NISHTAR MEDICAL UNIVERSITY, MULTAN

Institutional Review Board Policy

Office Of Research, Innovation & Commercialization

Institutional Review Board

1. **Background:**

Nishtar Medical University is a located in central Pakistan and providing health care facilities to a population from Southern Punjab, Upper Sindh and adjoining areas of Baluchistan. This Institute provides tertiary level health care, graduate and post graduate medical education, nursing and paramedical training programmes. Medical Research Training is an important requirement for graduate and Post Graduate Medical education. In addition to this faculty members has to present published Original Research Articles for their development and carrier promotions.

The establishment of Institutions Review Board (IRB) is necessary to approve monitor and Review Biochemical and Behavioural Research involving humans, primarily with an aim to ensure quality research, ensuring dignity, rights, safety, confidentially and relevance of the planed research activities. All the researchers (from NMU or other institutes) who wish to conduct a research at NMU, must comply with the IRB guidelines or research related policies of NMU.

The management of NMU had taken the decision to establish IRB.

1. Mandate:

IRB has assumed the mandate to support and provide guidance for ensuring quality research work within Nishtar Medical University/ Hospital. It will be a focal point for ethics in all research activities, and will monitor going research activities and develop an ethical research culture in the institute.

2. Composition and Functioning

1. The IRB will have at least five members.
2. One form clinical science, one from basic sciences, one from nursing section, one from community members, and one legal member.
3. The member will have enough experience, expertise, and diversity to make an informed decision on whether the research is ethical, informed consent is sufficient and appropriate safeguards have been put in place.
4. The IRB will have representation of both sexes.
5. IRB members will not vote on their own projects.
6. Each member will be selected for three year.
7. The IRB will invite relevant consultants in their discussions to meet requirements for expertise or diversity, but only actual IRB members will vote.
8. The chairman of IRB will nominate a secretary of IRB

In order to vote on a proposal more than half of member of the board must be present and there must be a non-scientist member present. There are exceptions for expedited

review where only the chair of the committee will review research composition of IRB in Nishtar Medical University/Hospital.

3. Criteria for IRB approval of research

The Institutional Review Board would use the internationally established rules and guiding principles, based on Belmont Report, Nuremberg Code, Declaration of Helsinki, CIOMS, and IOMS for ethics, as Pakistan is also signatory of most of these agreements.
IRB will, in addition develop, additional guiding rules in the light of socio-cultural and religious values on research.

The IRB will adherence to the following principles that;

a) Risk to subjects is minimal.
b) Risks to subjects are reasonable in relation to anticipated benefits.
c) Selection of subjects is equitable.
d) Informed consent is appropriately documented for each prospective subject to ensure;
    a) Safety of subjects
    b) Protecting privacy of subjects
    c) Maintaining confidentiality of data
e) Protecting the rights and welfare of vulnerable group (children, prisoners, pregnant women, mentally disabled persons or economically or educationally disadvantaged persons).
f) Research is scientific
g) Local social and cultural values are honoured.

4. Submission of Research Proposal

a. Research Proposal (hard and soft copy) will be submitted to IRB secretariat. In case of distant researcher it could be submitted through e-mail followed by hard and soft copy, but the signature of supervisor is mandatory. A research proposal may be directly submitted to IRB, when the researcher is working at NMU or to the VC office, when the researcher is from another institute.
b. In case the researcher is from another institute, the Vice Chancellor shall direct such research proposals to IRB, which shall review the research proposals based on its mandate and research ethics principles. The decision of IRB regarding permission/decline/amendment for commencing data collection shall be conveyed to the Vice Chancellor office for further action. Memorandum of Understanding (MoU) for collaboration on research and Ethical approval from the parent institute or organization shall be mandatory in such cases.

