

# COMMITMENT

Meinig Family Cornell National Scholars

The Cornell Tradition

Hunter R. Rawlings III Cornell Presidential Research Scholars

Fall 2006

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**The Cornell Commitment recognizes, rewards and encourages further development of a select group of students who exemplify Cornell's commitment to academic excellence, work and service; research and discovery; and leadership and learning and in so doing enrich their experience at Cornell and beyond.**

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## Commitment alumni find many reasons to get involved

Open up Google and type in "Cornell National Scholars," or "The Cornell Tradition." The number of returned pages is overwhelming. If you take a few minutes to scan through the articles found, you will find alumni engaged in various pursuits, who have in some small way given recognition back to the program that may have helped make their Cornell experiences richer.

With Commitment alumni across the globe engaged in various pursuits, we hope that many of you will wish to re-connect with the Commitment. We invite you to get involved with current students, to re-connect with former friends, to share your story, your successes and insights, and if you are able, visit with students and staff in person when you are on campus.

We value your time and respect the fact that you may not have a second to spare; however, we have come up with several ways one might get involved; we have something for even the busiest person:

- Volunteer to have your story profiled in the eNews. Whether you are a recent graduate or a seasoned alumni, you have important information to share with current students.

- When on campus, meet with a handful of students to share your experiences over a meal on us. Topics of conversation could include how to successfully make the transition from college to real life; how to dress for success; how to make it in your career field; or how to handle a relocation.

- Serve on a committee to help recruit prospective students or on the alumni advisory board for your program.

- Share your ideas about speakers, programming, or events that will engage and connect both students and alumni.

- Host a Commitment student through the Career Services Extern program. For more information on how to get involved in this program, visit the extern program website here:

<http://www.career.cornell.edu/externProgram/default.html>.

- For those who are really busy..simply keep in touch; send an email with your current contact information so that we can send you your eNews.

### Thank you to our alumni volunteers continued from cover page

Many of you are involved with the Commitment and with your program. We would like to recognize and thank your commitment of time and energy to the work we do.

Janet Barsky  
James Boglioli  
Allison Brett  
Samantha Castill  
Christopher Cox  
Nicole DelToro  
Keo Frazier  
Anne Goldfeld  
Sunil Gupta  
Lori Hamrick Bean  
Todd Hilgendorff  
Bill Kingston  
Tony Langone

Laura Lopes Humphrey  
Dan Maas  
T. McCormick  
Ryan Prichard  
Melissa Roberts  
Craig Schranz  
Mark Schwartz  
Paige Shipman  
Heather Slowik Kwon  
Priyal Subramanian  
Jama Toung  
Connie van Hoesel  
Mordechai Wiseman

# THANK YOU!

## *Commitment students expand their horizons during the summer*

Many students embark on internships or research experiences while on hiatus from school during the summer months. This issue of the eNews highlights the experiences of six Commitment students, each of whom received a living expense grant through the Commitment's internship and research experience program.

### **Kasey Toomey '08 *Landscape Architecture Intern***

#### **Terry Guen *Design Associates (TGDA)***

Due to Kasey's participation, TGDA was able to develop a new roadway planning design located on Chicago's 10 mile Kennedy Expressway. He was responsible for graphics, design schemes, meeting attendance and collaboration with growers and the Chicago Gateway Green organization. Kasey noted that he worked late with his co-workers to meet deadlines; he assisted on other smaller projects by designing graphics, and he offered a hand with routine clerical tasks as needed. In his evaluation of Kasey, Terry Guen wrote, "his highly professional graphic products were received enthusiastically by the client."

### **Hannah Kim '08 *Production Assistant to Artist Kristin Jones in Rome, Italy***

Hannah assisted with the production of the second annual river celebration/contemporary art festival, *Tevereterno*. Her main role was to act as liaison to American university students in Rome, piquing interest and coordinating cross-cultural participation in the

event. She assisted with project logistics, and coordination of publications and exhibitions.

In her internship evaluation, Hannah wrote, "this experience was invaluable in learning about different ways art can function in an urban, historic setting. Organizing a contemporary arts event in the heart of Rome, at the mythic and historic Tiber River, is an ambitious, demanding task. I learned skills that transcended the artistic sphere and will stay with me into the future – administrative, leadership and interpersonal skills." Kristin Jones, Hannah's supervisor, wrote, "Hannah taught me as much as I taught her."

