CHRISTIAN MEDICAL COLLEGE

Standard Operating Procedures for the Office of Research Version 3.0 (April 2025)

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VELLORE

Christian Medical College Vellore

Christian Medical College Vellore
Tamil Nadu India

Institutional Review Board
(Ethics and Research Committees)

Policies and Standard Operating Procedures

2025

Version Control Page

Document Title: Standard Operating Procedures for the Office of Research

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1.0	October 2007	-	Initial document creation	Senatus of CMC - 2010
2.0	April 2016	-	Major updates to align with new regulatory guidelines	Addl. VP Research
3.0	01st April 2025	Mr. Abel & Ms. Carolyne	Major updates to align with new ICMR guidelines	Dr. Jacob John, Addl. VP Research

General information:

The policies and standard operating procedures of the Institutional Review Board (IRB) of the Christian Medical College (CMC) Vellore were revised in April 2016 to include updated information and to ensure the CMC's IRB complies with Indian regulatory norms and the institution's guiding principles. The revised document reflects the changes made and approved by the Senatus of CMC in October 2010.

This document is organized into four sections:

Section 1 describes the general principles and regulations that guide biomedical research in India.

Section 2 details the policies and procedures of the Institutional Review Boards of CMC Vellore.

Section 3 outlines the policies for specific situations based on the ICMR Ethical Guidelines for Biomedical Research on Human Participants (2006) and Schedule Y of the Drugs and Cosmetics Act (1940), along with the associated Rules (1945) as amended up to June 30, 2005. It reflects further revisions made in December 2024, which are in line with the ICMR Ethical Guidelines for Biomedical and Health Research involving Human Participants (2017) and The New Drugs and Clinical Trials Rules (2019). Additionally, any further revisions published in the Gazette of India will be applicable as notified by the Government of India. This section also incorporates policies adopted by CMC Vellore that adhere to other international guidelines or are established through administrative approvals specific to the institution.

Section 4 describes the various committees present under the Office of Research and their functions.

Section 5 provides forms to be used for IRB submissions for different study designs and for providing interim reports, final reports, adverse events reports and other relevant forms. Where available, these forms conform to national and international guidelines governing specific research designs.

This document will be available for download from the CMC intranet. In addition, relevant guidelines and policy documents will also be available on the Research Website.

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Acronym	Full Form
BARC	Bhabha Atomic Research Centre
CDSCO	Central Drugs Standard Control Organization
CIOMS	Council for International Organizations of Medical Sciences
CMC	Christian Medical College
COI	Conflict of Interest
CONSORT	Consolidated Standards of Reporting Trials
CPCSEA	Committee for the Purpose of Control and Supervision of Experiments on Animals
CRISPR	Clustered Regularly Interspaced Short Palindromic Repeats
CTA	Clinical Trial Agreement
CTRI	Clinical Trials Registry - India
DBT	Department of Biotechnology
DCGI	Drugs Controller General of India
DHR	Department of Health Research
DSMB	Data Safety Monitoring Board
DST	Department of Science and Technology
EC	Ethics Committee
FDA	Food and Drug Administration
FLUID	Fund for the Improvement of Research Design
GCP	Good Clinical Practice
GLP	Good Laboratory Practice
GMP	Good Manufacturing Practice
HMSC	Health Ministry's Screening Committee
IAEC	Institutional Animal Ethics Committee
IBSC	Institutional Bio-Safety Committee
ICF	Informed Consent Form
ICH	International Council for Harmonisation
ICMJE	International Committee of Medical Journal Editors
ICMR	Indian Council of Medical Research
IEC	Institutional Ethics Committee
IPR	Intellectual Property Rights
IRB	Institutional Review Board
MTP	Medical Termination of Pregnancy
NABL	National Accreditation Board for Testing and Calibration Laboratories
NIH	National Institutes of Health
ORI	Office of Research Integrity

Acronym	Full Form
PI	Principal Investigator
RC	Research Committee
RCGM	Review Committee on Genetic Manipulation
SAE	Serious Adverse Event
SOP	Standard Operating Procedure
STARD	Standards for Reporting Diagnostic Accuracy Studies
STROBE	Strengthening the Reporting of Observational Studies in Epidemiology
UNESCO	United Nations Educational, Scientific and Cultural Organization
WHO	World Health Organization

SECTION 1

1 Principles And Regulations Governing Contemporary Biomedical Research In India

1.1 Background and history

The ethical principles that guide contemporary research in human participants stem from guidance from various organizations through the years. The earliest such attempt was the ***Nuremberg Code*****,** formulated in 1947 in the wake of Nazi atrocities of experiments with prisoners during World War II. This code clearly delineated the need for, and parameters of, informed consent in research, the need for a favourable risk-benefit ratio and the need for qualified research staff and appropriate research designs. This was backed by the ***Universal Declaration of Human Rights*** (adopted by the General Assembly of the United Nations) in 1948.

1.2 International ethical guidelines

In 1964 at Helsinki, the World Medical Association formulated general principles and specific guidelines on use of human participants in medical research, known as the ***Declaration of Helsinki*****,** which has undergone several revisions. In 1978, the US National Commission for the Protection of Human Subjects of Biomedical and Behavioural Research submitted its report entitled ***"The Belmont Report****: Ethical Principles and Guidelines for the Protection of Human Subjects of Research"*, named after the Belmont Conference Center at the Smithsonian Institute. The Belmont Report sets forth the basic ethical principles underlying the acceptable conduct of research involving human participants; these principles, *respect for the autonomy of persons, beneficence, non-malfeasance and justice*, are now accepted as the quintessential requirements for the ethical conduct of research involving human participants.

In 1982, the World Health Organisation (WHO) and the Council for International Organisations of Medical Sciences (CIOMS) issued the ***'Proposed International Guidelines for Biomedical Research involving Human Subjects.'*** Subsequently, the CIOMS brought out the ***'International Guidelines for Ethical Review in Epidemiological studies'*** in 1991 and ***'International Ethical Guidelines for Biomedical Research involving Human Subjects'*** in 1993. More recent documents on ethics include those of UNESCO's ***"The Universal Declaration on Human Genome and Human Rights"*** (1997), ***"The International Declaration on Human Gene Data"*** *(2003) and* ***"Universal Declaration on Bioethics and Human Rights"*** (2005).

Many national and regional bioethics advisory bodies such as the Nuffield Council of Bioethics (UK) and the European Commission on Ethics have general and specific principles in specific areas of scientific research involving human beings that should be followed in their respective jurisdictions, and that are updated or added to, periodically.

1.3 Ethical Guidelines And Regulatory Procedures In India

In India, the Indian Council of Medical Research (ICMR) brought out the 'Policy Statement on Ethical Considerations involved in Research on Human Subjects' in 1980 and revised these guidelines in 2000 as the ***'Ethical guidelines for Biomedical Research on Human Subjects'.*** Due to further rapid developments in science and technology in India after the release of the second version, globalization leading to increasing research being conducted in the developing world, and the revised CIOMS guidelines in 2002 and the Nuffield Council guidelines (Research ethics related

to healthcare in developing countries) in 2002, focusing on observance of ethical norms relevant to the protection of research participants in the pluralistic cultural environments in these countries, the ICMR issued its revised guidelines in 2006 (https://ethics.ncdirindia.org/asset/pdf/ICMR_National_Ethical_Guidelines.pdf).

The revised guidelines take into account the challenges faced by Indian researchers in applying universal ethical principles to biomedical research in a multicultural Indian society with a multiplicity of health-care systems of variable standards. In keeping with the national policies and the demands of Indian culture, the revised ICMR guidelines address ethical issues in specific situations, keeping in mind the twin dictates of not violating any universally applicable ethical standards, and the need to consider local cultural values when it comes to the application of the ethical principles to individual autonomy and informed consent. The ICMR guidelines acknowledge the need in India to balance the primacy of autonomy, as a guiding principle, with harmony of the environment of the research participant.

Other regulations relevant to research in India include the ***Drugs and Cosmetics Act (1940) and Rules (1945)*** as amended up to June 2005 (http://www.cdsco.in). These provide regulations on the import, manufacture, distribution and sale of drugs and cosmetics in India. ***Schedule Y*** (revised in January 2005), of the Act, in particular, lays down requirements and guidelines for permission to import and / or manufacture of new drugs for sale, or to undertake clinical trials. Schedule Y covers human and animal experimentation. It delineates the responsibilities of investigators, ethics committees and the procedures to be followed in all clinical trials, particularly for drugs that are to be licensed for manufacture in India, but it also covers drugs to be used for experimental indications for the first time in India, or for new indications, even though approved for marketing in India. The ***Indian Good Clinical Practice (GCP) guidelines*** lay down more detailed guidance on the conduct of clinical trials. Schedule Y requires all researchers to abide by the ICMR guidelines, as well as the ***Declaration of Helsinki*** and the Indian GCP guidelines.

Regulations for export of biological materials are laid down by the Director General of Foreign Trade (http://dgftcom.nic.in/) and the material transfer agreement of the ICMR. For clinical trials, permission for shipment of biological materials to overseas central laboratories may be included in the approval from the Drugs Controller General of India. All internationally funded research needs approval by the Health Ministry's Screening Committee (HMSC); this is to screen such research for potential violations of national security and intellectual property (IP) rights.

1.4 Cardinal ethical principles in research

The Declaration of Helsinki recognizes that medical progress is based on research which ultimately must rest in part on experimentation involving human participants. The Declaration asserts that medical research involving human participants must conform to generally accepted scientific principles, be based on a thorough knowledge of the scientific literature, other relevant sources of information, and on adequate laboratory and, where appropriate, animal experimentation; in short for research to be meaningful, it should be scientifically sound.

It also recognizes that in medical research on human participants, considerations related to the well-being of the human participant should take precedence over the interests of science and society. A basic principle enunciated in the Declaration is that it is the duty of the physician in medical research to protect the life, health, privacy, and dignity of the human participant. These can best be achieved

by adherence to the four cardinal ethical principles that govern all physician-patient encounters: *Respect for the autonomy of the individual, beneficence, non-malfeasance, and justice.*

Respect for the autonomy of the individual recognizes the personal dignity and autonomy of individuals to make decisions for themselves, and special protection of those persons with diminished autonomy. The derivative principles, which flow from respect for autonomy, are respect for the *confidentiality* of information and identity of the individual, *telling the truth* and obtaining valid *informed consent* before enrolling participants in research.

Informed consent contains three essential elements: information, comprehension (and competence), and voluntariness. First, participants must be given sufficient information on which to decide whether or not to participate, including the research procedure(s), their purposes, risks and anticipated benefits, alternative procedures (where therapy is involved), and a statement offering the participant the opportunity to ask questions and to withdraw at any time from the research. The amount of information to be disclosed is often a matter of debate with researchers often claiming that participants are unlikely to require or understand too much information. The Belmont report suggests that in deciding what constitutes adequate information a "reasonable volunteer" standard be used: "the extent and nature of information should be such that persons, knowing that the procedure is neither necessary for their care nor perhaps fully understood, can decide whether they wish to participate in the furthering of knowledge. Even when some direct benefit to them is anticipated, the participants should understand clearly the range of risk and the voluntary nature of participation." Incomplete disclosure is justified only if it is clear that: (1) the goals of the research cannot be accomplished if full disclosure is made; (2) the undisclosed risks are minimal; and (3) when appropriate, participants will be debriefed and provided the research results.

Second, participants must be able to comprehend the information that is given to them and be competent to make informed choices. The presentation of information must be adapted to the participant's capacity to understand it and can be through conversation, information sheets and brochures, group discussion, video presentations, and consent forms. Testing to ensure that participants have understood the essentials of the research, potential risks and benefits may be warranted. Where persons with limited ability to comprehend are involved, they should be given the opportunity to choose whether or not to participate to the extent they are able to do so, and their objections should not be overridden, unless the research entails providing them a therapy unavailable outside of the context of research. However, their choices should be supplemented by permission to participate from a responsible relative or legally authorized guardian. Each such class of persons should be considered on its own terms (*e.g.*, minors, persons with impaired mental capacities, the terminally ill, and the comatose). Respect for persons requires that the permission of third persons also be given in order to further protect them from harm.

Thirdly, consent to participate must be voluntarily given, free from coercion and from unfair persuasions and inducements. Consent forms are thus only evidence of a process and not the process itself. To ensure that consent is free and thus valid to the greatest extent, researchers should give attention to the setting and timing under which consent is obtained, the manner in which consent is invited and to how other persons impinge on the decision. IRBs should be especially sensitive to these factors when vulnerable participants are involved.

Beneficence and non-maleficence*:* These two cardinal principles emphasize *risk/benefit assessments* that are concerned with the probabilities and magnitudes of possible harms and anticipated benefits.

This involves defining the nature and scope of the risks and benefits, and systematically assessing the risks and benefits. All possible harms, not just physical or psychological pain or injury, should be considered. These principles require both protecting individual participants against risk of harm and consideration of not only the benefits for the individual, but also the societal benefits that might be gained from the research.

It is recommended that the IRB should: (1) determine the "validity of the presuppositions of the research;" (2) distinguish the "nature, probability and magnitude of risk with as much clarity as possible;" and (3) "determine whether the investigator's estimates of the probability of harm or benefits are reasonable, as judged by known facts or other available studies."

Five basic principles or rules apply when making the risk/benefit assessment: (1) "brutal or inhumane treatment of human participants is never morally justified;" (2) risks should be minimized, including the avoidance of using human participants if at all possible; (3) IRBs must be scrupulous in insisting upon sufficient justification for research involving "significant risk of serious impairment" (*e.g.*, direct benefit to the participant or "manifest voluntariness of the participation" (4) the appropriateness of involving vulnerable populations must be demonstrated; and (5) the proposed informed consent process must thoroughly and completely disclose relevant risks and benefits.

Justice: The principle of justice mandates that the selection of research participants must be the result of fair selection procedures and must also result in fair outcomes. The "justness" of participant selection relates both to the participant as an individual and to the participant as a member of social, racial, sexual, or ethnic groups.

With respect to their status as individuals, participants should not be selected either because the researcher favors them or because they are held in disdain (*e.g.*, involving "undesirable" persons in risky research). Further, "social justice" indicates an "order of preference in the selection of classes of participants (*e.g.*, adults before children, non-pregnant women before pregnant women) and that some classes of potential participants (*e.g.*, people with reduced capacity to consent or prisoners) may be involved as research participants, if at all, only on certain conditions.

Investigators, institutions, or IRBs may consider principles of distributive justice relevant to determining the appropriateness of proposed methods of selecting research participants that may result in unjust distributions of the burdens and benefits of research. Such considerations may be appropriate to avoid the injustice that "arises from social, racial, sexual, and cultural biases institutionalized in society."

Participants should not be selected simply because they are readily available in settings where research is conducted, or because they are "easy to manipulate as a result of their illness or socioeconomic condition." Care should be taken to avoid overburdening institutionalized persons who "are already burdened in many ways by their infirmities and environments." Non-therapeutic research that involves risk should use other, less burdened populations, unless the research "directly relate[s] to the specific conditions of the class involved."

1.5 The statement of general principles for research of the ICMR

The ICMR, in its *Ethical Guidelines for Biomedical Research in Human Participants,* has formulated a Statement on General Principles that are common to all areas of biomedical research.

"Any research using the human beings as participants shall follow the principles given below:

I. Principles of essentiality whereby the research entailing the use of human participants is considered to be absolutely essential after a due consideration of all alternatives in the light of the existing knowledge in the proposed area of research and after the proposed research has been duly vetted and considered by an appropriate and responsible body of persons who are external to the particular research and who, after careful consideration, come to the conclusion that the said research is necessary for the advancement of knowledge and for the benefit of all members of the human species and for the ecological and environmental well being of the planet.

II. Principles of voluntariness, informed consent and community agreement whereby research participants are fully apprised of the research and the impact and risk of such research on the research participant and others; and whereby the research participants retain the right to abstain from further participation in the research irrespective of any legal or other obligation that may have been entered into by such human participants or someone on their behalf, participant to only minimal restitutive obligations of any advance consideration received and outstanding. Where any such research entails treating any community or group of persons as a research participant, these principles of voluntariness and informed consent shall apply, *mutatis mutandis*, to the community as a whole and to each individual member who is the participant of the research or experiment. Where the human participant is incapable of giving consent and it is considered essential that research or experimentation be conducted on such consent shall continue to apply and such consent and voluntariness shall be obtained and exercised on behalf of such research participants by someone who is empowered and under a duty to act on their behalf. The principles of informed consent and voluntariness are cardinal principles to be observed throughout the research and experiment, including its aftermath and applied use so that research participants are continually kept informed of any and all developments in so far as they affect them and others. However, without in any way undermining the cardinal importance of obtaining informed consent from any human participant involved in any research, the nature and form of the consent and the requirements to prove that such consent was taken, shall depend upon the degree and seriousness of the invasiveness into the concerned human participant's person and privacy, health and life generally, and, the overall purpose and the importance of the research. The ethics committee shall decide on the form of consent to be taken or its waiver based on the degree of risk that may be involved.

III. Principles of non-exploitation whereby as a general rule, research participants are remunerated for their involvement in the research or experiment; and, irrespective of the social and economic condition or status, or literacy or educational levels attained by the research participants kept fully apprised of all the dangers arising in and out of the research so that they can appreciate all the physical and psychological risks as well as moral implications of the research whether to themselves or others, including those yet to be born. Such human participants should be selected so that the burdens and benefits of the research are distributed without arbitrariness, discrimination or caprice. Each research shall include an in-built mechanism for compensation for the human participants either through insurance cover or any other appropriate means to cover all foreseeable and unforeseeable risks by providing for remedial action and comprehensive aftercare, including treatment during and after the research or experiment, in respect of any effect that the conduct of research or experimentation may have on the human participant and to ensure that immediate recompense and rehabilitative measures are taken in respect of all affected, if and when necessary.

IV. Principles of privacy and confidentiality whereby the identity and records of the human participants of the research or experiment are as far as possible kept confidential; and that no details

about identity of said human participants, which would result in the disclosure of their identity, are disclosed without valid scientific and legal reasons which may be essential for the purposes of therapeutics or other interventions, without the specific consent in writing of the human participant concerned, or someone authorised on their behalf; and after ensuring that the said human participant does not suffer from any form of hardship, discrimination or stigmatisation as a consequence of having participated in the research or experiment.

V. Principles of precaution and risk minimisation whereby due care and caution is taken at all stages of the research and experiment (from its inception as a research idea, its subsequent research design, the conduct of the research or experiment and its applicative use) to ensure that the research participant and those affected by it including community are put to the minimum risk, suffer from no known irreversible adverse effects, and generally, benefit from and by the research or experiment; and that requisite steps are taken to ensure that both professional and ethical reviews of the research are undertaken at appropriate stages so that further and specific guidelines are laid down, and necessary directions given, in respect of the conduct of the research or experiment.

VI. Principles of professional competence whereby the research is conducted at all times by competent and qualified persons who act with total integrity and impartiality and who have been made aware of, and are mindful of, preferably through training, the ethical considerations to be borne in mind in respect of such research or experiment.

VII. Principles of accountability and transparency whereby the research or experiment will be conducted in a fair, honest, impartial and transparent manner after full disclosure is made by those associated with the research or experiment of each aspect of their interest in the research, and any conflict of interest that may exist; and whereby, subject to the principles of privacy and confidentiality and the rights of the researcher, full and complete records of the research inclusive of data and notes are retained for such reasonable period as may be prescribed or considered necessary for the purposes of post-research monitoring, evaluation of the research, conducting further research (whether by the initial researcher or otherwise) and in order to make such records available for scrutiny by the appropriate legal and administrative authority, if necessary.

VIII. Principles of the maximisation of the public interest and of distributive justice whereby the research or experiment and its subsequent applicative use are conducted and used to benefit all human kind and not just those who are socially better off but also the least advantaged; and in particular, the research participants themselves and or the community from which they are drawn.

IX. Principles of institutional arrangements whereby there shall be a duty on all persons connected with the research to ensure that all the procedures required to be complied with and all institutional arrangements required to be made in respect of the research and its subsequent use or application are duly made in a bonafide and transparent manner; and to take all appropriate steps to ensure that research reports, materials and data connected with the research are duly preserved and archived.

X. Principles of public domain whereby the research and any further research, experimentation or evaluation in response to, and emanating from such research is brought into the public domain so that its results are generally made known through scientific and other publications subject to such rights as are available to the researcher and those associated with the research under the law in force at that time.