5. Documents required for submission of Fresh Research Proposal

i. Proposal cover sheet (Annex-I)

ii. Research participant consent form (Annex-II)
iii. Research plan (Annex-III)
iv. Budget (Annex-IV)

6. Levels of Review

a) Preliminary Review

This function will be carried out by the secretariat staff including secretary to check the basic format as indicated in check list for specific review category and to assess the feasibility, rationally and suitability of research proposal.

b) Primary Review

i. Exempt from further Review (No Risk Group)

- Time period (1-2 week)
- Reviewer: Secretary IRB
- Approving authority Chairman IRB initially, final approval in IRB meeting.

ii. Expedited Review

- Time period (1-2 weeks)
- Reviewer: Secretary IRB and 1-2 members designated by Chairman IRB and subject specialist where necessary.
- Approving Authority: Chairman IRB initially, final approval in IRB meeting.

c) Full board review

- Time period (2-8 weeks)
- Reviewer: Subject specialist all members of IRB.
- Approving authority: Consensus of IRB committee members.

7. Approval of Research Proposal

Decision on Research Proposal under different categories will be communicated to the researchers in the given time frame one week for "Exempted Review". Two weeks for "Expedited Review" and 2-8 weeks for "Full Board Review" after the minutes of the meeting are signed by Chairperson/ Co-chairperson. Ethical approval letter shall be signed by the secretary IRB and he/she shall be responsible for all the record keeping.

8. Appeal Process

The researcher/PI have the right to request for revision of decision, providing fresh defence or incorporating necessary changes. The IRB secretariat does not have the binding to accept such modifications as final, till approved by the board.

9. **Cancellation of Approval**
   The board will have the right to cancel the approval of any proposal, if fresh information or unsatisfactory implementation of the study design is reported. The liability of any loss or indemnity due of cancellation will not be reflected to the board.

10. **Monitoring of Research Follow up**
    The IRB will develop a normal course of routinely monitoring of all approved proposals to ensure quality of conduct and adherence to the laid down conditions for periodic reporting of project to PI, The PI frame quarterly or six monthly. Any deviations observed will have to be reviewed and decided in regular meetings.

11. **Follow up to report change of protocol/ occurrence of new events.**

    The PI has the responsibility of informing the IRB about any change or occurrence of new events during the conduct of research. The Board might decide to review and revise the decision in the light of new evidence.

    Annex-1;Guide lines for researcher for making the research proposal.

    World Medical Association's: Declaration of Helsinki available at http:/www.wma.net/en/30publications/10policies/b3/index.html

    For the background perspective on the principles of research ethics the researcher is required to go through the following.

    The Belmont report available at
    www.hhs.gov/ohrp/humansubjects/guidance/belmonthtm,
    45CFR 46 of the cod Federal code regulations
    Research integrity: www.hhs.gov/ohrp/irb/irb chapter 5. htm#h1
    A brief of these is given below as 1A and 1B

1. A

HISTORICAL, ETHICAL AND LEGAL FOUNDATION FOR THE NIH'S POLICIES AND PROCEFURES

Concerns about the ethics of the practice of medicine have a long history but, until the middle of this century, they were mostly centred around the practice of therapeutic medicine, not research medicine. In 1946, 23 Nazi physicians went on trial on Nuremberg for crimes committed against prisoners of War. These crimes included exposure of humans to extremes of temperature, performance of mutilating surgery, and deliberate infection with variety lethal pathogens. During the trial, fundamental ethical standards for the conduct of research involving humans were codified into the Nuremberg code, which set forth ten condition that must be met to justify research

involving human subjects. The two most important conditions were the need for voluntary informed consent of subjects and a scientifically valid research design that could produce fruitful results for the good of society.

The Nuremberg code was reflected in the declaration of human rights and accepted in principle by each of the 51 original signatory nations of the charger of the United Nations. At that time, most countries, including the United States, had no mechanism for implementing the provision of the code. The clinical centre of the NIH produced the first U.S. Federal policy for the protection of human subjects in 1953. This policy was consistent with the Nuremberg code in that it gave special emphasis to the protection of healthy, adult research volunteers who has little to gain directly from participation in research. The clinical centre's policy was innovative in providing a mechanism for prospective review of research by individuals who had no direct involvement of intellectual investment in the research. This was the beginning of the research review mechanism the Institutional Review Board that is now fundamental to the current system of human subject protections throughout the United States.

