Fueling regional economic development in a global economy
Our Mission

Partner with industry to develop Cornell’s technologies into products and services for the public good

Leverage Cornell’s intellectual property to promote entrepreneurial opportunities and regional economic development

Provide technology transfer services to Cornell faculty and researchers

where INNOVATIONS mean BUSINESS

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www.cctec.cornell.edu
Welcome

I am glad to share with you the CCTEC annual report for FY2008. In this report you will find information on the five new businesses that were founded on licensed Cornell technologies in FY2008 as well as four products currently on the market which resulted from previously licensed Cornell technologies. Cornell technologies not only help to address environmental concerns, but also help to improve the quality of life to serve the public. They reflect the diversity and excellence of research at the university.

In FY2008, we continued the outreach and partnering efforts we initiated in FY2007. Beginning on page 15, you will find a summary listing of our activities for the fiscal year. On page 17, you will find brief descriptions of several of our “signature” events designed to promote intellectual property awareness, entrepreneurship, awareness of technology opportunities at Cornell, and interactions among researchers, entrepreneurs, investors and industry partners.

During 2008, CCTEC also initiated a brief survey of the 49 active businesses that were founded with licensed Cornell technologies (Cornell Startups). Of the 27 respondents to the survey, they combined to create 811 new jobs, 34% (275.5 FTE) of which were in the state of New York. These positions did not include consultants, contractors or independent agents hired by the companies. Twenty-four of the Cornell Startups reported a total payroll for the 2008 calendar year of over $68 million, 28.5% ($19 million) of which was for positions in the state. The 27 respondents also reported a combined total expenditure of over $196 million, 38% ($74 million) of which were New York state companies.

Twenty-three of these Cornell Startups had cumulatively raised a combined equity investment from investors of over $726 million, more than 16% ($120 million) of which was by new businesses founded and remained in New York. Thirteen of these companies also raised capital using other financial instruments such as debt of over $52 million, 39% ($20 million) of which was by companies that remained in the state.

Although most of the Cornell Startups are but a few years old, seventeen of them reported revenues from sales of products and services, partnerships and sublicensing that collectively in 2008 exceeded $66 million, more than 81% ($54 million) of which was from companies in the state.

I wish these Cornell Startups continuing success and CCTEC will continue to provide them the necessary support and assistance. I strongly believe they will contribute significantly to diversify and enhance the economy in the future.

Alan Paau, MBA, PhD
Executive Director and Vice Provost
In FY2008, CCTEC launched five new businesses based on Cornell technology, three in Ithaca, one in New York state, and one in Boston, MA. Of the five companies, two offer hardware devices, one sells software, one creates content about entrepreneurship and one produces coatings.
Widetronix Semiconductor, Inc.
Ithaca, NY

Long-life Batteries for Implantable Devices

Widetronix Semiconductor designs and builds very small, long life batteries that are a viable replacement for lithium batteries for use in defense, security, medical implant applications. The foundation of this battery technology is the use of an innovative semiconductor material, silicon carbide, which dramatically improves the efficiency of the batteries. The company's technology is based on Cornell University research conducted by Dr. Michael Spencer, Director of Cornell's Wide Bandgap Laboratory in the College of Engineering, along with his colleagues Dr. Chris Thomas and Dr. MVS Chandrashekar.

The company is focusing on defense and security markets currently but is also working with several biomedical implant companies on prototyping in implantable devices, such as pacemakers. In October 2008 Widetronix closed a $250K seed round with venture capital firms Draper Fisher Jurvetson and DFJ Gotham Ventures as a result of winning the East Coast Venture Competition. The firm has received more than $2 million in commercialization grants to support this technology, including two Small Business Innovation Research (SBIR) programs with the Department of Defense.

www.widetronix.com
Video Clips Open the World of Entrepreneurship

With almost 13,000 online video clips about entrepreneurship and business, Prendismo offers a glimpse into the minds of entrepreneurs, angel investors, Fortune 500 executives, academics and scientists. The material on the website is organized into 2-minute video clips and 10-15 minute podcasts which can be browsed in a variety of different ways. Exploring Prendismo’s collection offers information and education on topics ranging from product branding to business planning to cash flow to ethics.