XI. Principles of totality of responsibility whereby the professional and moral responsibility, for the due observance of all the principles, guidelines or prescriptions laid down generally or in respect of the research or experiment in question, devolves on all those directly or indirectly connected with the research or experiment including the researchers, those responsible for funding or contributing to the funding of the research, the institution or institutions where the research is conducted and the various persons, groups or undertakings who sponsor, use or derive benefit from the research, market the product (if any) or prescribe its use so that, inter alia, the effect of the research or experiment is duly monitored and constantly subject to review and remedial action at all stages of the research and experiment and its future use.

XII. Principles of compliance whereby, there is a general and positive duty on all persons, conducting, associated or connected with any research entailing the use of a human participant to ensure that both the letter and the spirit of these guidelines, as well as any other norms, directions and guidelines which have been specifically laid down or prescribed and which are applicable for that area of research or experimentation, are scrupulously observed and duly complied with".

XIII. Principle of Collegiality: Treating all members of a research team or lab with respect and dignity.

XIV. Principle of Fairness: All contributing parties should be treated with fairness regarding IP rights, authorship or acknowledgement on the publication of the research and their contributions should be acknowledged appropriately.

1.6 Research combined with clinical care

Special concerns have been raised when research is conducted in settings where normal clinical care is provided. This is due to the 'therapeutic misconception' that arises in the minds of patients recruited as research participants who are often unable to comprehend the differences between participating in a study and receiving treatment in the clinical setting. Rather than understanding these differences, study participants tend to believe that therapy and research were governed by the same primary goal, to advance the individual patient's best interests. Therapeutic misconception is particularly relevant to clinical trials and refers to the belief that the purpose of a clinical trial is to benefit the individual patient rather than to gather data for the purpose of scientific research. This can take the form of therapeutic mis-estimation, which is an overestimation of the potential for benefit from the research; therapeutic optimism, which is the unwarranted hope for the most positive outcome, and therapeutic mis-assignment, which refers to the tendency for participants to over-estimate their chances of being assigned the active or experimental intervention over placebo or standard care.

The Declaration of Helsinki has laid down the following guidelines to govern such situations:

- "The physician may combine medical research with medical care, only to the extent that the research is justified by its potential prophylactic, diagnostic or therapeutic value. When medical research is combined with medical care, additional standards apply to protect the patients who are research participants.
- The benefits, risks, burdens and effectiveness of a new method should be tested against those of the best current prophylactic, diagnostic, and therapeutic methods. This does not exclude the use of placebo, or no treatment, in studies where no proven prophylactic, diagnostic or therapeutic method exists.

- At the conclusion of the study, every patient entered into the study should be assured of access to the best proven prophylactic, diagnostic and therapeutic methods identified by the study.
- **The physician should fully inform the patient which aspects of the care are related to the research** (emphasis added). The refusal of a patient to participate in a study must never interfere with the patient-physician relationship.
- In the treatment of a patient, where proven prophylactic, diagnostic and therapeutic methods do not exist or have been ineffective, the physician, with informed consent from the patient, must be free to use unproven or new prophylactic, diagnostic and therapeutic measures, if in the physician's judgement, it offers hope of saving life, re-establishing health or alleviating suffering. Where possible, these measures should be made the object of research, designed to evaluate their safety and efficacy. In all cases, new information should be recorded and, where appropriate, published" (Clauses 28-32).

In the final analysis, it is the investigator's moral and ethical duty to convey, through the process of informed consent, to participants that the sole purpose of research is to contribute to scientific knowledge and not the specific treatment of an individual patient. This is particularly important in research that is unlikely to directly benefit participants. IRBs have an obligation to ensure that this information is incorporated in the information sheet that accompanies the consent form.

1.7 Research on vulnerable participants

Vulnerable research participants are individuals whose willingness to volunteer in research such as a clinical trial may be duly influenced by the expectation, whether justified or not, of benefits associated with participation, or of a retaliatory response from senior members of a hierarchy in case of refusal to participate, or those whose consent may not be valid due to a variety of reasons. Vulnerable participants include those who are economically disadvantaged, those with mental disorders that impair their capacity to consent, children, pregnant and nursing women, the institutionalised, those in a dependant and relatively un-empowered relationship such as students, employees, military and prisoners, and patients with life-threatening diseases.

Research using vulnerable participants is not prohibited by international ethical codes or regulations, but their inclusion needs to be justified, and special precautions need to be implemented for their protection.

Research using children and adolescents

The purpose of including children in research is to gain knowledge relevant to the health needs of children. The ICMR guidelines state:

"Before undertaking trial in children, the investigator must ensure that

i. Children will not be involved in research that could be carried out equally well with adults;

ii. The purpose of the research is to obtain knowledge relevant to health needs of children. For clinical evaluation of a new drug the study in children should always be carried out after the phase III clinical trials in adults. It can be studied earlier only if the drug has a therapeutic value in a primary disease of the children;

iii. A parent or legal guardian of each child has given proxy consent;

iv. The assent of the child should be obtained to the extent of the child's capabilities such as in the case of mature minors from the age of seven years up to the age of 18 years.;

v. Research should be conducted in settings in which the child and parent can obtain adequate medical and psychological support;

vi. Interventions intended to provide direct diagnostic, therapeutic or preventive benefit for the individual child participant must be justified in relation to anticipated risks involved in the study and anticipated benefits to society;

vii. The child's refusal to participate in research must always be respected unless there is no medically acceptable alternative to the therapy provided/ tested, provided the consent has been obtained from parents / guardian;

viii. Interventions that are intended to provide therapeutic benefit are likely to be at least as advantageous to the individual child participant as any available alternative interventions;

ix. The risk presented by interventions not intended to benefit the individual child participant is low when compared to the importance of the knowledge that is to be gained."

Research in the economically disadvantaged

Persons who are economically or socially disadvantaged should not be used to benefit those who are better off than them. The economically disadvantaged have limited access to health care, may enrol in research to receive treatment, or enrol for compensation, are often educationally disadvantaged too with limitations in understanding and the potential for undue influence or manipulation. It is, therefore, important that the informed consent process uses simple language and enlists the help of family and significant others to explain the potential for risks, the uncertainty of personal health benefits, if appropriate, and clearly delineates those aspects of the study that are purely for research and those that are part of standard care. Undue financial inducements should be avoided. Particularly for illiterate and vulnerable participants in research, the informed consent process should be witnessed by an impartial witness, who is not part of the research team.

Research using students and employees

Research involving trainees of any description or employees including faculty often confers no therapeutic advantage for the participant. However, students and employees have the same rights as any other potential recruit to participate in a research project, irrespective of the degree of risk, provided certain conditions are met:

- The research must not bestow upon participating employees or students any competitive academic or occupational advantage over other staff and students who do not volunteer, and the researchers must not impose any academic or occupational penalty on those or staff who do not volunteer.
- Students and employees must not be systematically treated differently from non-employee or non-student participants as part of the project.
- Due to the potential for perceived or real coercion to participate, students and employees who desire to participate in the research (especially those under the direct supervision of the principal

investigator (PI) or listed research collaborators) should ideally have a witness of their choice present during the informed consent process to ensure that participation was voluntary. A suitable representative may be invited to be present during the ethics review of the proposal.

The Declaration of Helsinki states that, "When obtaining informed consent for the research project the physician should be particularly cautious if the participant is in a dependent relationship with the physician or may consent under duress. In that case the informed consent should be obtained by a well-informed physician who is not engaged in the investigation and who is completely independent of this relationship" (Clause 23). If possible, this approach is to be preferred to the immediately previous suggestion.

Research involving people with life-threatening diseases or who are medically vulnerable

Prospective participants in a study which has a therapeutic component who are by reason of mental or behavioural disorders not capable of giving adequately informed consent, persons with serious, potentially disabling, or life-threatening diseases, and persons rendered incapable of informed consent by an acute condition [emergency], are also vulnerable to exploitation, as are people who by virtue of progressive cognitive impairment may become vulnerable during the process of research (e.g., long term studies of those with cognitive decline who develop dementia).

Participants with serious medical diseases are vulnerable to (possibly) misplaced therapeutic optimism. For such participants, attempts should be made to include them only if there is minimal risk if non - therapeutic research; for therapeutic research potential risks should be emphasized, as should realistic estimates of benefits. If the disease cannot otherwise be treated, a "compassionate use" of the experimental intervention is ethically justified.

The Declaration of Helsinki states that, "For a research subject who is legally incompetent, physically or mentally incapable of giving consent or is a legally incompetent minor, the investigator must obtain informed consent from the legally authorized representative in accordance with applicable law. These groups should not be included in research unless the research is necessary to promote the health of the population represented and this research cannot instead be performed on legally competent persons (Clause 24).

Being mentally ill does not automatically render a person incompetent to consent and this must be ascertained for every participant. In people with major mental disorders such as schizophrenia, severe depression, mania, or people with mental retardation, even if the patient consents to participate, consent to permit participation should be additionally obtained from a responsible relative or legal guardian.

The Declaration of Helsinki also states, that "Research on individuals from whom it is not possible to obtain consent, including proxy or advance consent, should be done only if the physical/mental condition that prevents obtaining informed consent is a necessary characteristic of the research population. The specific reasons for involving research participants with a condition that renders them unable to give informed consent should be stated in the experimental protocol for consideration and approval of the review committee. The protocol should state that consent to remain in the research should be obtained as soon as possible from the individual or a legally authorized surrogate" (Clause 26).

1.8 Research on pregnant or nursing women

The *ICMR guidelines* state, "Pregnant or nursing women should in no circumstances be the subject of any research unless the research carries no more than minimal risk to the foetus or nursing infant and the object of the research is to obtain new knowledge about the foetus, pregnancy and lactation. As a general rule, pregnant or nursing women should not be subjects of any clinical trial except such trials as are designed to protect or advance the health of pregnant or nursing women or foetuses or nursing infants, and for which women who are not pregnant or nursing would not be suitable participants.

i. The justification of participation of these women in clinical trials would be that they should not be deprived arbitrarily of the opportunity to benefit from investigations, drugs, vaccines or other agents that promise therapeutic or preventive benefits. Example of such trials are, to test the efficacy and safety of a drug for reducing perinatal transmission of HIV infection from mother to child, trials for detecting foetal abnormalities and for conditions associated with or aggravated by pregnancy etc. Women should not be encouraged to discontinue nursing for the sake of participation in research and in case she decides to do so, harm of cessation of breast feeding to the nursing child should be properly assessed except in those studies where breast feeding is harmful to the infant.

ii. **Research related to termination of pregnancy:** Pregnant women who desire to undergo Medical Termination of Pregnancy (MTP) could be made participants for such research as per The Medical Termination of Pregnancy Act, GOI, 1971.

iii. **Research related to pre-natal diagnostic techniques:** In pregnant women such research should be limited to detect the foetal abnormalities or genetic disorders as per the Prenatal Diagnostic Techniques (Regulation and Prevention of Misuse) Act, GOI, 1994 and not for sex determination of the foetus".

1.9 The Ethical Conduct of Controlled Human Infection Studies (CHIS) in India 2023.

1.10 Ethical Guidelines for Application of Artificial Intelligence in Biomedical Research and Healthcare

SECTION 2

2 Policies and Procedures of The Institutional Review Boards of Christian Medical College Vellore

2.1 Research at CMC Vellore

The Christian Medical College, Vellore (CMC) is an institution owned and administered by The Christian Medical College Vellore Association, a society registered under the Societies Registration Act, 1860 having its Registered Office at Ida Scudder Road, Vellore 632 004, Tamil Nadu, India.

CMC, Vellore is an unaided, non-capitation, Christian minority educational institution affiliated with the Tamil Nadu Dr M.G.R. Medical University, set up with the mission to develop through education, research and training of, compassionate, professionally excellent, ethically sound individuals who will go out as servant-leaders of health teams and healing communities. It has the aim of "the establishment, maintenance and development of a Christian Medical College and hospitals in India, where women and men shall receive an education of highest grade in the art and science of medicine, nursing, or in related professions, to equip them in the Spirit of Christ for service in the relief of suffering and the promotion of health". The motto of the institution is "NOT TO BE MINISTERED UNTO, BUT TO MINISTER".

The Christian Medical College Vellore Council is the highest body that represents this society and is responsible for the formation of institutional policies. In keeping with the goal of imparting the highest grade of education, research is a priority area for this institution. Research is an integral part of the vision and the mission of CMC. Research at the institution has been oriented to areas of need and emphasizes application of knowledge to relevant problems. The inculcation of an attitude of inquiry, acquisition of knowledge of the mechanisms of research and the conduct of research, at various levels of involvement in health care, are encouraged in faculty and students. Research relevant to the country's needs is encouraged with institutional grants as seed money to initiate projects.

CMC has established an Office of Research under the Additional Vice-Principal (Research) to facilitate the conduct and reporting of research and to institute and provide oversight mechanisms. This office supports and coordinates research activities and provides education on the responsible conduct of research. Additionally, it functions as the Office of Research Integrity, having established policies and procedures for investigating allegations of research misconduct.

CMC has demonstrated a commitment to responsible and ethical medical care and to human participant protection by establishing a clinical ethics committee led by the Medical Superintendent that is separate from the institution's IRBs. This committee deals with all matters pertaining to the ethical clinical care of patients attending the hospital.

2.2 Institutional Authority

The Council of CMC, which met on June 16, 1994, authorized the establishment of the Institutional Review Board (IRB) (as outlined in the CMC Council minutes from that date).

The Principal of CMC constitutes the IRBs under the directive of the Christian Medical College Council. Any appeals regarding IRB decisions shall be directed to the Principal, who, while not a member of the IRB, serves as the appellate authority.

2.3 The Institutional Review Board (IRB)

CMC utilizes a centralized program to review all research. Until 2010, CMC operated one Institutional Review Board, but because of the increased workload, and in order to conform to national and international requirements of research oversight, from 2011 CMC has operated two Institutional Review Boards (IRB) [Silver, Blue] that each comprise of a Research Committee (RC) charged with reviewing the scientific validity of research proposals and an Ethics Committee (EC) that specifically addresses ethical concerns. The IRB reviews projects in a wide range of medical, biomedical, social, education and behavioural fields. All external research proposals, proposals from faculty and all interventional trials are reviewed by the Silver IRB. The Blue IRB reviews applications for non-interventional studies from trainees **(Medical, Nursing & Allied Health)**.

i. Purpose of the Policies and Standard Operating Procedures of the IRB

The objective of the Policies and Standard Operating Procedures (SOP) document is to protect the rights, dignity, welfare and privacy of human research participants and to contribute to the effective functioning of the IRBs. The IRBs must function such that a responsible and consistent ethical review mechanism for health and biomedical research is put in place for all proposals dealt with by the IRBs, as prescribed by the relevant national guidelines from the Department of Health Research, ICMR and regulations under the Drugs and Cosmetics Act and Rules, Government of India. The mechanism is also in keeping with the ICH-GCP, the National Institutes of Health Office for Human Research Protection guidelines and the European Medicines Agency directives.

ii. Mandate

The IRBs will review all types of research proposals involving human participants and laboratory protocols that are intended for use in human testing ensuring the dignity, rights, safety and well-being of research participants and that research carried out in CMC is of the highest scientific and ethical standards. The goals of research, however important, should never be permitted to override the health and well-being of the research participants. The IRBs will evaluate all research projects involving human participants conducted at CMC, regardless of the funding agency, approve them if they meet all ethical and scientific requirements, and monitor ongoing studies. CMC is committed to protecting human participants, and it continuously monitors the resources allocated to the IRBs to ensure adequate support for their functions.

Ethical issues related to clinical services provided by the institution will typically be addressed by the Clinical Ethics Committee under the supervision of the Medical Superintendent's office.

The mandate of the IRBs of CMC

- Require that all research conducted in the institution be presented to the IRBs for assessment in the prescribed format. The IRB can also review research that is conducted off-site where a member of the faculty of CMC is a named investigator. For such external projects, the IRB at the institution where the research is conducted will be primarily responsible for the ethical oversight.

- Provide competent and timely review of all research proposals submitted to ensure the scientific validity studies within the standard norms of national and international guidelines, and the ethical conduct of all such research within the ethical norms laid down by the latest

revisions of the National Ethical Guidelines for Biomedical and Health Research involving human participants of the Indian Council for Medical Research (ICMR) and other relevant guidelines. In addition, it will ensure that all research ~~it approves~~ approved will also conform to applicable central, state and local laws and regulations.

- Evaluate the informed consent process and documentation; assess the risk-benefit ratio, distribution of burden and benefit and provisions for appropriate compensation, wherever required.
- Suggest strategies to improve research proposals that fall short of the expected scientific and ethical standards.
- Refuse approval of research proposals that to despite modifications are unlikely to meet the expected scientific and ethical standards.
- Provide ongoing monitoring of all research that it approves, including site visits and audits of procedures and documentation.
- Require periodic reports and final reports of all research that it approves.
- Require that the results be made publicly available in the form of research publications or formal reports.
- Ensure that universal ethical values and international scientific standards are expressed in terms of local community values and customs.
- Facilitate the collaborative and multidisciplinary nature of scientific research, maintaining the integrity of the research process, detecting and declaring all conflicts of interest in research conduct and research review, reporting research misconduct, and ensuring research is driven by relevance to local needs and the interests of patient care and scientific advancement over personal motives.
- To assist in the development and the education of a research community responsive to local health needs.

2.4 Composition and role of IRB

The composition and roles of the two committees (Research and Ethics) that make up CMC Vellore's IRBs are as follows:

2.4.1 Research Committee (Silver):

The research committee of the Silver IRB shall consist of the Chairperson (*a member of the Senatus nominated by the Principal*), a member Secretary (*ex officio* the Head of the Department of Biostatistics), and senior faculty members of CMC nominated by the Principal to represent a mix of specialities and research expertise.

2.4.2 Research Committee (Blue)

The Research Committee of the Blue IRB of CMC shall consist of the Chairperson (*a member of the Senatus nominated by the Principal*), a member Secretary (*ex officio* the Head of the Department of

Biostatistics), and senior faculty members of CMC nominated by the Principal to represent a mix of specialities and research expertise.

2.4.3 Ethics Committee Silver

The Ethics Committee of the Silver IRB shall consist of a Chairperson, Deputy Chairperson, Member Secretary, and eight to twelve members nominated by the Principal. The membership of the ethics committees will comply with the prevailing regulations governing biomedical research in India.

The Chairperson and Deputy Chairperson of the Ethics Committee will be persons of stature with a scientific background and adequate familiarity with the principles of ethics and related issues. They will both be external to the institution to maintain the independence of the IRB/EC. The Additional Vice-Principal (Research) will serve as the Member Secretary of the Ethics Committees.

The composition of the EC shall include a social scientist, an ethicist/theologian/representative of a non-governmental organization, a legal expert, a layperson from the community, a basic medical scientist (preferably a pharmacologist) and a clinician. Preferably 50% of the members should be non-affiliated or from outside the institution. The ethics committee Silver will be registered with the CDSCO in the Sugam Portal and any change in membership will be notified via this portal within 30 days of the said change.

2.4.4 Ethics Committee Blue

The Ethics Committee of the Blue IRB shall consist of a Chairperson, Deputy Chairperson, Member Secretary, and eight to twelve members nominated by the Principal. The membership of the ethics committees will comply with the prevailing regulations governing biomedical research in India.

The Chairperson and Deputy Chairperson of the Ethics Committee will be a person of stature with a scientific background and adequate familiarity with the principles of ethics and related issues They will both be external to the institution to maintain the independence of the IRB/EC. The Additional Vice-Principal (Research) will serve as the Member Secretary of the Ethics Committees.

2.4.5 Independent consultants

The IRB may call upon independent consultants who may provide special expertise to the IRB on proposed research protocols. These consultants may be specialists in ethical or legal aspects, specific diseases or methodologies, or they may be representatives of communities, patients, or special interest groups. They are required to give their specialized views and may be required to attend convened IRB meetings but do not take part in the decision making process, which is conducted by members of the IRB

4.3.11 for example HIV, genetic disorders, or cancer, with appropriate decision making power.

2.4.6 Education of IRB members

- IRB members will be provided a training pack consisting of relevant guidelines regarding the science and ethics of biomedical research.
- All RC members must have attended basic training in research study design and the ethics of human research participants' protection. All members are encouraged to familiarize themselves

with the CONSORT, STARD, STROBE and other relevant guidelines for the design, conduct and reporting of various types of research designs.

