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THE WHISTLE

FACULTY/STAFF NEWSPAPER

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THE GEORGIA INSTITUTE OF TECHNOLOGY

Research findings could help improve biomedical implant design

Megan McRainey
Institute Communications
and Public Affairs

Medical devices are traditionally thought of as fairly simple implants such as stents and hip replacements — pieces of plastic or metal that are placed in the body to handle a very specific function. But biomedical devices now on the drawing board are more sophisticated and represent an unprecedented melding of humans and machines.

Combination products, devices that include a combination of drug, biological and device components, are expected to be the next big thing in biomedical devices. An example of a combination product is a tissue-engineered device that combines living cells with a polymer scaffold. When implanted into a patient, the device can replace or restore damaged tissue or organ function. While the response of the body to each component is well known, considerably less is known about how their new union may affect the body's reaction to a combination device.

According to new research from Georgia Tech's Department of Biomedical Engineering, the body can have a different — and potentially detrimental — reaction when there's more than one component involved. Findings from the study headed by

Julia Babensee, an assistant professor in the Department of Biomedical Engineering, were presented last month at the annual meeting of the American Association for the Advancement of Science (AAAS).

When a biomedical implant is introduced into a patient's body, the body's response is a threat to the acceptance of the implant and could result in device failure. The body responds to biomaterials with an inflammatory reaction and to foreign biological components with an immune reaction. But the two reactions may affect one another when triggered simultaneously, as they would be in a combination device if the combination product contains any foreign biological material.

"If you're combining a polymer with a biological component, the body may respond differently to that combination than it would to either component by itself. The immune response towards a foreign biological component of the device may be affected by the inflammatory response to the biomaterial component," Babensee said.

According to Babensee, there is a need to better understand more complex combination products so that as they move into wider use, they can be designed to integrate as smoothly

Babensee continued, page 3



Through the design of biomaterials and devices that better integrate with the body, Julia Babensee, an assistant professor in the Department of Biomedical Engineering, hopes to both control the immune response and restore damaged tissue or organ function.

Video games innovator to be honored by Ivan Allen College

Elizabeth Campell
Institute Communications
and Public Affairs

Each year the Ivan Allen College of Liberal Arts presents the Ivan Allen Jr. Prize for Progress and Service to an individual demonstrating exemplary contributions to a discipline related to the College's academic mission. On March 15 at 1 p.m., the College will honor Will Wright, designer of some of the most popular video games including "The Sims."

Wright joins past distinguished recipients of the Prize: Senator Zell Miller in 2001, President Jimmy Carter in 2002, syndicated columnist Molly Ivins in 2003 and former U.S. Senator Sam Nunn in 2004. After the

award presentation, Wright will give a keynote address. The program takes place at The Biltmore in the Georgian Ballroom on West Peachtree near Technology Square. The campus is invited to attend.

Wright's selection to receive the 2005 Ivan Allen Jr. Prize for Progress and Service reflects the robust digital media program in the College's School of Literature, Communication and Culture (LCC). The School offers several undergraduate and graduate degrees in digital media, plus continuing education certificates in Web design. The LCC faculty collaborates extensively with faculty in the College

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NCAA academic reform metric scores Tech above national average

Athletic Association

Georgia Tech's athletics teams performed well in the initial data released last week by the National Collegiate Athletic Association (NCAA) regarding the new Academic Progress Rate (APR).

In particular, Tech's men's basketball score of 962 for the 2003-04 academic year ranks in the 70th-80th percentile nationally, meaning that Georgia Tech stands better than 70 percent of NCAA Division I basketball programs. Tech's football score of 942 is in the 60th-70th percentile.

The APR is a key component of the NCAA's academic reform structure, which is designed to improve graduation rates for student-athletes. Under the APR formula, each student-athlete on a scholarship is scored each semester, receiving one point for remaining academically eligible and one point for being retained. One point is deducted for each student-athlete who is academically ineligible, and one point is deducted for each student-athlete who leaves school for any reason, including academic status, transfer to another institution or pursuit of a professional career.