Prendismo grew out of the eClips project that originated at Cornell. In July 2008, eClips became Prendismo, LLC (pronounced “pren-deez-mo”) after licensing the eClips collection and technology from Cornell. Prendismo’s leadership team includes Cornell Professor Deborah Streeter; Tony Eisenhut, Managing Director of Ithaca-based intellectual property development company, KensaGroup, LLC; and Kirsten Barker, a 17-year veteran in technology who now serves as President of Prendismo, LLC.

The team launched the Prendismo website (www.prendismo.com) in the fourth quarter of 2008. Prendismo has established relationships with several clients, including Cisco, that are working with the group to capture new video content or sublicense content from the existing collection.

www.prendismo.com
Mezmeriz, Inc.
Ithaca, NY

Tiny Projectors the Size of a Matchbook

Mezmeriz, Inc. is building a tiny high-definition projector the size of a matchbook to embed into mobile devices such as phones and iPods. Mezmeriz’s projection technology is unique not only for its small size and energy efficiency, but also for its ability to project a massive screen from a short distance in lit rooms. The market forecast for this new class of projector is projected to be $10 billion annually by 2013. Mezmeriz was co-founded by Brad Treat and Shahyaan Desai, a graduate of Cornell’s Department of Materials Science and Engineering. Treat says “When I first tell people about the concept of a tiny projector inside of their cell phone, they think the idea is ridiculous. Then they think about it for a few days and come back to me and are really excited about it. I think it was the same way with the cell phone camera.”

Mezmeriz’s projection technology uses carbon fiber MEMS technology developed at Cornell by Desai, Dr. Anil Netravali, Fiber Science, and Dr. Michael Thompson, College of Engineering. Small mechanical devices like the company’s have traditionally been made from pure silicon. Desai, Netravali, and Thompson’s research resulted in a MEMS device that can selectively reinforce traditional silicon with high strength carbon fibers. The advantage of carbon fiber reinforced MEMS structures is that they are superior to traditional silicon-only structures due to their increased strength, motion, and fatigue properties. Furthermore, carbon fiber MEMS can be manufactured and tested on existing equipment, thus reducing the manufacturing cost ten-fold over other exotic MEMS materials.

In 2008 Mezmeriz raised nearly $1 million in a seed funding from a consortium that included six venture capital firms and several individual investors. They added to their available funds by winning the $100,000 Grand Prize in New York’s Creative Core Emerging Business Competition. In early 2009 it was announced that they were one of five recipients selected to receive $75,000 in the Metropolitan Development Association’s Grants For Growth program.

www.mezmeriz.com
Opinion Utility™: Searching Opinions and Sentiments

Based on technology developed at Cornell University, Jodange offers a powerful Opinion Utility™ that rapidly mines information in wikis, blogs, RSS feeds, news, online documents and other web sites in order to know “who” is saying “what” about “what”. By identifying and isolating peoples’ opinions and sentiments about key topics over time, users can identify whose opinions are the most frequently cited or what topics are emerging as key concerns around news stories and events. Jodange’s Opinion Utility™ search engine ignores sentences or phrases deemed to be factual, and instead, focuses on subjective phrases to determine the sentiment (positive, neutral, or negative) being expressed.

The core of Jodange’s technology is based on natural language processing algorithms developed by Cornell computer science professor Claire Cardie.

The Top of Mind™ product draws from Jodange’s Opinion Processing Engine™ (OPE) using what Jodange calls “gadgets,” software tools that offer updates throughout the day as new opinions are published. So far, Jodange has released a number of subject-specific Top of Mind™ “gadgets” that mine opinions expressed online on topics such as economic recovery, energy issues, most discussed S&P 500 companies, and the 2008 presidential campaign. Founder and CEO Larry Levy offers a free version of Top of Mind™ at www.jodange.com but plans to offer a subscription service to companies seeking to “understand who’s saying what about their market, their competitors, their company, and the executives,” he says.

Jodange recently received a Small Business Innovation Research grant from the National Science Foundation to support the company’s research to use statistical modeling methods to better determine the link between expressed opinions and related business outcomes. Cardie’s patent-pending “Opinion Summarization System” is exclusively licensed to Jodange.

Jodange’s Opinion Utility™ automatically extracts opinions from any online content in order to understand sentiment.

www.cctec.cornell.edu
Nano Surfaces, Inc.
Boston, MA

Environmentally Friendly Marine Coatings

Nano Surfaces, Inc. (NSI) produces environmentally friendly coatings that protect man-made surfaces from bio-fouling. Based on polymer coating research conducted by Dr. Chris Ober in Cornell’s College of Engineering, the technological design attempts to mimic antifouling mechanisms that occur naturally in marine organisms.