- All EC members must be conversant with the ICMR ethical guidelines for research involving human participants, The New Drugs and Clinical Trials Rules, 2019, the Declaration of Helsinki and ICH-GCP guidelines.
- IRB members will also be provided with a copy of the Policies and Standard Operating Procedures.
- IRB members will be offered ongoing opportunities for enhancing their capacity for ethical review, including participation at the periodic Research Ethics and GCP workshops conducted by the Office of Research.
- A record will be maintained of the training obtained by IRB members and updated annually.

2.4.7 Responsibilities of IRB members

2.4.7.1 Chairperson of EC

- Conduct EC meetings and be accountable for the independent and efficient functioning of the committee
- Ensure active participation of all members (particularly non-affiliated, non-medical/non-technical) in all discussions and deliberations
- Ratify minutes of the previous meetings
- Seek COI declaration from members and ensure quorum and fair decision-making.
- Handle complaints against researchers, EC members, conflict of interest issues and requests for use of EC data, etc
- In case of the anticipated absence of both the Chairperson and the Deputy Chairperson of the EC at a planned meeting, the Chairperson should nominate another IRB member as the Acting Chairperson, or the members present may elect an Acting Chairperson on the day of the meeting. The Acting Chairperson should be a non-affiliated person and will have all the powers of the Chairperson for that meeting.

2.4.7.2 Member Secretary

- Organize an effective and efficient procedure for receiving, preparing, circulating and maintaining each proposal for review
- Schedule EC meetings, prepare the agenda and minutes
- Organize EC documentation, communication and archiving
- Ensure training of EC secretariat and EC members
- Ensure SOPs are updated as and when required
- Ensure adherence of EC functioning to the SOPs
- Prepare for and respond to audits and inspections
- Ensure completeness of documentation at the time of receipt and timely inclusion in the agenda for EC review.
- Assess the need for expedited review/ exemption from review or full review

- Assess the need to obtain prior scientific review, invite independent consultant, patient or community representatives.
- Ensure quorum during the meeting and record discussions and decisions.

2.4.7.3 Basic Medical Scientist(s)

- Scientific and ethical review with special emphasis on the intervention, benefit-risk analysis, research design, methodology and statistics, continuing review process, SAE, protocol deviation, progress and completion report
- For clinical trials, pharmacologist to review the drug safety and pharmacodynamics.

2.4.7.4 Clinician(s)

- Scientific review of protocols including review of the intervention, benefit-risk analysis, research design, methodology, sample size, site of study and statistics
- Ongoing review of the protocol (SAE, protocol deviation or violation, progress and completion report)
- Review medical care, facility and appropriateness of the PI, provision for medical car, management and compensation.
- Thorough review of the protocol, investigators brochure (if applicable) and all other protocol details and submitted documents

2.4.7.5 Legal expert/s

- Ethical review of the proposal, Informed Consent Form (ICF) along with translations, MoU, Clinical Trial Agreement (CTA), regulatory approval, insurance document, other site approvals, researcher's undertaking, protocol specific other permissions, such as, stem cell committee for stem cell research, HMSC for international collaboration, compliance with guidelines etc.
- Interpret and inform EC members about new regulations if any

2.4.7.6 Social scientist/ philosopher/ ethicist/theologian

- Ethical review of the proposal, ICF along with the translations.
- Assess impact on community involvement, socio–cultural context, religious or philosophical context, if any
- Serve as a patient/participant/ societal / community representative and bring in ethical and societal concerns.

2.4.7.7 Lay person(s)

- Ethical review of the proposal, ICF, along with translation(s).
- Evaluate benefits and risks from the participant's perspective and opine whether benefits justify the risks.
- Serve as a patient/participant/ community representative and bring in ethical and societal concerns.
- Assess on societal aspects if any

- The basic responsibility of an EC is to ensure the protection of the dignity, rights, safety and well-being of the research participants.
- The EC must ensure the ethical conduct of research by the investigator team.
- Membership of the IRB is a position of responsibility and IRB members are expected to approach this position with the seriousness and professionalism befitting their role in aiding the advancement of science and protection of research participants.
- IRB members are expected to show interest and motivation, commitment and availability, experience with or education regarding the science and ethics of research, respect for divergent opinions and ability to work as a team, integrity, diplomacy and ability to maintain confidentiality.
- IRB members should attend a minimum of 7 of the 11 IRB meetings every year and not miss three consecutive meetings. Information should be provided at the beginning of each month if a member is unable to attend an IRB meeting.
- Members should inform the Office of Research in advance if they anticipate being unavailable for three consecutive IRB meetings.
- IRB members should assess in detail the proposals allotted to them as primary or secondary assessors and come to convened meetings with their prepared report. Reports by IRB members should be succinct but sufficiently detailed so as to highlight deficiencies and suggested improvements in design or execution of the study. IRB members function as facilitators of sound and ethical research, not primarily as regulators of research.
- All IRB members are expected to declare competing conflicts of interest with respect to research proposals or investigators, if any, before commencement of each meeting.
- IRB members are expected to agree to not be present during presentation of proposals in which they are co-investigators, unless requested to answer clarifications; they may present proposals if they are PIs, but in both situations should leave the room before IRB discussions and decisions. It is the duty of IRB members to adhere to this without being reminded of this duty.
- IRB members are required to sign a confidentiality agreement on joining and this will be renewed with every extension.
- Members should submit an updated CV on joining the IRB and with each extension.
- Members should not make copies of any material provided to them and ensure destruction or return of all materials sent for review (CD containing research proposals and supporting documents) after the IRB meetings.
- The EC should be registered with the relevant regulatory authorities, for example, ECs approving clinical trials under the ambit of the Drugs and Cosmetics Act should be registered with CDSCO and DHR
- The EC should carry out monitoring visits at study sites as and when needed

2.5 Purpose of the Research Committees

The Research Committees will discuss and review the design, scientific content, statistical methods and the appropriateness of the study in the setting of CMC, compliance with regulations, and the budgets. The Research Committee will make recommendations on any request for intramural research funding.

While the primary responsibility of the Research Committee is to provide scientific and administrative oversight of a research study, members are encouraged to raise their concerns about potential ethical concerns with the proposals that they review at the convened meetings of the IRB or in their reports.

2.5.1 Terms of appointment:

- The Principal of CMC nominates members of the faculty to serve on the Research Committee.
- The duration of appointment for members is for a period of three years. The appointment may be renewed at the discretion of the Principal for additional terms.
- For the ex-officio members, membership in the research committee is for the duration of their tenure in the administrative office.
- At the end of the term of a member or members, new member(s) are appointed such that at least 50% of the members will remain in the committee to provide continuity.
- A member can be replaced in the event of resignation or non-attendance for three consecutive Research Committee meetings (unless this was intimated in advance to the member secretary on sufficient grounds), or for any action not commensurate with the responsibilities laid down in the guidelines. Disqualification of members for any reason is to be communicated in writing by the Principal in consultation with the Chairperson of the IRB**.**
- A member who is unable to attend three consecutive meetings and informs the Office of Research in advance may be temporarily replaced by another member of the faculty selected by the Principal.
- A member can tender his/her resignation from the committee, with approval from **the Principal.**
- Membership of the Research Committee is a position of responsibility. Members will not be paid an honorarium or compensation for their membership or attendance at the meetings.

Current members of the Research & Ethics Committee of the Silver IRB
(Please refer *APPENDIX-X)*

2.5.2 Research Grant:

If the PI requests a fluid research grant in the IRB application. An itemized budget is to be provided in the IRB form. If the budget is approved, an agreement form is sent along with the IRB approval letter. The PI and Guide (if applicable) must sign the agreement and email it back to the Office of Research ([research@cmcvellore.ac.in]) within 30 days to initiate the account opening process. Upon receipt of the signed agreement, account opening will be completed for fluid research proposals within 7 working days.

The research office verifies the budget details and drafts and uploads the account opening letter and the IRB approval letter on the Research Dashboard. After uploading, the accounts department verifies the documents uploaded, after which a new account is opened.

Second Installment

If the study duration is greater than one year the budget will be split across the years with a maximum of 1.5 lakhs being provided in year one. The PI needs to submit an interim/annual report, following the review of which, the second instalment will be released.

The request for a second installment should be submitted within the duration of the approved study. Requests submitted after the study duration has lapsed will not be honored.

The total grant amount is Rs. 3,00,000 for two years (limited to Rs. 1,50,000 per year) for standard applications. If the overall budget exceeds this limit, investigators must clearly specify the source of funds to cover the excess. It must be evident that these funds are sourced from departmental funds, special funds, or any other earmarked funds.

Eligibility:

1. The FLUID research grant is open to all students, faculty, and staff of CMC Vellore.

2. Every third FLUID grant requested by the PI will be granted only if prior research funded by the FLUID research grant has been published and meets one of the following criteria:

    - An impact factor of 2 or higher.
    - Published in a journal with an impact factor in the 1st or 2nd quartile in Scopus.

Terms and Conditions:

1. The expenses for stationery, printing materials, and paper should not exceed Rs. 8,000 from the allocated FLUID grant, regardless of the study duration.

2. The FLUID research grant ordinarily cannot be used for:
    - Recruitment of staff or hired manpower
    - Purchase of equipment, mobile phones, or gadgets
    - Job outsourcing
    - Translation costs (can be funded only if PI uses institutional facility)
    - Travel expenses for investigators

3. Laboratory investigations must specify the category clearly and avoid generalizations.

4. For any tests or investigations, investigators are encouraged to negotiate costs at C-rates for participants and budget accordingly.

5. The IRB generally does not approve the purchase of capital items. However, in certain cases, such purchases may be permitted depending on the specifics of the study. In the event that any capital item with a useful life exceeding one year is purchased using funds provided by the IRB, it must be returned to the research office for potential use in future research projects.

Ordinarily, not more than 3 fluid research grants can be concurrently held by a PI

2.5.3 Major Research Grant:

- **Revision of Major fluid research grant amount:**

1. The allocation for major fluid research grant is increased from Rs. 4,00,000 for 2 years to Rs. 8,00,000 for 2 years.
2. In a year, a maximum of **6** major fluid research grants will be allowed.

Note: If there is more than ONE application received:

- A 3-member **selection committee** formed by the VP research will approve funding for proposals on a **quarterly basis** based on the terms and conditions.

- The study must be approved by IRB prior to selection committee review.

- **Changes in terms and conditions:**

(i) Criteria for an individual researcher:

CURRENT	REVISED
▪ Confirmed medical faculty– Assistant Professor Grade I & II; Associate Professor Grade II.	▪ Confirmed **Medical faculty**– Assistant Professor Grade I & II; Associate Professor Grade I & II. ▪ Confirmed **Non-medical Post Docs**- Up to Associate Professor Grade I equivalent. ▪ **At least 50% of the awarded grants will be availed by confirmed medical faculty**.
▪ Only one major research grant may be used at a time by the given Principal Investigator.	▪ An Individual can avail Major fluid grant only once in his/her tenure.

▪ He/ She should have received at least one Fluid Research Grant or applied for grant from an external agency in the past at least as Co-Principal Investigator (co-PI)	▪ He/ She should have at least one fluid research grant funding as a PI (or) external grant funding at least as a co-PI.
▪ He/ She should have at least 3 research papers published in National / Inter-national Journals related to this field, preferably indexed. ▪ Those who have been currently actively engaged in research work and have done quality research in the past will be preferred.	▪ At least 1 research paper published in National / Inter-national Journals related to this field, preferably indexed.
▪ Up to 50% of the amount may be used for reimbursing the salary of a Research Fellow.	▪ The researcher can avail up to 50% of the total budget towards employing research staff.
▪ Publication charges cannot be budgeted.	▪ 10% of the total grant can be budgeted for Publication. **<u>To avail the funding opportunity:</u>** - The journal should have a minimum of 2.5 impact factor. - The publication acceptance timeline should be 2 years from the date of closure of the project. - Journals of repute that are indexed in Medline, PubMed Central, Sciences Citation Index Expanded, Embase, Scopus are accepted.
▪ The grant can be given for a maximum period of two years, with an amount of Rs. 2,00,000/- per year.	▪ The grant can be given for a maximum period of two years, with an amount of Rs. 4,00,000/- per year.

(ii) Criteria for a department:

- A department can apply for major fluid research grant once a year (both medical and non-medical faculty).
- If the IRB receives more than 1 proposal from the same department, then the **selection committee** will make the final decision.
- A letter of acknowledgement by the Head of Department on availing the major fluid research grant to be received and filed.

(iii) Criteria for Principal Investigator (PI):

- The PI is expected to send an interim report at the end of one year for the release of the 2nd year installment and final report at the end of two years.
- The PI is expected to publish the study results in an indexed peer reviewed journal and specifically acknowledge '**CMC major fluid grant funding'** in the publication.
- Any deficit in the fund at the end of two years will need to be covered by the PI's research fund or Departmental funds.

2.5.4 Special Grants:

2.5.4.1 CMC VELLORE & MISSION NETWORK COLLABORATIVE RESEARCH GRANT (CMCV&MNC grant)

Christian Medical College, Vellore has instituted a new intramural funding opportunity for all confirmed faculty called the "CMC Vellore Mission Network Collaborative Research Grant".

BROAD AIMS:

1. Capacity building among CMC Vellore Mission Network Hospitals for field, epidemiological, clinical and translational research.
2. Create Data Sub-hubs among CMC Vellore Mission Network Hospitals to leverage systematic and centralized data management for research.

FUNDS ALLOCATED:

1. Ten lakh INR per grant for a total duration of 2 years.
2. A maximum of 4 grants will be awarded annually.

APPLICATION AND SELECTION PROCEDURE:

1. This is an annual call and the call for application is open and the deadline for submission is 30th November 2024.
2. The PI must be a confirmed medical faculty in CMC Vellore.
3. There must be at least one Co-PI/Co-I from one of the Mission Network Hospitals of CMC Vellore (list available with Missions Office).

4. The proposal must be submitted in the standard format available in CMC Research website. Submissions should be made via the MS Forms link prior to the deadline.
5. The proposal will be reviewed in the next sitting of the CMC-IRB. Any proposal on Artificial Intelligence/ Machine learning will also need the appropriate checklist to be filled up and uploaded for approval via the MS Forms link.
6. All proposals with IRB clearance will be forwarded to an apriori constituted 'CMC Research Funding Committee' for decision on funding.
7. The results of the awards will be broadcasted within CMC and among the Mission Network Hospitals.
8. An Individual can avail this grant only once in his/her tenure.

AWARD DETAILS:

Some guidelines for the PI regarding the funding breakdown:

1. The PI can avail up to 25% towards manpower.
2. The PI can avail up to 25% towards acquiring equipment/electronic devices e.g. (Laptops/Computers).
3. The PI can avail up to 15% towards publication fees in an indexed journal.
4. The PI can avail up to 10% for travel expenses to mission hospital for research oversight or/ and for the field travel of research staff employed in the project.
6. The RedCap facility available in the CMC Biostatistics department can be used for data management at a nominal cost.

POST AWARD REQUIREMENTS:

1. The PI is expected to send an interim report at the end of one year for the release of the 2nd year installment and subsequently send the final report at the end of the project.
2. The PI is expected to publish the study results in an indexed peer reviewed journal within 2 years of completion of the study.
3. The PI should acknowledge 'CMC Vellore & Mission Network Collaborative Research Grant' in the publication.

2.5.4.2 VELLORE CMC FOUNDATION (VCMCF) RESEARCH GRANT

Christian Medical College and Vellore CMC Foundation (VCMCF) has instituted a new funding opportunity for all confirmed junior faculty called the "VELLORE CMC FOUNDATION (VCMCF) RESEARCH GRANT".

(i) AIMS:

1. To encourage basic, translational and clinical research among confirmed junior faculty of the institution.
2. To acquire data/ experience for facilitating external funding and publications in indexed journals.

(ii) FUNDS ALLOCATED:

1. The allocation for VCMCF Research Grant is Rs. 10,00,000 per grant.
2. In a year, a maximum of **2** VCMCF Research Grants will be awarded.

(iii) SELECTION PROCEDURE:

- This is an annual call and the call for the application is open and the deadline for submission is 30th November 2024.
- The proposal must be submitted in the standard format, which is available on the CMC Research website. Submissions should be made via the MS Forms link prior to the deadline.
- The proposal will be reviewed in the next sitting of the CMC-**IRB.** Any proposal on Artificial Intelligence/ Machine learning will also need the appropriate checklist to be filled up and uploaded for approval via the MS Forms link.
- All proposals with IRB clearance will be forwarded to an apriori constituted '**CMC Research Funding Committee**' for decision on funding.

(iv) ELIGIBILITY CRITERIA:

Criteria for an individual researcher:

Confirmed **Medical faculty**– Assistant Professor Grade I & II; Associate Professor Grade I & II. Confirmed **Non-medical Post Docs**- Up to Associate Professor Grade I equivalent. At least 50% of the awarded grants will be availed by confirmed medical faculty.
An Individual can avail VCMCF Research Grant only once in his/her tenure.
He/ She should have at least one fluid research grant funding as a PI (or) external grant funding at least as a co-PI.
At least 1 research paper published in National / Inter-national Journals related to this field, preferably indexed.
The researcher can avail up to 50% of the total budget towards employing research staff.

10% of the total grant can be budgeted for publication.
To avail the funding opportunity for Publication

- The journal should have a minimum of 2.5 impact factor.
- The publication acceptance timeline should be within 2 years from the date of closure of the project.
- Journals of repute that are indexed in Medline, PubMed Central, Sciences Citation Index Expanded, Embase, Scopus are accepted.

- The grant is given for a maximum period of two years, with a total amount of Rs. 10,00,000/- per project.

Criteria for a department:

- A department can apply for VCMCF Research Grant once a year (both medical and non-medical faculty).
- If the IRB receives more than 1 proposal from the same department, then the **selection committee** will make the final decision.
- A letter of acknowledgement by the Head of Department on availing the VCMCF Research Grant to be received and filed.

Responsibilities of Principal Investigator (PI):

- The PI is expected to send an interim report at half term for the release of the 2nd year installment and final report at the end of the project duration.
- The PI is expected to publish the study results in an indexed peer reviewed journal and specifically acknowledge 'Vellore CMC Foundation Research Grant' in the publication.
- Any deficit in the fund at the end of the project duration will need to becovered by the PI's research fund or Departmental funds.

2.6 Purpose of the Ethics Committee

The Ethics Committees of CMC shall provide ethical oversight of all research conducted in CMC within the remit of each IRB. The EC will, in addition to considering the social, cultural, legal and ethical aspects of the proposed study, also review the informed consent processes and the protection from research-related harms.

2.6.1 Terms of Appointment

- The Principal of CMC invites individuals of high standing and expertise from the community and within the institution to serve on the Ethics committee, paying particular attention to the regulatory requirements governing ethics committees.
- The duration of appointment for members is for a period of three years.

- For the nominated, or ex-officio members, it would be for the period that they hold administrative office. Members may be re-appointed for as many terms as deemed by the Principal
- At the end of the term of a member or members, a new member or members is/are appointed such that at least 50% of the members will remain in the committee to provide continuity and to help in the seamless overview of ongoing research.
- A member can be replaced in the event of resignation or non-attendance for three consecutive EC meetings (unless this was intimated in advance to the member secretary on sufficient grounds), or for any action not commensurate with the responsibilities laid down in the guidelines. Disqualification of any member is communicated in writing by the Principal.
- A member can tender his/her resignation from the committee, with approval from the Principal
- Membership of the EC is a position of responsibility and is not a paid position for institutional members. Members will not be paid an honorarium or compensation for their membership or attendance at the meetings. Members of the EC who are external to the institution shall be provided transport to attend EC meetings or be compensated for their travel expenses and shall be paid an honorarium, as fixed by the Principal's office, for attendance and participation at each EC meeting.
- The role of Chairperson/Member Secretary is an additional activity to their primary responsibility based on their qualifications
- The Ethics committee may maintain a panel of subject matter experts and representatives of patient groups to consult as invited experts to provide opinions on specific projects. However, such experts will serve solely in an advisory capacity with no voting rights.

Current membership of the Ethics Committee Silver & Blue (Please refer *APPENDIX-XI)*

2.7 Research Proposal Submission Process

All research proposals to be submitted to the IRB should be on prescribed application forms failing which applications will not be accepted.

i. Application

- All research proposals will be submitted to the Office of Research on specific forms according to the design of the study. These forms can be downloaded from the Research Website. Applications for interventional studies, diagnostic test accuracy studies, and epidemiological research have separate forms and checklists. Study designs that do not conform to the above may be submitted in the general application form (see Section 5 for samples of these forms).
- All applications will be concurrently reviewed for scientific merit by the Research Committee and ethical considerations by the Ethics Committee at the meeting of the IRB. Hence the sections in the application forms dealing with the science and ethics of the study should both be filled in and submitted for the proposal to be considered.
- All relevant documents detailed under documentation should accompany the application.

