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Mr. Alex Lopes  
Director, Deemed Exports and Electronics Division  
U.S. Department of Commerce  
Bureau of Industry and Security  
Regulatory Policy Division  
14th and Pennsylvania Avenue, N.W.  
Room 2705  
Washington, D. C.  20230

By Electronic Mail to scook@bis.doc.gov

Reference: Revision and Clarification of Deemed Export Related Regulatory Requirements, RIN 0694-AD29

Dear Mr. Lopes:

I write on behalf of the Association of American Medical Colleges (AAMC) in response to the request for comments on the Advance notice of proposed rulemaking: Revision and Clarification of Deemed Export Related Regulatory Requirements, appearing in the Federal Register on March 28,2005 (70 FR 15607) [hereinafter ANPR]. The AAMC is a non-profit organization representing all 125 U.S. accredited allopathic medical schools, some 400 major teaching hospitals, and 94 academic and professional societies representing 109,000 faculty members. The APNR invites comments on the impact on the academic community, industry, and government agencies involved in research of certain recommendations that are contained in the March 2004 Department of Commerce Office of Inspector General Report entitled: “Deemed Export Controls May Not Stop the Transfer of Sensitive Technology to Foreign Nationals in the U.S.”

Introduction

These recommendations, if adopted, will significantly damage the health of the academic research community in the U.S. and, in so doing, damage the economic and scientific vitality of the country as well as its national security. Accordingly, our comments are focused especially on those recommendations of the Department of Commerce Inspector General Report [hereinafter Inspector General], with respect to “deemed exports” and fundamental university research, that would have the most immediate and dramatic effect on the manner in which science is conducted both in academic medical centers and their parent universities and on the talent pool available to academic (and, likely, industry) research. These recommendations should be rejected.
In addition to our own comments, we support and endorse the comments on the Inspector General’s recommendations that have been submitted by the Association of American Universities and the Council on Governmental Relations. In particular, we join them in (1) urging that the Inspector General’s recommendations be rejected, (2) seeking clarification of ambiguities in existing regulations regarding use technology, and (3) urging that the Bureau of Industry and Security [hereinafter BIS] foster a continuing, high level dialogue among all stakeholders on deemed exports in the context of fundamental research. Such a dialogue might foster a reasoned approach to legitimate security concerns that does not sacrifice key aspects of the community on which much of the nation’s scientific and economic success has been based.

The AAMC and its member institutions are committed to continuing to do their part to preserve national security. The AAMC intends these comments to assist BIS in addressing legitimate national security concerns without unnecessarily and seriously compromising scientific research at academic medical centers and research universities. However, the necessity for the recommended significant expansion of the deemed export provisions with correlative contraction of the fundamental research exception is nowhere justified. The burden of the changes recommended by the Inspector General would fall most heavily and adversely on fundamental research in research universities and academic medical centers. These higher education institutions have been key partners in creating the scientific and technological advances that have played vital roles in national security. Moreover, the proposed changes would substantially restrict the already limited ability of international students and scholars to study and train in the U.S. and thereby impoverish U.S. higher education and academic science.

In short, the recommendations of the Inspector General, if adopted, would lead to a significant expansion of the deemed export program without documentation of the asserted risk addressed by the recommendations, without adaptive calibration of possible regulatory responses to identified risk, and, because of the ambiguities in the current regulations, without precise definitions of what activities are proscribed. Fundamentally, the nation’s scientific and economic vitality and security are dependent on its universities and the knowledge and innovation they generate. Restriction of the fundamental research environment should be accomplished only through the highly limited classification process based on clear, precise, and substantial considerations.

As a prelude to our comments, it is important, by way of identifying the community on which the impact of the Inspector General’s recommendations would fall, to reference the comprehensive data cited in the comments of the Association of American Universities and those of the Council on Governmental Relations. Because the impact of the recommendations will affect the entire academic scientific community, and not just academic medicine, we have elected not to focus simply on the census count of foreign medical students and foreign scholars in medical schools, although those numbers represent a significant population of scholars, but rather upon the entire academic research community.
1. The Fundamental Research Provisions Must Include the Use by Foreign Persons of Equipment Controlled for Use Technology.

