II. Ethical and Regulatory Framework

The current ethical and regulatory framework for the conduct of human subject research dates back to the 1940's Nuremberg Code. In this section we provide a brief summary of the major ethical and legal regulations that pertain to human subject research.

Nuremberg Code

Following the atrocities committed by the
Nazi regime during World War II, the Nuremberg Code was developed and outlined 10 key points to govern the ethical conduct of human subject research. The Nuremberg Military Tribunal convened to bring to trial, Nazi physicians who conducted inhumane medical experiments on prisoners without their consent. The Code provided many of the basic principles that still govern the ethical conduct of human subject research today. For example, it asserts that **"the voluntary consent of the human subject is absolutely essential" to conducting medical research**.

The Nuremberg Code further explains that this requirement for subjects includes:

- capacity of participants to consent
- voluntary participation
- freedom from coercion
- no penalty for withdrawal
- full knowledge of the risks and benefits of participation

The Nuremberg Code can be found at:
http://www.hhs.gov/ohrp/archive/nurcode.html

Declaration of Helsinki

In 1964, the World Medical Association adopted the Declaration of Helsinki as guidance for medical doctors undertaking biomedical research involving human subjects. The
Declaration addresses international research ethics and defines rules for "research combined with clinical care" and "non-therapeutic research." The Declaration of Helslinki has undergone numerous revisions, the most recent occurring in 2008.

The Declaration of Helsinki states:

- Research involving medical interventions with humans should be based on results from laboratory and animal experimentation
- Human research protocols should be reviewed by an independent committee prior to initiation
- Informed consent of research participants is necessary
- Research should be conducted by medically/scientifically qualified individuals
- Risks should not exceed benefits

The Declaration of Helsinki can be found at:
http://www.wma.net/en/30publications/10policies/b3/index.html.

Belmont Report

In 1978, the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research was established by the U.S. Congress. The Commission was established in response to public outrage over the Tuskegee syphilis study conducted by the U.S. Public Health service in the 1940's. The research involved using disadvantaged, rural black men to study the untreated course of a disease that is by no means confined to that population. These subjects were deprived of demonstrably effective treatment in order not to interrupt the project, long after such treatment became generally available. As a result, the Commission produced "**The Belmont Report: Ethical Principles and Guidelines for the Protection of Human Subjects of Research.**"

The Belmont Report identifies three basic ethical principles for conducting research involving human subjects: **respect for persons, beneficence, and justice**. These three principles provide the framework for the regulations governing human subject research in the U.S. These terms have specific meaning when applied to human subject research as noted below:

1) Respect for persons

Respect for persons requires that individuals be treated as autonomous beings, that is, as having the capacity to make their own choices. It also provides that persons with diminished autonomy be protected. In other words, a person must be capable of making an informed decision whether or not to participate in a human subject

research project and safeguards must be in place for those who cannot make an informed decision on their own. Gaining the informed consent of human research subjects is one of the most fundamental and important principles of ethical research and is derived from the principle of **respect for persons**.

2) Beneficence

Beneficence is demonstrated when subjects are protected from harm, specifically, by maximizing possible benefits and minimizing possible harms from their participation in a research study. The "risk-to -benefit" ratio for participants in a study must be acceptable to the IREC in order for the research to be approved.

3) Justice

Justice refers to equitable selection of subjects for a research study without undue burden of risks or exclusion from likely benefits of a particular population. For example, exclusive enrollment of a subset of the population for a condition that is not unique to that subset is not just. Additionally, enrollment of a population unlikely to benefit from the results of the research is also unjust.

The Belmont report can be found at: http://www.hhs.gov/ohrp/policy/belmont.html.

U.S. Federal Policy for the Protection of Human Subjects (Common Rule)

In 1991, the U.S. Department of Health and Human Services codified into regulation the Policy for the Protection of Human Subjects (Title 45, Part 46). These regulations, called the "Common Rule" (Subpart A), provide the basic foundation for the human subject protection program in use today. This Federal Policy has been codified by most federal agencies that conduct, support, or otherwise regulate human subjects research, hence the title "Common Rule." The Policy in Subparts B, C, D, provides additional protections to what are considered "vulnerable populations".

Vulnerable populations requiring special protections when involved in human subject research are:

- pregnant women, fetuses, and neonates (Subpart B),
- prisoners (Subpart C), and
- children (Subpart D).

The Code of Federal Regulations (Title 45 Part 46) can be found at: http://www.hhs.gov/ohrp/humansubjects/guidance/45cfr46.html. These regulations apply to most research conducted by Nazarbayev University students, staff, and faculty.