- Researchers submitting proposals funded by other funding agencies or pharmaceutical agencies that have other kinds of application formats need to submit the agency-specific format ***as well as*** the IRB application forms relevant to the design of the study. Failure to do this is likely to result in rejection of the application.

1.1 IRB submission and categorization

- When the Research Office receives IRB submissions they are checked for completeness and are then placed in the queue for the respective Silver or Blue IRB.
- If the application is either incomplete or has not been duly approved by co-investigators and the head of department, the application will be sent back and will not be included in the IRB queue until the preliminary screening is successful.

1.2 Document verification

- Once an application is placed in the IRB queue a more detailed check on the completeness of the IRB application is done along with verification of mandatory documents. The following documents are considered necessary for the review process to be started.

Mandatory documents for IRB submission

- Completed IRB application form with responses for each of the questions or a "not applicable" for those that do not call for a response.
- Approvals (Signatures) of the Principal Investigator (PI), Co-Investigators, Guide (for student research), and Head of the Department of Head of Unit as appropriate.
- CVs of the PI and Co-Investigators that highlight the expertise of the investigators in conducting the proposed research.
- Patient Information Sheet/Informed Consent Forms with translations (if applicable) and any advertisements for recruitment.
- Data collection instruments, MoUs, and other agreements may be requested in the form. Delays with approval of MoUs and agreements will not delay the IRB review, but approvals cannot be provided till these are also reviewed by the IRB.

All the above mentioned should be submitted as a soft copy to the Office of the Additional Vice-Principal (Research) on or before the due date. **Applications submitted after the due date will not be entertained.**

- At the time of submission, the checklist for submission should also be submitted; if this indicates incomplete submissions, the application will be returned.
- All incomplete submissions will have to be completed and returned before the last date of submission for it to be considered for review at the IRB meeting for that month. This is to ensure that IRB members have sufficient time to review the proposals in detail. Researchers are requested to keep to this deadline and not attempt to place undue pressure on the office of research to accept last-minute applications or seek expedited review without justification.
- If the application is complete and accepted, the date and time of the IRB meeting will be intimated to the PI by email. For the Blue IRB, the PI must be present along with his/her guide or co-guide.

- For silver IRB, the PI or one of the co-investigators will be required to be present to offer clarifications. If none of the investigators are able to be present for discussion of the proposal, it will not be taken up for review. **For all student/post-graduate presentations, it is essential that the guide or a co-guide attend the meeting along with the student/post-graduate. If no guide or co-guide is present, the proposal will not be considered for review.**

1.3 Review Chart Preparation

- Upon verification of the completeness of the submission, the proposals are screened by the Additional Vice-Principal (Research) and reviewers are allotted. A reviewer will get no less than seven calendar days to review proposals prior to the meeting. All proposals will have a scientific review with one or more reviewers assessing the proposal. The ethics review for all proposals (other than retrospective studies) will be done by one or more ethics reviewers.
- At least four reviewers will ordinarily review interventional studies. However, if interventions are deemed to be of minimal risk, two reviewers may be assigned for the primary review. In addition, clinical trials will be reviewed for methodological issues by team of experienced trialists from across the institution and their report will be made available to the IRB. The peer review findings are not binding on the IRB and serves to advice on methodological aspects of the proposed study.
- Up to 32 prospective proposals will be considered at an IRB meeting. If the meeting has less than 12 interventional studies and there is an urgency for additional proposals to be considered, up to 40 proposals can be reviewed in one sitting of the IRB.

ii. Processing fee for IRB Clearance for industry-funded research

- A *non-refundable processing fee* will be levied on all external research proposals that are funded by agencies or organizations with a commercial orientation (pharmaceutical companies, contract research organizations, etc) for IRB approval.
- This fee is not applicable to proposals that are funded by non-commercial sponsors (governmental or non-governmental funding agency).
- This processing fee is independent of the eventual decision to accept, revise or reject the proposal.
- The processing fee applicable will be Rs. 75,000 (Rupees Seventy-Five thousand only) (Excluding Tax as per Government norms) and 18% GST is applicable per proposal for proposals sponsored by overseas organizations or agencies (parent organization is based overseas even if there are significant Indian operations) or Indian agencies with significant overseas operations, and Rs. 75,000 (Excluding Tax as per Government norms) per proposal for Indian organizations or agencies.
- This fee is non-negotiable. Under exceptional circumstances, as decided by the Additional Vice-Principal in consultation with the Principal, a reduction or waiver of this fee may be made.
- If there are any additional documents included, the charges may be mutually agreed upon based on the scope of work. The amendments do not require additional charges.

- This fee is to be remitted by crossed-demand draft payable to the State Bank of India, Vellore, in the name of the 'CMC Vellore Association.'
- The receipt of payment of this fee will have to accompany the IRB application for the review to take place at the IRB meeting for the month.

iii. Documentation

The researcher should apply of the study protocol in the prescribed format for the study design (see section 5).

The protocol should include the following: -

- The title of the project with affiliation and signatures of the PI and all co-investigators should be included as attestation for agreement to conduct the study. If co-investigators are not available for signature at the time of submission of the protocol, a signed letter with the title of the study with names of all authors should accompany the proposal and stating that the co-investigator has read the protocol as submitted, approves the submission and the role of all investigators and agrees to the terms of participation.
- Signature of the Head of the Department or Unit, as applicable. For interdepartmental studies, an agreement letter from concerned departmental heads is desirable, especially if they are not co-investigators.
- Clear research objectives and rationale for undertaking the investigation in the light of existing knowledge.
- Recent curriculum vitae of the Investigators indicating qualification and experience.
- Participant recruitment procedures and brochures, if applicable.
- Inclusion and exclusion criteria for entry of participants.
- Precise description of methodology of the proposed research, including sample size (with justification), type of study design, intended intervention, dosages of drugs, route of administration, duration of treatment and details of invasive procedures, as appropriate. A diagrammatic representation of the study participant flow is encouraged for all study designs, where appropriate.
- Plan to withdraw or withhold standard therapies in the course of research.
- Plan for statistical analysis of the study.
- Procedure for seeking and obtaining informed consent with sample of patient information sheet and ICFs in English and all local languages of expected participants.
- Safety of proposed intervention and any drug/device or vaccine to be tested, including results of relevant laboratory, animal and human research.
- Proposed compensation and reimbursement of incidental expenses and management of research related and unrelated injury/ illness during and after research period.

- If applicable (in study-related injuries); a description of the arrangements for insurance coverage for research participants and copy of insurance documents from an Indian insurance agency.
- If applicable; all significant previous decisions (e.g., those leading to a negative decision or modified protocol) by other regulatory authorities for the proposed study (whether in Vellore or elsewhere) and an indication of the modification(s) to the protocol made on that account. The reasons for negative decisions should be provided.
- An account of storage and maintenance of all data collected during the trial.
- Plans for publication of results, whether positive or negative, while maintaining the privacy and confidentiality of the study participants, with names of proposed authors and their expected contributions.
- A statement on probable ethical issues and steps taken to address these, such as the justification for washout of a standard drug, or the use of a placebo control.
- All other relevant documents related to the study protocol e.g., investigator's brochure for trial on drugs/ devices/ vaccines/ herbal remedies, statement of relevant regulatory clearances.
- Any material used for advertisement to recruit participants to the study - this may include flyers, posters, radio and TV advertisements.
- Details of Funding agency/ Sponsors and breakdown of fund allocation.
- For international collaborative study details about foreign collaborators and documents for review of Health Ministry's Screening Committee (HMSC) or appropriate Committees under other agencies/ authority like Drug Controller General of India (DCGI); clearance from the Department of Biotechnology (DBT) for recombinant DNA experiments; and from the Bhabha Atomic Energy Commission (BARC) for experiments involving ionizing radiation.
- For exchange of biological material in international collaborative studies, a MoU/ Material Transfer Agreement between the collaborating partners.
- A statement on conflict of interest (COI), if any.
- Agreement to follow the latest version of the ICMR guidelines and the Declaration of Helsinki with amendments, if any.
- For clinical trials in humans, agreement to prospectively register the trial in the Clinical Trials Register- India (www.ctri.in) and/or other clinical trial registries as required by Indian regulatory authorities.
- Agreement to report adverse events as required by institutional policy, and/or provides details of the Data Safety and Monitoring Board (DSMB) and to submit to review and audit if required.
- Agreement to inform the IRB in writing of any deviations to the approved protocol.
- Agreement to submit progress reports, if applicable or requested, and a final report (for institutionally sponsored as well as externally funded research) within six months of completion of the study, unless an extension is granted by the Additional Vice-Principal.

- Agreement to write up and submit the results of the research to a peer-reviewed journal within a reasonable time (within two years of completion of submission of the final report).

2.8 Review Procedure

- All properly submitted applications will normally be reviewed during the month following the submission and according to the review procedure described below.
- Each application will be screened by the Office of Research for their completeness and depending on the risk involved categorise them into three types, namely, *exemption from review*, *expedited review* and *full review* (see below for explanation).
- A study with minimal risk would be defined as one which may be anticipated as harm or discomfort not greater than that encountered in routine daily life activities of general population or during the performance of routine physical or psychological examinations or tests. However, in some cases like surgery, chemotherapy or radiation therapy, great risk would be inherent in the treatment itself, but this may be within the range of minimal risk for the research participant undergoing these interventions since it would be undertaken as part of current everyday life.
- An investigator cannot decide that her/his protocol falls in the exempted category without approval from the IRB. All proposals will be scrutinised to decide under which of the following three categories it will be considered.
- **It is important to remember that the IRB is constituted both as a Research and an Ethics Committee, and the purpose is to review and improve scientific quality in addition to human subjects' protection, hence even if the study is of less than minimal risk, it may still need to be considered by the full IRB.**

ii. Exemption from review

Proposals which present less than minimal risk fall under this category as in situations such as research on educational practices such as instructional strategies or effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.

Exceptions:

- When research on use of educational tests, survey or interview procedures, or observation of public behaviour can identify the human participant directly or through identifiers, and the disclosure of information outside research could subject the participant to the risk of civil or criminal or financial liability or psychosocial harm.
- When interviews involve direct approach or access to private papers.

iii. Expedited Review

Research activities that present no more than minimal risk to human participants, and involve only procedures listed in one or more of the categories listed below may be reviewed by the Chairperson or Deputy Chairperson of the Research Committee through the expedited review procedure.

Categories of research considered for expedited review

a. Minor deviations from originally approved research during the period of approval (usually of one year duration).

b. Revised proposal previously approved through full review by the IRB or continuing review of IRB approved proposals where there is no additional risk or activity is limited to data analysis.

c. Research activities that involve only procedures listed in one or more of the following categories:

- Clinical studies of drugs and medical devices only when research is on already approved drugs (except when studying drug interaction or conducting trials on vulnerable populations or for new indications)
- Research involving clinical materials (data, documents, records, or specimens) that have already been collected for non-research (clinical) purposes
- Collection of blood samples by finger prick, heel prick, ear prick, or venepuncture:
  - from healthy adults and non-pregnant women of normal weight for their age and not more than 500 ml blood is drawn in an 8 week period and frequency of collection is not more than 2 times per week;
  - from other adults and children, where the age, weight, and health of the participants, the collection procedure, the amount of blood to be collected, and the frequency with which it will be collected has been considered and not more than 50 ml or 3 ml per kg, whichever is lesser is drawn in an 8 week period and not more than 2 times per week. From neonates, any blood collection should be considered very carefully and is unlikely to be approved with an expedited clearance.
- Prospective collection of biological specimens for research purposes by non-invasive means. For instance:
  - skin appendages like hair and nail clippings in a non-disfiguring manner;
  - dental procedures - deciduous teeth at time of exfoliation or if routine patient care indicates a need for extraction of permanent teeth; supra and sub-gingival dental plaque and calculus, provided the collection procedure is not more invasive than routine prophylactic scaling of the teeth;
  - excreta and external secretions (including sweat);
  - un-cannulised saliva collected either in an un-stimulated fashion or stimulated by chewing gum or by applying a dilute citric solution to the tongue;
  - placenta removed at delivery;
  - amniotic fluid obtained at the time of rupture of the membrane prior to or during labour
  - mucosal and skin cells collected by buccal scraping or swab, skin swab, or mouth washings;
  - Sputum collected after saline mist nebulization and bronchial lavages.

- Collection of data through non-invasive procedures routinely employed in clinical practice. Where medical devices are employed, they must be cleared/ approved for marketing, for instance:
    - 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 participant or an invasion of the participant's privacy;
    - weighing or testing sensory acuity;
    - magnetic resonance imaging;
    - electrocardiography, echocardiography; electroencephalography, thermography, detection of naturally occurring radioactivity,
    - electroretinography, ultrasound, diagnostic infrared imaging, Doppler blood flow,
    - Moderate exercise, muscular strength testing, body composition assessment, and flexibility testing where appropriate given the age, weight, and health of the individual.
- Research involving clinical materials (data, documents, records, or specimens) that will be collected solely for non-research (clinical) purposes.
- Collection of data from voice, video, digital, or image recordings made for research purposes.
- Research on individual or group characteristics or behaviour 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.

d. Proposals requesting expedited review should provide sufficient detail to enable a decision to be made in this regard. In the case of minor protocol amendments of approved research studies, the application should clearly specify the amendments that need expedited review. All expedited review proposals should be ratified in the next full IRB meeting.

e. All projects, whether internally or externally funded, are expected to submit a **report to the IRB annually for monitoring**. In approved and ongoing studies, the report will undergo expedited review by the Deputy Chairpersons of the RC and EC or their nominees from among the IRB members. Currently used ICFs must be submitted for ongoing review, along with an update on the study and any relevant new information that may affect the conduct of the study.

f. A brief summary and all review decisions will be placed before the IRB members in the next meeting.

g. The expedited review procedure may not be used where identification of the participants and/or their responses would reasonably place them at risk of criminal or civil liability or be damaging to the participants' financial standing, employability, insurability, reputation, or be stigmatizing, unless reasonable and appropriate protections will be implemented so that risks related to invasion of privacy and breach of confidentiality are no greater than minimal.

h. The expedited review procedure may not be used for fresh applications with prospective data collection or interventions involving human participants. The Expedited review cannot be given to overseas investigators.

i. The standard requirements for informed consent (or its waiver, alteration, or exception) apply regardless of the type of review, expedited or convened, utilized by the IRB.

iv. Full Review

All research presenting with more than minimal risk, proposals/ protocols which do not qualify for exempted or expedited review and projects that involve vulnerable populations and special groups shall be subjected to full review by all the members.

Previous Studies which have undergone previous IRB clearance in excess of 3 years, need a fresh IRB renewal in case of major proposal changes, additional investigations involving sample collection or procedures, novel ideas, major budgetary presentations or new sponsors are involved.

v. Review of final reports

All final reports submitted in the prescribed format will be reviewed by one member of the Research Committee assigned to review final reports. If the report is satisfactory, the investigator will not be asked to make a presentation to the IRB. In case of any queries regarding the report, the investigator will be asked to attend the next convened IRB meeting to make a presentation of their work and answer queries.

2.9 Ethical issues related to reviewing a protocol

i. Social values:
The basic requirement for health research to be ethically permissible is that it must have anticipated social value. The outcome of the research should be relevant to the health problems of society. All stakeholders, including sponsors, researchers and ECs must ensure that the planned research has social value.

ii. Scientific design and conduct of the study

- Valid scientific methods are essential to make the research ethically viable as poor science can expose research participants or communities to risks without any possibility of benefit.
- Although ECs may obtain documentation from a prior scientific review, they should also determine that the research methods are scientifically sound, and should examine the ethical implications of the chosen research design or strategy.
- The EC can raise scientific concerns (even if the study has prior approval of a scientific committee) if it may affect quality of research and or safety of research participants.

iii. Benefit-risk assessment

- The benefits accruing from the planned research either to the participants or to the community or society in general must justify the risks inherent in the research.
- Risks may be physical, psychological, economic, social or legal and harm may occur either at an individual level or at the family, community or societal level. It is necessary to first look at the intervention under investigation and assess its potential harm and benefits and then consider the aggregate of harm and benefits of the study as a whole.
- The EC should review plans for risk management, including withdrawal criteria with rescue medication or procedures.

- The EC should give advice regarding minimization of risk/ discomfort wherever applicable.
- Adequate provisions must be made for monitoring and auditing the conduct of the research, including the constitution of a Data and Safety Monitoring Board (DSMB) if applicable (for example in clinical trials)

iv. Selection of the study population and recruitment of research participants

- Recruitment should be voluntary and non-coercive. Participants should be fairly selected as per inclusion and exclusion criteria. However, selection of participants should be distributive such that a particular population or tribe or economic group is not coerced to participate or benefit.
- Participants should be able to opt out at any time without their routine care being affected.
- No individual or group of persons must bear the burden of participation in research without accruing any direct or indirect benefits.
- Vulnerable groups may be recruited after proper justification is provided.

v. Payment for participation

- Plans for payment for participation, reimbursement of incurred costs, such as travel or lost wages, incidental expenses and other inconveniences should be reviewed.
- There is a need to determine that payments are not so large as to encourage prospective participants to participate in the research without due consideration of the risks or against their better judgement. No undue inducement must be offered.

vi. Protection of research participants' privacy and confidentiality

- ECs should examine the processes that are put in place to safeguard participants' privacy and confidentiality.
- Research records should be filed independently of the clinical records with safeguards to prevent protected health information being compromised.

vii. Community considerations

- The EC should ensure that due respect is given to the community, their interests are protected and the research addresses the community's needs.
- The proposed research should not lead to any stigma or discrimination. Harm, if any, should be minimized.
- Plans for communication of results to the community at the end of the study should be carefully reviewed.
- It is important to examine how the benefits of the research will be disseminated to the community.

viii. Qualifications of researchers and adequacy assessment of study sites

- The EC should look at the suitability of qualifications and experience of the PI to conduct the proposed research along with adequacy of site facilities for participants.

ix. Disclosure or declaration of potential COI

- The EC should review any declaration of COI by a researcher and suggest ways to manage these.
- The EC should manage COI within the EC and members with COI should leave the room at the time of decision making in a particular study.

x. Plans for medical management and compensation for study related injury

- The proposed plan for tackling any medical injuries or emergencies should be reviewed.
- Source and means for compensation for study related injury should be ascertained.

xi. Review of the informed consent process

The informed consent process must be reviewed keeping in mind the following:

- the process used for obtaining informed consent, including the identification of those responsible for obtaining consent and the procedures adopted for vulnerable populations;
- the adequacy, completeness and understandability of the information to be given to the research participants, and when appropriate, their Legally Acceptable Representatives
- contents of the patient/participation information sheet including the local language translations
- back translations of the informed consent document in English, wherever required;
- provision for audio-visual recording of consent process, if applicable, as per relevant regulations; and
- if consent waiver or verbal/oral consent request has been asked for, this should be reviewed by assessing whether the protocol meets the criteria.

ICMR guidelines 2017

2.10 IRB Meeting

- The IRB Silver will meet every month (except the month of May) to enable a detailed review of all proposals scheduled for the convened meeting.
- The IRB Blue will meet every month (except the month of May) on the 1st Wednesday to enable a detailed review of all proposals scheduled for the convened meeting.
- In the event that the timing is unsuitable, the meeting could be rescheduled by the Additional Vice-Principal (Research) in consultation with the Chairpersons of the Research and Ethics committees.
- All decisions will be taken at convened meetings and not solely by circulation of project proposals.

Invitation to Investigators

- Once reviewers are assigned and the schedule of the IRB is finalised, the time and venue of the IRB meeting will be communicated to investigators. This will ordinarily be 5-6 days prior to the meeting.
- Investigators will be briefed on what to expect at the meeting. If the investigators carry with themselves a copy of their submission, it will help them discuss the proposal and provide appropriate clarifications.
- All reviewers are expected to attend the meeting in person in the IRB room on the Bagayam Campus or, if that is not feasible, at designated locations on other campuses. Connecting from personal devices at unsecured locations is not acceptable.

i. Distribution of proposals to members and preparation for the IRB meeting

- The Office of Research shall prepare an agenda and send this to the members of the IRBs at least two weeks before the meeting.
- Each member of the IRB shall receive an online link with copies of all proposals (or hard copy if preferred) with all submitted documents along with the agenda.