Currently, most paints and coatings that prevent fouling organisms (e.g., bacterial biofilms, barnacles, seaweed, etc.) contain environmentally unfriendly metals and/or biocides. In contrast, NSI plans to design and produce effective, environmentally friendly antifouling coatings. Currently, the NSI team is involved in process scale-up and marine testing activities.

www.nanosurfaces.biz
CCTEC works with industry partners to develop Cornell’s technologies into products and services. Here we feature four products currently on the market that were based on innovations by Cornell researchers.
Perfluoron® Liquid
Alcon Manufacturing Ltd.

Tear Substitute During Eye Surgery
Perfluoron® Liquid enables eye surgeons to operate on complicated retinal detachments more easily by acting as a substitute for normal eye fluids. Based on technology invented by Dr. Stanley Chang of the Weill Cornell Medical College, Perfluoron® Liquid makes eye surgeries such as LASIK more efficient and can help detached retinas heal. Perfluoron’s properties include a low refractive index and low viscosity, making it easy to identify and remove after surgery. Other beneficial properties include a high degree of optical clarity that gives surgeons an unobstructed view of retinal structures.

Harp-N-Tek™
Plant Health Care

Proteins that Protect Plants
Naturally occurring Harpin proteins help protect plants against disease and pests without pesticides or impacting DNA by “turning on” the plants’ natural defense system. Harp-N-Tek™ utilizes Harpin protein technology discovered in research conducted by Dr. Steven Beer and Dr. Alan Collmer of the College of Agriculture and Life Sciences. Sold by Plant Health Care, Harp-N-Tek™ protects major field crops such as corn, soybeans, cotton, rice, and tobacco, as well as specialty crops such as fruits, vegetables and citrus. Harp-N-Tek™ is the key ingredient in a product line that includes ProAct™ Plant Health Regulator, N-Hibit™ Seed Treatment, and Employ™ Plant Health Regulator. Harp-N-Tek™ products are classified by the EPA as “Toxicity Category IV” products (reserved for materials with the lowest hazard potential). Harp-N-Tek™ products contain no pathogens or pesticides and after triggering the plant’s protective response, quickly disintegrate in the environment, leaving no residue.
The Speedster™ product line speeds up the way data moves through a computer chip.
Emerging Technologies

Cornell remains on the forefront of world-changing research. Five new inventions were disclosed in FY2008 that have the potential to someday become products to benefit health care, agriculture and consumers.
Nanomaterials For A Better Battery

Dr. Lynden Archer
Xiong Wen (David) Lou

Rechargeable lithium ion batteries power most portable consumer electronics and are growing in popularity for large-scale defense, automotive, and aerospace applications. Over time, the charge capacity (how long their charge lasts) of lithium ion batteries declines and they need to be re-charged more and more frequently. Dr. Lynden Archer, Professor of Chemical Engineering and doctoral student Xiong Wen (David) Lou in Chemical Engineering created a new anode material composed of hollow microspheres of tin-oxide coated with a layer of carbon. Batteries consist of two charged electrodes (anode and cathode) and an electrolyte, the medium where current flows back and forth. Most lithium ion batteries currently use graphite anodes with a modest charge capacity. Cornell’s new anode material offers a charge capacity more than twice that of graphite and the high surface area and the multi-layered construction of the microspheres enables a longer lasting and more stable battery. Researchers have already demonstrated a stable charge capacity of over 500 mAh/g over 220+ full discharge-charge cycles at charging rates ranging from 5 minutes to 3 hours.

