Export Controls Office Helps Resolve Ambiguity of Law

On Lake Michigan's shoreline lies a border with Iran. Among the coffee shops downtown sits a section of Bolivia, to the south, a portal to China.

For Northwestern's research community, the distinction that foreign nationals represent the borders of their homeland — combined with the definition of information as an export — can require careful thought when deciding with whom to share sensitive data.

“'In the university setting, an export can occur on campus when wholly within the United States,' says Lane Campbell, director of the Office for Export Controls Compliance. ‘Fortunately, there is an exclusion to the export control regulations that allows universities to conduct their research openly despite having significant international populations, as Northwestern does.’

Since 9/11, the government has increasingly viewed export control regulations as a means to potentially guard against terrorism and other threats to national security. As a result, there has been renewed focus on compliance and enforcement of these regulations, in particular at universities.

“The law doesn't prohibit research participation by foreign students, fellows, or faculty members, and the University works hard to protect everyone's ability to publish,” says Campbell, who holds a joint JD/MBA degree from the University of Cincinnati. “It does, however, require an awareness of things like international embargoes, restricted party lists, and the confines of the fundamental research exclusion.”

In May, the Office for Export Controls published the university's first policy on the issue, meant to help researchers identify potential red flags when considering both physical and nonphysical exports.
Until recently, many universities relied almost exclusively on a 1985 exemption to export controls granted to fundamental research institutions.

Provided that the work being done on campus is intended to be published and shared broadly with the scientific community, there is an exclusion from licensing requirements. It's an exclusion that allows, for example, a foreign national in the Robert R. McCormick School of Engineering and Applied Science to work in an area deemed export-control sensitive.

“What the law states is that if something is export controlled, you either can’t do it (for example, share nuclear secrets with North Korea), you need to be properly licensed, or there must be an exemption,” Campbell says. “Although a large swath of our research still falls under the fundamental research exclusion, it doesn’t mean we aren’t confronted with export control considerations every day. Protecting this exclusion often presents challenges for universities, and for areas that fall outside of the exclusion, the stakes are high, the implications are impactful, and navigating through these issues proactively is critical to the success of an export controls compliance program.”

Director of a one-person team — with plans to expand next fiscal year — Campbell focused his efforts during the office’s first year on finalizing the university’s export controls compliance policy, engaging with the nation’s export controls community, and providing counsel to researchers engaged in cutting-edge work. His day-to-day interactions with the Office for Sponsored Research ahead of contract or funding approvals most typically involve specific areas of work, including Department of Defense-funded research and projects involving proprietary information. (Campbell previously worked in OSR as a senior contract and grant officer.)

“What makes export controls a challenging field is that the rules fly directly in the face of what the university stands for: openness in research, publishing new insights, and not discriminating,” Campbell said. “In essence, export controls are trying to tamp down the ability to share information, and there’s a balance that needs to be struck in certain situations.”

Generally speaking, the University will not agree to contract terms that eliminate or exclude a specific person from research. It might, however, accommodate some restrictions within reason.

“The single most important role for me, generally speaking, is to educate,” says Campbell, who conducts quarterly training sessions throughout the year. “I also need to ascertain the areas of highest potential exposure on campus, including certain research disciplines and the researchers engaged in potentially sensitive work.”

When considering export control-sensitive material, be it knowledge or physical components, Campbell ultimately must weigh what is being exported versus where it is going.

“An item can be as ubiquitous as a laptop, but if it is going to Iran you’ve potentially violated the law,” he says. "What it is, what it’s going to be used for, where in the world it’s going, or whom is receiving it are all major factors. The goal is to attempt to find ways to protect the university community with respect to the law.”

Embargoes, Restricted Lists

While exports to all countries are controlled in various ways, there are very strict federal prohibitions on shipments and interactions with Cuba, Iran, North Korea, Sudan, and Syria.

“Anytime we’re involved in transactions with any of those countries there needs to be additional oversight,” Campbell says. There are also restricted party lists published by the federal government that include people and entities with whom the University is restricted from doing business.