- Each member of the IRBs will be allotted primary or secondary reviewer status for each proposal by the Office of Research. Thus, each proposal will be reviewed in detail by two members of the Research Committee for scientific consideration and by two members of the Ethics Committee for ethical review.

- Members are expected to indicate at the earliest their participation at the scheduled IRB meeting.

- If there are potential conflicts of interest in reviewing their allotted proposals, they shall inform the Office of Research sufficiently early so that these may be re-allotted or be encouraged to review with the nature of the declared conflict recorded in the minutes of the IRB meeting.

- IRB members are encouraged to seek clarification from researchers directly or via the Office of Research before the IRB meeting so that conclusive decisions can be facilitated.

- IRB members will prepare brief assessment reports for the assigned proposals.

- If expert opinion is thought necessary, members are free to seek this directly from a suitable person but confidentiality of the proposal should be ensured. The name, affiliation and nature of expertise and the opinion of the expert should be submitted with the review report. In case, more than one reviewer is unable to review a proposal, it may be referred to an independent consultant, recommended by an IRB member or chosen from a standing list of consultants in the Office of Research.

- While designated proposals will be the primary responsibility of IRB members, they are encouraged to review all proposals, if possible, and share their views at the meetings.

ii. Combined research and ethics review by IRB

- The IRBs, comprising the Research and Ethics committees, will meet together at a designated venue that will accommodate all members of both committees.

- The meeting is chaired by the Chairperson of the Ethics Committee. In his/her absence, the meeting can be chaired by the Chairperson of the Research Committee or the Deputy Chairperson of the Ethics Committee. Scientific review of the proposal by the Research Committee will precede the ethical review.

iii. **Quorum requirements for IRB meetings**

- The quorum for RC review will be 4 members.

- The quorum for EC review will be 5 members and should fulfil the following composition (as prescribed in The New Drugs and Clinical Trials Rules, 2019):

  - One basic medical scientist (preferably one pharmacologist).
  - One clinician
  - One legal expert or retired judge
  - One social scientist/ representative of non-governmental organisation/ philosopher/ ethicist/ theologian or a similar person

- One layperson from the community.

- The quorum should be maintained throughout the meeting, and the names of members present during each proposal should be recorded to ensure compliance with The New Drugs and Clinical Trials Rules, 2019.

- No decision is valid without the fulfilment of the quorum.

iv. Conduct of Meeting

- Investigators are expected to be available at the venue 15 minutes before their scheduled time. Investigators will be informed as early as feasible if there are inadvertent delays with the IRB.
- Proposals will be discussed in the order listed on the review chart.
- The assigned reviewers will summarize the proposal, raise pertinent questions, or seek clarification. Following this, the IRB will evaluate the scientific and ethical aspects of the proposed research collectively and the Chairperson will verbally inform the investigator regarding the decision of the board.

- The Office of Research will record any queries raised and communicate them to the investigators.

- The members of the Research Committee with responsibility for primary and secondary review shall summarise the proposal and present their reports.

- Researchers will be present during the presentation and will be invited to offer clarifications if required to do so; they may also volunteer clarifications or additional information. For PG trainees and students, the guides or co-guides must be present for the presentation and discussion of the proposal.

- There will be provision for review of proposals on computers for each member of the IRB and projection of proposals and member's reports if needed.

- Once the Research Committee has made their decision about the scientific validity of the study, the same process of review by the Ethics Committee will commence.

- Independent consultants/experts will be invited to offer their opinions on specific research proposals if needed. When invited for consultation, the consultant/expert will be expected to follow the provided IRB SOP and sign a letter stating that they understand the terms of reference and a confidentiality agreement.

- At each meeting, the pharmacologist or the Deputy Chairperson of the RC will present the data obtained from the CMC IRB Safety Monitor on SAEs for ongoing studies at CMC, and the investigator may be requested to be present for discussion if considered necessary by the IRB.

v. Elements of Review

a. The **Research Committee** shall review the scientific aspects of the proposal as follows:

- the rationale and need for the study in view of existing literature

- the appropriateness of the study design in relation to the objectives of the study, the statistical methodology (including sample size calculation), and the potential for reaching sound conclusions with the smallest number of research participants.
- the explanation of risks and benefits, the justification for the use of control arms, criteria for withdrawal or study termination.
- the adequacy of provisions made for monitoring and auditing the conduct of the research, including the constitution of a data safety monitoring board (DSMB).
- the adequacy of the investigative team, site, available facilities, and procedures.
- the manner in which the results of the research will be reported and published.

b. The **Ethics Committee** will take into account the process and outcome of the scientific review by the Research Committee, and the requirements of applicable laws and regulations. In addition, the EC will also consider the following:

Care and Protection of Research Participants

- The suitability of the investigators' qualifications and experience for the proposed study.
- Any plans to withdraw or withhold standard therapies for the purpose of the research, and the justification for such action.
- The medical care to be provided to research participants during and after the course of the research.
- The adequacy of medical supervision and psycho-social support for the research participants.
- Steps to be taken if research participants voluntarily withdraw during the course of the research.
- The criteria for extended access to, the emergency use of, and/or the compassionate use of study products.
- The arrangements, if appropriate, for informing the research participant's general practitioner or consultant, including procedures for seeking the participant's consent to do so.
- A description of any plans to make the study product available to the research participants following the research.
- A description of any financial costs to research participants; the rewards and compensations for research participants (including money, services, and/or gifts);
- The provisions for compensation/treatment in the case of the injury/disability/death of a research participant attributable to participation in the research;
- The insurance and indemnity arrangements;

Protection of Research Participant Confidentiality

- A description of the persons who will have access to the personal data of research participants, including medical records and biological samples.
- The measures taken to ensure the confidentiality and security of personal information concerning research participants.

Informed Consent Process

- A full description of the process for obtaining informed consent, including the identification of those responsible for obtaining consent;
- The adequacy, completeness, and understandability of written and oral information to be given to the research participants, and, when appropriate, their legally acceptable representative (LAR)(s);
- Clear justification for the intention to include in the research individuals who cannot consent, and a full account of the arrangements for obtaining consent or authorization for the participation of such individuals;
- Assurances that research participants will receive information that becomes available during the course of the research relevant to their participation, including their rights, safety, and well-being;
- The provisions are made for receiving and responding to queries and complaints from research participants or their representatives during the course of a research project.
- **Site-specific ICF is mandatory:** It is mandatory to use the institution-specific ICFs for all research projects. Additionally, sponsor-specified ICFs may be collected after IRB approval.
- **More details of the Informed Consent Process is available in Section 3.2**

The format for CMC's informed consent is available on the Research Website: http://10.13.21.249/Research/Files/Draft%20format%20for%20Informed%20Consent.doc

Informed consent in emergency protocols

- This section describes responsibilities related to informed consent when research participants are enrolled in emergent circumstances, as when human participants are in a life-threatening situation, available treatments are unproven or unsatisfactory, and the collection of valid scientific evidence, which may include evidence obtained through randomized placebo-controlled investigations, is necessary to determine the safety and effectiveness of particular interventions.
- Obtaining informed consent is not feasible because (i) the participants will not be able to give their informed consent as a result of their medical condition, (ii) the intervention involved in the research must be administered before consent from the participant's legally authorized representatives is feasible, and (iii) there is no reasonable way to identify prospectively the individuals likely to become eligible for participation in the research.
- Participation in the research holds out the prospect of direct benefit to the participants because (i) participants are facing a life-threatening situation that necessitates intervention, (ii) appropriate animal and other preclinical studies have been conducted, and the information derived from those studies and related evidence support the potential for the intervention to provide a direct benefit

to the individual participants; and(iii) risks associated with the research are reasonable in relation to what is known about the medical condition of the potential class of participants, the risks and benefits of standard therapy, if any, and what is known about the risks and benefits of the proposed intervention or activity.

- The research could not practicably be carried out without the waiver.
- The proposed research protocol defines the length of the potential therapeutic window based on scientific evidence, and the investigator has committed to attempting to contact a legally authorized representative for each participant within that window of time and, if feasible, to asking the legally authorized representative contacted for consent within that window rather than proceeding without consent. The investigator will summarize efforts made to contact representatives and make this information available to the IRB at the time of continuing review.
- The IRB has reviewed and approved informed consent procedures and an informed consent document. These procedures and the informed consent document are to be used with participants or their legally authorized representatives in situations where the use of such procedures and documents is feasible. The IRB has reviewed and approved procedures and information to be used when providing an opportunity for a family member to object to a participant's participation in the research.

In addition, the IRB is responsible for ensuring that procedures are in place to inform, at the earliest feasible opportunity, each participant, or if the participant remains incapacitated, a legally authorized representative of the participant, or if such a representative is not reasonably available, a family member, of the participant's inclusion in the research, the details of the research and other information contained in the informed consent document. The IRB shall also ensure that there is a procedure to inform the participant, or if the participant remains incapacitated, a legally authorized representative of the participant, or if such a representative is not reasonably available, a family member, that he or she may discontinue the participant's participation at any time without penalty or loss of benefits to which the participant is otherwise entitled. If a legally authorized representative or family member is told about the research and the participant's condition improves, the participant is also to be informed as soon as feasible. If a participant is entered into research with waived consent and the participant dies before a legally authorized representative or family member can be contacted, information about the research is to be provided to the subject's legally authorized representative or family member, if feasible.

Please also refer to the guidelines of the Informed consent process in section 5 of the National Ethical Guidelines For Biomedical And Health Research Involving Human Participants – *ICMR Guidelines 2017*

Community Considerations

- the impact and relevance of the research on the local community and on the concerned communities from which the research participants are drawn;
- the steps taken to consult with the concerned communities during the course of designing the research;
- the influence of the community on the consent of individuals;
- proposed community consultation during the course of the research;
- the extent to which the research contributes to capacity building, such as the enhancement of local healthcare, research, and the ability to respond to public health needs;
- a description of the availability and affordability of any successful study product to the concerned communities following the research;
- The manner in which the results of the research will be made available to the research participants and the concerned communities.

Recruitment of Research Participants

- The characteristics of the population from which the research participants will be drawn (including gender, age, literacy, culture, economic status, and ethnicity);
- The means by which initial contact and recruitment is to be conducted;
- The means by which full information is to be conveyed to potential research participants or their representatives;
- The inclusion and exclusion criteria for research participants.

vi. Decision making

In making decisions the IRB will take the following into consideration:

- A member will withdraw from the meeting during the decision procedure concerning an application where there is a conflict of interest; the conflict of interest should be indicated to the chairperson prior to the review of the application and recorded in the minutes.
- Decisions may only be taken when sufficient time has been allowed for review and discussion of an application in the absence of non-members (e.g., the investigator and independent consultants) from the meeting, with the exception of IRB secretariat.
- Decisions will only be made at meetings where a quorum is present and maintained for each proposal.
- Only members who participate in the review will participate in the decision.
- In the interests of sound and ethical research, the members of the RC and EC are encouraged to discuss the proposal in detail before a decision is made.

- Decisions will be arrived at through consensus, where possible; when a consensus is not possible, the IRB will vote.
- In the event of a vote, although the names of members who voted for and against the project may be recorded, this information will not be made public knowledge to avoid coercion and inducements.
- If one of the members has her/his own proposal for review or has any conflict of Interest then s/he should withdraw from the IRB while the project is being discussed.
- The decision must be to recommend / reject / suggest modification for a repeat review or advise appropriate steps.
- The record of the discussion will serve as the minutes and will be approved and signed by the Chairperson/ alternate Chairperson/ designated member of the committee. Review reports of primary and secondary IRB members will be filed along with details of the resolution of any concerns raised, outstanding issues and final decisions. Any advice that is non-binding will be appended to the decision.
- In cases of conditional decisions, clear suggestions for revision and the procedure for having the application re-reviewed will be specified.
- A negative decision on an application will be supported by clearly stated reasons.

vii. Communicating IRB decisions

i. A decision will be communicated in writing to the applicant, preferably within two week's time of the meeting at which the decision was made.

ii. The IRB will provide direct approval to the studies that satisfactorily clarify both ethical and scientific aspects.

For the studies that require certain modifications before issuing final approval, the following process will take place:

- The queries raised by the IRB will be emailed to the Principal Investigator (PI) (CC'd to the Guide if it is a student research project) along with a revision checklist within 4-5 business days after the IRB meeting. Only official CMC Vellore email addresses will be used to share communications from the IRB
- The investigators will provide their responses to queries (clarifications) via email within 3 months from the date of receipt, along with the filled revision checklist.
- The clarifications received will be screened for completeness and forwarded to the original reviewers of the study within five business days of receipt to obtain their approval.
- Reviewers will be reminded for approval every 10 days, with a maximum of 3 reminders.
- If no response is received after the final reminder, the proposal may be considered approved and approved by the Addl VP research
- If there are any additional clarifications required the same process will be repeated.

- The final IRB approval letter will be issued after receiving the final approval from the Primary & Secondary reviewers of the study via email.

iii. The fluid grant agreement, signed by the Vice-principal (Research), will indicate the amount sanctioned from the Fluid Research Fund (if financial support was requested) and will be separate from the IRB clearance.

Final Approval & Documentation

- Once the original reviewer approves, the IRB approval letter will be drafted by the Office of Research and signed by the Member Secretary (Ethics Committee).
- The signed approval letter and the fluid grant agreement (if applicable) will be emailed to the investigators.
- Since the office of research has moved to a paperless office. All communication from the research office / Ethics committee will be shared as PDFs with electronic signatures by Class III Adobe Acrobat Sign.
- If a wet signature is required, the PI can forward a hard copy of the electronically signed document to the research office, and it will be countersigned and sealed by the welfare officer.

iv. The IRB communication of the decision will include, but is not limited to, the following:

- The exact title of the research proposal reviewed;
- The clear identification of the protocol of the proposed research or amendment, date and version number (if applicable).
- The names and specific identification number version numbers/dates of the documents reviewed, including the potential research participant information sheet/material and ICF and local translations.
- If applicable, the following will also be mentioned- Investigator's Brochure, proposed methods for patient accrual including advertisement (s) etc. proposed to be used for the purpose, PI's current CV, insurance policy / compensation for participation and for serious adverse events occurring during the study participation, Investigator's Agreement with the Sponsor, and Investigator's Undertaking.
- The names and designations of all members present during the presentation and discussion of the proposal.
- In case of a conditional decision, any requirements by the IRB, including suggestions for revision and the procedure for having the application re-reviewed;
- In the case of approval of the proposal, a statement of the responsibilities of the applicant; for example, confirmation of the acceptance of any requirements imposed by the IRB; submission of annual report(s); the need to notify the IRB in cases of protocol amendments (other than amendments involving only logistical or administrative aspects of the study); the need to notify the IRB in the case of amendments to the recruitment material, the potential research participant information, or the ICF; the need to report serious and unexpected adverse events related to the conduct of the study; the need to report unforeseen

circumstances, the termination of the study, or significant decisions by other IRBs or the Drug Controller General of India; the information the IRB expects to receive in order to perform ongoing review; the final summary or final report; and the need to store documents for at least 5 years after the end of the study.

- In the case of a negative decision, clearly stated reason(s) for the negative decision;
- Signature (dated) of the Member Secretary (or another authorized person) of the IRB.

AC approval and Account Opening for externally funded studies

If a study is externally funded, it must be reviewed by the Administrative Committee after receiving approval from the IRB committee before account creation.

The following documents are required for account opening (soft copies only):

1. A completed AC form – a signed PDF copy and an unsigned Word format are required.
2. IRB approval letter.
3. A copy of the sanction order from the funding agency, including the budget breakdown.
4. A copy of the agreement, if applicable.

AC meetings are conducted every Thursday, and documents must be submitted to the research office by the previous Friday for timely processing.

Once the research office receives the documents the office will verify the content and forward it to the project office, along with a cover letter to be presented at the AC meeting.

After the AC meeting, the minutes will be sent to the research office on the following Friday.

Upon receipt of the minutes and if the study is approved, the research office will upload the study file onto the research dashboard for account creation. The accounts office will then create the account and email the Principal Investigator directly. This process is likely to take up to seven days from the receipt of the minutes.

Institutional Overheads

The standard institutional overhead is 15%. If there are any deviations, please ensure this is approved by Addl. Vice Principal (Research)

2.11 Prospective Registration Of Clinical Trials

- The ICMR and the WHO require prospective registration of all clinical trials before the enrolment of the first participant in a Primary Register of the WHO International Clinical Trials Registry Platform. Further, prior registration is now a condition of publishing clinical trials for many journals. From 1st July 2005 the International Committee of Medical Journal Editors (ICMJE) has declared that their journals will not publish the results of any clinical trials not included on an authorized register. The Clinical Trials Registry–India, linked to WHO registry, was launched on 20 July 2007 by ICMR, as a free and online public record system for registration of clinical trials, PG thesis and other biomedical research being conducted in the country. Trial

registration in the CTRI was made mandatory by CDSCO on 15 June 2009 for clinical trials that are registered under the Drugs and Cosmetics Act and its Rules. Registration with CTRI is voluntary for other biomedical and health research.

- The ICMR requires all trials conducted in India to be prospectively registered in the Clinical Trials Registry- India (CTRI; www.ctri.in). The CTRI is a Primary Register of the WHO International Clinical Trials Registry Platform and trials fully registered here will fulfil the ICMJE criteria of prospective trials registration.
- All interventional clinical trials conducted in India and involving Indian participants need to be registered.
- An interventional clinical trial is any research study that prospectively assigns people to one or more health-related interventions (e.g., preventive care, drugs, surgical procedures, behavioural treatments, etc.) to evaluate their effects on health-related outcomes. Thus, early and late trials, trials of marketed or non-marketed products, randomized or non-randomized trials -- all should be registered.
- Trial registration involves providing information regarding the study, investigators, sites, sponsor, ethics committees, regulatory clearances, disease/condition, types of study, methodologies, outcomes, etc.
- As of January 2010, the other major website for the database registering clinical trials (www.clinicaltrials.gov) offers the following guidance: 'Multi-site trials and multi-sponsor trials are susceptible to duplicate registration. Thus care must be taken in how the trials are registered. For multi-sponsor trials it is the lead sponsor who should take responsibility for registration. It is critical that investigators and sponsors work together to ensure that a trial is registered once and only once.' Registration in both these registers is free.
- The "Responsible Registrant" for a trial is either the PI the primary sponsor, to be decided by an agreement between the parties. The primary sponsor is ultimately accountable for ensuring that the trial is properly registered. For multi-centre and multi-sponsor trials, it is the lead PI or lead sponsor who should take responsibility for registration.
- The CTRI requires, in addition to the entry of the WHO 20-item dataset, contact details of IRB and a copy of the IRB approval (and DCGI approval, if applicable).
- The IRB of CMC will only grant provisional approval for clinical trials in humans till the permanent registration number and a copy of the registration document is submitted to the Office of Research. Researchers may not commence recruitment until the final clearance is received.
- At least one member of the research team must have the qualifications and adequate research experience in the subject on which the trial is planned

2.12 Follow-up and monitoring

- The IRB may nominate, when necessary, a subcommittee of one or more persons to monitor the conduct of clinical trials. This subcommittee will usually consist of members of the faculty of

CMC and operate under the aegis of the CMC Clinical Trial Monitoring Committee (CTMC), chaired by the Head of Department of Biostatistics.

- In addition to possible monitoring by the CMC CTMC, the follow-up review intervals will be determined by the nature and the events of research projects, though each protocol will undergo a follow-up review at least once a year.
- Reports should be submitted at prescribed intervals for review. This should be no less frequent than an annual report.
- Final report should be submitted at the end of the study (including externally funded studies).
- All SAEs and the interventions undertaken should be intimated to the IRB, in the prescribed format (see section 4) with a copy of the report to the study sponsor, if any.
- Protocol deviations, if any, should be recorded and reported with adequate justifications.
- Any amendment to the protocol should be resubmitted for renewed approval. If these are minor and do not alter the risk-benefit ratio, expedited clearance may be requested.
- Any new information related to the study should be communicated to the IRB and the participants, particularly those that pose additional risks or may warrant premature stopping of the trial.
- Premature termination of study should be notified, with reasons for termination, as well as a summary of the data obtained up to the point of termination.
- Change of investigators/sites should be communicated in writing to the office of research within 30 days of the change.
- In case of voluntary withdrawal from studies, the reasons for participant withdrawal need to be recorded and submitted to the IRB along with the monitoring and final reports.

