

What technologies are considered "fundamental research"?

"Fundamental research" is basic and applied research in science and engineering where the resulting information is ordinarily published and shared broadly within the scientific community. It is distinguished from proprietary research and from industrial development, design, production, and product utilizations, the results of which ordinarily are restricted for proprietary and/or specific national security reasons. Normally, the results of "fundamental research" are published in scientific literature, thus making it publicly available. Research which is intended for publication, whether it is ever accepted by scientific journals or not, is considered to be "fundamental research." A large segment of academic research is considered "fundamental research." Because any information, technological or otherwise, that is publicly available is not subject to the Export Administration Regulations (EAR) (except for encryption object code and source code in electronic form or media) and thus does not require a license, "fundamental research" is not subject to the EAR and does not require a license.

§734.8 INFORMATION RESULTING FROM FUNDAMENTAL RESEARCH

(a) Fundamental research

Paragraphs (b) through (d) of this section and §734.11 of this part provide specific rules that will be used to determine whether research in particular institutional contexts qualifies as "fundamental research". The intent behind these rules is to identify as "fundamental research" basic and applied research in science and engineering, where the resulting information is ordinarily published and shared broadly within the scientific community. Such research can be distinguished from proprietary research and from industrial development, design, production, and product utilization, the results of which ordinarily are restricted for proprietary reasons or specific national security reasons as defined in §734.11(b) of this part. (See Supplement No. 1 to this part, Question D(8)). Note that the provisions of this section do not apply to encryption software controlled under ECCN 5D002 for "EI" reasons on the Commerce Control List (Supplement No. 1 to part 774 of the EAR) or to mass market encryption software with symmetric key length exceeding 64-bits controlled under ECCN 5D992. See §740.13(e) of the EAR for certain exports and reexports under license exception.

(b) University based research

(1) Research conducted by scientists, engineers, or students at a university normally will be considered fundamental research, as described in paragraphs (b)(2) through (6) of this section. ("University" means any accredited institution of higher education located in the United States.)

(2) Prepublication review by a sponsor of university research solely to insure that the publication would not inadvertently divulge proprietary information that the sponsor has furnished to the researchers does not change the status of the research as fundamental research. However, release of information from a corporate sponsor to university researchers where the research results are subject to prepublication review, is subject to the EAR. (See Supplement No. 1 to this part, Questions D(7), D(9), and D(10)).

(3) Prepublication review by a sponsor of university research solely to ensure that publication would not compromise patent rights does not change the status of fundamental research, so long as the review causes no more than a temporary delay in publication of the research results.

(4) The initial transfer of information from an industry sponsor to university researchers is subject to the EAR where the parties have agreed that the sponsor may withhold from publication some or all of the information so provided. (See Supplement No. 1 to this part, Question D(2)).

(5) University based research is not considered "fundamental research" if the university or its researchers accept (at the request, for example, of an industrial sponsor) other restrictions on publication of scientific and technical information resulting from the project or activity. Scientific and technical information resulting from the research will nonetheless qualify as fundamental research once all such restrictions have expired or have been removed. (See Supplement No. 1 to this part, Question D(7) and D(9)).

(6) The provisions of §734.11 of this part will apply if a university or its researchers accept specific national security controls (as defined in §734.11 of this part) on a research project or activity sponsored by the U.S. Government. (See Supplement No. 1 to this part, Questions E(1) and E(2)).

(c) Research based at Federal agencies or FFRDCs

Research conducted by scientists or engineers working for a Federal agency or a Federally Funded Research and Development Center (FFRDC) may be designated as "fundamental research" within any appropriate system devised by the agency or the FFRDC to control the release of information by such scientists and engineers. (See Supplement No. 1 to this part, Questions D(8) and D(11)).

(d) Corporate research

(1) Research conducted by scientists or engineers working for a business entity will be considered "fundamental research" at such time and to the extent that the researchers are free to make scientific and technical information resulting from the research publicly available without restriction or delay based on proprietary

concerns or specific national security controls as defined in §734.11(b) of this part.

(2) Prepublication review by the company solely to ensure that the publication would compromise no proprietary information provided by the company to the researchers is not considered to be a proprietary restriction under paragraph (d)(1) of this section. However, paragraph (d)(1) of this section does not authorize the release of information to university researchers where the research results are subject to prepublication review. (See Supplement No. 1 to this part, Questions D(8), D(9), and D(10)).

(3) Prepublication review by the company solely to ensure that publication would compromise no patent rights will not be considered a proprietary restriction for this purpose, so long as the review causes no more than a temporary delay in publication of the research results.

(4) However, the initial transfer of information from a business entity to researchers is not authorized under the "fundamental research" provision where the parties have agreed that the business entity may withhold from publication some or all of the information so provided.

(e) Research based elsewhere

Research conducted by scientists or engineers who are not working for any of the institutions described in paragraphs (b) through (d) of this section will be treated as corporate research, as described in paragraph (d) of this section. (See Supplement No. 1 to this part, Question D(8)).