### **Jordan Wells '07 *Student activist United Students Against Sweatshops (USAS)***

USAS is a grassroots, youth run student labor organization. As a student labor activist, Jordan took part in on-the-ground organizing in the apparel factories from which Cornell's licensees order apparel. This internship was important to him because he was able to meet and work with people for whom he has been campaigning in solidarity during his undergraduate years at Cornell. Jordan's supervisor wrote, "he was able to break through many cultural and linguistic barriers to build the trust and camaraderie of those with whom he was working. Jordan was a catalyst in providing re-newed motivation for the union, SITEMEX in Pueblo, Mexico, to

continue organizing, and he rebuilt relationships that had not been cultivated in a number of years. His work had significant impacts for the workers as well."

After Cornell, Jordan plans to pursue a career in the labor movement and he stated, "this internship provided me the opportunity to get experience in the all-important task of worker organizing."

### **Laura Sheldon '07 *Cheese maker Silvery Moon Creamery at Smiling Hill Farm***

Laura was an assistant cheese maker, and part-time sales woman in the dairy store. Her job was to prepare equipment for the day, help make, package and store the cheeses for aging, and manage the local farmer's market on the weekend. Laura's supervisor, Jennifer Betancourt, cheese maker and co-owner of Silvery Moon Creamery wrote, "Laura excelled at everything; production, packaging, shipping, sales, etc. She identified redundancies in our order fulfillment methods, and trained new employees." Laura helped the Creamery achieve record-levels of production and sales.

### ***Student achieves untethered flapping hovering flight with robot***

An Interview with Floris Van Breugel '08 Rawlings Cornell Presidential Research Scholar and 2006 Janet McKinley '74 Family Grant recipient

*Commitment:* What are you currently doing in research? **continued on page 6.**

## ***Excellence in Leadership Awards presented***

The Meinig Family Cornell National Scholars announced the winners of the 2006 Excellence in Leadership Awards during the Freshman Forum fall dinner held November 15, 2006. Featured speaker this year was LeNorman Strong, Assistant Vice President for Student and Academic Services, and Director of Campus Life. More than 80 people turned out for the award ceremony.

The essay evaluation and student recognition committee, organized by Heather Slowik '97, MBA '02, selected the following students as the winners. Additionally, the organization with which each winner is most involved is listed.

### ***Alumni News***

On July 8, 2006, former MFCNS officer and Cornell ILR '04 graduate Dave Broderdorf '04 was married to Laura Buchholtz in Milwaukee, WI. Dave is currently in his second year at Georgetown University Law Center and lives outside Washington, DC in nearby Fairfax, VA. At Georgetown, he is involved with the Georgetown Journal of Law and Public Policy, the Georgetown Law Golf Club, and is actively participating in a national law student negotiation competition. Next summer, Dave is planning to work at the law firm Morgan Lewis, where he will focus on labor and employment law.



David L. Hoof '68, a Cornell National Scholar, has shared with us the news that his latest novel, *Little Gods*, will be released in November. The novel deals with murder and vengeance at an elite

New England prep school. Mr. Hoof is an award-winning scientist, teacher, screenwriter and novelist. He lives in Washington, DC with his wife, Marsha, and is at work on his next novel.

Class of 2007 Essay Winner: Kevin Hwang, *The Triple Helix*. Honorable Mention: Nathan Skelley, PATCH (Pre-Professional Association Toward Careers in Health); Luke Hogle, CU Wrestling team.

Class of 2008 Essay Winner: Lisa Antonecchia, AEM Ambassadors. Honorable Mention: Laura McIntyre, Society for Natural Resources Conservation; Aaron Sherbany, who set out to start a publication and an organization which would showcase student architectural work and concepts in an effort to demonstrate how the three disciplines of Cornell's Art, Architecture, and Planning could become more cohesive. The project is called ASSOCIATION.

Class of 2009 Essay Winner: Joran Sequeira, Cornell Elderly Partnership. If you are interested in participating with other alumni in the Excellence in Leadership essay review process, please contact Heather Slowik '97 MBA '02 at [heather.slowik@citigroup.com](mailto:heather.slowik@citigroup.com).

### ***MFCNS executive board is leading the way and redefining its image***

This year, the executive board has been quite busy. Early in the semester, they called a meeting of the entire membership, which resulted in record turn-out. The purpose of the meeting was to help give the program some scope and to help bring the membership together around common goals.

