DID YOU KNOW
THAT McGill IS
MAKING HISTORY?

Recent Discoveries, Breakthroughs and Milestones

McGill
McGill continues to place at or near the top of a number of respected university rankings, indicating that it remains in the upper echelons of higher learning worldwide. For the sixth year in a row, McGill has been named one of the Top 25 universities in the world by the prestigious *Times Higher Education – QS World University Rankings*. McGill’s rankings of 18th overall and 10th in the Life Sciences and Biomedicine category were again the highest of any Canadian university. In addition, *Maclean’s* magazine named McGill Canada’s top university in its medical-doctoral class for the fifth straight year. And, in the *Globe and Mail’s* 2010 Canadian University Report, students gave the University an “A+” in Academic Reputation, an “A” in the Campus Technology and Libraries categories, and an “A-” in Quality of Education.

Note about methodology: The *Times Higher-QS World University Rankings* is a composite of qualitative and quantitative indicators. Academic Peer Review (40%) was drawn from 9,386 active academics around the world. Employer Review (10%) was derived from 3,281 people representing major global and national employers. Universities provide data used to measure faculty-to-student ratio (20%). Citations of published research papers were divided by the number of full-time equivalent faculty (20%). Points were also awarded based on the international composition of staff (5%) and students (5%).
President Clinton wows McGill

In a globe-trotting speech that touched upon everything from climate change in Afghanistan to linguistic demographics in Papua New Guinea, former U.S. President Bill Clinton accepted an honorary doctor of laws degree from McGill on October 16.

Despite the breadth of topics, he returned time and again to a call for his audience to tackle world issues by fostering a “communitarian consciousness.”

After being hooded by Chancellor Arnold Steinberg, BCom’54, LLD’00, and Victor Dahdaleh, DipMan’75, McGill benefactor and Clinton family friend, the 42nd President of the United States took to the podium, where he proceeded to captivate his 700-member audience and those watching via webcast for more than an hour.

“I am particularly grateful for the priority that McGill has placed on making serious commitments to broadly shared prosperity, sustainability in the face of climate change, reaping the progress and promise of science and technology, promoting wellness and health, and trying to deal with the amazing array of diversity that exists in our countries and throughout the world that has to be both respected and reconciled,” he said, setting the stage for a discourse that was impressive in both scope and sentiment.

President Clinton’s wide-ranging address doubled as the closing event for the inaugural McGill Leadership Summit, which brought together 300 of the University’s lead volunteers, senior administrators, esteemed academics and talented students for two historic days of meetings and workshops in celebration of Campaign McGill: History in the Making, the University’s ambitious $750-million comprehensive fundraising campaign.

Arnold Steinberg named chancellor

On July 1, Arnold Steinberg, BCom’54, LLD’00, was appointed the 18th chancellor of McGill University. He is a distinguished Montrealer and Canadian, a life-long supporter of McGill, and a member of the Order of Canada. He is also a senior officer with Cleman Ludmer Steinberg Inc., an investment holding company. His career and volunteer endeavours, including significant contributions to the McGill community, reflect a deep integrity and commitment to higher education and health care.

University joins the ranks of Project Hero

In honour of Canadian soldiers who have lost their lives in Afghanistan, McGill announced in September that it has joined Project Hero, a scholarship program co-founded by Honorary Lieutenant-Colonel Kevin Reed and Retired General Rick Hillier of the Canadian Forces. As part of this initiative, McGill will waive the cost of undergraduate tuition for children of military personnel killed during active service dating back to February 2002. Students will have to gain admission to the University and maintain satisfactory academic standing to be eligible.

Campaign McGill surpasses $500-million

The University announced in October that, thanks to the collective contributions of 70,000 donors around the world, Campaign McGill has surpassed the $500-million mark, only two years into its public phase. The Campaign is raising the funds needed to ensure McGill remains one of the world’s great research-intensive, student-centred universities and is now well positioned to reach its $750-million target by 2012.
DID YOU KNOW?