The NCAA Division I Board of Directors, on which President Wayne Clough serves, established a score of 925 (out of 1000) as acceptable for each sport. A sport program falling below 925 would be subject to scholarship reductions, losing scholarship equivalency for any student-athletes who receive a "0-for-2" score, meaning that he or she left school and was not academically eligible upon departure. However, the 925 score will be initially adjusted with a temporary confidence boundary to account for squad sizes until more data is collected.

Data released on March 1 is for the 2003-04 academic year and will be combined with 2004-05 data to achieve the initial score for which schools could be penalized.

No Tech programs would be subject to penalties, based on the 2003-04 data released last week. Sixteen of the Yellow Jackets' 17 sports programs scored above the established standard of 925. The lone exception is baseball at 907, but even that score is well within the APR upper confidence boundary, which accounts

APR continued, page 3

QUOTE UNQUOTE

"They make it sound like it's absolutely nothing. Here's a group of assets that is worth billions less than last year. It's not nothing."
—Charles Mulford, professor in the College of Management, on a \$4.9-billion write-off by Clear Channel Communications on its radio station licenses and outdoor billboard permits. Executives disclosed its latest write-down of assets on the seventh page of its earnings report and blamed the charge on new federal accounting laws.
(San Antonio Express-News)

Visionary gift benefits students studying abroad

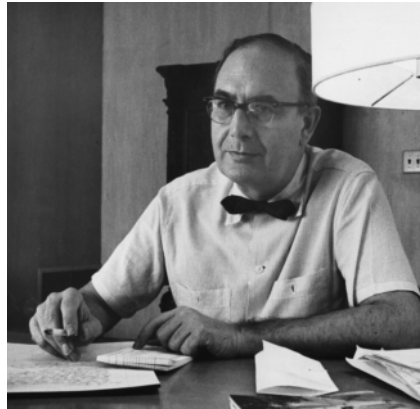
Dan Treadaway
Institute Communications
and Public Affairs

During his thirty-eight-year career at Georgia Tech, the late Paul M. Heffernan literally left his mark on the campus. Professor and head of the former School of Architecture, Heffernan was chief designer for the Bradley Building (now occupied by Junior's), the College of Architecture building, the Price Gilbert Library and Information Center, the Hinman and Hightower Buildings, and Smith, Glenn, and Towers Residence Halls, among others.

Heffernan also believed in the value of studying abroad for architecture students, having spent considerable time in Paris studying and teaching French architecture. Just prior to retiring, he taught at the Grand Palais in Paris as part of Tech's Study Abroad Program in 1976-77.

To ensure that his commitment to international study continued after his death in 1987, Heffernan established a trust in which the College of Architecture has a remainder interest. The trust was created for the lifetime benefit of Heffernan's sister, Virginia Hancock, who died in 2004. Heffernan's will provides that after his sister's death, the College of Architecture will receive \$100,000 to support students with "traveling scholarships abroad."

"P. M. Heffernan really is a legendary figure among our students,



Paul M. Heffernan

faculty, and alumni," said College of Architecture Dean Thomas Galloway. "He was a driving force early on for propelling Tech's Architecture program to national and international prominence. A critical element of that prominence is the consistently high national ranking of our academic programs and the high quality of our study abroad programs, especially our Senior Year in Paris Program. P. M. had the extraordinary foresight to realize that for us to have a truly great architecture program, we had to have truly great study abroad opportunities in place."

The Heffernan gift helps to support a broader strategic goal of Georgia Tech's for at least 50 percent of all undergraduates to have an international academic experience before they graduate.

"We were so pleased to learn about Mr. Heffernan's wonderful gift,"

Paul Heffernan file

- Earned bachelor's and master's degrees in architectural engineering at Iowa State University in 1929 and 1931
- Completed master's degree in architecture at Harvard University in 1935
- Traveled to France on a fellowship, studying at the Ecole Nationale Supérieure des Beaux-Arts from 1935-1938
- Hired by Georgia Tech as an associate professor in the School of Architecture in 1938
- Named director of the School of Architecture in 1956
- Adopted a six-year curriculum in 1972
- Established a fourth-year class affiliated with Ecole des Beaux Arts in 1975
- Retired in 1976

said Howard Rollins, director of Tech's Office of International Education, which administers the Institute's study abroad and exchange programs. "This is the kind of strategic gift that truly moves us forward in terms of external recognition as a genuinely global institution."