Ryan Pernice, a senior executive board member said, "it was a great way to start out the year with Meinig, and get the members thinking creatively about the program." From that meeting, the group was able to fine tune their program offerings: a more active service program is in the works; improvements were suggested and made to the Executive Mentor program; and the "MINT method", a new initiative focusing on putting Meinig Scholars in front of administration, was announced. Through the MINT method, the group is trying to give MFCNS more relevance on campus by acting as a sounding board for upper administration.

In addition to this, Jonathan Feldman, also a senior executive board member, created a "Meinig resume" that illustrates the breadth of involvement of its individual members in campus organizations. This resume will help promote networking within the membership and with administration.

## Teach for America's Wendy Kopp speaks at Cornell

By Cathy Xiaowei Tang writing for *The Cornell Sun*

It is easy to mistake Wendy Kopp for a typical corporate executive. She wears a low-key black suit and sensible brown flats and wasted no time on chit-chat when she talked to *The Sun* yesterday.

Yet the 39-year-old woman who, as a senior in Princeton, decided to tackle inequalities in America's education system is anything but ordinary.

Kopp is the founder and president of Teach For America, a national nonprofit organization that recruits college graduates as two-year teachers for low-income school districts, where students have traditionally lagged behind their peers.

She began to pursue her vision in 1989, enlisting about 490 college graduates just the first year. Today, Teach For America has about 16,000 current members and alumni and reaches over 350,000 students in 25 communities across the U.S.

Kopp spoke about her ongoing mission to expand educational opportunities of children, her goals for Teach For America by the year 2010 and her growing sense of urgency that more action must be taken to solve the nation's education woes.

In the first year of the program, 2,500 graduates applied to become Teach For America corps members. Kopp launched the program with \$2.5 million from corporate donations.

The first group of Teach For America members, Kopp recalled, struggled just to survive. With nearly no experience,

the organization and the students were ill-equipped to deal with the harsh realities of classrooms — especially of economically-disadvantaged ones.

There were exceptions, however. "Some number of those people figured out how not just to survive but how to actually change the academic trajectory of the kids they were teaching," Kopp said.

Teach For America learned from these people — analyzing their

**TEACHFORAMERICA**

To learn more about Teach for America, visit the web at <http://www.teachforamerica.org/>

leadership style in the classroom and their strategies for reaching kids — and passed on the knowledge to the next class of teachers.

Almost two decades later, the organization has accumulated plenty of success stories. Alumnus Chris Barbic started out teaching fifth graders in Houston, Texas and became so popular that parents petitioned the school board to let him start his own school. Today, Barbic's high school, YES College Preparatory Schools, is one of the top 100 high schools in America, according to a May issue of *Newsweek* magazine.

In its latest issue, *BusinessWeek* named Teach For America as one of the 50 best places to launch a career. The program was number 43, behind NASA and

CapGemini.

Leaders are the backbone of the organization's success. Because corps members only undergo five weeks of training as opposed to the years a regular teacher puts in, it is imperative that graduates demonstrate both talent and high leadership ability. Much of Teach For America's aggressive recruiting is targeted toward students at the helm of campus organizations.

Still, a common criticism is that Teach For America cannot adequately prepare its members in just over a month. While the organization has many outstanding teachers, it also has a fair number of students who quit before their two years are up because of the intense demands placed upon them.

By 2010, Kopp said the organization hopes to reach 700,000 kids. This number would rival the nation's second largest public school system, the Los Angeles Unified School District, which had around 730,000 students in 2005.

The lecture was sponsored by The Cornell Commitment. Kirsten Gabriel, associate director, said the organization invited Kopp because she exemplified its focus on integrating service and leadership into professional roles.

# Help Wanted

## THE CORNELL TRADITION RECRUITMENT INITIATIVE

### COORDINATOR

**The job of the recruitment coordinator is to:**

- **Update** materials (volunteer solicitation letter, talking points, etc.)
- **Solicit volunteers** from the Tradition alumni base to participate in the recruitment initiative in April.
- **Match alumni** to prospective students.
- **Prep alumni** on talking points and important dates for prospective student events.
- **Follow up** with volunteers to gather critical data on the success of the effort and **report back** suggestions and changes for next year to the Tradition office.

If you are interested in spearheading this initiative, please contact Stephanie Spackman at 607-255-8595 or [sws36@cornell.edu](mailto:sws36@cornell.edu).