Final report & Clearance

- The office of research will intimate the PIs via email six months before the end of the study duration that their grant is scheduled to close shortly.
- The PI is responsible for providing the final report to the research office upon completion of the study. If the research office does not receive the final report after the completion of the study, a reminder email will be sent to the PI.
- The PI will not be eligible for further funding from the IRB if the annual reports are not submitted in response to this reminder.
- If any faculty member or student is leaving the institute for any reason and requires clearance from the research office, and has research studies associated with their name, a final report form must be submitted to the research office, along with a statement of accounts, should funds have been requested for the study.

- Postgraduate (PG) theses or studies may not be transferred from one postgraduate student to another for the purpose of obtaining clearance. If clearance is required, the current principal investigator must withdraw the study if it has not already been completed.

2.13 Continuing review

Any research activity involving the use of human participants that has received initial review and approval by the IRB is subject to continuing review and approval. Time intervals for such reviews shall be made at the discretion of the Data Monitoring Committee (if applicable) but shall occur no less than annually.

i. Amendments to protocols

- Amendments to protocols or consent forms must be requested in writing, and reviewed and approved by the IRB prior to making any changes in study procedures.
- All amendments to the protocol must be submitted within the study duration. Any amendment submitted after the study's completion or outside the study duration will not be considered. In such cases, the study may need to be resubmitted for Institutional Review Board (IRB) review.
- Requests must describe what modifications are desired, why changes are required, and if the changes pose any additional risks to the participants.
- All submitted amendments will be forwarded to the original study reviewers for review and approval. If required, the reviewers will seek a full IRB review of the amendment.
- Minor changes (those that do not increase the risk or decrease the potential benefit to participants) may be administratively approved and notified to the IRB at the next convened meeting. Investigators need not be present for this meeting.
- Changes considered to be more than minor must be reviewed at a convened meeting of the IRB and the investigator must be available to answer any queries.
- All amendments are reported to, discussed and approved by the IRB at a convened meeting.
- Once the amendment is approved, the research office will provide an electronically signed approval letter, confirming the amendment's acceptance and implementation. No study procedure deviation is permitted until the written approval of the IRB is received

ii. Serious Adverse Event Reporting

- When a participant who is participating in a research study experiences an unexpected or serious adverse event, the PI must promptly report the incident to the CMC IRB Safety Monitor (CISM, a clinical pharmacologist nominated by the Principal to review all SAE data for ongoing trials) and the Data Safety Monitoring Board (DSMB if applicable).
- In addition, all SAE data from all sites for studies in which CMC is a participating site, must be submitted to the CISM (currently, Dr. Rohini Ann Mathew Department of Clinical Pharmacology) in the CMC format, for inclusion in the CMC SAE database. This will be used to generate the external (non-CMC) SAE report monitored for trends by the CISM and presented each month to the IRB.

- All adverse events, even if anticipated, are to be reported to the SAE committee. The committee, after discussion, will provide their decision on whether it is related or unrelated.
- If the adverse event or reaction was unanticipated, unexpectedly serious, life-threatening or fatal, the adverse event must be reported to the CISM or DSMB and the Office of Research within 24 hours of the investigating team becoming aware of the event. The Medical Superintendent and concerned consultant in charge of clinical care (if applicable) should also be notified at the earliest if the affected person is a registered patient of CMC.
- If the research study is being supported by an industry sponsor, the PI is also responsible for notifying the sponsor. The sponsor must then notify the regulatory authorities within 14 days of the knowledge of the occurrence of SAE.
- If the PI holds the Investigational New Drug (IND) or Investigational New Device Exemption (IDE) in his/her name, he/she is required to notify the regulatory authorities of the adverse event or reaction within 24 hours, in addition to notifying the DSMB or DMC, as appropriate.
- Notifying the CISM or DSMB does not relieve the PI from his/her responsibility to notify the sponsor and regulatory authorities.
- Within 10 working days, the PI must submit a detailed written report of the adverse event or reaction to the CISM/IRB in the specified format.
- For industry sponsored research trials of drugs or devices, sponsors are required to inform investigators of adverse events or reactions that occur at other sites. When PIs are informed of the adverse events in sponsor safety memos and other correspondence, the PI must review the adverse event report and then notify the CISM. This should be done as promptly as possible after receipt of the report from the sponsor.
- Receipt of adverse events reported must be acknowledged in writing and communicated to IRB members at the next convened meeting. The CISM presents a brief summary of all external reports received and a presentation of each SAE at CMC to the IRB each month. If thought necessary, the IRB may request the PI to be present at that meeting or a subsequent meeting to review the risk-benefit ratio in the light of the new information.

2.14 Record keeping and archiving

The following records will be archived and maintained by the Office of Research. Access to this data will only be on a need basis. Care will be taken to maintain the confidentiality of this data.

- Curriculum Vitae (CVs) of all members of IRB.
- One electronic copy of all study protocols with enclosed documents, progress reports, amendments and SAE reports.
- Minutes of all meetings, duly signed by the Chairperson, or deputed signatory.
- Copies of all existing relevant national and international guidelines on research ethics and all relevant laws, along with amendments.

- Copy of all correspondence with members, researchers and other regulatory bodies.
- Annual reports, Interim reports and final reports of the approved projects.
- All records must be archived for a period of at least 3 years after the completion/termination of the study.
- All documents related to regulatory clinical trials must be archived for 5 years after a study is closed and will be available for an audit if required.

i. Archival and Retention

a. File Preparation

- Review and Retention: As soon as the final report is submitted for a project the files can be prepared for archival. For all Fluid Grant studies (other than clinical trials), the archival period is for 3 years from the completion of the study. For externally funded studies and clinical trials, documents will be retained for 5 years after the completion of the study.
- Indexing: a unique identifier is assigned to each file for easy retrieval. (IRB number)
- File Storage: files are stored in designated locations, such as file cabinets or electronic folders, according to their type and retention schedule.
- Metadata: Relevant metadata is to be recorded for each file, including IRB number, PI, and Title of the study.
- Organization: Ensure that all documents pertaining to that study has been filed in a single file/folder.

b. Archival:

- Transfer to Archives: Files are moved to the designated archival storage facility or electronic repository when they \are no longer required for active use.
- Archival Formats: Ensure that files are stored in appropriate archival formats preferably in PDF to preserve their integrity and accessibility over time.

c. Retrieval:

- Retrieval Requests: All retrieval requests will be processed only after receiving request via Email, Care to be taken to ensure the file is not removed from the repository by the requestor
- Retrieval Procedures: An access and return log has to be maintained and all retrieval requests are to be logged along with the Employment Number of the requestor. A letter from the HOD/HOU should also be enclosed along with the retrieval request.
- Return of Files: Ensure that retrieved files are returned to their appropriate storage location after use.

d. Security and Confidentiality

- Access Controls: All files are to be stored in a locked file room, and for electronic copies, the system should be password protected.
- Confidentiality: Protect confidential information within archived files Confidentiality should be maintained during access and retrieval procedures by designated persons.
- EC records should be accessible for inspection by authorized representatives of regulatory agencies.

Section 3

3 Policies To Be Followed For Research Conducted At CMC Vellore

The following section contains policies that will be followed for all research conducted at CMC Vellore

3.1 Policy on the recruitment of research participants

- In addition to its review for scientific merit and protection of participants from unnecessary research risks, the IRB will evaluate all protocols for participant recruitment especially with respect to women with childbearing potential, minority groups and children. Exclusion of minorities, women or children will be recommended or approved when inclusion is inappropriate with respect to the health of the participants or the purpose of the research.
- Patients may be identified as potential research participants through direct contact of the PI with his or her patients, collaboration with physicians of other medical specialties, contact with individual consultants in the community itself, posted written notices, flyers, or other IRB-approved methods.
- Inpatients - May be recruited by the investigator or other member of the research team only after consultation with the patient's treating consultant/head of the Unit.
- Outpatients - For minimal-risk research which does not bear directly upon a specific continuing therapeutic relationship between the individual and a CMC doctor or unit, outpatients may be recruited without prior notification of their personal physicians. However, when possible, each participant's consultant should be notified of the study and informed that the patient had been entered into a minimal-risk study.
- For more than minimal risk research or any research bearing directly upon a specific diagnosis or treatment, the participant's personal physician/consultant should be notified before enrolling the participant.
- If the potential research participant is a minor, or does not have capacity, then contact must be via a parent or legal guardian.

3.2 Policy and procedures for informed consent

- Informed consent is "consent given voluntarily by a competent individual who has received the necessary information, has adequately understood the information and after considering the information, has arrived at a decision without having been subjected to coercion, undue influence or inducement, or intimidation".
- Informed consent is based on the principle that competent individuals are entitled to choose freely whether to participate in research or not and protects the individual's freedom of choice and respect for the individual's autonomy. It also protects the participants' rights.
- Taking informed consent is a "process" and does not merely consist of a signature on the consent form. Informed consent is a communication process between the researcher and the

participant and starts before the research is initiated and continues throughout the duration of the study. The investigator or his delegate must discuss all pertinent aspects of the study, answer any queries / doubts, request consent and then if freely given, documented. The ultimate responsibility for ensuring informed consent lies with the investigator.

- Informed consent includes a verbal description and discussion of the details of the study including the process of randomization, the components of the study, and other details mentioned in the checklist below (from Schedule Y 2005). This may be a single document or be structured as two separate documents, a written *information sheet* containing all relevant information in simple, non-technical language in the participant's vernacular and a separate *ICF* used to document consent, both of which are given to the participant to keep. A copy of the signed ICF is to be retained by the researcher.Adequate time must be provided for the participant to decide on participation.

- In case of illiterate participants, a witness is crucial and thumb impressions are allowed. All signatures should be dated and in case a date is forgotten on the day the consent is taken, it must be retaken on the next visit and dated, with a clear explanation documented in the source document. The investigator MUST NOT date the consent at any point in time; this must be done by the witness in the case of illiterate participants. (ref:ICMR 2017, 5.36)

- In the case of minors, proxy consent from a parent/responsible guardian is permitted and only the parent/responsible guardian may sign the ICF. However, it is mandatory that the minor, if over 7 years of age and considered capable of understanding the study procedures, provides assent (permission) to participate and, if possible, this should be recorded in a separate assent form. If the participant is incompetent to provide valid informed consent and it is deemed ethically justified to include this person in research, then the proxy consent of a responsible family member/legal guardian and a witness must be taken.

- Each participant (or their representative) must be given a copy of the signed consent form. The original consent form should be filed in such a manner as to insure immediate retrieval when required by auditing entities, IRB, or sponsor monitors.

- Written documentation of informed consent is required. Therefore, obtaining consent from an authorized third party via the telephone is not acceptable.

- Obtaining informed consent from participants must be accomplished prior to performing the research activity and using only an IRB approved consent form. Written requests for amendments to an existing consent form must be approved by the IRB prior to implementation.

- Upon receipt of an IRB approved consent form, all old versions should be discarded to prevent inadvertent use of an outdated consent form. Copies of the most recently approved consent form may be made and should be used until superseded by an amended consent form.

- The consent form, patient information sheet and the consent policy must be reviewed at least annually as part of the continuing review process.

- A test of understanding should be designed and used to ensure comprehension in case of very high risk studies, or for sensitive studies. If need be, the test may be repeated till comprehension is ensured (ref:ICMR 2017 5.3.7)

- **Checklist for study Participant's informed consent documents (from Schedule Y). Note that this is designed for clinical trials, where essential elements are not required for other study designs, they need not be included.**

i. Essential Elements: (ref: ICMR 2017, Box 5.1)

- Statement that the study involves research and explanation of the purpose of the research
- Expected duration of the Participant's participation
- Description of the procedures to be followed, including all invasive procedures
- Description of any reasonably foreseeable risks or discomforts to the Participant
- Description of any benefits to the Participant or others reasonably expected from research. If no benefit is expected, the Participant should be made aware of this.
- Disclosure of specific appropriate alternative procedures or therapies available to the Participant.
- Statement describing the extent to which confidentiality of records identifying the Participant will be maintained and who will have access to Participant's medical records
- Trial treatment schedule(s) and the probability for random assignment to each treatment (for randomized trials)
- Compensation and/or treatment(s) available to the participant, in the event of a trial-related injury
- An explanation about whom to contact for trial related queries, rights of Participants and in the event of any injury
- The anticipated prorated payment, if any, to the Participant for participating in the trial
- Participant's responsibilities on participation in the trial
- Statement that participation is voluntary, that the participant can withdraw from the study at any time and that refusal to participate will not involve any penalty or loss of benefits to which the Participant is otherwise entitled
- Any other pertinent information

ii. Additional elements, which may be required

- Statement of foreseeable circumstances under which the Participant's participation may be terminated by the Investigator without the Participant's consent.
- Additional costs to the Participant that may result from participation in the study.

- The consequences of a Participant's decision to withdraw from the research and procedures for orderly termination of participation by Participant.
- Statement that the Participant or Participant's representative will be notified in a timely manner if significant new findings develop during the course of the research which may affect the Participant's willingness to continue participation will be provided.
- A statement that the particular treatment or procedure may involve risks to the Participant (or to the embryo or fetus, if the Participant is or may become pregnant), which are currently unforeseeable.
- Approximate number of Participants enrolled in the study.

iii. Special situations:(ref: ICMR 2017, 5.10, 5.11)

- Permission of the **gatekeepers,** in community based studies may be obtained where necessary, keeping in mind this does not replace individual consent.
- **Community consent** in relevant situations, such as when individual consent cannot be obtained, in large ecological studies or if individual consent will change the behaviour of the individual

iv. Additional elements for consent for **vulnerable individuals**

- In types of research studies which require deception, such as if a true informed consent may lead to modification of behaviour and defeat the purpose of the study, it may be permitted after careful review by the IRB. A two-step consent procedure may be required comprising an initial consent and a debriefing after participation.

v. Re-consent

Fresh consent or re-consent is taken for the following conditions:

- When a participant enrolled before legal age of consent enters the legal age to consent for self, i.e. crosses 18 yrs. of age
- Availability of new information which would necessitate deviation of protocol.
- When a research participant regains consciousness from unconscious state or becomes mentally competent to understand the study. If such an event is expected then procedures to address it should be spelt out in the ICF.
- When long term follow-up or study extension is planned later.
- When there is change in treatment modality, procedures, site visits.
- Before publication if there is possibility of disclosure of identity through data presentation or photographs (this should be camouflaged adequately).

vi. Waiver of consent

Voluntary informed consent is always a requirement for every research proposal. However, this can be waived if it is justified that the research involves not more than minimal risk or when the participant and the researcher do not come into contact or when it is necessitated in emergency situations. If such studies have protections in place for both privacy and confidentiality, and do not violate the rights of

the participants then the IRB may waive off the requirement for informed consent in following instances:

- When it is impractical to conduct research since confidentiality of personally identifiable information has to be maintained throughout research as may be required by the sensitivity of the research objective, *e.g.*, study on disease burden of HIV/AIDS.
- Research on publicly available information, documents, records, works, performances, reviews, quality assurance studies, archival materials or third party interviews, service programs for benefit of public having a bearing on public health programs, and consumer acceptance studies.
- Research on anonymised biological samples from deceased individuals, left over samples after clinical investigation, cell lines or cell free derivatives like viral isolates, DNA or RNA from recognised institutions or qualified investigators, samples or data from repositories or registries *etc.*
- In emergency situations when no surrogate consent can be taken **(see Section 2.5.2.4)**

The IRB will consider written requests for waiver or alteration of the process when accompanied by sufficient justification along with a copy of the research proposal.

vii. Obligations of investigators regarding informed consent:

The investigator has the duty to –

- Communicate to prospective participants all the information necessary for informed consent. Any restriction on participant's right to ask any questions related to the study will undermine the validity of informed consent;
- Exclude the possibility of unjustified deception, undue influence and intimidation. Although deception is not permissible, if sometimes such information would jeopardize the validity of research it can be withheld till the completion of the project, for instance, study on abortion practices;
- Seek consent only after the prospective participant is adequately informed. The investigator should not give any unjustifiable assurances to prospective participant, which may influence her/his decision to participate.
- Obtain from each prospective participant a signed form as an evidence of informed consent (written informed consent) preferably witnessed by a person not related to the trial, and in case the participant is not competent to do so, a legal guardian or other duly authorised representative
- Take verbal consent when the participant refuses to sign or give thumb impression or cannot do so. This can then be documented through audio or video means;
- Take surrogate consent from the authorized relative or legal custodian or the institutional head in the case of abandoned institutionalized individuals or wards under judicial custody;

- Renew or take fresh informed consent of each participant under circumstances described earlier in this document;
- If participant loses consciousness or competence to consent during the research period as in Alzheimer's Disease or psychiatric conditions, surrogate consent may be taken from the authorized person or legal custodian.
- The investigator must assure prospective participants that their decision to participate or not will not affect the patient-- clinician relationship or any other benefits to which they are entitled.

ICMR guidelines 2006, Schedule Y of the Drugs and Cosmetics Act, 2005

viii. **Audio-visual Recording for Informed Consent Clinical Trials- when does it apply?**

As per the DCGI office order dated 31st July 2015, Audio Visual (AV) recording of the informed consent process was made mandatory for regulatory clinical trials. This office order is in support to order dated 21st Oct 2013 from the Honourable Supreme Court of India.

Based on the guidelines, the institutional review board of Christian Medical College Vellore (IRB) has implemented the following guidelines:-

All clinical trials wherein a new drug is being used or an old drug for a new clinical indication will require audio-visual recording- whether investigator initiated or industry driven.

The rule will also apply to surgical devices, implants, and stents etc*, which are under the jurisdiction of the Drug controller general of India*, when an old device is being used for a new indication.

In case of situations of ambiguity or when the circumstances so demand, the IRB will make a case by case decision at the time of clearance during the Silver IRB meeting.

The process of audio-visual recording should be done to ensure the confidentiality of the subject, and the process itself (of audio-visual recording itself) should be recorded in the patient information sheet. The investigator will have to read a brief summary of information that is relevant to the clinical trial under visual and audio recording. The subject will then need to give his verbal consent, following which the process of signing the document will need to be recorded.

The audio-visual document should be stored with the investigator on a suitable, but confidential repository, and the recordings need to be submitted on a monthly basis to the Office of Research at Carmen block with a cover letter. The soft copy of this documentation should immediately be made available to the sponsor or the DCGI, when asked for.

3.3 Policy on research costs and compensation

If a research participant may have to bear <u>any</u> costs, which would be unnecessary if the participant had declined to participate in the research, all potential participants must be fully informed of the nature and estimated extent of these costs when obtaining consent. Examples of additional research costs include:

- Prolongation of treatment or hospitalization.
- Extra diagnostic tests are necessary for the research.

- Extra clinical or laboratory assessments to evaluate research treatment outcome.
- A research treatment (whether randomly assigned or not) may be more costly than a standard treatment.
- Other substantial costs associated with extra visits to CMC.

- Participants may be paid for the inconvenience and time spent, and should be reimbursed for expenses incurred, in connection with their participation in research. They may also receive free medical services. When this is reasonable then it cannot be termed as benefit. During the period of research if the participant requires treatment for complaints other than the one being studied necessary **free ancillary care** or appropriate referrals may be provided. However, payments should not be so large or the medical services so extensive as to make prospective participants consent readily to enrol in research against their better judgment, which would then be treated as undue inducement. All payments, reimbursement and medical services to be provided to research participants should be approved by the IRB.
- **Care should be taken:**
  - When a guardian is asked to give consent on behalf of an incompetent person, no remuneration should be offered except a refund of out of pocket expenses;
  - When a participant is withdrawn from research for medical reasons related to the study the participant should get the benefit for full participation
  - When a participant withdraws for any other reasons s/he should be paid an amount proportionate to the amount of participation.
- Research participants who suffer physical injury as a result of their participation are entitled to financial or other assistance as per the Compensation Act, to compensate them equitably for any temporary or permanent impairment or disability. In case of death, their dependents are entitled to material compensation as per the Compensation Act. This is applicable to participants in any of the arms of research, such as intervention, control and standard of care.(ICMR 2017, 2.6.2). The institution should create in-built mechanism to be able to provide for compensation, such as a corpus fund in the institution.(ICMR 2.6.4).
- **Obligation of the sponsor to pay**

  The sponsor whether a pharmaceutical company, a government, or an institution, should agree, before the research begins, in the *a priori* agreement to provide compensation for any physical or psychological injury or provide insurance coverage for an unforeseen injury.
- An Arbitration committee set up by the institution under the Principal's office will decide on the issue of compensation on a case-by-case basis for all institutional funded research. The institution will also establish such a committee to oversee such claims, again on a case-by-case basis, for externally funded research.
- Compensation for **ancillary care** for unrelated illness as free treatment or appropriate referrals may also be included in the *a priori* agreement with the sponsors whenever possible.