In the 1960s Federal funding of clinical research expanded, with a concomitant increase in the number of individuals participating as subjects. Interest in the rights of research subjects grow not only because of a general increase in America's attention to human's tights, but also because of a number of highly publicized clinical research abuses. For example, there were newspaper reports of investigators in New York injecting elderly, indigent people with live cancer cells, without their consent, in order to learn more about the human immune system. Although no apparent harm to subjects occurred, the investigators were cited for fraud, deceit and unprofessional conduct. In 1966, Henry Beecher, highly respected physician investigators from Harvard University, shocked the medical community when he reported that unethical or questionably ethical practices were common the conduct of human subjects research in many of America's premier research institutions.

The World Health Organization recognized a need for guidelines that were broader in scope than the Nuremberg Code and The Declaration of Helsinki: Recommendations Guiding Medical Doctors in Biomedical Research involving Human subjects was adopted by the World Medical Society in 1964. These guidelines have been revised a number of times, most recently in 2000, and currently are in use throughout the world.

The NIH, under the directorship of Dr. James Shannon, promoted the development of the first public Health Services Policy on the protection fo Human Subjects, issued in 1966. At first, the policy applied to extramural activities only, but it was later expanded to cover all human subjects research conducted or supported by the Department of Health, Education and Welfare (HEW). It required prospective review of human subjects research, taking into account the rights and welfare of the subjects involved the appropriateness of the methods used to secure informed consent, and the risks and potential benefits of the research. The elements of informed consent included the requirement that consent be documented and singed by subjects or their representatives.

Several events in the early 1970s led to renewed and intense efforts in the United States to protect human subject. Most notable was the revelation that, since the 1930s approximately four hundred black men in Tuskegee, Alabama, had been involved

without their knowledge, in the lengthy study (the Tuskegee Syphilis Study) on the natural history of syphilis. These men were systematically denied penicillin even after its introduction as the standard treatment for the disease. The Senate Committee on Labor and Human Resources held hearings on this study and on other alleged health care abuses of prisoners and children. The outcome of these hearings were (1) enactment of the National Research Act of 1974, (2) formation of the National Commission for the Protection of Human Subjects of Biomedical and Behavioural Research and (3) imposition of a moratorium on research conducted or supported by HEW involving live human fetuses until the National Commission could study and make recommendations on it.

The National Commission for Protection of Human Subjects of Biomedical and Behavioural Research, which functioned from 1974-1978 evaluated the existing HEW system, recommended improvements to the Secretary, HEW, and issued reports on research involving pregnant women, live human fetuses, prisoners children, the mentally disabled and use of psychosurgery. It also issued the Belmont Report: Ethical Principal and Guidelines for the Protection of Human Subjects of Research. A major advancement in the development of public policy, the Belmont Report provided guidance for distinguishing therapeutic medicine from subjects, and illustrated how the ethical principles should be applied to the conduct of human subjects research.

In 1979, HEW began the process of revising the 1974 regulations but it was into until 1981 that final Department (renamed the Department of Health and Human Services – DHHS) approval was given to Title 45, Code of Federal Regulations, Part 46, Protection of Human Subjects (45 CFR 46). Initially these regulations were applicable only when research was conducted or supported by DHHS, but in June 1991, 45 CFR Part 46 was revised and became the basic policy that now governs all federally supported research.