Funds from the Heffernan bequest will be available to College of Architecture students studying abroad, hopefully beginning in fall 2006.



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Georgia Tech is a unit of the
University System of Georgia.

Architecture symposium examines memory and design

Matt Nagel
Institute Communications
and Public Affairs

Michael Arad, whose architectural design for the World Trade Center Memorial was chosen from more than 5,000 entrees, made a return visit to campus for the College of Architecture's Symposium on Architecture and Memory.

"This is where it started. My development as an architect began here at Georgia Tech. When I needed help, I didn't hesitate to contact them, even when I was developing my ideas for the World Trade Center Memorial. They have been helpful through the whole process and continue to help me through the process now," said Arad.

The February 26 event brought together a variety of experts and drew a crowd of more than 300 people.

Professor Harris Dimitriopolous said he was proud to participate in the symposium and that it was a good learning experience for the students.

"It shows architecture can influence the community around us.

Especially with Michael Arad presenting, an alumnus that has been very successful in this area of architecture, it indirectly shows the students that this type of success is available to them."

Ken Knoespel, professor and chair of the School of Literature, Communication and Culture agrees, "The fact that Michael Arad witnessed the collapse of the towers sharpened and challenged his work in ways that is difficult to imagine. The benefit to students is priceless."

Arad offered his insight on the design itself and the grueling selection process. Reflecting Absence, features a pair of reflecting pools and cascading waterfalls surrounding the names of the dead in a "living park" at ground level that symbolizes life and rebirth.

During his presentation, Arad also alluded to how intimately involved his contacts at Georgia Tech are with his design. Associate Dean Doug Allen was one of the first people Arad called when he found out he won. Arad credited Allen with helping through the early stages of the design.

"The Alumni Committee of the

College of Architecture wanted to honor Michael as a fellow alumnus of the College, but we wanted this to reside within a larger discussion of the issues he faced and still faces as the architect of one of the most significant memorials of our time. We are obviously quite proud of him," said Allen.

According to Allen, the College of Architecture hopes to add more of these in-depth discussions to their annual Dean's Symposium.

"Universities have a public obligation for the generation and dissemination of thought and knowledge," he said. "Such events gather serious people together to discuss difficult issues of public importance. While such occasions may not always produce new knowledge, the generation of a public discussion of such issues is important in an open society."

For more information...

College of Architecture
www.coa.gatech.edu

World Trade Center Memorial
www.wtcsitememorial.org

2005 Women’s Awareness Month Event Calendar

Mar. 10	The Vagina Monologues	Student Center Ballroom, 7 p.m.
Mar. 12	Funny Girls: Atlanta Women of Comedy	Under the Couch, 8 p.m.
Mar. 15	African-American Women’s Career Panel	Student Center Theater, 11 a.m.
Mar. 17	The Vagina Monologues	Student Center Ballroom, 7 p.m.
Mar. 29	Keynote: Amy Henry (“The Apprentice”)	Ferst Center for the Arts, 7 p.m.
Mar. 31	Take Back the Night	Campanile, 7 p.m.
Apr. 1	ADVANCE Conference	Global Learning & Conference Center, 8 a.m.

For more information, visit www.womenscenter.gatech.edu/wam.

Founder’s Day cont’d from page 1

of Computing and the interdisciplinary Graphics, Visualization and Usability (GVU) Center.

Janet Murray, professor and director of Graduate Studies in the School of Literature, Communication and Culture, credits him with expanding the possibilities of game formats and game play.

“Will Wright is one of the world’s foremost game designers, and has shown that you can make best-selling games that engage people in complex problem solving about realistic situations,” she said. “He has said that he would rather create communities than games, by which he means that he is constantly trying to give players more powerful tools for making their own places, their own characters, their own story worlds, and then sharing them with one another.



Will Wright

“He has also played a crucial role in fostering serious intellectual discussion among game designers and between game designers and academic researchers, and has even served on a thesis committee here at Georgia Tech.”