Recent Export Violations

The most publicized export controls violation case involving a university occurred in 2008 when professor John Reece Roth at the University of Tennessee was convicted of violating the law and sentenced to four years imprisonment for disclosing export-controlled technical data related to his work without obtaining an export license. More recently, the University of Massachusetts at Lowell was fined $100,000 and placed on probation for two years for violating the law in connection with the export of an atmospheric testing device and related equipment to a restricted company located in Pakistan.
**Hersam, Kraus Testify Before Congress**

A pair of Northwestern University researchers recently met with members of Congress to discuss higher education issues critical to the nation’s future.

**Mark Hersam**, materials science and engineering, visited Capitol Hill on May 20 to testify before Congress regarding the need for “predictable and sustained federal funding” for nanotechnology research and development.

Hersam’s remarks came during a hearing called by the U.S. House of Representatives Committee on Science, Space, and Technology’s Subcommittee on Research and Technology to examine the current state of nanotechnology research, development, opportunities, and challenges.

Hersam shared the story of his company NanoIntegris, a supplier of high purity, semiconducting, and metallic inks. Nearly 10 years after filing a patent application, some of the claims for the company’s products remain pending. Hersam asked the subcommittee to improve the efficiency of the United States Patent and Trademark Office in order to protect nanotechnology commercialization.

**Nina Kraus**, communication sciences and disorders, spent May 22 in Washington meeting with members of Congress and their staff to try and shift the emphasis of the national dialogue on education from “STEM” (science, technology, engineering and mathematics) to “STEAM” (science, technology, engineering, arts and math education).

She presented three briefings titled “The biological benefits of music education” to the House education staff, the Senate education staff, and the U.S. Department of Education.

Click here to read more.

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**Gong Receives Hartwell Award**

**Edward Gong**, urology, has received a Hartwell Individual Biomedical Research Award to pursue work on restoring function to obstructed bladders in children.

Each year, The Hartwell Foundation invites a limited number of institutions to nominate faculty members who are involved in early-stage, innovative, and cutting-edge biomedical research that has not qualified for significant funding from outside sources. The award provides $100,000 in annual direct cost for three years.

Gong’s research focuses on a congenital condition called posterior urethral valve that occurs in the urinary system of newborn boys, where obstructive flaps of tissue act like valves in the urethra to prevent outflow of urine from the bladder.

Click here to read more.

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**YALI Fellows Welcomed**

**Edward Gong**

**Nina Kraus**

**Njoki Kamau**

**Mark Hersam**

Njoki Kamau, associate director of the Women’s Center, speaks with members of the Young African Leadership Initiative (YALI) during a welcome reception for the 2014 Washington Fellows. Chosen from more than 50,000 applicants, the 25 fellows will be on campus for six weeks to learn about business and entrepreneurship. To see a slideshow of the event, click here.
$1.5 Million Awarded to NU-Q Media Use, Mobile Innovation Research

Northwestern University in Qatar has received a pair of grants totaling more than $1.5 million from the Qatar National Research Program.

The awards will fund the continuation of research on media use in the Middle East and a project that will probe innovation strategies of mobile media.

“Northwestern’s growing research programs represent our commitment to creating knowledge about media in a region which has traditionally been studied by outsiders looking in,” says Everette E. Dennis, dean and CEO of NU-Q. “These grants emphasize the value of systematic research in solving practical problems — both of our awarded studies help us understand media audiences and messages better. The mobile content study could be quite important in terms of technology advances.”

Click here to read more.

Stanley Manne Children’s Research Institute Named

Following a transformative gift made by Stanley Manne, a retired local business executive and chairman of the Manne Family Foundation, the Ann & Robert H. Lurie Children’s Hospital of Chicago Research Center has been renamed the Stanley Manne Children’s Research Institute.

The philanthropic commitment represents the second-largest gift in the hospital’s more than 130-year history. The support will provide funding to help sustain and further enhance pediatric medical research at Lurie Children’s.