1. B

THE ETHICAL PRINCIPLES OF THE BELMONT REPORT

The Belmont Report—Ethical Principles and Guidelines for the Protection of Human Subjects, which was published in 1979, provides the philosophical underpinnings for the current laws governing human subjects research. Unlike the Nuremberg Code and the Helsinki Deceleration, which consist of “guidance” or “rules”, The Belmont Report establishes three fundamental ethical principles that are relevant to all research involving human subjects: Respect for Persons, Beneficence, and Justice. Although other important principles sometimes apply to research, these three provide a comprehensive framework for ethical decision-making in research involving human subjects.

1. The principal of Respect for Persons acknowledges the dignity and autonomy of individuals, and requires that people with diminished autonomy be provided special protection. This principle requires that subjects give informed consent to participation in research. Because of their potential vulnerability, certain subject populations are provided with additional protections. These include live human fetuses, children, prisoners, the mentally disabled, and people with severe illnesses.

2. The principle of Beneficence requires us to protect individuals by maximizing anticipated benefits and minimizing possible harms. Therefore, it is necessary to examine carefully the design of the study and its risks and benefits including, in some cases, identifying alternative ways of obtaining the benefits sought form the research. Research risks must always be justified by the expected benefits of research.
3. The principle of Justice requires that we treat subjects fairly. For example, subjects should be carefully and equitably chosen to insure that certain individuals or classes of individuals—such as prisoners, elderly people, or financially impoverished people – are not systematically selected or excluded, unless there are scientifically or ethically valid reasons for doing so. Also, unless there is careful justification for an exception, research should not involve persons from groups that are unlikely to benefit from subsequent applications of the research.

   Each of these principles carries strong moral force, and difficult ethical dilemmas arise when they conflict. A careful and thoughtful application of the principles of The Belmont Report will not always achieve clear resolution of ethical problems. However, it is important to understand and apply the principles, because doing so helps to assure that people who agree to be experimental subjects will be treated in a respectful and ethical manner.

Annex-2: <u>NMU IRB Research Proposal For Fresh Application</u>

Proposal Cover Sheet

Please complete the application form and attach the documents as detailed in section:

A. To be exempted from further review. (see Annex 5a)
B. For expedited review. (see Annex 5b)
C. Full review (see Annex 5c)

Incomplete application forms will not be entertained.

1. Title of research: _____
2. Principle Investigator: _____
   Designation: _____
   Department: _____
   Additional Investigators: _____
   Designation: _____
   Department: _____
   Organisation: _____
   Review category:

a)	☐	Exempt by category	☐	Category no.
b)	☐	Expedited by category	☐	Category no.
c)	☐	Full Board review	☐	Category no.

3a. Anticipated dat4e on which the research will begin.
3b. If the projects is funded please name the funding sources

Date…….

Signature……
Principal Investigator

Date…….

Signature……
Co- Investigator

Date…….

Signature……
Head of Institute

Annex-3; <u>NMU Institutional Review Board</u>

RESEARCH PLAN

1. **PROJECT TITLE:**
2. **SPECIFIC AIMS OF THE STUDY:**
3. **BACKGROUND AND SIGNIFICANCE OF THE STUDY:**
   (Limit up to 4 paragraph)
4. **Project involves the use of: (Check relevant boxes)**

I. ☐ **Experimental drugs (s)**
II. ☐ **Radioactive agents**
III. ☐ **Non-therapeutic research**
IV. ☐ **Non-approved use or non-approved dose for approved**
V. ☐ **Experimental surgical procedures**
VI. ☐ **Fetal research**
VII. ☐ **Behavioural research**
VIII. ☐ **Stem cell research/somatic cell nuclear transfer (cloning)**
IX. ☐ **Other (please specify)**

5. **RESEARCH DESIGN AND METHOD:**

   a. Research Design
   b. Hypotheses or Research Questions.
   c. Definition of variables.
   d. Describe all the questionnaires and /or survey instruments you will use as well as the equipment with which the subject will interact. Please provide a brief description of **<u>all</u>** questionnaires/survey instruments (include reliability/validity information, a copy of drug brochure) and equipment, citing the source/manufacturer where applicable.
      Attach copies of **<u>each</u>** questionnaire/survey instrument as an appendix.
   e. Data collection procedures:
   f. Data analysis procedure:

6. **HUMAN SUBJECTS**

   a. **Describe the subjects:** Include the total number to be recruited and inclusion/exclusion criteria. If the study includes members of a vulnerable population or targets a particular religious, recial, ethnic or sexual-orientation population, then state a justification for the choice of subject population.
   b. Describe the recruitment process. Attach a sample of any advertisement, brochure, or flyer you will use an appendix to this application.
   c. What steps will you take to assure that participant is voluntary?
   d. What will the subjects do and/or how will you interact with the subjects? Include the estimated duration of subject participation.
   e. List any cost incurred by subjects.
   f. List the location(s) where data collection will be conducted.

g. List ALL foreseeable risk to participants, including. If you are asking questions related to mental or physical health, include the possibility of subjects experiencing such emotions as anxiety or sadness. If the above does not apply, state: “Risks are minimal”, which means the risk are no greater than experienced in every day life.

h. If applicable, include a plan for **Minimization of Risks to Participants** that includes referral to a mental health professional, if the participant requires further emotional support.

7. STATEMENT OF RISK/BENEFIT RATIO

I. Are the potential risks in this study outweighed by the potential benefits?
   a. Describe possible adverse outcomes/risks possible that may affect the subjects?
   b. What is provision for managing these adverse outcomes?
   c. Who will pay for them?

II. In cases where therapeutic needs of the research subjects are identified during the course of the study:
   a. What is the provision for managing these needs of the subjects?
   b. Who will pay for them?

III. Laboratory and Radiology studies:
   a. In case research subjects are also patients, will any additional study related tests be performed which are not routinely required as part of the work up for the patient?
   b. Who will pay for these additional tests?

8. LOCATION OF STUDY

a. NMU Department _____ :Outpatient Unit _____ Inpatient Unit_____
b. Outside NMU (please specify the location _____

IV. What are actual potential benefits if any, to be obtained?
   a. By participants
   b. By society as a result of this study?
   c. Please specify benefit of the study to the finding agency or sponsors
   d. Please specify benefit of the study to institution where study is being conducted.

9. PROTECTIONS OF CONDIFDENTIALITY

a. Will all data will be coded using number or pseudonyms?
   Yes _____ No._____
b. Will all data collection tools be free of any names or identifiers such as student ID numbers?
   Yes _____ No._____

c. Will all data will be stored in a locked file cabinet or password protected computer file?
   Yes _____ No. _____
d. Will only the researcher and his/her advisor (if possible) have access to the data?
   Yes _____ No. _____
e. Will all data be kept a minimum of 5 years before being destroyed?
   Yes _____ No. _____

If you answered **NO,** to any item in part 9, explain below.

10. **Please point out any ETHICAL ISSUES involve in the study.**
11. **Any other information relevant to the study in context to Pakistan?**
12. **Has this duty conducted elsewhere earlier?**

Annex-4: <u>Research Participant Consent From for (Title of Research Study) Registered at Nishtar Medical University, Hospital Multan</u>

Project No: _____ Date Received _____

Project Title: _____

Principal Investigator: _____

Position: _____

Organization: _____

Department: _____

Contact No:_____ E-mail Address: _____

Co-Investigator: _____

Position: _____

Organization:_____

Department: _____

Contact No:_____ E-mail Address: _____

Consent form must be clearly written in easy local language where the research is to be conducted. All the technical terms should be fully explained in simple local language and copy should also be provided for the same in English.
Consent form (oral or written) should include:

1. Clear explanation of the purpose of the research.
2. Description of the procedures to be carried out with each subject group in chronological order.
3. Time each participant will devote to the study.
4. Potential direct benefits to the subject from participating in the research.
5. Any risks, discomforts, or inconveniences (social, physical or psychological) that subject may expect from of compensation for participating in the research.
6. Any forms of compensation for participation in the research.
7. Treatment in case of adverse effects.
8. A statement that participation in TOTALLY VOLUNTARY and that the subject may WITHDRAW AT ANY TIME without prejudice or penalty.
9. Subjects having access to the data after the study is completed.
10. How confidentially will be maintained.
11. Audio or video taping of subjects is done: A statement that the subjects will be audio/video taped and who will have access to the tapes.
12. How the tapes will be stored and whether they will be shared with others.
13. A statement that the PI will be reviewing the subject's medical/academic/other records.
14. If applicable, describe how the results of the study will be included in the subjects permanent medical/academic/other records.

15. If participant decides to discontinue his or her participation form the study at any level what potential consequences may result (list) or investigator decides to terminate the participant from the study explain conditions.
16. If the participant is not satisfied by the interviewer, how could he/she access the Principal Investigator.

AUTHORIZATION:

I have read and understood this form and consent to the research is described to me. I volunteer to participate in this research study. I understand that I will receive a copy of this consent from for my records. I voluntarily choose to participate but I understand that my consent does not take away any legal rights in the case of negligence or other legal fault or any one who is involved in this study. I further understand that nothing in this consent from is intended to replace my applicable, federal state or local laws.

Signature of participant _____ Dated: _____

Name of participant _____

Signature of principal Investigator _____ Dated: _____

Signature of person obtaining consent _____ Dated: _____

Annex-5a; <u>Section A: Exempt From Further Detailed Review</u>

1. Complete and attach the cover sheet (Annex 2) with necessary signatures.
2. Indicate on the cover sheet by number into which of the six exempt categories listed in A-F (Annex 5a.I) below you believe best apply to your research.
3. Attach clear description of the proposed research. Be sure to include the following.
    a. Who are the subjects and how will you recruit them?
    b. What will subject do or how will you interact with the subjects?
    c. What steps will you take to ensure that participation is voluntary?
    d. Attach copies of questionnaires or other materials that will be used (such as interview questions or topics, experimental stimuli or other instruments).

    The IRB chair reviews each application for initial review submitted to the IRB. The chair determines qualify for **exempt from future review** after review of supplementary documentation (informed consent forms, procedures, data collection instruments etc) the secretary will issue an **exempt from review** letter after approval from chair.

Annex 5a.1; <u>Section A: Exempt From Further Detailed Review</u>

Categories

A. Research conducted in established or commonly accepted educational settings, involving normal educational practices, such as (i) research on regular and special education institutional strategies, or (ii) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.

B. Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behaviour, unless: (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of human subjects responses outside the research could reasonably place the subjects at risk of criminal or civil liability, or be damaging to the subjects financial standing, employability, or reputation.

C. Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedure, or observation of public behaviour that is not exempt, it: (i) the human subjects are elected or appointed public official or candidates for public office; or (ii) federal statue(s) require (s) without exception that the confidentiality of the personally identifiable information will be maintained throughout the research and thereafter.

D. Research, involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available, or if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects.

E. Research and demonstration projects, which are conducted by or subject to the approval of department or agency heads, and which are designed to study, evaluate, or otherwise examine: (i) public benefit or service programs; (ii) procedures for obtaining benefits or services under those programmes; (iii) possible changes in or alternatives to those programs or procedures; or (iv) possible changes in method or levels of payment for benefits or services under those programmes.

F. Taste and food quality evaluation and consumer acceptance studies, (i) If wholesome foods without additives are consumed, or (ii) if a food consumed that contains a food ingredient at or below the level and for a use found to be safe, by the Food and Drug Administration, or approved by the Environmental Protection Agency, or the Food Safety and Inspection Service of the Department of Agriculture.