Still a great place to work

McGill’s subsidized on-site daycare, holiday shutdown, and phased-in retirement program are among the reasons the University has, for a second year running, been named one of Canada’s Top 100 Employers, according to a list unveiled in the October 14 issue of Maclean’s magazine. Established nine years ago by the magazine and Toronto publisher Mediacorp, the survey also noted maternity leave top-up benefits, the inter-university leadership development program, and its location in “one of Canada’s most livable and vibrant urban centres” as some of the advantages of working at McGill.

Awards and Accolades

Brenda Milner wins international Balzan Prize

Dr. Brenda Milner, PhD’52, DSc’91, the Dorothy J. Killam Professor at McGill’s Montreal Neurological Institute, is one of four recipients of the prestigious International Balzan Prize for 2009. Each awardee will receive approximately $1-million CDN (one million Swiss francs), half of which must be designated for research. The announcement was made on September 8 by the Balzan Foundation in Milan, Italy.

Milner has had an extraordinary influence on the shape of neuroscience. The origins of modern cognitive neuroscience of memory can be traced directly to her rigorous and imaginative studies. Her research focuses on cognitive function in the frontal and temporal lobes of the human brain. Although she is now in her 90s, Milner remains active in the field and inspires students whenever she lectures.

Nobel Laureate Eric Kandel credits Milner with taking the critical step of merging the fields of neurobiology and psychology to form this new field that has spawned a vast body of research in human cognition and has broad implications for the treatment of patients. The creative and precise methodology developed by Milner to study amnesic and other patients led her to conclusions that radically changed the way we think about memory, and were so subtle and refined that it was almost 25 years before a useful animal model would be developed.

The Balzan Prize award fields vary each year and can be related to either a specific or an interdisciplinary field, and look to go beyond the traditional subjects both in the humanities (literature, the moral sciences and the arts) and in the sciences (medicine and the physical, mathematical and natural sciences), so as to give priority to innovative research.

Killam Prize hat trick

Professors at McGill won three of the five $100,000 Killam Prizes for 2009. Awarded annually by the Canada Council for the Arts on behalf of the Killam Trusts, the prizes recognize outstanding scholarship in the fields of health sciences, natural sciences, engineering, social sciences and humanities. Drs. Philippe Gros, PhD’83, Department of Biochemistry, Wagdi G. Habashi, BEng’67, MEng’70, Department of Mechanical Engineering, and François Ricard, BA68, Department of French Language and Literature, were presented their prizes at a ceremony held in the University’s Life Sciences Complex on May 11.

The great communicators

McGill came away from the Canadian Council for the Advancement of Education’s (CCAE) National Conference in June with nine Prix d’Excellence Awards, the biggest haul by any university in the country. The CCAE’s Prix d’Excellence recognize outstanding achievements in alumni affairs, public affairs, development, student recruitment and overall institutional advancement. McGill took home gold medals in the Best Print in Advertising Campaign, Best Brochure, Best Alumni Relations Campaign, and Best Fundraising Statement and Campaign Materials categories.

Still a great place to work

McGill’s subsidized on-site daycare, holiday shutdown, and phased-in retirement program are among the reasons the University has, for a second year running, been named one of Canada’s Top 100 Employers, according to a list unveiled in the October 14 issue of Maclean’s magazine. Established nine years ago by the magazine and Toronto publisher Mediacorp, the survey also noted maternity leave top-up benefits, the inter-university leadership development program, and its location in “one of Canada’s most livable and vibrant urban centres” as some of the advantages of working at McGill.
DID YOU KNOW?

Student and Alumni Achievements

Nobel-winning alumni

Over a historic 24-hour period in October, the number of Nobel Prizes earned by McGill alumni rose by 50 per cent, to six.