Academic medical centers and universities have assumed for years that the use in fundamental research of equipment controlled for use technology is exempt under the fundamental research provisions of the Export Administration Regulations [hereinafter EAR]. Universities and medical schools have also understood the fundamental research provisions to extend to the right for foreign students and researchers, as full members of research teams, not only to participate in fundamental research, but also to use, alter and create, and to receive information on how to use, alter and create equipment controlled for use technology while conducting fundamental research on U.S. university campuses. Academic fundamental research and the use of equipment required to conduct it are inseparable. Yet the Inspector General now takes the position that “technology relating to controlled equipment – regardless of how use is defined – is subject to the deemed export provisions (and the requirement to license foreign nationals having access to that equipment), even if the research being conducted with that equipment is fundamental.”

Even if implementation of the Inspector General’s recommendations would mean “only” a delay in a foreign scientist or student’s participation and visitation rights, and not a complete bar, the effect may be the same. Because research will proceed while the international scholar awaits licensure [note that he or she has already been admitted to study in the United States after an earlier protracted visa process], the scholar will lose the opportunity for learning and participating in aspects of the research that cannot be held in suspension pending receipt of the foreign scholar’s license under EAR. The best international talent will likely prefer to study and contribute to research in other countries where they will not be similarly isolated and constrained. Evidence already shows a decline in the competitiveness of U.S. universities against major universities in other countries for the best foreign graduate and postdoctoral students in the sciences. This in itself is a serious threat to the nation’s security, because the scientific vitality of the country is dependent on the health of its academic research community. History is clear about the enormous contributions to science and technology that have been made by foreign students and scientists training and working in the U.S.

Control of university fundamental research should be accomplished only through the classification process, as expressed in the NSDD 189, which was explicitly affirmed by the current administration late in 2001. It should most assuredly not be accomplished through an artificial and unrealistic disarticulation of research from the equipment by which research is carried out and through access restrictions to fundamental research. We urge that the existing U.S. visa program be used as the mechanism by which to control access to academic research settings by those who may threaten national security. If, after screening a foreign student or researcher at point of entry, our government approves the individual’s entry into our country under a visa that permits study and research at a U.S. university or medical school, that permission should imply and provide full and unrestricted participation in the academic research community. Most foreign students and scholars participating in scientific or engineering research also undergo personal interviews in the visa process and Visa Mantis clearance. Universities and medical schools should not be required by adoption of the recommendations, nor are they equipped to take up the role of supplemental “screeners” for their
foreign students and scholars, then to isolate them, and to restrict non-licensed access to research or equipment used in non-classified research.

If the U.S. visa policy needs to be improved, it should be the focus of attention, as it has been in recent years, both to improve its effectiveness in enhancing national security and in improving its efficiency without corresponding burdens on higher education and academic science. The deemed export licensing regime should not be used to attempt to solve the problem. Doing so will change in fundamentally destructive ways the open, international, collaborative and spontaneous academic research environment that is the very foundation of its success.


Fundamental research relies for its success on an open, international, collaborative, and spontaneous research environment where members of research teams and their colleagues from elsewhere in the university community freely visit each other’s laboratories, participate at the spur of the moment in work with equipment, and convey ideas and information without constraint. Fundamental research requires using equipment and conveying information on how to use that research equipment. Implementation of the Inspector General’s recommendations regarding access to equipment controlled for use technology will fundamentally alter the environment and culture for academic research, and will stall or suspend research while academic institutions seek licenses for the foreign members of university research teams.

Under the Inspector General’s recommendations, many, if not all, foreign nationals may need to be licensed by the government before participating in university research because of the possibility of encountering, in an open, university setting, use technology-controlled equipment. Conveying information on how to use such equipment cannot be predicted, controlled, or separated from the use itself in the spontaneous and collaborative university research environment. And the use itself of equipment is an integral part of fundamental research, long recognized in EAR as an exception from its reach.

Although a vast amount of technology is “subject to EAR”, according to BIS it may or may not be controlled under EAR. Further, BIS indicates that not all uses of controlled equipment involve transfers of restricted use technology. But the regulations appear to require otherwise, equating operation with proscribed use, for example. As a consequence of the lack of clarity regarding use technology, proper compliance with the Inspector General’s recommendations regarding equipment controlled for use technology would demand item by item categorization according to EAR of thousands and thousands of pieces of equipment at each individual medical school and university. Worse, because of the highly fluid, unpredictable, and dynamic nature of university and medical school research, the equipment inventory changes frequently, as well as the identity of those who have access to the equipment.
Simply to characterize university equipment according to the demands of the regulations will require a huge investment of resources on the part of the academic community, and will necessitate not only technology experts and auditors but specialized legal counsel and advisors. Concurrently, potential as well as actual authorized users of equipment controlled for use technology will have to be identified both as to status as a foreign person, as well as to potential access to equipment controlled for use technology, which is difficult if not impossible to predict accurately in advance. That essentially means every foreign student and scholar.