The celebration continues on Wednesday, March 16, with a symposium — Living Games World — honoring Will Wright and the 10th anniversary of digital media degree programs at Georgia Tech. Panels will feature experts from industry and academia discussing issues such as the future of entertainment, creativity and narrative and game worlds. Representatives from industry include Electronic Arts (EA), Turner Broadcasting, Academy of Machinima Arts and Sciences, Klaus Entertainment, Schematic and more. The day closes with demos and exhibits. The detailed agenda is available online at www.gameworlds.gatech.edu.

IN BRIEF:

Scholarships available

The Georgia Tech Faculty Women’s Club is offering scholarships to undergraduates who are the children of Tech employees. Scholarships range from \$500 to \$1,500 and are based on financial need and academic achievement. Completed applications must be received by March 20. For more information or to download an application form, e-mail Lucy Jarrett at thejarretts@bellsouth.com or visit www.gtscholar.itgo.com.

Pi Mile Road Race

Online registration has begun for the 33rd Pi Mile Road Race to be held Saturday, Apr. 16 on the Georgia Tech campus.

The 5K route, which was trimmed from the traditional 3.14-mile length in 2002, will wind through campus and will be followed by a post-race celebration on the Tech Tower lawn with food, drinks and an awards ceremony.

Registration begins at 7 a.m., with the race starting at 8 a.m. Race T-shirts will be distributed to the first 500 registrants.

Awards will be presented to the top male finisher, top female finisher, top male and female student finishers, top male and female faculty/staff finishers, top alumnus and alumna and the top three male and female finishers in age categories from under 14 to over 60.

For those who want to be a part of the fun but cannot participate in the race, official Pi Mile T-shirts are available for \$20 and will be mailed in advance of the event.

For information and to register online, visit www.gtalumni.org/pimile.

Babensee cont’d from page 1

as possible into the patient.

Babensee’s work focuses on strategies for designing biomaterials and devices that can best integrate into the body by controlling host responses.

To better understand the body’s reaction to biomedical devices that incorporate both biomaterials and biological components, Babensee works with human blood cells, treating them with a variety of biomaterials to see what response is induced from the dendritic cells.

“These cells control which way the immune response will go, so if we can control their phenotype, the idea is that we can control immune responses,” Babensee said.

But there are ways around triggering a response. Babensee’s research has determined that immature dendritic cells don’t cause an immune response, making them a good option for biomaterials used in combination biomedical devices.

“Eventually, this may be a way to integrate the control of immune responses toward a biomedical device through a biomaterial,” Babensee said.

For more information...

Department of Biomedical Engineering
www.bme.gatech.edu

APR cont’d from page 1

for squad size until more data can be collected. Also, baseball had seven players leave for professional baseball following their junior seasons, but all were academically eligible, meaning that there would be no “0-for-2” penalties.

Six Tech programs — men’s golf, men’s tennis, women’s cross country, women’s softball, women’s swimming and women’s tennis — received perfect scores.

As a member of the NCAA Division I Board of Directors, Clough has stressed the need to supplement graduation rate data, which measures what has happened in the past rather than what is currently happening.

“As a member of the NCAA Division I Board of Directors, our intent was to find a statistic that would provide a timely and meaningful measure of a university’s commitment to academics,” he said. “While the new APR is not perfect, it’s a step in the right direction. It will provide universities and the public with a more intelligent assessment of the success of student-athletes, and provide data that reflects the current situation and not the way it was six years ago.

“I’m very pleased with Georgia Tech’s numbers. As one of the few technological research universities competing at Division I-A athletics, I’m very impressed with the success of our student-athletes and coaches. Since we have no calculus-free majors at Tech, I’m delighted that our

Georgia Tech’s APR Scores by Sport

Men’s Sports	APR	Women’s Sports	APR
Baseball	907	Basketball	984
Basketball	962	Cross Country	1000
Cross Country	950	Softball	1000
Football	942	Swimming	1000
Golf	1000	Tennis	1000
Swimming	966	Track, Indoor	988
Tennis	1000	Track, Outdoor	988
Track, Indoor	979	Volleyball	981
Track, Outdoor	978		

first report shows us to compete very well with other Division I-A programs around the country. We have a very good foundation from which to build, and we will continue to be vigilant as we build a winning program on the playing field and in the classroom.”