## Exploring Cornell and all that the Tradition has to offer

*Explore CT* is a first-year experience program designed to acquaint new Tradition fellows with other fellows; the Tradition program benefits, requirements, and ideals; and the greater Cornell University. *Explore CT* consists of a series of six programs, of which first-year students are required to attend at least four. Programs include Orientation; a teambuilding; a workshop on Tradition's work requirement and how to get, keep, and document a job; a day of community service and reflection; the New Fellow Family Breakfast during Cornell's First-Year Family Weekend; and a workshop that provides sessions on summer internship funding programs, Tradition's Student Advisory Council, and Commitment's leadership development program, CCLEAD.

### **Tradition fellows contribute to Plantations fall clean up**

The day of service event at the Cornell Plantations was very successful. Tradition staff organized a service activity that allowed new freshman and transfer Tradition fellows to work with Plantations staff on fall projects such as removing invasive plants, mulching, and restoring natural areas around Cornell's campus. The service projects were followed by a reflection activity facilitated by upper-class student leaders. New fellows broke into small groups and ranked a series of service activities (i.e. giving blood, voting, serving in the armed forces, working in a soup kitchen) according to their personal philosophies. Small groups then came up with a group ranking via consensus and discussed such things as what constitutes service and why, what criteria they used in their rankings, and the challenge of coming up with a universal definition of "service."

Jim Mack, Horticulture Supervisor at the Plantations wrote, "Cornell Tradition was a fabulous partner in setting up the work day and then joining me to monitor the work sites...we had a terrific day and together, we got a lot of work done! On its surface, the Plantations may not look very large until you get out there to experience it. The Cornell Plantations manages nearly 4,000 acres!"

Kirsten Gabriel, program coordinator for the Cornell Tradition, worked with Laura Hunsinger, Director of External Relations for the Plantations, to send letters to the families of each of the new fellows containing a montage of pictures and information about their students' service work. Feedback from the Plantations, new freshman and transfer fellows, and upper-class student leaders was extremely positive.

### **Students and families enjoy annual new fellow breakfast**

The annual new fellow breakfast provided this year's new fellows and their families an opportunity to meet each other, Tradition staff and students, and Cornell faculty members. The breakfast occurred on Sunday morning, October 22, in the Trillium of Kennedy Hall. Highlights of the morning included musical selections performed by Last Call, a Cornell student a cappella group, and a presentation by Caitlin Branisel '07, chair of the Tradition Student Advisory Council.

*Caitlin Branisel '07 address audience while new fellows look on*



# Research in Progress

*Imagine a robotic hummingbird or dragonfly, designed by the same evolutionary process used by nature, exploring remote terrains in stealthy silence. continued from page 2*

*Van Breugel:* As a freshman I started working on a project with the eventual goal of building a robot capable of hovering using flapping flight. Essentially I am building a mechanical hummingbird. The two advantages of such flight are the added agility (just look at the ease and accuracy with which hummingbirds and dragonflies move around) and the scalability. Due to fluid dynamics fixed wing flight (like a normal airplane) and rotary-based flight (helicopter) are not as efficient because of the fluid flow regime. The existence of mosquitoes and fruit flies shows that flapping flight can indeed work at these scales.

My first year I worked on simulations, which this past year I translated into a hardware robot with the help of another student (Will Regan). After working on this large scale ornithopter for a semester, and despite the improvement we found, we were confident that it would not be able to lift itself. After doing more background research, we came up with a much lighter and more insect/hummingbird like design. This design is what I'm currently working on, slowly improving it, and approaching untethered flight. In June we had a six-winged version, weighing 18 grams not including a power source that was able to lift itself (when supplied with off board power, 8-9V, ~1A). After much redesign, testing in various other architectures, I've settled back on the previous design, but much improved. Now each pair of wings (including the motor) weighs 2.5 grams, and I've opted for using 8 wings to make future control issues

easier to solve. The total weight is thus 10 grams, plus 3-6grams for a power source (still deciding on which one), most likely a lightweight Li-ion polymer battery.

**Commitment:** What inspired you to begin research in this area?

*Van Breugel:* I've always been interested in birds, and during high school I got hooked on robotics. I like the creative approach to science that engineering offers, and this problem seemed like the perfect match for me.