The administrative burdens and costs for universities and academic medical centers are substantial in making determinations of whether or not equipment that will be used in fundamental research is controlled for use technology. In addition to the necessity to develop comprehensive, centrally controlled and accurate inventories of equipment (which is often currently a function distributed to operating units instead), the person-hours required to complete an assessment in a single laboratory of equipment controlled for use technology and the potential exposure of foreign students and scholars to it are themselves significant. The only way universities could pay these costs would be through a significant reallocation of existing research dollars from the conduct of research to this administrative undertaking, and this would be required at a time when the outlook for university research budgets in the next several years indicates little or no appreciable growth. We believe the nation’s leadership must weigh the benefits and costs of compelling such limited resources to be devoted to this undertaking, when there has been no evidence presented of any inadequacy in the current approach of relying on the visa process combined with classification when warranted.

Moreover, these lab-by-lab equipment assessments that would be necessitated by the recommendations must be considered in the context of the number of foreign students and researchers at our universities who potentially might be subject to deemed export licensing requirements. In this regard, we submit that while it is impossible to quantify precisely the number of deemed export licenses that would be required under the Inspector General’s interpretation, given the large number of foreign students and scholars at our campuses as well as the breadth of the existing definitions and the proposed expansion of the deemed export category, the result would likely be a substantial increase in license applications as well as huge and often irreparable impediments to exempt fundamental university research.


The EAR does not clearly define "use" technology. It defines use in terms of specific functions performed on equipment [EAR 772]. However, deemed exports involve transfers of information. The Inspector General appears to confuse mere operation of equipment with access to technical information covered by the deemed export regulations. Even though BIS takes the position that mere operation without access to proprietary information is not a deemed export, the regulations appear to contradict that position. At a minimum, the confusion should be explicitly resolved in favor of the BIS stated position, provided that the BIS position includes observation and instruction
on how to operate equipment. If it does not, then this interpretation is also unworkable. Moreover, 
the overly broad current definition of equipment controlled for use technology further compounds the 
problems that would inevitably be created by the Inspector General’s recommendations regarding use 
by foreign nationals of controlled equipment in fundamental research. The result is the restriction of 
equipment that is publicly available in other U.S. settings.

If the Inspector General’s recommendations are adopted in this context of the already-
extensive CCL and ambiguities in current regulations, defining the reach of the deemed export 
provisions into fundamental research will require the most conservative interpretations by specialized 
counsel, technical experts, and equipment auditors. The fundamental research provisions will be 
gutted. Substantial over-categorization of equipment and over-restriction of access to it will be the 
only way to assure compliance with these provisions. Rejection of the Inspector General’s 
recommendations regarding deemed exports and clarification of the existing definition of use 
technology are urgently necessary to establish clear compliance standards. Ambiguities make 
reliable compliance difficult, which itself may raise national security concerns. Changing "and" to 
"and/or" in the EAR Part 772 definition of "use" does not address the confusion and ambiguity 
between use of equipment and transfer of information. Leaving ambiguous the definition of 
controlled use technology means that overly broad categorization is inevitably required.

BIS should also officially confirm that if a foreign national in the course of research modifies 
an item of controlled equipment for his/her specific research purposes, or fabricates a new apparatus 
that otherwise would be subject to export controls, no licensable event has occurred so long as the 
foreign national has no access beforehand to controlled proprietary technology, and the research 
results are ordinarily published.

AAMC endorses and urges adoption of the alternative approach offered by the Association of 
American Universities and the Council on Government Relations that controlled use technology in 
the context of university fundamental research should be defined to encompass only proprietary or 
classified information that is not generally available to the public in the U.S. without significant 
restriction. Technology (including information in user manuals) that is generally available to anyone 
in the U.S without such restrictions should be considered publicly available for purposes of being 
excluded from deemed export licensing requirements. Publicly available information, by any 
realistic definition, should not be swept into the scope of export regulations.