Director of Athletics Dave Braine said, “We’re very pleased with our initial APR report. We are committed to the academic success of our student-athletes, and these figures clearly show that they are performing well and succeeding in the classroom as well as on the field.”

C A M P U S E V E N T S

Arts & Culture

Mar. 9

The First Center for the Arts welcomes the Mozart Festival Opera for an 8 p.m. performance of “The Marriage of Figaro.” For tickets, call 894-9600.

Mar. 11-12

The First Center welcomes Cirque Eloize for two 8 p.m. performances of its “Rain” program. For tickets, call 894-9600.

Brown Bags/Conferences/Lectures

Mar. 8

The Women in Science and Film series concludes with “Jewels in a Test Tube,” an NSF documentary about the work of biochemist Lynda Jordan, at 5 p.m. in room 236, Global Learning and Conference Center. A reception will follow.

Mar. 9

The School of Psychology’s spring colloquium series welcomes Jeffrey Schall, professor of neuroscience at Vanderbilt University, on “Neural Selection and Control of Visual Guided Eye Movements,” at 3 p.m. in the J.S. Coon Building.

Mar. 10

The School of Mechanical Engineering’s Woodruff Colloquia series features Gareth McKinley, director of the Hatsopoulos Microfluids Laboratory at MIT, on “Elasto-Capillary Thinning and the Breakup of Complex Fluids,” at 11 a.m. in the MARC Auditorium.

Mar. 11

The Program in Cognitive Science Colloquium features David Kirsh, professor of cognitive science at the University of California, San Diego, on “Routines, Cost Structure and the Design of Environments,” at noon in room 114, MARC.

Mar. 14

A lecture jointly sponsored by the School of History, Technology and Society and the Sam Nunn School of International Affairs features Professor Kerrie L. MacPherson, Centre of Urban Planning and Environmental Management at the University of Hong Kong, on “Invisible Borders: Hong Kong, China and the Imperatives of Public Health in Pacific Asia” at 11 a.m. in room 303, D.M. Smith Building.

Mar. 15

The 2005 Innovations in Economic Development Speaker Series features Monica Oliver of CARE, on “Making Markets Work for the Poor,” at 4 p.m. in the Dublin Room, EDI Building.

Mar. 16

Associate Professor Elizabeth Dowling will give a lecture on “Personal Journeys to New Classicism,” at 5 p.m. in the College of Architecture auditorium.

Mar. 16

The College of Management’s IMPACT Speaker Series welcomes Ed Baker, publisher of The Atlanta Business Chronicle, at 4:30 p.m. in the LeCraw Auditorium.

Faculty/Staff Development

Mar. 16

The Office of Sponsored Programs offers a brown bag session on “Are Service Centers Right For You?” at noon in the seminar room of the Research Administration Building. To reserve a seat, call 894-6944. For more information, visit www.osp.gatech.edu/education/workshops.shtml.

Mar. 17

The Office of Sponsored Programs offers a brown bag session on “Effort Reporting” at noon in the seminar room of the Research Administration Building. To reserve a seat, call 894-6944. For more information, visit www.osp.gatech.edu/education/workshops.shtml.

Mar. 18

The Center for the Enhancement of Teaching and Learning’s faculty development seminar series presents “Mindmapping the Classroom,” from 11 a.m. - 1 p.m. in the Library’s Wilby Room. For more information, visit www.cetl.gatech.edu.

Miscellaneous

Mar. 21-25

Spring break.

E-mail events to editor@icpa.gatech.edu. Submissions within two weeks of the scheduled date will be listed as space allows.

C L A S S I F I E D S

AUTOMOBILES

1988 Volvo 240 GL wagon. White w/ tan leather interior. 210K miles. Runs well, body and engine in great shape. \$1,800 OBO. Call 404-806-6096.

1991 Honda Prelude Si. 5-speed, sun-roof, red, AM/FM/CD, 142K miles, good condition. \$2900 OBO. Call 404-295-3008 or e-mail shella.keilholz@bme.gatech.edu.

1992 Honda Civic hatchback, rebuilt engine and transmission and more. 5-speed. Good gas mileage. Good work car. \$2,000. Call 404-323-4371.

