# An Overview of the Historic and Regulatory Basis for the University Responsible Conduct of Research Program

**1772**

The Royal Society of London institutes peer review procedures for articles submitted to *Philosophical Transactions*.

**1830**

Charles Babbage (1791-1871) publishes *Reflections on the Decline of Science in England, And Some of Its Causes*, in which he argues that many of his colleagues were engaging in dishonest research practices

**1901**

The Massachusetts Supreme Court rules in McDonald v. Massachusetts General Hospital that a charitable hospital is not liable for the actions of its employees. This was an important case for human research ethics because courts that followed its reasoning shielded hospitals from legal liability from medical experiments performed by employees.

**1901**

U.S. Army physician Walter Reed (1851-1902) conducts medical experiments in Cuba in the early 1900s which show that *Aedes aegypti* mosquitos carry yellow fever. Believed to be 1st known use of consent forms, UVA graduate.

**1945**

The Allies prosecuted the German scientists for war crimes in the Nuremberg Trials. The Nuremberg Code provided the legal basis for prosecuting the scientists.

**1945**

The U.S. drops atomic bombs on Hiroshima and Nagasaki, Japan on August 6 and 9, killing an estimated 200,000 civilians. After the bombs were dropped, Oppenheimer and other scientists led the "atoms for peace" movement.

**1947**

The Nuremberg Code, the first international code of ethics for research on human subjects, is adopted.

**1963**

The Public Health Service publishes its *Guide to the Care and Use of Laboratory Animals*, which describes standards, practices, and procedures for conducting experiments with animals and protecting their welfare.

**1964**

The World Medical Association publishes Declaration at Helsinki, Ethical Principles for Research Involving Human Subjects.

**1966**

The U.S. Congress adopts the Animal Welfare Act, which protect animals used in research, excluding rodents and birds. The Act was adopted partly due to the fear of dogs being stolen to be used in research.

**1972**

The Tuskegee Syphilis Study, sponsored by the U.S. Department of Health, Education and Welfare, begins in 1932. The study ended in 1972.

**1974**

After conducting hearings on unethical research involving human subjects, including the Tuskegee study, Congress passes the National Research Act in 1973, which President Nixon signs in 1974. The Act authorizes federal agencies (e.g., the NIH and FDA) to develop human research regulations. The regulations require institutions to form Institutional Review Boards (IRBs) to review and oversee research with human subjects.

**1979**

The National Commission for the Protection of Human Subjects in Biomedical and Behavioral Research publishes *The Belmont Report: Principles of Ethical Research on Human Subjects*.

**1982**

1982 report of the Committee on the Integrity of Research appointed by the Association of American Universities

**1982**

1982 Association of American Medical Colleges (AAMC) report entitled *The Maintenance of High Ethical Standards in the Conduct of Research*.

**1989**

1989 Institution of Medicine (IOM) Report *The Responsible Conduct of Research in the Health Sciences*. The National Academy of Science (NAS) publishes On Being A Scientist

**1990**

Beginning in 1990, the NIH and the ADAMHA required "that a program in the principles of scientific integrity be an integral part of the proposed research training effort" of all National Research Service Award (NRSA T32 and T34) applications

**1992**

NAS publishes *Responsible Science: Ensuring the Integrity of the Research Process*.

**1995**

The NIH and NSF revise their conflict of interest policies. Updated again in 2005 and 2011.

**1995**

HHS's 1995 *Report of the Commission on Research Integrity*, although mainly concerned with the ongoing debate over the definition of research misconduct, included among its recommendations a strong endorsement of required RCR instruction. "*all individuals* who perform research in institutional settings are sensitized to the ethical issues inherent in research"

**1999**

The U.S. NIH and OHRP require all people conducting or overseeing human subjects research to have training in research ethics.

**2000**

December 2000, ORI announced its intention to adopt a *Policy on Instruction in the Responsible Conduct of Research. Subsequently suspended.*

**2002**

The NAS publishes *Integrity in Scientific Research*, which recommends that universities develop programs for education in responsible conduct of research (RCR) as well as policies and procedures to deal with research ethics.

**2000**

Government-wide *Federal Research Misconduct Policy*, issued in December 2000, stressed that federal agencies may "have ultimate oversight authority for federally funded research, but research institutions bear primary responsibility for *prevention* and detection of research misconduct and for the inquiry, investigation, and adjudication of research misconduct alleged to have occurred in association with their own institution."

**2010**

The World Conference on Research Integrity releases the Singapore Statement on Research Integrity, a code of ethics for scientists in various disciplines.

**2010**

The National Science Foundation (NSF) announces RCR training requirements for funded investigators, students, and trainees.

**2017**

17 federal agencies publish the Final Rule for revisions to the Common Rule

**2023**

*NSF expands its RCR requirement to include faculty and other senior personnel.*


David B. Resnik, J.D., Ph.D. and Florian W. Hofweber, Research Ethics Timeline, National Institute of Environmental Health Sciences: Research Ethics Timeline (accessed 2023).

Steneck NH, Bulger RE. The history, purpose, and future of instruction in the responsible conduct of research. Acad Med. 2007 Sep;82(9):829-34. doi: 10.1097/ACM.0b013e31812f7d4d. PMID: 17726385.