The recommended expansion of the deemed export provisions together with the ambiguities 
in current definitions defy logic from a security standpoint while standing as serious impediments to 
the process – and progress – of science in U.S. research institutions. Although we concede that there 
may be a subset of technology that needs to be controlled, even when used in fundamental research, 
this limited subset is nowhere identified. Unless “publicly available” is defined as information that is 
neither proprietary nor classified and is available on the open U.S. market, an overly broad range of 
information is swept into the regulatory net, beyond the underlying rationale of the EAR, that only 
non-publicly available information is that which is intended to be within its ambit.
Further, we believe there are compelling reasons why the burden of identifying controlled technology should not fall on universities and academic medical centers. Point of purchase is the appropriate locus for identifying whether equipment is controlled for use technology. To hold academic institutions accountable for making such after the fact identifications based on the national origin of the user will result in thousands of person hours being spent in virtually all institutions, many of them in classifying the same, commonly used research equipment. There is no demonstrated justification, whether based in national security or other federal policy objective, to impose such a costly and inefficient burden on the academic community.

4. Country of Birth is an Illogical and Burdensome Standard.

Another very troubling provision in the Inspector General’s report is the recommendation that deemed export licensing should be based on national origin rather than current residence. The AAMC has serious legal reservations about such classifications, and believes the legal implications of such a regulatory move should demand careful analysis. National origin classifications are generally subject to strict judicial scrutiny, require a compelling government interest as justification, and, even so justified on the basis of national security (widely acknowledged to be a compelling governmental interest), require narrow tailoring of the classification. Gross determinations, such as all persons born in country X are automatically suspect regardless of circumstances, appear to us to be anything but narrowly tailored.

Even if such a position were found not to violate existing U.S. law, the administrative burden on medical schools and their universities would be huge. The institutions have no such information now, and indeed, they have carefully avoided collecting such information because of legal concerns. Moreover, the SEVIS system does not include fields for such information. It would be necessary to isolate and then determine for all foreign students and scholars – and indeed visitors to academic labs and facilities – their country of birth so as to assure that the academic community not run afoul of the Inspector General’s recommendations. This is an enormous undertaking with potentially serious side effects. And for those who have current citizenship in a country different from that of their birth, it would double the effort required of universities and medical schools, as such foreign persons would have to be evaluated with respect to both current citizenship and country of birth to make licensing determinations.

5. The recommended substantial expansion of the deemed export program would place the scientific vitality and primacy of the United States and its security in jeopardy.

The collaborative, open, international research environment that has been the hallmark of U.S. based science will be irrevocably altered. Foreign scientists and those studying to be scientists in the U.S. who have contributed so very significantly to this nation’s scientific prowess and security since before WWII will be prevented from ready access to equipment controlled for use technology or at the least seriously delayed and potentially unalterably disadvantaged, because of country of birth or other arbitrary reasons that have not been demonstrated to pose a threat to national security. Not only will these expansions affect the substance of the experience of foreign students and scholars in
the U.S., it will especially send a message of restriction and lack of welcome to the great
disadvantage of higher education and the nation at large, without compensating gain.

Recent reports (President’s Council of Advisors on Science and Technology Report
“Sustaining the Nation’s Innovation Ecosystem: Maintaining the Strength of Our Science
Engineering Capabilities”, 2004, and the National Academies of Science COSEPUP Report “Policy
Implications of International Graduate Students and Postdoctoral Scholars in the United States”,
2005) indicate that, despite the fact that the presence of the best of foreign students and scholars is
critical to the continued success of U.S. higher education and the nation’s economy and security, the
international competitiveness of U.S. universities has declined. Implementation of the Inspector
General recommendations would only accelerate this worrisome trend by reinforcing the already
growing international perception of increased U.S. inhospitality to foreign students and scientists.
The PCAST report states emphatically “The openness of our campuses to students, scholars, and
faculty from all over the world is one of our greatest strengths, and is at the heart of the phenomenal
success of the American research university...”

Simply put, the more barriers we put into place for foreign students and scholars, the more
likely it becomes, as evidence is clearly demonstrating, that this boundlessly rich source of talent will
go to other countries, to learn and to enrich those environments instead of our own. We cannot let
undifferentiated fear interdict the progress of science and the future health, prosperity, and indeed,
security of the American public. The vitality of society is based on the dynamism of our science and
economy. As we seek rational security solutions, we must not let them suppress that dynamism.
Controls via deemed export expansions and classification must be limited to instances where national
security concerns are clearly identified and documented and justified.

Conclusion

For the five reasons stated, the recommendations of the Inspector General, substantially
expanding the deemed export program in the context of university fundamental research without
credible, let alone compelling justification, must not be implemented. Moreover, there must be
clarification achieved in existing regulations regarding use technology.

Thank you for your consideration.

Sincerely,

Jordan J. Cohen, M.D.
President