2000 Toyota Corolla VE sedan 4D. Teal, good condition, regular maintenance, 60K miles. E-mail ccosgrove@eas.gatech.edu or call 385-4566.

2003 Jeep Liberty Sport, silver, sun-roof, CD player, power windows and locks, tinted windows, 40K miles, \$17,500. Call 678-725-6093 or e-mail tina.crouch@ece.gatech.edu.

FURNITURE

Girl’s white wicker bedroom set. Excellent condition: 2 dressers, desk, chair, twin headboard, shelf. Paid \$750. Sell for \$300. Call 894-3325.

3-piece entertainment center, white-washed pine finish, lighted glass

shelves, holds up to 32-inch TV and other components. \$400 OBO. Pictures available. E-mail debbie.winn@gtri.gatech.edu.

Wooden captain bunk bed. Has two beds with built-in chest of drawers and built-in desk. Ladder to top unit. Less than one year old. Paid over \$900, sell for \$300. Call 894-5675.

Four bar stools. High back, padded seat and lumbar. Full swivel. Mint condition. \$80 each OBO. Call Phyllis at 385-1109.

REAL ESTATE/ROOMMATES

3BR/2.5BA house located in Durham, NC near neighboring universities and RTP. Large fenced-in yard in very peaceful neighborhood. Spacious, screened-in deck. Priced around \$134,900 for sale or \$1,200/month. Call Marc 404-964-9928.

Immaculate 2BR/2BA condo, 1.5 miles from Tech. Furnished/unfurnished. \$1,250/month. Call 404-873-5158 or e-mail markballam@aol.com.

Completely updated 3BR/1BA brick ranch on quiet street in West End. Renovated. Attached carport/portico and front yard with picket fence. Quick commute to Midtown. \$169,900. Call 404-502-8393.

3BR/2BA house for sale in Smyrna/Vinings. 20 minutes to Tech. Spacious brick ranch. Hardwood under carpet. 3-year-old Trane HVAC system. \$179,000. E-mail sandra.bullock@oit.gatech.edu or call 770-843-4758.

3BR/2BA brick ranch on 1/2 acre, deck, wood floors, garage. Located in Smyrna, \$149,000. Call John at 404-771-2067 or e-mail john.doane@gtri.gatech.edu.

4BR/2.5 BA house for rent. Inside I-285, three miles from Lenox Square. \$2,000/month. Call Tanya at 404-816-6113.

Roommate wanted for 1BR/1BA in Midtown, next to Fox Theater, \$410/month and 1/2 utilities. Call 404-275-3897.

2BR/2.5BA townhome for sale in Cross Creek, 12 min from GT. New appliances, plantation shutters, built-in bookshelves, patio. Swim/tennis/golf community. \$169,800. Call 404-210-8038.

Approx. one-acre lot at Lake Jackson in Turtle Cove (Eagle Lot 10). Direct common property access to the lake, underground utilities. 2005 taxes and fees paid. \$15,500. E-mail dennis.kelly@edi.gatech.edu or call 478-825-5504.

SPORTS/FITNESS/RECREATION

Air hockey table by Harvard. Just over a year old and in great condition. Measures 67” x 32.5” with electronic scorer, \$50. Photos by request. Call 770-928-7344 or e-mail rita.brown@edi.gatech.edu.

Tuff Stuff Muscle 3 all-in-one gym. Top of the line. Like new, kept in finished basement. Paid \$1,200, reduced to \$250 OBO. Call 894-8392 or e-mail bob.lang@police.gatech.edu.

MISCELLANEOUS

Four 20-inch Helo rims and Nitto 255/50/R20 tires. Asking \$1,200. Call 678-525-3191 or e-mail pcfreak@gmail.com.

Gently used Bedside CoSleeper. Cream-colored. \$75. E-mail joanie.chembars@coa.gatech.edu.

1999 Play-mor Deluxe camper. 38-foot fifth wheel model, self-contained with water and waste tanks. \$29,500 OBO. E-mail t.banks@mse.gatech.edu or call 894-6763.

To submit an ad, e-mail the text to editor@icpa.gatech.edu. Due to the volume of submissions, it may take several weeks for ads to appear in print.