Breakthrough Vaccine Offers Savings to Dairy Farmers

Dr. Yung-Fu Chang

Farmers will soon have a new vaccine to prevent Johne’s disease, a contagious, chronic and often fatal bacterial infection in ruminants such as cattle, sheep, goats, deer, elk, llamas, alpaca, and bison. Found worldwide, Johne’s disease causes a thickening of the intestinal wall allowing infected animals to feed, but unable to absorb the necessary nutrients to keep from wasting. Cornell professor Yung-Fu Chang of the College of Veterinary Medicine successfully demonstrated that a cocktail of antigens and adjuvants, substances that stimulate the production of disease-fighting antibodies, was able to protect treated animals from contracting the disease. Until now, the only way to prevent the spread of Johne’s was to identify and remove infected animals from the herd.
Repurposed Drugs for Heart Attack and Other Conditions and Diseases

Dr. Barbara Hempstead

As anyone who has twisted an ankle knows, the inflammation that follows an initial injury can sometimes cause more problems than the original injury itself. Further harm to the body can be even more pronounced in organs like the brain and the heart where follow-on damage to strokes and heart attacks multiply the original damage in ways that patients often can’t recover from. Dr. Barbara Hempstead of the Weill Cornell Medical College discovered a new cytokine in 2001 and has become the world’s thought leader on it. Cytokines are the proteins that drive inflammation, and are important targets for drug developers looking for the next blockbuster painkiller. Cytokines often play roles in other diseases as well, such as cancer or Alzheimer’s. Last year, Dr. Hempstead initiated a drug screening program and identified several off-patent drugs that block this cytokine. CCTEC has filed a patent application covering the repurposing of these drugs as treatments for heart attack, Alzheimer’s, brain cancer, and, surprisingly, balding. The patent application is available for licensing. CCTEC may start a company around this invention and is also willing to license the patent application to an existing company.

Engineering Gut Bacteria to Fight Disease

Dr. John March
Dr. Faping Duan

Humans have been consuming microbe-enriched foods such as yogurt for centuries to bolster and balance the microbial flora in their digestive tract. Cornell researchers have taken this traditional practice one step further, creating a method to introduce harmless, customized, and genetically engineered microbes to the digestive tract to prevent and to fight diseases. Called microbial signal transducers, the innovation is being developed to treat bacterially-based diseases such as cholera and to control chronic conditions such as diabetes. The introduced “designer” bacteria can be easily removed from the body by selective antibiotics. Invented by Dr. John March of Cornell’s Department of Biological and Environmental Engineering and Research Associate Dr. Faping Duan, the technology is currently being tested in animal models.
Precise Pesticide Release Technology

Dr. Margaret Frey
Dr. Michael P. Hoffmann
Dr. Alan Taylor
Dr. Chunhui Xiang

Pesticides are applied as liquids sprayed onto crops or urban landscapes, as granules applied to the soil, or as seed treatments, where the pesticide is incorporated into a “coating” around the seed. To reduce risks to the environment and human health, methods of application that are most effective in delivering the pesticide to the target pest with little loss to the environment are highly preferred. Using an electrospinning fabrication process, Dr. Margaret Frey, Cornell the College of Human Ecology, Dr. Michael P. Hoffmann, College of Agriculture and Life Sciences, Dr. Alan Taylor of the New York State Agricultural Experiment Station and Dr. Chunhui Xiang, Research Associate, created a nano-scale “fabric” that when applied to seeds or pesticide capsules, enables precise control of the diffusion rate at which pesticides are released after they are applied to crops. Dr. Frey’s nano-scale material could someday result in pesticide delivery systems that are biodegradable, more effective and made of low-cost, renewable resources. Potential applications include applying the nano-scale fabric directly to seeds as a film coating or forming pellets and capsules that can be released alongside seeds during planting.

Nano-scale “fabric,” when applied to seeds or pesticide capsules, controls the diffusion rate at which pesticides are released after they are applied to crops, reducing pests with less environmental impact.
Outreach and Partnering

Selected CCTEC Activities

During the Fiscal Year 2008, over 600 attendees attended over 20 business and networking events hosted by CCTEC. As part of Cornell University’s commitment to fulfill its land grant mission and promote regional economic development, CCTEC hosts events, attends tradeshows, and actively participates in local, regional, and state committees.

JULY 2007
• Participated in an exploratory meeting with the Pipeline for Progress and Cornell University to develop partnership opportunities to spark Southern Tier economic development efforts.
• Joined Tompkins County and Ithaca City officials for a Tompkins County Area Development (TCAD) Collaborative Economic Group meeting.

AUGUST 2007
• Hosted the CCTEC Economic Development Coordinating Group meeting with stakeholders from the upstate New York region.