Annex 5b; <u>Section B: Expedited Review</u>

1. Complete and attach the cover sheet (Annex 2) with necessary signatures.
2. Indicate on the cover sheet by number into which of the nine categories a-j **(Annex 5b.1-)**of expedited review, you believe this research best falls.
3. Attach a clear description of the proposed research, using numbered pages. Be sure to address each of the following issues, with particular attention to potential risks to subjects and what will be done to minimize those risks.
   i. Background and purpose of the research.
   ii. Who are the subjects and how will you recruit them?
   iii. What steps will you take to assure that participation is voluntary?
   iv. What will the subjects do or how will you interact with the subjects?
   v. Describe all the equipment you will use or with which the subject will interact.
   vi. Note the estimated duration of subject participation.
   vii. Will the subjects incur any expenses? If so, please explain.
   viii. Name facilities other than NMU where research will be conducted.
   ix. Attach copies of questionnaires or other materials that will be used such as interview questions or topics, experimental stimuli or other instruments.
   x. List the foreseeable risk (s) to subjects, describe how you will minimize each risk, and why each risk is justifiable in light of benefits (either directly to the subject or indirectly or generalized knowledge) to be gained by the research.
   xi. Describe the procedure you will follow to obtain informed consent. Attach a copy of the consent forms in local language and in English. (Informed consent is a process, which verifies that the process has occurred and therefore the form will be examined).

Annex 5b.1;<u>Section B Expedited Review</u>

Categories

A. Clinical studies of drug and medical devices only when condition (a) or (b) is met. (a) Research on drugs for which an investigational new drug application is not required. (Note: Research on marketed drugs that significantly increase the risks or eligible for expedited review.). (b) Research on medical devices for which (i) an investigational device exemption application is not required; or (ii) the medical device is cleared/approved for marketing and the medical device is being use in accordance with its cleared/approved labelling.

B. Collection of blood samples by finger stick, heel stick, ear stick, or venipuncture as follows: (a) from healthy, non-pregnantadults who weigh at least 110 pounds. For these subjects, the amounts drawn may not exceed 550 ml in an 8 week period and collection may not occur more frequently that 2 times per week.

C. Prospective collection of biological specimens for research purposes by non-invasive means. Examples: (a) hair and nail clippings in a no disfiguring manner; (b) deciduous teeth at time of exfoliation or if routine patients care indicates a need for extraction; (c) permanent teeth if routine patient care indicates a need for extraction; (d) excreta and external secretions (including sweat); (e) uncannulated saliva collected either in an unstimulated fashion or stimulated by chewing gum base or wax or by applying a dilute citric solution to the time of rupture of the membrane prior to or during labor; (h) supra- and sub gingival dental plaque and calculus, provided the collection procedure is not more invasive than routine prophylactic scaling of the teeth and the process is accomplished in accordance with accepted prophylactic techniques; (i)mucosal and skin cells collected by buccal scraping or swab, skin swab, or mouth washings; (j) sputum collected after saline mist nebulization.

D. Collection of data through noninvasive procedure (not involving general anaesthesia or sedation) routinely employed in clinical practice, excluding procedure involving x-rays or microwaves. Where medical devices are employed, they must be cleared/ approved for marketing. (studies intended to evaluate the safety and effectiveness of the medical device are not generally eligible for expedited review, including studies of cleared medical devices for new indications.) Examples: (a) physical sensors that are applied either to the surface of the body or at a distance and do not involve input of significant amounts of energy into the subject or an invasion of the subject's privacy; (b) weighing or testing sensory acuity; (c) magnetic resonance imaging; (d) electrocardiography, electroencephalography, thermography, detection of naturally occurring radioactivity, electroretinography, ultrasound, diagnostic infrared imaging, doppler blood flow, and echocardiography; (e) moderate exercise, muscular strength testing, body composition assessment, and flexibility testing where appropriate given the age, weight and health of the individual.

E. Research involving materials (data, documents, records or specimens) that have been collected, or will be collected solely for non research purpose (such as medical treatment or diagnosis).

F. Collection of data from voice, video, digital or image recordings made for research purposes.

G. Research on individual or group characteristics or behaviour (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices and social behaviour) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation or quality assurance methodologies.