Pediatric research through the Stanley Manne Children’s Research Institute will continue to be conducted in several locations, including the research center in Lincoln Park, Northwestern University, and the hospital. Part of the medical center’s long-range plan is to consolidate all research in the new biomedical research building on the Chicago campus.

Click here to read more.

Sen. Durbin Legislation Dedicates $589 Million for Medical, Prosthetics Research Around Country

The Northwestern University Prosthetics-Orthotics Center (NUPOC) welcomed Sen. Dick Durbin to campus as the Democrat from Illinois announced Senate Appropriations Committee approval of enhanced prosthetics and orthotics (P&O) care for service members and veterans.

The bills Durbin authored provide competitive grant funding for colleges and universities with P&O master’s degree programs and the rotation of P&O specialists through Veterans Affairs facilities. The $589 million will help build upon work conducted at Northwestern and the Rehabilitation Institute of Chicago.

While in Chicago, Durbin toured the NUPOC fabrication and fitting laboratories, where he also spoke with faculty, researchers, and graduate students.

Click here to read more.
When Going Solar, Scientists Find Local is Better

Solar panels used in Europe but made in China have a higher overall carbon footprint and are likely to use substantially more energy during manufacturing than those made locally, according to a new study from Northwestern University and the U.S. Department of Energy’s Argonne National Laboratory. The report compared energy and greenhouse gas emissions that go into the manufacturing process of solar panels in Europe and China.

“We estimated that a solar panel’s carbon footprint is about twice as high when made in China and used in Europe,” said Fengqi You, chemical and biological engineering, corresponding author on the paper.

While it might be an economically attractive option to move solar panel manufacturing from Europe to China, it is actually less sustainable from the life cycle energy and environmental perspective — especially under the motivation of using solar panels for a more sustainable future, You says.

Click here to read more.

Northwestern, University of Chicago Part of Unprecedented Art History Collaboration

The Andrew W. Mellon Foundation has awarded grants totaling nearly $1.3 million to three Chicago-area institutions in an effort to enhance the study of art history through a focus on working with art objects.

The unprecedented, four-year, inter-institutional pilot known as the Andrew W. Mellon Foundation Chicago Objects Study Initiative, will provide doctoral students in art history from Northwestern and the University of Chicago with new or significantly enhanced coursework and training at the Art Institute of Chicago.

“We are very grateful to the Mellon Foundation for encouraging us to think creatively,” says Jesús Escobar, art history. “Our three institutions work collaboratively in a number of ways, but the planning of the Chicago Objects Study Initiative alone has sparked so many new ideas. I look forward to seeing how the program will enhance the graduate student experience of studying art history at the doctoral level in Chicago.”

Click here to read more.

Sponsored Research Reports Webinar to Aid Staff who Reconcile Awards

Wondering what report would list all awards for a specific investigator? Need to know the best way to review a budget and actual expenditures at a detailed level?

An upcoming one-hour webinar will re-introduce research administrators, business administrators, and staff working with proposal and award management about some of the grant management, general ledger, and supply chain reports that can help manage grants. The training session will also include a look at some options inside NUFinancials such as the Budget Detail, Budget Overview, the Grants menu and the Grants Tree Viewer.

Live webinar sessions of FMS504 Reports in Sponsored Research will be offered June 18, July 2, and July 16 from 2-3 p.m.

Click here to register.
Scientific Image Contest
Deadline June 30

Through the end of June, Northwestern's nano-Picassos and crystal-Cezannes are invited to submit captivating research-based images as part of the annual scientific image contest.

Sponsored by Science in Society, a University office of science outreach and public engagement, this year’s contest winners will be displayed at the Museum of Science and Industry in the fall.

The contest is open to all Northwestern University faculty, students, and staff.

Click here to learn more about contest entry.

Evening Blue Light Exposure Linked to Hunger

Checking email before dinner may be part of the reason that third piece of pizza looks so good.

A new Northwestern Medicine study suggests that blue light exposure immediately before and during the evening meal may increase hunger and alter metabolism.