SEPTEMBER 2007
• Promoted Cornell nanotechnologies at the International Invention Show and Technomart in Taipei, Taiwan.
• Presented “Technology Transfer- What is it? How do we do it? and why should we care?” at Queens University Belfast and University of Ulster, United Kingdom.
• Presented at the Ivy Technology Conference, an annual conference for technology transfer professionals in the Ivy League in Providence, Rhode Island.
• Joined Selda Spitzer and other New York State constituents to brainstorm on ways to keep young professionals in New York state at the I Live New York Summit in Cortland, New York.
• Attended a TCAD Marketing Initiative Committee meeting.
• Attended an economic development meeting to discuss ways to help upstate communities improve their economy, hosted by Dan Gunderson, former New York State Commissioner of the Department of Economic Development.
• Attended the Greater Syracuse Technology Business Sector Meeting.
• Hosted a Seminar & Social Hour with Johnson School MBAs.
• Hosted an IP & Pizza with the College of Agriculture and Life Sciences.

OCTOBER 2007
• Hosted an IP & Pizza at the Weill Cornell Medical College with the Department of Pharmacology.
• Hosted a CCTEC Open House to welcome local companies, government officials and the technology transfer committee of the Cornell University Council.
• Hosted the Cornell Technology Venture Forum.
• Hosted a Seminar & Social Hour with Johnson School MBAs.
• Hosted an IP & Pizza with the College of Human Ecology.
• Hosted visitors from Office of Economic and Peace Creation of the National Research Council of Thailand (NRCT).

NOVEMBER 2007
• Hosted an IP & Pizza with the College of Agriculture and Life Sciences at the New York State Agricultural Experiment Station in Geneva.
• Hosted a Seminar & Social Hour with Johnson School MBAs.
• Attended a NYC Investment Fund Cleantech Venture Breakfast.

Dr. Margaret Bynoe of Cornell’s College of Veterinary Medicine presents at the Inventor’s Roundtable.
December 2007
• Hosted an IP & Pizza at the Weill Cornell Medical College with the Department of Immunology, Division of Medicine.
• Served as a judge at two business plan competitions in Georgia and Azerbaijan to help the US Civilian Research & Development Foundation distribute $25,000 grants to technology-based startups in each country.

January 2008
• Met with Senator Charles Schumer and regional government and business officials to discuss economic concerns in upstate New York.
• Joined Tompkins County and Ithaca City officials for a TCAD Collaborative Economic Group meeting.
• Attended the Tompkins County Chamber of Commerce Annual Dinner.

February 2008
• Hosted an IP & Pizza at the Weill Cornell Medical College with the Department of Biochemistry.
• Hosted a Seminar & Social Hour with Johnson School MBAs.
• Hosted an IP & Pizza with the College of Veterinary Medicine.
• Attended the Tompkins County Chamber of Commerce 2008 Economic Summit.
• Attended a Pipeline for Progress Regional Action Initiative meeting.
• Attended the Exploit Technologies Group IT and Communication Showcase in Singapore.

March 2008
• Hosted a reception for members of the Bay-Helix Group at the Cornell Club.
• Hosted a Seminar & Social Hour with Johnson School MBAs.
• Hosted an IP & Pizza with the College of Engineering.
• Attended a New York State Economic Development Council Conference.

April 2008
• Attended the University Research & Entrepreneurship Symposium.
• Hosted the CCTEC Technology Showcase at the Entrepreneurship@Cornell Celebration.
• Hosted a Seminar & Social Hour with Johnson School MBAs.
• Attended a NYAES/NYSTAR Strategic Planning Meeting for New York State science and technology investment.

May 2008
• Hosted Tom DiNapoli, New York State Comptroller, to discuss companies and intellectual property in the areas of clean and renewable energy.
• Attended the Institute for Biotechnology and Life Technologies Public Engagement and Science Communication Symposium.
• Presented Cornell technologies at the SmartStart UNYTECH Venture Forum in Albany, New York.

June 2008
• Hosted the CCTEC Startup Boot Camp at the Cornell Ithaca campus.
• Hosted the CCTEC Inventors Roundtable at the Cornell Ithaca campus.
• Hosted a Cornell Alumni Reception at BIO International Conference 2008 to celebrate the launch of a social networking site for Cornellians in the BioPharma industry, the Cornell BioPharma Network.
Event Descriptions

**Inventors Roundtable**

The Inventors Roundtable is an intimate event in which two to three Cornell inventors present their invention to a small group of industry representatives and investors. Inventors receive frank feedback about industry needs and guidance on the commercialization of their inventions.