ICMR Guidelines 2006

3.4 Policy on authorship of publications

- Publishing research is an ethical imperative. Decision regarding authorship should commence at the design stage of each study.
- The International Committee of Medical Journal Editors has recommended the following criteria for authorship; these criteria are still appropriate for those journals that distinguish authors from other contributors.

  According to the ICMJE, authorship entails the following criteria: (ICMR 2017, Box 3.3)

  - substantial contributions to the conception or design of the work, or the acquisition, analysis, or interpretation of data for the work;
  - drafting the work or revising it for important intellectual content;
  - final approval of the version to be published;
  - agreement to be accountable for all aspects of the work and ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

  When a large, multi-centre group has conducted the work, the group should identify the individuals who accept direct responsibility for the manuscript. These individuals should fully meet the criteria for authorship/contributorship defined above and editors will ask these individuals to complete journal-specific author and conflict of interest disclosure forms. When submitting a group author manuscript, the corresponding author should clearly indicate the preferred citation and should clearly identify all individual authors as well as the group name. Journals will generally list other members of the group in the acknowledgements.

  - The National Library of Medicine indexes the group name and the names of individuals the group has identified as being directly responsible for the manuscript.
  - Acquisition of funding, collection of data, or general supervision of the research group, alone, do not justify authorship.
  - All persons designated as authors should qualify for authorship, and all those who qualify should be listed.
  - Each author should have participated sufficiently in the work to take public responsibility for appropriate portions of the content.
  - Some journals now also request that one or more authors, referred to as "guarantors," be identified as the persons who take responsibility for the integrity of the work as a whole, from inception to published article, and publish that information.
  - Increasingly, authorship of multi-centre trials is attributed to a group. All members of the group who are named as authors should fully meet the above criteria for authorship/contributorship.

- The group should jointly make decisions about contributors/authors before submitting the manuscript for publication. The corresponding author/guarantor should be prepared to explain the presence and order of these individuals. It is not the role of editors to make authorship/contributorship decisions or to arbitrate conflicts related to authorship.

International Committee of Journal Editors (http://www.icmje.org/#author)

3.5 Policy on research using stored biological products

- Biological materials or biospecimens or samples include biological fluids, such as blood, dried blood spots, body fluids, urine, tissues, organs, cord blood, oocytes, sperm, semen or embryos. These may be stored or prospectively collected. ICMR 2017, 11.0)

i. **Types of samples (ICMR 2017, Box 11.4)**

- **Anonymous or unidentified**

  No identifiers are present from the start or if collected, are not maintained. Such samples are received by biobanks without any identifiers and supplied to researchers.

- **Anonymized**

  This involves systematic de-identification, reversible or irreversible: link of samples/data to personal identity is reversibly or irreversibly cut.

- **Coded or reversibly anonymized:**

  There is an indirect link of sample/ data to the participant's identity with restricted access. This link could be re-linked if required; therefore, it may also be termed reversible anonymization.

- **Irreversibly anonymized:**

  Link to the participant's identity is removed and cannot be re-linked.

- **Identifiable**

  A direct link of sample/data to the participant's identity exists.

- A bio bank/repository is a collection of resources that can be accessed to retrieve human biological material and data. Human Tissue Repositories collect, store, and distribute human tissue materials for research purposes. As tissue banking concerns research at a later time, the ethical issues pertain to consent requirements for the banking and further uses of tissue and DNA samples, their control and ownership, and the benefit sharing to the individual or community.

ii. **Primary use:** By primary use it is meant that the biological material will be used for the intended purpose as described in the protocol submitted for approval from the IRB. Ownership of the sample lies with the individual, family or community as the case may be.

The IRB should consider following points for approving primary use:

- consent should be written, given voluntarily by the donor who has the capacity to do so. The use of the samples shall be reserved for the defined purpose only;

- Participants have the right to withdraw at any time. This does not apply to anonymised samples; Principles for Human Genetics and Genomics arch
- If sample is inadequate or contaminate and, re-contact is likely to be necessary for fresh samples, then this should be incorporated in the consent form, or fresh consent obtained;
- While obtaining data/samples from vulnerable subgroups with reduced autonomy, the IRB should ensure that informed consent be obtained from legally authorized representatives in the presence of an impartial witness. The risks and benefits should be adequately explained;
- when samples have to be obtained for specific research from participants belonging to specified communities, permission of the group leader/local leader/authorities must also be obtained. However individual consent should never be compromised even if permission of the gatekeepers/village panchayat has been obtained
- Group consent of the population/community should be obtained through its culturally appropriate authorities before sampling starts, particularly for group specific research like genetic research;
- Samples obtained for archival purposes in a prospective study.

iii. **Secondary Use:** Every request for secondary use shall be examined by the IRB to ensure that:

- the proposed use does not transgress the original consent given for the earlier study and the validity of the objectives of the new study;
- provisions for ensuring anonymity of the samples for secondary use are stated;
- after anonymization of a sample, results are not communicated to the donor;
- for post-mortem uses of samples the permission of the next of kin, legally authorized representative should be obtained; and
- Waiver of consent is given whenever the donor is not traceable or the sample is anonymised.

- Consent forms for the primary use of biological material should specify the details of what will be done with the material in the future. Sample forms that can be adapted for use are provided in the Appendices.

iv. Example of multiple options in a multi-layered consent (ICMR 2017, 11.2)

Please pick one of the choices below:

- I agree to allow my sample/bio-specimen to be stored for future use for any biomedical research.
- I agree to allow my sample/bio-specimen to be stored for future use for specific disease such as cancer research.
- I agree to allow my sample/bio-specimen to be stored for future use for other pre specified health problems, such as diabetes, heart disease.
- I do not wish to allow my sample/bio-specimen to be used in future research which is beyond the scope I have already consented for, unless researchers re-contact me to seek my permission.

- I do not wish to allow my sample/bio-specimen to be used in future research. I do not want researchers to contact me about future studies.
- I wish to be informed/not to be informed about the results of my investigation.

3.6 Policy on research on foetal tissue or organs for transplantation

The following policies will be followed for all research on foetal tissues or organ

i. Transplantation

- Every transplantation or research project involving the use of embryonic or foetal tissue must be approved by the Institutional Committee for Stem Cell Research and Therapy (IC-SCRT) and ethics committees and referred to National Apex Committee for Stem Cell Research and Therapy (NAC-SCRT) for final approval in case of restrictive research as defined in the Stem Cell Research and Therapy Guidelines.
- All centres doing research on stem cells should be registered with NAC-SCRT.
- All members of the hospital or research staff - medical and paramedical – directly involved in any of the procedures will be fully informed of the purpose and implications of the research project.
- The researcher shall not be a party to deliberate conception and / or subsequent abortion for the sake of obtaining tissue or organ for research or saving the life of a family member or for the purpose of commercialisation.
- No research is permitted on the live aborted foetus.
- Tissue for transplantation or research may be obtained from dead embryos or foetuses, their death resulting from legally induced or spontaneous abortion. Death of an intact embryo or foetus is defined as absence of respiration and heartbeat.
- Voluntary, informed, written consent will be obtained from the mother in two stages - first for the abortion, next for the donation of tissue from the foetus.
- Termination of pregnancy should not be sought with a view to donate foetal tissue in return for possible financial or therapeutic benefits.
- The mother's decision to donate foetal tissue is sufficient for the use of the tissue unless the father objects in writing. In cases of incest or rape, the father's objection carries no significance.
- The mother will not dictate who shall receive the foetal tissue taken for transplantation.
- Anonymity of donor and recipient will be maintained so that neither party is aware of the identity of the other.
- The procedure of abortion, or its timing, will not be influenced by the requirements of the transplantation activity. These should solely be based on concern for the safety of the mother.
- Those participating in termination of pregnancy will not, in any way, be party to the subsequent usage of embryonic or foetal tissue for commercial purposes.

- The procurement of embryos, foetuses or their tissue for commercial purposes will not involve profit or remuneration.
- **Intact embryos or foetuses will not be kept alive** artificially for the purpose of removing usable material.
- **Tissues from aborted foetus can be cultured and banked** for use in research on transplantation. If such stored tissue is to be subsequently used for any purpose other than the original objective, a fresh sanction will be obtained from the ICSCRT and ethical committees.
- **Cells obtained from foetuses will not be patented** for commercial considerations for their subsequent usage.
- **Use of umbilical cord blood from a live foetus or neonate** for transplantation: The fundamental principle in any operation on a live foetus or neonate will be to ensure that no harm will occur to the foetus or neonate. Since the exact timing of the clamping of the umbilical cord has a significant impact on the neonate and early clamping may cause an abrupt surge in arterial pressure resulting in cerebral intra-ventricular haemorrhage, particularly in premature neonates, normal clamping protocol will be followed when collecting foetal blood for transplantation. There is a risk that the neonate donor may need his or her own cord blood later in life. If the blood has been used for another, he or she might be without blood when it is needed. Parents will be fully informed of the risks of the donation and written consent obtained from them on behalf of the foetus.
- **Use of tissue or organs from dead anencephalic foetus or neonate** (foetus or neonate lacking brain development above the level of the brainstem) is permitted. Physicians may provide anencephalic neonates with ventilator assistance and other medical therapies that are necessary to sustain organs till such time as the diagnosis of death is made on the basis of cessation of cardiac function.

  Retrieval and transplantation of organs of anencephalic foetus are ethically permissible only after such diagnosis of death is made.
- No transplantation of foetal tissue into man will be permitted unless the following criteria have been met:
  - there will be a detailed scientific basis for such transplantation;
  - animal experiments must show successful results - eradication of disease, elimination or amelioration of symptoms and signs or successful substitution of deficient chemicals and restoration of normal physiological function by the transplant. These must be documented in one or more indexed journals with good peer review mechanisms;
  - All records pertaining to animal experiments must be complete and submitted to specialist and general scientific scrutiny. These records must be preserved for a minimum period of 5 years after the completion of the study preferably on a permanent basis as far as possible;
  - Success in animal experimentation must be shown on a long-term basis. The studies must include investigations on animals receiving the transplants at periodic intervals after the

procedure specially with reference to unequivocal demonstration of absence of any transmission of disease through the transplant.

- Trials in human patients will commence only on those patients where no other form of treatment is available and where, in the absence of the transplant, the patient is likely to suffer relentless deterioration in his health with fatal termination.
- After obtaining consent, the mother must be screened for transmissible disease. If possible, the material to be transplanted must also be similarly screened.
- Trials in human patients will be carried out only at the institutions having clinical and research facilities needed for such trials, including those that may be required to treat complications that may follow such research.
- The research group and the institution(s) in which they work will undertake to conduct free of charge the research on their human participants and also treat completely any complication that may follow their study even if it appears several years after the conclusion of the study.
- The research group will provide the human participants a printed document explaining in simple, non-technical language, the purpose of the study, details of the procedures the human participant is to undergo, complications that may follow these procedures, financial implications, interests of the researchers in the conduct of the study, and a commitment to treat completely and free of cost any complication that may ensue. The human participant must certify in writing that he has studied and understood the contents of this document and that s/he is willing to participate in the study.
- Any adverse effects noted will be immediately discussed with members of the ethics committee and the project grounded if these cannot be explained or reasonably corrected in the course of the study.

- The local ethics committee must ensure report-back measures at every stage of research and confirm that a detailed report on the procedures, findings and conclusions is submitted to an indexed journal for publication even when the results are of a negative nature. The NAC-SCRT should be kept informed.
- As with therapeutic transplantation, constantly updated local (metropolitan), regional or national lists of available tissues and organs should be maintained to ensure that optimal use is made of all available donations. These lists should be made freely available to all authorised research workers.

ICMR Guidelines 2006

3.7 Policy on stem cell research and therapy

i. Levels of Manipulation

Stem cells, whether autologous or allogeneic, require variable degree of in vitro or ex vivo processing before their use for clinical application/transplantation/translational research. This carries the risk of contamination and may also lead to alteration in their properties which may vary according to the degree and type of manipulation. All laboratory procedures should be carried out under aseptic

conditions in a CDSCO certified GMP (schedule M) and GLP (schedule L 1) facility for human applications. For preclinical studies on animals, the laboratory should have GLP certification from the Department of Science and Technology (DST).

This section describes different levels of manipulation used for stem cells and necessary approvals required for the same:

a. Minimal Manipulation:

This refers to the situation where the processing neither alters the number nor the biological characteristics and function of the cells (or tissue) relating to their utility for reconstruction, repair or replacement.

- Processing includes simple isolation/separation, washing, centrifugation and suspension in culture medium/reagents, cutting, grinding, shaping, overnight culturing without biological and chemical treatment, decellularization and cryopreservation for a period not exceeding 72 hours.
- Clinical application using such cells requires the IC-SCR, IEC and CDSCO approvals if these are meant for homologous use for unapproved indications. For example, use of bone marrow/peripheral blood/umbilical cord blood derived mononuclear cells/bone marrow concentrate using any device by intravenous route for clinical indications other than those listed in Annexure III on the National Guidelines for Stemcell research.
- If the minimally manipulated cells are to be used for non-homologous purposes, approval from CDSCO is mandatory apart from those from the IC-SCR and IEC before initiating any clinical application. For example, use of bone marrow/peripheral blood/umbilical cord blood derived mononuclear cells//bone marrow concentrate using any device by any route of administration other than intravenous for neurological, musculo-skeletal, liver and cardiovascular disorders and any other similar examples.
- If cells/tissues are removed and implanted into the same individual during the same surgical procedure within a single operation, it should not undergo processing steps beyond centrifugation/rinsing/cleaning/sizing

b. Substantial or More than Minimal Manipulation:

This is defined as ex vivo alteration in the cell population (enhancement or depletion of specific subsets), expansion, cryopreservation or cytokine based activation, but one that is not expected to result in alteration of cell characteristics and function.

- Clinical trials using cells that have undergone more than minimal manipulation require approvals from CDSCO only after obtaining clearances from IC-SCR and IEC.
  For example, adipose tissue may be more than minimally manipulated if the processing alters the original relevant characteristics of the tissue relating to its utility for reconstruction, repair, or replacement. Adipose tissue is sometimes processed by various means (e.g. enzymatic digestion, mechanical disruption etc.) to isolate its non-adipocyte or non-structural components. In some instances, these non-adipocyte or non-structural components are cultured and expanded. Processing to isolate non-adipocyte or non-structural components e.g. Stromal Vascular Fraction (SVF) from adipose tissue (with or without subsequent cell culture

or expansion) is considered more than minimal manipulation. Clinical trials using SVF will therefore require approval by ICSCR, IEC and CDSCO.

c. Major Manipulation:

This refers to the genetic and epigenetic modification of stem cells, transient or permanent, or of cells propagated in culture leading to alteration not only in their numbers but also biological characteristics and function.

- This includes trans-differentiation, transduction/transfection by retro/lenti viruses or other gene delivery vehicles to achieve specific selection and expansion of cells of interest. These alterations may also be carried out at transcriptional or translational level. The process also includes regulated lineage specific differentiation of human ESCs and iPSCs into the desired cell types.
- Use of stem cells which have undergone major manipulation shall require approval of CDSCO after obtaining approval from NAC-SCRT through IC-SCR and IEC prior to initiation of clinical application.

ii. Categorization of Research

The stem cell research could be basic and/ or translational (preclinical and clinical research) as described in Sections 10 and 11. Further, the research has been categorized into three major areas based on ethical and/or safety concerns regarding the source of stem cells and levels of manipulation, which warrant additional review and monitoring as per existing regulations. These include permissible, restrictive and prohibited areas.

a. Permissible Areas of Research include,

- In vitro studies using stem cells isolated from tissues can be done with prior approval of IC-SCR and IEC.
- Establishment of new human ESC lines from spare embryos or iPSC lines from fetal/adult somatic cells or SSCs from fetal or adult tissues, with prior approval of the IC-SCR and IEC,
  - provided appropriate informed consent is obtained from the donor (Section 15).
  - the same shall be registered with NAC-SCRT through IC-SCR with appropriate documentation, including details regarding their derivation and characterization.
  - cell lines may be deposited/registered in an accredited cell bank for potential use by other investigators.
  - Pluripotent stem cell lines intended for use in clinical research/trials need the approval of CDSCO after obtaining clearances from IC-SCR and IEC.
  - The cell lines should have unique identification number for future reference.
- In the above situations, if the tissue is obtained from a hospital/clinic/entity other than the institute of the investigator, then the IEC clearance from the source institute is mandatory.
- In vitro studies using established cell lines can be carried out with prior approval of the IC-SCR.
- In vivo studies in experimental animals (other than primates, see Sub Section 8.2 in National Guidelines for Stemcell research) with established cell lines from any type of human pluripotent stem cells viz. ESCs, iPSCs, including their differentiated cells, and human SSCs

(fetal, neonatal or adult) from any tissue are permitted with the prior approval of IC-SCR and the Institutional Animal Ethics Committee (IAEC).

- Such animals shall not be allowed to breed if the stem cells are likely to be incorporated in the gonads.
- Relevant tissues/organs of the sacrificed animals should be preserved for validation of the claims made and/or similar studies by other investigators in future

b. Restrictive Areas of Research include, basic and translational research activities requiring additional arm of oversight/monitoring due to contentious issues involved. Such activities need close supervision and strict adherence to the guidelines.

- Creation of human pre-implantation embryos by In vitro fertilization (IVF), Intra cytoplasmic Sperm Injection (ICSI) , Somatic Cell Nuclear Transfer (SCNT) or any other method with the specific aim of deriving ESC lines for any purpose. The investigator needs to provide reasoning taking into consideration the following:
  - The proposed research cannot be carried out with existing ESC lines, or those that can be derived from spare embryos
  - Minimum number of embryos/blastocysts required for such research must be clearly defined.
  - Research teams involved should have appropriate expertise and requisite training in derivation, characterization and culture of ESCs.
- Clinical trials using stem cells of any type, source and level of manipulation for homologous/non-homologous transplantation in indications other than listed in Annexure III can only be done with prior approval of the IC-SCR, IEC and CDSCO.
  - CDSCO approval is mandatory even if the products are not intended for market authorization.
  - Trials should be carried out using only clinical grade cells, that are processed in CDSCO certified GMP and GLP facility
- Clinical trials sponsored by multinationals, employing cell products developed outside India, should have clearances from the regulatory authorities of the country of the origin and shall need prior approval from CDSCO following clearance from both IC-SCR and IEC of the trial site.
- All international collaborations require approvals from the respective funding agencies followed by approval from the Health Ministry's Screening Committee (HMSC) as per Government of India Guidelines (Available at: http://icmr.nic.in/ guide.htm).
- Import of any type of stem cells and/or their products/derivatives requires license from CDSCO as per the established regulations. These should have prior clearances from the regulatory authorities of the country of the origin.
- Research involving introduction of human ESC/iPSC/SSCs into animals (including primates), at embryonic or fetal stages of development for studies designed to understand the patterns of differentiation and integration of human cells into non-human animal tissues shall conform to the following
  - If the expected outcome of the study is suggestive of a possibility that human stem cells could contribute in a major way to the development of brain or gonads of the recipient animal, the scientific justification for such experiments must first be substantiated with data.

- Animals derived from such experiments shall not be allowed to breed.
- Such proposals would need approval of the NAC-SCRT for additional oversight and review after clearance has been granted by the IC-SCR, IEC and IAEC (or CPCSEA).