Compared with dim light, blue-enriched light exposure was associated with an increase in hunger that began 15 minutes after light onset and was still present almost two hours after the meal.

“It was very interesting to observe that a single three-hour exposure to blue-enriched light in the evening acutely impacted hunger and glucose metabolism,” said study co-author Ivy Cheung, a doctoral candidate in the interdepartmental neuroscience program. “These results are important because they suggest that manipulating environmental light exposure for humans may represent a novel approach of influencing food intake patterns and metabolism.”

Click here to read more.

OSR Quarterly Updates Scheduled for June 19, 20

The Office for Sponsored Research is hosting its Chicago quarterly update from noon-1 p.m. on Thursday, June 19, at 676 N. Saint Clair St. The event will take place inside the Surgery Training Room on the sixth floor. The OSR Evanston quarterly meeting is taking place Friday, June 20, from 10-11:30 a.m. in the Ruan Conference Room (Lower Level of Chambers Hall; 600 Foster Street in Evanston).

At the Chicago update, the first of two presentations will delve into the topic of corporate engagement. The former Office of Corporate Relations has been renamed and Senior Director Coleen Burrus and Assistant Director Aaron Wooden will present on Corporate Engagement’s new structure and their ongoing collaboration with OSR Evanston and OSR Chicago.

A look at time management will follow as Eugenie Chao, grants officer with OSR Chicago, presents “Best Practice: Building A Proposal Timeline for Successful Submissions.”

Chao will also share the outcomes of the 2013 GO/RA work group and the proposal timeline that was developed.

Call for STAR Nominations Ahead of July 23 Event

Summer’s Office for Research STAR (Staff Team Award Recognition) Leadership Award presentation will be held July 23 from 1-2:30 p.m. inside the Willens Atrium of the Technological Institute, 2145 Sheridan Road, Evanston.

Nominations for the award and RSVPs for the event will be accepted through July 17.

Dedicated in fall, the Willens Engineering Life Sciences Wing encompasses the atrium and features a 50,000-square-foot addition for students and faculty in the life and biomedical sciences. It was made possible by a significant gift from Ronald and JoAnne Willens.

The OR STAR program is designed to recognize OR employees who demonstrate leadership and support of the Office for Research goals to achieve excellence at all levels and promote a workplace culture which models Northwestern behaviors of coachability, collegiality, communication, compliance, customer focus, efficiency, planning, and leadership. The award is bestowed three times a year.

For more information on the nomination process, click here.
Research Around Campus

Debabrata Chakravarti, obstetrics and gynecology, found that elevated levels of a protein associated with cell cycle regulation may allow physicians to identify prostate cancer at its earliest stages. Read more …

C. Kirabo Jackson, human development and social policy, led a collaboration revealing that low-income children were significantly more likely to graduate from high school, earn livable wages, and avoid poverty in adulthood in school districts that substantially increased their spending as the result of court-ordered changes in school finance. Read more …

Manijeh Razeghi, electrical engineering and computer science, and her team have been the first to produce terahertz radiation in a simplified system, making it easier to harness the power of these elusive waves. Read more …

Kalliopi P. Siziopikou, pathology, and Chonghui Cheng, medicine: hematology-oncology, discovered a new pathway that can stop breast cancer cells from spreading. Read more …

Honors

Elizabeth Gerber, mechanical engineering, received one of two inaugural awards for curriculum development. The grant, cosponsored by the Alumnae of Northwestern University and the Office of the Provost, will be used toward a course focused on online pitches that are key to successful crowdfunding.

Chad Mirkin, chemistry, has been named the North American winner of the 2014 ACSNano Lectureship Award. The awards honor the contributions of three individuals from across the globe who have made major impacts on nanoscience and nanotechnology.

Anne Marie Piper, communication studies, received one of two inaugural awards for curriculum development. The grant, cosponsored by the Alumnae of Northwestern University and the Office of the Provost, will be used to teach students to develop technologies that help those with disabilities take advantage of modern communications.