H. Continuing review of research previously approved by the convened IRB as follows: (a) where (i) the research is permanently closed to the enrolment of new subjects; (ii) all subjects have completed all research-related interventions; and (iii) the research remains active only for long-term follow-up of subjects; or (b) where no subjects have been enrolled and no additional risks have been identified; or (c) where the remaining research activities are limited to data analysis.

I. Continuing review of research, not conducted under an investigational new drug application or investigational device exemption apply but the IRB has determined and documented at a convened meeting that the research involves no greater than minimal risk and no additional risks have been identified.

J. For both initial and continuing reviews conducted under an expedited review procedures, the IRB chair will document the specific category justifying the expedited review and the action taken by the IRNB chair, including any required findings.

Annex- 5c; <u>Section C: Full Review (Proposed Research Not Eligible For Expedited Review)</u>

1. Complete and attach the cover sheet (Annex 2) with necessary signatures.
2. Attach a clear description of the proposed research. Be sure to address each of the following issues, with particular attention to potential risks to subjects and what will be done to minimize those risks.

a. Background and purpose of the research.
b. Who are the subjects and how will you recruit them? Specifically, note whether subjects belong to a protected group as defined in **Annex-5c.1**
c. What steps will you take to assure that participation is voluntary?
d. What will the subjects do or how will you interact with subjects (e.g. describe any bodily invasive procedures)?
e. Describe all the equipment you will use or with which the subject will interact.
f. Note the estimated duration of subject participation.
g. Will the subjects incur any expenses? If so, please explain.
h. Name the facilities other than NMU where research will be conducted and provide copies of any letters, please explain.
i. Attach copies of questionnaires or other materials that will be used (such as interview questions of topics, experimental stimuli or other instruments).
j. List the foreseeable risk(s) to subjects, describe how you will minimize each risk, and why each risk is justifiable in light of benefits (either directly to the subject or indirectly to generalized knowledge) to be gained by the research.
k. Describe the procedure you will follow to obtain informed consent, and/or assent, if applicable. Attach a copy of the consent and/or assent from(s). (Consent forms verifies that the process has occurred and therefore, the forms will be examined in detail).

Annex 5c.1; <u>Section C: Full Review Board</u>

Categories

A. In order to approve research project the IRB shall determine that all of the following requirements are satisfied:

(1) Risks to subject are minimized:

(i) By using procedure which are consistent with sound research design and which do not unnecessarily expose subjects to risk, and

(ii) Whenever appropriate, by using procedure already being performed on the subject for diagnostic or treatment purpose.

(2) Risks to subject are reasonable in relation to anticipated benefits, if any, to subjects, and the important of the knowledge that may reasonably be expected to result. In evaluating risks and benefits, the IRB should consider only those risks and benefits that may result from the research (as distinguished from risks and benefits of therapies subjects would receive even if not participating in the research). The IRB should not consider possible long-range effects of applying knowledge gained in the research (for example, the possible effects of the research on public policy) as among those research risks that fall within the purview of its responsibility.

(3) Selection of subjects is equitable. In making this assessment the IRB should take into account the purposes of the research and the setting in which the research will be conducted and should be particularly, such as children, prisoners, pregnant women, mentally disabled persons, or economically or educationally disadvantage persons.

(4) Informed consent will be sought from each prospective subject or the subjects <u>legally authorized representative</u>, in accordance with, and to the extent required.

(5) Informed consent will be appropriately documented, in accordance with, and to the extent required.

(6) When appropriate, the research plan makes adequate provision for monitoring the data collected to ensure the safety of subjects.

(7) When appropriate, there are appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of data.

(B) When some or all the subjects are likely to be vulnerable to coercion or undue influence, such as children, prisoners, pregnant women, mentally disabled persons, or economically or educationally disadvantaged persons, additional safeguards have been included in the study to protect the rights and welfare of these subjects.