First, Jack Szostak, BSc’72, was named co-recipient of the Nobel Prize for Medicine for his discovery of how chromosomes are protected by telomeres and the enzyme telomerase. Then, Willard Boyle, BSc’47, MSc’48, PhD’50, shared the Nobel Prize for Physics for the discovery of a device that is the key component in digital photography.

Born in London, England, but raised in Montreal’s West Island, Szostak won a share of his prestigious prize for research that showed how organisms rely on a particular enzyme to protect themselves from losing genetic material during cell division. Later studies linked this enzyme to cancer and aging-related maladies. Normaly the enzyme, telomerase, gradually shuts down as a body ages; when it runs amok, cancer can result.

Boyle, who is the retired executive director of research at the Communications Sciences Division of Bell Laboratories, splits the prize with his Bell Laboratories collaborator George E. Smith for the 1969 invention of the charged-couple device (CCD), a semiconductor circuit capable of sensing light and images, which is the core technology behind today’s digital photography revolution.

“To have two of our graduates win shares of Nobel Prizes on consecutive days is indeed remarkable,” says Principal and Vice-Chancellor Heather Munroe-Blum. “I know I speak for the entire McGill community when I say that we are extremely proud of Dr. Boyle and Dr. Szostak and the advances they pioneered.”

Martlets golden again

The Martlets hockey team completed its second straight undefeated season in March, successfully repeating as CIS women’s national champions. The top-seeded squad played 60 minutes of near-perfect hockey in a 3-1 gold-medal win over the Wilfrid Laurier Golden Hawks at the Keating Centre of St. Francis Xavier University in Antigonish, Nova Scotia. McGill has racked up over 60 consecutive victories against CIS opponents since December 2007.

Ideas for rebuilding New Orleans

In April, students from McGill’s School of Architecture took seven of the top 10 awards, including the top three, in a contest that challenged entrants to create new home designs for areas of the Big Easy ravaged by Hurricane Katrina. The Billes Architecture Student Design Competition invited top architecture schools in North America to submit original concepts to be judged on originality, innovation and sustainability, among other criteria. All of the finalists are now eligible to have their home designs built and marketed by Billes Architecture.

Extraterrestrial encounter

Over the summer, two McGill graduates had a chance to reminiscence about their university days while orbiting the Earth. Robert Thirsk, MDCM’82, and Julie Payette, BEng’86, met aboard the International Space Station in July, marking the first time that two Canadians have been in space at the same time. In addition, Thirsk became the first Canadian to remain at the station for an extended period, a total of six months.
DID YOU KNOW?

Groundbreaking Research

Squeezing light out of quantum dots

McGill researchers revealed in March that they have successfully amplified light with so-called “colloidal quantum dots,” a technology that had been written off by many as a dead end. However, after extensive research, Professor Patanjali (Pat) Kambhampati and colleagues at McGill’s Department of Chemistry determined that colloidal quantum dots do indeed amplify light as promised. This breakthrough has enormous significance for the future of laser technology, and by extension, for telecommunications, next-generation optical computing and many other applications.

Green chemistry makes the impossible possible

McGill Professor Chao-Jun (C.J.) Li, PhD’92, a pioneer in the field of green chemistry, and his colleagues have discovered a new way of synthesizing peptides using simple reagents, a process that would be impossible in classical chemistry. Not only is the new method more environmentally friendly, but it is considerably less expensive than traditional techniques and could be adopted by labs anywhere in the world. The team’s results were published in the February online edition of the Proceedings of the National Academy of Sciences.

McGill team recreates 18th century sounds

Three Schulich School of Music professors – keyboardist and musicologist Tom Beghin, record producer Martha de Francisco, and acoustical architect Wieslaw Woszczyk – have joined forces to apply “virtual acoustics” for the first time to a comprehensive commercial recording: a complete collection of Joseph Haydn’s works for solo keyboard. The result is The Virtual Haydn, released in October by the Naxos label.