Kalyan Raman, integrated marketing communications and psychiatry and behavioral sciences, has been named recipient of the Dorothy Ann and Clarence L. Ver Steeg Distinguished Research Fellowship. The Ver Steeg fellowship supports research and enhances the reputation of the University.

Myles Wolf, medicine: nephrology, is being honored by the American Society of Nephrology (ASN) with its Young Investigator Award. Wolf will be honored at ASN’s annual Kidney Week, held this year Nov. 11-16 in Philadelphia, where he will also deliver a plenary lecture.

Research in the News

Mark Beeman, psychology, and his research on the role insight, or the “Eureka” moment, plays in creativity, was recently included in articles in The New Yorker and Time.

Joan Cook-Mills, medicine: allergy/immunology, was quoted in the New York Times and other international media outlets in continuing coverage of a study suggesting that vitamin E-rich oils like canola, soybean, and corn may lead to lung inflammation and, possibly, asthma.

Leemore Dafny, management and strategy, was featured in the New York Times regarding research on why health insurance premiums vary throughout America.

Kelly Glazer Baron, neurology, found that even among healthy, active individuals, sleep timing and circadian preference are related to activity patterns and attitudes toward physical activity. Her work was featured on Science Codex and the Huffington post.

Steven Jacobsen, Earth and planetary sciences, was among a team of geologists who found a vast body of water, three times the size of any ocean, bound up in earth’s mantle. The story was featured in numerous international publications including Time Magazine.

Benjamin Jones, management and strategy, was featured in Forbes regarding his research on how great achievements are coming later in life.

Eric Masanet, mechanical engineering and chemical and biological engineering, was quoted in numerous stories including one in US News & World Report about a study he co-authored that showed streaming videos online could avert billions of kilograms in carbon dioxide emissions.

Mary McDermott, internal medicine, was featured in several media outlets including US News & World Report, Health.com, Reuters, and the Chicago Tribune regarding research she authored that found a home-based exercise program benefits people with poor blood circulation in their legs.

Adam Murphy, urology, was quoted in various news outlets including News Medical and Tech Times regarding his research findings that show an increased prostate cancer risk for some men with vitamin D deficiency.

Research by Benjamin I. Page, political science, suggesting that ordinary American citizens have little or no independent influence on policy, was featured in the Economist.

Neal Roese, marketing, was featured on Fox News Business regarding his research findings that showed marketing managers who advertise their products as the best alternatives actually decrease the business’ chances of success with consumers.

A computer program being co-developed by Matthew J. Smith, psychiatry and behavioral sciences, was featured in a Wall Street Journal article on its use in advising adults with autism heading into job interviews.
Proposal and Award Report: through April 2014

The total amount of award funding received through April 2014 is $303.1 million, an increase of 12 percent ($31.4 million) over April 2013. The number of awards thus far within the fiscal year (1,514) is 73 higher than the prior year to date.

Through April 2014, the dollar volume of awards from federal agencies reflected a slight increase of 5 percent ($9.4 million). Awards from industrial sponsors increased by 73 percent ($27.1 million), while those from foundations have stayed about the same, increasing by 1 percent ($0.2 million). Awards from the state of Illinois have decreased 92 percent ($4.7 million).

The dollar volume of proposals submitted through April 2014 is $1.53 billion, an increase of 6 percent ($116.4 million) over the total reported in April 2013. The number of proposals submitted thus far this fiscal year (2,174) is about the same as last year at this time.

Through April 2014, the dollar volume of proposals submitted to federal agencies grew by 7 percent ($87.5 million), while those to industrial sponsors rose by 55 percent ($22.5 million). Proposal activity to state of Illinois agencies reflected a decrease of 92 percent ($3.1 million), while those to voluntary health organizations were up by 9 percent ($3.4 million).

Click here to access the full report. You will first be brought to the university’s single sign on access page, where you will then need to provide your NetID and password. From the report launching page, find the appropriate report type and select the desired month.