**IP & Pizza**

IP & Pizza events bring together faculty, students and staff to talk informally with CCTEC staff and each other about intellectual property issues in a “town hall meeting” format. These hour-long gatherings are held in partnership with academic units in both Ithaca and New York City.

**Seminar & Social Hour**

This networking event connects CCTEC professionals, researchers and MBA students. Cornell researchers present a technology and participants discuss its commercialization potential and potential for new business formation.

**Cornell Technology Venture Forum**

This day-long event showcases Cornell innovations in a series of presentations by Cornell researchers. The event attracts members of the venture community and industry partners who are seeking to fund a startup or to develop an emerging technology.

**CCTEC’s Startup Bootcamp**

CCTEC’s Startup Bootcamp is a one-day event, held alternately in Ithaca and in New York City. This learning and networking event features panels of successful entrepreneurs, investors and legal experts.

**New Business & Emerging Technology Showcase**

Held annually as part of the Entrepreneurship@Cornell 2009 in partnership with the Entrepreneurship@Cornell team. CCTEC’s Showcase recognizes Cornell’s startups and technologies in presentations and poster sessions.
Technology Transfer Activity

IP Disclosures
In FY 2008 CCTEC received disclosures for 16 copyrights, 24 plants, and 199 inventions.

- Copyrights
- Inventions
- Plants

Agreements
In FY 2008, CCTEC completed a total of 308 agreements related to technology management.

Patents
In FY 2008, CCTEC filed a total of 241 U.S. patent applications, of which 150 were provisional and 91 were non-provisional. CCTEC filed 337 international patent applications. CCTEC was issued a total of 162 patents, 105 international and 57 in the U.S.

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Licenses of Inventions and Copyrights
Revenue

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<td>Licensing</td>
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<td>Reimbursements</td>
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<td>Extraordinary*</td>
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*Extraordinary income includes non-recurring items such as sale of equity and payments resolving patent litigation cases.

Expenses

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<td>Extraordinary*</td>
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*Extraordinary expenses include expenses for litigation.

Mandatory Distributions

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</table>

*As of the end of FY 2008, Cornell also holds private equity in 25 companies licensing Cornell technology, the value of which cannot be reliably estimated at this time.

Cornell also holds convertible notes in the principal amount of $1,629,973.
Technology Transfer Advisory Committee

The Cornell University Technology Transfer Advisory Committee (TTAC) provides advice and guidance to the leadership of Cornell administration and to the Cornell Center for Technology Enterprise and Commercialization (CCTEC) on all issues related to academic technology transfer. The TTAC provides general oversight on all aspects of CCTEC’s activities to advance Cornell’s land grant mission and to fulfill Cornell’s objective of making the results of its research available to benefit society regionally, nationally, and globally.

FACULTY

Professor C.C. Chu, College of Human Ecology/2010
Professor Geoff Coates, College of Arts & Sciences/2011
Professor Steven Gross, Weill Cornell Medical College/2010
Professor Dan Luo, College of Agriculture & Life Sciences/2011
Professor Rajit Manohar, College of Engineering/2010
Professor John Schimenti, College of Veterinary Medicine/2011
Professor Robert Seem, College of Agriculture & Life Sciences - Geneva/2010
Professor Randi Silver, Weill Cornell Medical College/2011

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Overseer Madelyn Antoncic/2011
Chairman of the Cornell Council Technology Transfer Committee, Andrew Firlik, ex officio
Trustee Samuel Fleming/2010
Overseer Len Harlan/2010
Trustee Marcus Loo/2011
Trustee Kevin McGovern/2011
Chairman of the Board of Trustees and Overseers, Peter Meinig, ex officio
Alumnus Phil Proujansky/2011

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Provost, Kent Fuchs, ex officio
Executive Vice President for Finance and Administration, Steve Golding, ex officio
Provost for Medical Affairs and Dean of the Weill Cornell Medical College, Antonio Gotto, ex officio
Dean of the Graduate School of Medical Sciences, David Hajjar, ex officio
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Dean of the College of Agriculture & Life Sciences, Susan Henry, ex officio
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Dean of the College of Human Ecology, Alan Mathios, ex officio
University Counsel, James Mingle, ex officio
Vice Provost for Technology Transfer and Economic Development, Alan Paau (Secretary), ex officio
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