On a set of four Blu-ray discs, this groundbreaking package includes 15 hours of music, performed on seven historical keyboards in nine “virtual rooms,” along with a documentary video on the making of the recordings.

The musical settings are actual rooms where Haydn or a typical player of his keyboard music would have performed, which have been acoustically sampled, electronically mapped, and then precisely recreated in a studio at the Immersive Presence Lab at McGill’s Centre for Interdisciplinary Research in Media and Technology (CIRMMT). Featured rooms range from Haydn’s own study in his Eisenstadt home to the Holywell Music Room in Oxford, England.

In addition, the professors used seven historical keyboards to further enhance their unique recreation of the Haydn repertoire. The instruments, ranging from a 1760s clavichord to a 1798 English grand piano, were built for the project by today’s leading artisans.

For the Schulich School and CIRMMT, “the Virtual Haydn project represents the pinnacle of achievement in musical performance, scholarship, production and research,” said Don McLean, dean of Schulich. “It is the embodiment of the innovative outcomes to which we aspire.”

Thanks to Virtual Haydn, modern audiences can now hear the works of one of history’s greatest composers as they were originally intended to sound.

Beacon from the cosmic dark ages

McGill researchers participated in the discovery of the most distant stellar object ever found, Gamma-ray Burst 090423. The burst, emitted by a massive star exploding into a supernova, was detected in April by an international consortium of institutions including NASA, using telescopes positioned in the northern and southern hemispheres. The burst sheds light on the very origins of the universe, researchers say. Their results were published the October issue of the journal Nature.
DID YOU KNOW?

Groundbreaking Research

Back up your brain

“The old theory is that once a memory is wired in your brain, it stays that way,” explains Nader, William Dawson Scholar and EWR Steacie Fellow in the Department of Psychology. “But our discovery shows that once you remember something, it doesn’t stay wired in your brain, it becomes unwired and needs to be restored again.”

This latest finding builds on Nader’s previous research which showed that it was possible to chemically erase fearful memories in rats. That discovery shed light on the neurobiology of memory and showed that long-term memories can be unlocked and even modified. Nader’s discoveries challenged traditional views about the neural basis for memory.

The new findings deepen our understanding of the molecular basis of how the brain controls which memories do and do not undergo reconsolidation. Furthermore, the authors identified some of the brain mechanisms that determine whether a memory will or will not undergo reconsolidation. Their results were published in the journal Nature Neuroscience on June 21.

IPLAI gets to work

McGill’s newest institute promises to open a window onto the humanities by promoting teaching and research that cuts across disciplines and departments. The Institute for the Public Life of Arts and Ideas (IPLAI), which launched its first year of programming in September, draws together teachers and researchers interested in understanding how the arts and new ideas come into being – and how they transform the world. The Institute has already appointed 10 resident faculty fellows, whose areas of research range from medieval French literature to 1960s Japanese film.

Reversal of multiple sclerosis in animals

A new experimental treatment for multiple sclerosis (MS) completely reverses the devastating autoimmune disorder in mice and might work exactly the same way in humans. This finding was announced by a team of researchers, led by Dr. Jacques Galipeau, at McGill and the Jewish General Hospital Lady Davis Institute for Medical Research in August. The new treatment, appropriately named GIFT15, puts MS into remission by suppressing the immune response. As a result, it might also be effective against other autoimmune disorders like Crohn’s disease, lupus and arthritis and could theoretically control immune responses in organ transplant patients.

Library acquires rare Burney manuscript

In May, the McGill Library bought at auction a rare manuscript notebook of English novelist Fanny Burney (1752-1840), containing drafts of some 40 letters in French addressed to various friends from 1809 to 1811. Author of the classic Evelina, Burney was a prolific writer and diarist whose work directly influenced her successors, such as Jane Austen and William Makepeace Thackeray. The notebook will be housed in the Library’s Rare Books and Special Collections and will support the work of the University’s world-renowned Burney Centre.
McGill University is making history.
(Now you know.)