetables, and cheese plus different sauces. My favorite sauce is Classico, it’s better than Ragu or Prego. You can also make a lot of salads and desserts to go with the meal, simple things like Jell-O and brownies. I get a lot of recipes online,” Said Morrissey.

The Focus Section’s Favorite Dorm Recipes

Compiled by Kimberly Rieck

Looking for some easy recipes that you, too can whip up in just a few minutes? Never fear, the Focus section has come to your rescue. Who needs to watch the Naked Chef and Emeril when you have these?

Onion dip and chips: Even freshmen can cook this appetizer

Ingredients: 8 oz. of dried onions, 1 container of sour cream

Directions: Mix the two together.

Enchiritoes ‘Student Style’: They call it ‘Moda Estudiante’ in Mexico

Ingredients: 1 lb. of ground beef, 8 oz. can of tomato sauce, 1 cup of chopped onions, sliced cheeses, 4-6 flour tortillas, 1 chopped avocado, sour cream, taco sauce, and 1 cup of chopped olives

Directions: To make the meat sauce, first brown ground beef, and then add spices and tomato sauce. Then warm mixture over low heat. Proceed to lay meat sauce in an unfolded large flour tortilla. Add avocado, onions, cheese, and olives. Roll all ingredients into the tortilla. Use as many tortillas as desired to use up the meat sauce. Bake enchiritoes in oven at 350° for 10-15 min. During the last 5 minutes of baking time, place slices of cheese of the enchiritoes. Serve with sour cream on top.

Summer Pasta: When you wish you had the semester off

Ingredients: Any type of cooked pasta, spaghetti works great. 3-4 cut tomatoes. 1 block cubed mozzarella cheese, 1 bunch fresh chopped Basil, a drizzle of Olive Oil

Directions: Cook the pasta. Chop up the tomatoes, basil, and cheese. Combine all of the ingredients into a bowl and drizzle a bit of olive oil on top. After cooking your pasta and chopping your tomatoes, basil, and mozzarella, combine all the ingredients in a bowl and drizzle a bit of olive oil on top.

Fruit in ice: Probably the easiest recipe we could find

Directions: Slice up some apples, pears, grapes or cherries into a bowl of broken ice and water. Serve fruit in the iced water.

Baked Apples: Delicious desserts for the post-study hunger

Directions: Cut the core out of the center of an apple. Place the apple in a baking dish, and then pour lemon-lime soda, or any other flavor soda, into the center of the apple. Then sprinkle it with cinnamon and nutmeg and bake for about 30 min at 450° F, and serve hot. Cut the core out of the center of an apple. Place apple in baking dish, and then pour lemon-lime soda, or any other flavor soda, into the center of the apple. Sprinkle with cinnamon and nutmeg and bake for about 30 minutes at 450 degrees. Serve hot.

For more ideas, you can check out dormfood.com, and yumyum.com, or tune in to the Food Network on your dorm cable.

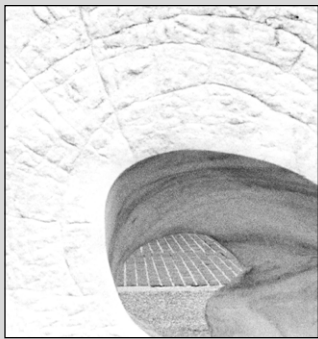


Tech Up Close

e-mail: focus@technique.gatech.edu

Last week's Tech Up Close:
Sculpture in the library fountain

Last week's winner:
Lloyd Johnson



By Andrew Saulters/ STUDENT PUBLICATIONS

Ions

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channel helps maintain the correct amount of surface fluid in the airway. When the chloride secretion channel is turned off, it signals the channel to absorb sodium and water.

When this regulatory channel is faulty, however, chloride ions cannot leave the membrane. Because of this, the sodium channel thinks it needs to activate, setting off the absorption of water and sodium, and it doesn't know when to stop. This buildup of water and sodium chloride results in the abnormally thick mucus characteristic of the disease.

By studying the physiology of this ion channel, Dr. McCarty and his research group hope to have a better understanding of how the CFTR gene functions in normal cells and can thus be improved in cystic fibrosis patients. The research takes a three-pronged approach: the biophysics and regulation of the chloride channel, control of the ion

transport complex as a whole, and understanding the relationship between the genotype and phenotype of cystic fibrosis patients.