**Commitment:** What is your ultimate goal for this project?

*Van Breugel:* My ultimate goal is to build an untethered, hovering, flapping robot. Initially it will be passively stable (ideally) and ultimately I'll add active stabilization and control.

**Commitment:** How has your involvement in RCPRS impacted your research?

*Van Breugel:* Being a part of RCPRS has essentially given me the opportunity to do the research. It is much easier for a professor to give you a project if you can fund it yourself. Once you've established that you're doing interesting work it is easy to get more money, but having the RCPRS money really helped to get me started.

**Commitment:** How has RCPRS added to your Cornell Experience?

*Van Breugel:* A big part of my experience here at Cornell has been the research I'm involved in. Not only do I learn a lot from it, but I've gotten to meet other interesting people, both at Cornell and other research institutions (at conferences). I also get to learn about the research other people are



involved in, especially the work that goes on in my lab. I'm confident that this experience will eventually help me find out what I'd like to do after I graduate (grad school, PhD), and give me connections to people so that I end up in a good place.

**Commitment:** What are your future plans?

*Van Breugel:* I'll keep working on this project as long as I'm at Cornell. I find it much more productive to be involved in a long term project where I can really get stuff done than to dabble in separate little projects where you essentially do work for other people. Once I've gotten my machine to hover on it's own, I may start working on micro fabrication. The entire design (mechanics and aerodynamics) is scalable to the micro scale.

Floris presented his simulations work at GECCO 2005, and the results of hardware embodiment of the simulations at ALifeX this past June. These papers are available on the CCSL website as well as on his Cornell people page. Professor Hod Lipson is Floris' faculty mentor for this project.

## *CU biodegradable wipe would quickly detect biohazards, from avian flu to E. coli*

By Susan Lang

Detecting bacteria, viruses and other dangerous substances in hospitals, airplanes and other commonly contaminated places could soon be as easy as wiping a napkin or paper towel across a surface.

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***Jamie Mullally '07, right, a Cornell Presidential Research Scholar, and Margaret Frey, assistant professor of textiles and apparel, examine a nonwoven nanofiber fabric on aluminum foil backing. Mullally will complete an honors thesis on the biorecognition fabrics in spring '07.***

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“It’s very inexpensive, it wouldn’t require that someone be highly trained to use it, and it could be activated for whatever you want to find,” said Margaret Frey, the Lois and Mel Tukman Assistant Professor of Fiber Science and Apparel Design at Cornell University. “So if you’re working in a meat-packing plant, for instance, you could swipe it across some hamburger and quickly and easily detect E. coli bacteria.” She reported on the research Sept. 11 at the American Chemical Society’s national meeting.

Once fully developed, the biodegradable absorbent wipe would contain nanofibers containing antibodies to numerous biohazards and chemicals and would signal by changing color or through another effect when the antibodies attached to their targets. Users would simply wipe the napkin across a surface; if a biohazard were detected, the surface could be disinfected and retested with another napkin to be sure it was no longer contaminated.

In work conducted with Yong Joo, assistant professor of chemical and biomolecular engineering, and Antje Baeumner, associate professor of biological and environmental engineering, both at Cornell, Frey developed nanofibers with platforms made of biotin, a part of the B vitamin complex, and the protein streptavidin, which can hold the antibodies. Composed of a polymer compound made from corn, the nanofibers could be incorporated into conventional paper products to keep costs low. Nanofibers, with diameters near 100 nanometers (a nanometer is one-billionth of a meter, or about three times the diameter of an atom), provide extremely large surface areas for sensing and increased absorbency compared with conventional fibers.

“The fabric basically acts as a sponge that you can use to dip in a liquid or wipe across a surface,” Frey said. “The fabric itself will transport and concentrate the targeted biohazard. As you do that, antibodies in the fabric are going to selectively latch onto whatever pathogen that they match. Using this method we should, in theory, be able to quickly activate the fabric to detect whatever is the hazard of the week, whether it is bird flu, mad cow disease or anthrax.”

Frey and her colleagues are still working on ways, such as a color change, for the fabric to signal that it has identified the contaminant.

“We’re probably still a few years away from having this ready for the real world,” Frey said, “but I really believe there is a place for this type of product that can be used by people with limited training to provide a fast indication of whether a biohazard is present.”

This research was supported by the National Research Initiative of the U.S. Department of Agriculture’s Cooperative State Research, Education and Extension Service.