As mentioned before, CFTR controls the sodium channel (EnaC) and another chloride channel (ORCC), and so it might be the "master regulator" in the membrane complex. But how and why does it control these channels? This component of the research is being carried out at Emory University, where the interactions between the channels are studied from airway cells taken from normal and CF subjects. Current hypotheses suggest that the interactions come from the cytoplasmic portion of the protein, although it has yet to be determined how mutations of the CFTR gene alter them.

One of the main efforts of McCarty's lab is to find out which parts of the CFTR protein control how ions move in and out of the membrane, and which parts function in

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gating or regulating the ion channels. The basic structure of the gene consists of two domains that span the membrane, each consisting of six helices. Also attached are two folds, one that binds with ATP during gating, and one that acts as a regulatory domain to controls that gating. One of the main issues at hand is which of these regions forms the pore to secrete chloride, and how this pore is constructed to be a regulatory channel. Dr. McCarty's lab aims to construct a three-dimensional functional map of the pore's structure and employs a number of other electrophysical techniques to analyze gating and permeation.

Using macromolecules as probes,

Dr. McCarty's lab can sense changes in the membrane over a large area, which could help them to identify the transmembrane helices that are involved. In addition, using smaller molecules can enable the lab to sense more specific changes in domains that coordinate anions permeating the pore, and thus find out which channels are specific to which ions. Another strategy involves using pore-blocking drugs as probes. DCP, NPPB, FFA, and Glibenclamide, the rationale being that changes in the membrane that affect the binding and blocking of the drugs are likely in a region that has to do with the channel. So far, DCP and FFA have been found to block the CFTR channel and had

their binding regions studied. Looking at the current through channels can also provide data about the physiology of the CFTR channel, since voltage is an inherent property of ion channels (remember your electrochemistry from Chem 1310?). Macroscopic recording takes a look at millions of channels at a time and uses a two-electrode voltage clamp to measure the relative permeability and conductances in the channels. These measures will hopefully help identify sites that control the selective ability of the chloride channel.

McCarty, however, is partial to the single-channel patch clamp, which looks at the current through one channel at a time. "This is the only method in scientific research through which you can study the behavior of one protein or molecule in real time," he pointed out.

Still, there are nearly a thousand possible mutations of the CFTR gene. Not all of these can possibly cause cystic fibrosis, can they? This is what the final tier of Dr. McCarty's research involves, understanding the relationship between genotype and phenotype. This can be tested in patients under the premise that if there is a chloride channel defect in the airway, it also exists in the upper airway. Thus, one can measure membrane potentials in nasal epithelial cells surgically removed from normal subjects and CF patient (yes, they are studying patient's noses). For this, Dr. McCarty is collaborating with Eggleston and Emory hospitals, using the Eggleston Cystic Fibrosis Research Center. Along with testing correlations between the mutation and ion transport defects, this technique is important in clinical trials for new treatments of cystic fibrosis. The data can also be used to tell if a new patient has cystic fibrosis.

If all this seems somewhat esoteric, it is because this actually is a unique area of biological research. In fact, it is one of the reasons Professor McCarty enjoys his research. "One of the most interesting things about this research is that it is the only ion channel research that deals with epithelial cells," he explained.

"Also, our research on cystic fibrosis allows us to explain the patients' condition to them in a way that their physicians may not be able to, and education has always been an important part of our work."

McCarty's lab is always willing to take on undergraduate help, so if this sounds like something you might be interested in, contact him. You can also visit his research homepage at www.biology.gatech.edu/mccarty/nmlabtop.htm.

Quiz around Campus!

Sliver me timbers!

1) Oh, my beloved ice cream bar! How I love to lick your creamy middle!

- a) Freak.
- b) Dude.
- c) Newt.
- d) Waffle.

2) As God is my witness, I'll never

- a) eat at Britain again.
- b) why the hell am I using Gone With the Wind? I hate that movie.
- c) and furthermore, it was overrated. Dumb movie critics.
- d) Now Hudsucker Proxy. That was a cool movie.