- Studies on chimeras where stem cells from two or more species are mixed together at any stage of early development (embryonic or fetal), for understanding patterns of development and differentiation would also require prior approval of NAC-SCRT after clearance has been granted by the IEC and IC-SCR.
- Genome modification including gene editing (for example by CRISPR-Cas9 technology) of stem cells, germ-line stem cells or gamete and human embryos is restricted only to in vitro studies. It will require thorough review by the IC-SCR, IEC and IBSC, and finally by Review Committee on Genetic Manipulation (RCGM). Research teams involved should have appropriate expertise, requisite training and infrastructure in gene editing/genome modification and characterization.
  - Only spare embryos, germ-line cells or gametes should be used.
  - The source of somatic cells and/or minimum number of embryos, germ- line cells or gametes required for this research should be clearly defined.
  - Genome modified human embryos should not be cultured beyond 14 days of fertilization or formation of primitive streak, whichever is earlier.

c. Prohibited Areas of Research

In the current state of scientific knowledge and understanding, stem cell research in the following areas is prohibited:

- Research related to human germ line gene therapy and reproductive cloning.
- In vitro culture of intact human embryos, regardless of the method of their derivation, beyond 14 days of fertilization or formation of primitive streak, whichever is earlier.
- Clinical trials involving xenogeneic cells.
- Any clinical research on Xenogeneic-Human hybrids.
- Use of genome modified human embryos, germ-line stem cells or gametes for developmental propagation.
- Research involving implantation of human embryos (generated by any means) after in vitro manipulation, at any stage of development, into uterus in humans or primates.
- Breeding of animals in which any type of human stem cells have been introduced at any stage of development, and are likely to contribute to chimeric gonadal cells.

iii. Responsibilities of the Investigator, Institution and Sponsor

Although appreciable advances have been made in understanding the biology of stem cells, there are still several elements of unpredictability in the translation aspects of research in this area. Regular review of progress in this field ensures the highest degree of scientific rigor and resolution of ethical concerns. Members of the IC-SCR and IEC shall regularly update themselves with regard to advances in the field.

It is mandatory for all investigators, institutions and sponsors conducting or involved with stem cell research to fully understand and be conversant with all aspects of the guidelines as per this document.

Given below is a summary of their responsibilities:

- Institutions involved in basic research and/or clinical trials shall constitute an IC-SCR as per these guidelines and provide adequate support for its functioning. The IC-SCR should be registered with the NAC-SCRT.

- The investigators and institutions where stem cell research is being conducted bear the ultimate responsibility of ensuring that research activities are in accordance with the national regulations and guidelines.
- Research involving hESCs, iPSCs, gene editing/modification and other contentious areas demands extra caution.
- The investigator shall endeavor to avoid any activity that leads to hype, or unrealistic expectations in the minds of human participants or general public regarding the status of stem cell research and application.
- Investigators should demonstrate respect for autonomy and privacy of those who donate gametes, blastocysts, embryos or somatic cells for stem cell research, and be sensitive to public concerns about research involving human embryos.
- Investigators should also ensure confidentiality of the human donors to safeguard their rights and dignity.
- Biological material can be procured only from clinics/hospitals that have IEC. The IEC must ensure that the standard operating procedures (SOPs) are in compliance with the guidelines. Investigators should treat the biological material with atmost respect and adequate care to avoid misuse.
- Creation of human embryos falls under the restrictive areas of research and shall be resorted to only when all other alternatives have been exhausted.
- Special care should be taken for research involving introduction of human cells in animals, particularly in early developmental stages, since this may lead to development of chimeras or incorporation of stem cells into brain and gonads which can be potentially hazardous.
- Research involving stem cells can be conducted only after approval both from the ICSCR. Additional approvals may also be necessary depending on the research category. The proposal should first be reviewed by the IC-SCR which primarily evaluates the scientific and technical aspects of the study followed by the IEC that will review overall work plan with major focus on ethical issues.
- Clinical trials can be permitted only in institutions/hospitals having registered IC-SCR (with NAC-SCRT) and IEC (with CDSCO).
- It is the responsibility of the investigator to generate robust scientific evidence through well designed clinical trials that could yield valuable information for the benefit of patients. The study subject and/or legally acceptable representative should be provided adequate and unbiased information about the trial protocol, its limitations and potential adverse effects.
- A clinical trial must have a medical specialist registered with MCI and holding MCI approved post graduate qualification in the subject domain of the trial. This can only be conducted in a medical institution/hospital with adequate infrastructure and clinical facilities in accordance with Para 2 (1)(ii) of Schedule Y, Drugs and Cosmetic Act 1940 and rules therein. All medical professionals involved in clinical trials should have a valid GCP certification obtained from agencies such as Central Drug Service Agency (CDSA) or online courses conducted by National Institutes of Health (NIH) USA.
- All records pertaining to clinical trials must be maintained for a period of at least 15 years. The head of the institution should facilitate the maintenance of records through investigator and IC-SCR.

- Participants enrolled for clinical trials are not liable to pay any charges towards procedures, investigations and/or hospitalization related to the trial.
- An institution or laboratory developing or processing stem cells for human use should obtain National Accreditation Board for Testing and Calibration (NABL), accreditation for all laboratory procedures required for product development.
- The cells or cell-based products used in the trial should be processed in a CDSCO certified GLP and GMP facility (Schedule L1 and M of Drugs and Cosmetic Act, 1940 and rules therein).
- Those working with human iPSCs should be cautious with the vectors and genes used for induction of stemness against possible malignant transformation.
- Sponsors shall take note of their responsibilities and liabilities under various statutes, regulations and guidelines governing research and development in this field in the country.
- Government agencies/sponsors facilitating stem cell research must ensure that the projects submitted for financial support has prior approval of IC-SCR in addition to IEC/ IAEC/ IBSC (whichever applicable).
- For multi-centric clinical trials, all participating sites should obtain approvals form their own IC-SCR and IEC.
- Each institution shall have an empanelled roster of investigators conducting stem cell research and ensure that national guidelines, regulations and best practices are followed.
- Institutions conducting stem cell research shall establish suitable mechanism for creating awareness amongst the scientific community and the public at large.

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3.8 Policy regarding research misconduct

i. The Office of Research Integrity

The Office of Research Integrity (ORI) was set up in the Office of Research by a Senatus resolution (Senatus Minute no 2478(c) dated 9th April 2007, AC. Minute 110-a:10-07 dated 25.10.2007). The Additional Vice-Principal (Research) will be responsible for its functioning and is designated as the Research Integrity Officer (ROI). The ROI will report to the Principal and to the Director (and the Medical Superintendent when deemed necessary) of CMC Vellore. A committee of three Senatus members nominated by the Principal will assist the Addl. Vice-Principal (Research).

ii. Scope:

This statement of policy and procedures is intended to describe and help carry out this institution's responsibilities in all matters pertaining to the integrity of Research conducted in CMC, irrespective of the source of funding. These policies also satisfy guidance and procedures for all research conducted in CMC that is funded by the US Public Health Service under the US Public Health Service (PHS) Policies on Research Misconduct, 42 CFR Part 93.

The scope of these policies applies only to allegations of research misconduct that occurred within ten years of the date the institution received the allegation.

iii. Definitions:

The role of the Office of Research Integrity is to ensure the integrity of all research conducted in CMC. It is primarily concerned about Research Misconduct.

- **Research misconduct** means fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results. (ICMR 2017, Box 3.4)
- **Fabrication** is the wilful making up data or results and recording or reporting them.
- **Falsification** is the wilful manipulation of research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research report.
- **Plagiarism** is the "wrongful appropriation" and "stealing and publication" of another paper or another author's "language, thoughts, ideas, or expressions" and the representation of them as one's own original work or duplicating one's own publication (self-plagiarism)
- Research misconduct does not include honest errors or differences of opinion.
- Disputes about authorship do not normally come under the scope of research misconduct. In some instances, failure to include a researcher who contributed significantly to the research as an author or to acknowledge his/her contribution could amount to plagiarism.
- Matters pertaining primarily to the scientific validity and ethical conduct of research will ordinarily fall under the purview of the Institutional Review Board (IRB), unless they pertain to research misconduct. The ORI will work in conjunction with the IRB in such instances.
- Allegations of research misconduct will not be entertained against a person who, at the time of the alleged research misconduct, was employed by, was an agent of, or was affiliated by contract or agreement with this institution.

iv. Standard Operating Procedures

The Standard Operating Procedures Document of the Office of Research Integrity contains all policies and procedures pertaining to investigations of allegations of research misconduct are available in the Office of Research.

3.9 Policy regarding conflict of interest

Conflict of interest (COI) is a set of conditions where professional judgement concerning a primary interest such as participants welfare or the validity of research tends to be unduly influenced by a secondary interest, financial or non-financial (personal, academic or political). COI can be at the level of researchers, EC members, institutions or sponsors. If COI is inherent in the research, it is important to declare this at the outset and establish appropriate mechanisms to manage it. (ICMR 2017, 2.8)

Christian Medical College, Vellore is committed to ensuring its faculty an open and productive environment in which to conduct teaching, patient care, and research. The College's concern with conflict of interest reflects the ever-increasing complexity of our society, our various relations with each other and with outside institutions, along with the heightened national and governmental sensitivity to such matters. Conflicts of interest, in the most conventional sense, arise because faculty members may have the opportunity to influence the institution's business decisions in ways productive

of personal gain. Additionally, faculty members' outside relationships may compromise the integrity of decisions they make as teachers, researchers and providers of patient care.

- In contrast, a faculty member's more general commitment to the institution requires that the member perform the duties conventionally or specifically associated with the member's position. The nature of these duties, like their compatibility with outside activities, varies. Subject to this general standard of commitment, faculty members appropriately use their own judgment in deciding whether to engage in a variety of extramural activities.

- Questions concerning the definition and resolution of conflicts of interest are frequently matters of degree and judgment. Christian Medical College, Vellore recognizes that members of its faculty are professionals; it expects them to be alert to the possible effect of outside activities on the integrity of their decisions and on their ability to fulfil their obligations to the institution. Likewise, the institution recognizes the value of professional interaction between its faculty and outside entities. It supports and promotes university-industry relationships and, subject to this policy, it maintains an environment in which such relationships may flourish.

- In response to these concerns, Christian Medical College, Vellore has adopted three statements of policy:

  - It is the policy of Christian Medical College, Vellore that its faculty have an obligation to avoid unacceptable ethical, legal, financial or other conflicts of interest and to ensure that their activities and interests do not conflict with their obligations to the institution or its welfare.

  - It is the policy of Christian Medical College, Vellore that any faculty member engaging in an outside activity or possessing a personal interest that could lead to a serious conflict of interest must immediately disclose that possibility by informing the Principal and Director in writing. If the Principal, having been provided with all pertinent information, determines that the faculty member's situation presents a serious conflict of interest, that conflict must be resolved. Consultation should be sought when a faculty member is in doubt about whether an interest or activity creates a conflict of interest. Subsequent disputes can be ameliorated more readily if a written record is kept of these consultations. If the faculty member and the Principal disagree, either about the presence of a conflict or about its appropriate resolution, the faculty member may pursue the matter with the Director.

  - It is the policy of Christian Medical College, Vellore that relationships between faculty members and outside institutions must not impede the open communication of research results. This includes sharing, in accordance with applicable legal and ethical principles, of data, samples, physical collections and other supporting materials, unless their dissemination is governed by written proprietary agreements between the institution and a second party. If IP is subject to institutional guidelines (such as those governing technology transfer), a faculty member may not transfer or commit to transfer that property outside the institution without going through approved procedures.

- The requirement of consultation is generally applicable to situations that could lead to serious conflicts of interest. The requirement's relevance to certain specific situations is detailed below.

- Some activities and interests are unlikely to lead to serious conflicts of interest and thus require no consultation. An example is a faculty member's entitlement to examiner fees, consultation fees or honoraria for publications or lectures. These are to be returned to the institution as per institutional rules.

- Consultation is mandatory if the faculty member has a relationship that might bias a decision the member makes or influences concerning the institution's dealings with an outside organization, leading to personal gain to the member. An example is a faculty member's direct or indirect ownership or control of a financial interest in a business with which CMC has dealings, when the faculty member is in a position to influence the relevant decisions by CMC. The first step to resolve such a conflict is full disclosure by the faculty member to the persons making the relevant decision for CMC; the second is arrangements that clearly exclude the member from participating in the relevant decision.

- Consultation is mandatory if the faculty member has a financial interest in a business, or has a right to receive, control or benefit from a business, under circumstances that significantly link the fortunes of the business to the member's research. In such situations, it is advisable to couple the formal presentation of research results with disclosure of the interest.

3.10 Policy for retrospective studies

Research studies involving the review, collection and analysis of medical /laboratory record information are descriptive studies. There are several different approaches to the conduct of retrospective medical record research studies that can be approved by the IRB. The general principles to be considered are listed below.

- Data is generated by multiple units and departments in the hospital. No one unit or department has primacy in access to data. This data may consist of medical records, stored images, laboratory online reports or registers.

- Data cannot be used without informing or obtaining permission from the units or departments that generated the data. Whether the generating department needs to be informed or permission obtained depends on the focus of data usage.

- There are two ways that hospital data can be used for retrospective studies:

  1a. The clinical service unit could use the data; or

  1b. The diagnostic service unit could use the data.

- The retrospective study might be

  2a. Mainly focused on the clinical data with minimal use of the diagnostic/lab data;

  2b.Mainly focused on the diagnostic/lab data with minimal use of the clinical data; and

  2c. Equally focused on both the clinical and diagnostic/lab data.

  Suggested protocols:

- For 1 a and 2 a: No permission required from anyone. Inform the diagnostic service unit so that they can learn from the study.
- For 1 a and 2 c: Clinical service unit should discuss the study with the diagnostic service unit and request their input. Authorship should ideally include both the groups. .
- For 1 b and 2 b: No permission required from anyone. Inform the clinical service unit so that they can learn from the study.
- For 1 b and 2 c: The diagnostic service unit should discuss the study with the clinical service unit and ideally both groups should be given authorship.

- A combination of 1 a and 2 b and 1 b and 2 a is not encouraged and would require specific permission from the IRB. The protocols I to IV need not be discussed by the IRB, unless they are submitted for the purpose of obtaining funding or for research permission for a dissertation.
- Authorship cannot be given just for providing the data, the author must fulfil the requirements of authorship.
- Most authorship issues involving retrospective studies should be settled before initiating the study through a process of discussion.

Not all possible situations are covered in these guidelines. Any disputes will be considered by a committee constituted by the Office of Research. Recommendations of the committee will be implemented by the administration.

3.11 Policy regarding biosafety

CMC complies with norms instituted by the Department of Biotechnology (DBT), Government of India for researchers working with genetically modified organisms and has constituted an Institutional Biosafety Committee. This committee comprises the Principal, the Addl. Vice-Principal (Research), two scientists engaged in DNA work, a medical expert and a nominee of the Department of Biotechnology. The Institutional Biosafety Committee (IBSC) has an on-site emergency plan according to the manuals/ guidelines of the DBT; meets twice annually to review new applications, monitor ongoing studies and prepare reports for submission to DBT. The reports are submitted after approval to the DBT via the DBT website.

SECTION 4

4 COMMITTEES

4.1 Compensation committee

- According to the guidelines of the Drug Controller General of India (DCGI) and recent updates, it is mandatory to seek the opinion of the compensation committee in all cases of serious adverse events, including those involving death, during a clinical trial.
- This opinion will lay down the recommendation for compensation which is subsequently documented and forwarded to the sponsor of the trial and from there to the DCGI.
- The committee meets on the day that the Silver IRB has its regular meeting.
- The Compensation Committee meeting will be held **once a month** where the Serious Adverse Events (Death/ Injury) proposals are reviewed. The Compensation Committee follows the guidelines provided in the New Drugs and Clinical Trials Rules 2019

The members of the compensation committee will include:

1. Senior Clinicians (2)

2. Experts in Clinical Trials- IRB members (2)

3. Finance Director or a suitable representative (1)

4. Vice Principal Research or a suitable representative (1)

5. A Clinical Pharmacologist (1)

6. Legal Officers (2)

All members of the committee are members of the Silver IRB and the Chairperson will be a Clinician adept in clinical trials.

i. Procedure for reporting:

All interventional trials approved by the IRB of CMC Vellore will come under the purview of this policy (drugs, devices, and behavioural or educational interventions; single or multiple armed trials, randomized or non-randomized).

ii. For all SAE reports:

SAEs must be reported to the Ethics Committee at (**saeclinpharm@cmcvellore.ac.in)** with a cc to the secretariat at the Office of Research CMC **(research@cmcvellore.ac.in)** within **24 hours** of learning about an unanticipated or serious adverse event. A hard copy of this document must also be sent to the IRB SAE co-ordinator, Clinical Pharmacology Unit, CMC Hospital, Vellore 632 004, Tamil Nadu.

The PI is responsible for notifying the **DCGI, and** the Study Sponsor (if external)

Within **10 days** of first knowledge of the SAE the PI is to submit a follow up or final report .

If it is a death report then this must also be sent to the expert committee and the head of the institution (both should have a copy of the original report to the DCGI).

Expert Committee address:

The Chairman, Expert Committee, The Drug Controller General of India, FDA Bhavan, ITO, Kotla Road, New Delhi -110002

Within 10 days, the completed access database should be sent to the IRB SAE Co-ordinator at saeclinpharm@cmcvellore.ac.in.

Composition of Compensation Committee

S. No	Name	Designation	Affiliation
1	Mr. Sampath	Chairperson	External member
2	Dr. Jacob John	Member Secretary	Internal member
3	Dr. Selvamani B	Associate Director Finance	Internal Member
4	Dr. Winsley Rose	Clinician	Internal Member
5	Dr. Premila Wilfred	Pharmacologist	Internal Member
6	Dr. Nitin Kapoor	Clinician	Internal Member
7	Dr. Ramya I	Clinician	Internal Member
8	Dr. Aby Abraham	Clinician	Internal Member
9	Dr. Rohini Ann Mathew	Pharmacologist	Internal Member

4.2 Data Safety Monitoring Board

The Data and Safety Monitoring Board (DSMB) is a group of experts that advises the Institutional Review Board and the study investigators. The members of the DSMB serve in their individual capacity and provide their expertise and recommendations.

Individual studies can and do have DSMBs appointed by the study sponsors—however, these guidelines pertain to an internal DSMB for the Christian Medical College.

Studies advised by the IRB to be presented in the DSMB will have to report to the DSMB meeting when scheduled.

A broadcast will be sent to notify all the Principal Investigators regarding the DSMB meeting along with the application for the DSMB meeting. The participants are advised to fill in the DSMB application form and forward the same to the research office, along with a 5-minute PPT outlining the details mentioned in the application form.

i. The primary responsibilities of the internal DSMB are

- Periodically review and evaluate accumulated study data for participant safety, study conduct and progress, and, when appropriate, efficacy,
- Make recommendations to IRB concerning the continuation, modification, or termination of the trial. The DSMB considers study-specific data as well as relevant background knowledge about the disease, test agent, or patient population under study. The studies for which data monitoring is required will be decided by the IRB and communicated to the DSMB.
- The DSMB is responsible for defining its deliberative processes, including events that would call for an unscheduled review, stopping guidelines, unmasking (unblinding) and voting procedures prior to data review.
- The DSMB is also responsible for maintaining the confidentiality of its internal discussions and activities as well as the contents of reports provided to it. The IRB will review each protocol for any major concern prior to implementation. During the trial, the DSMB should review cumulative study data to evaluate safety, study conduct, and scientific validity and integrity of the trial. As part of this responsibility, DSMB members must be satisfied that the timeliness, completeness, and accuracy of the data submitted to them for review are sufficient for evaluation of the safety and welfare of study participants.
- The DSMB should also assess the performance of overall study operations and any other relevant issues, as necessary.
- The DSMB committee can stop any study if they find any issues and if deemed necessary.

After the meeting, if there are any queries raised, the same will be sent to the PI for their response, and if there are no queries, an approval letter will be issued.

ii. Items reviewed by the DSMB include:

- Interim/cumulative data for evidence of study-related adverse events;

  Interim/cumulative data for evidence of efficacy according to preestablished statistical guidelines, if appropriate;

- Data quality, completeness, and timeliness;
- Adequacy of compliance with goals for recruitment and retention, including those related to the participation of women and minorities;
- Adherence to the protocol;
- Factors that might affect the study outcome or compromise the confidentiality of the trial data (such as protocol violations, unmasking, etc.); and,
- Factors external to the study such as scientific or therapeutic developments that may impact participant safety or the ethics of the study.

iii. Membership

The members of the DSMB are nominated by the Additional Vice Principal (Research) with the approval of the Principal.

iv. Qualifications:

Should be from medical specialties or equivalent specialty so that necessary knowledge is there to interpret the data from the clinical trial and to fully evaluate participant safety.

v. Constituents

The Core DSMB members consist of the Convener (Vice-Principal Research), Chairperson and 4 committee members.

As required, others may be called, including
Expert(s) in the clinical aspects of the disease/patient population being studied; One or more biostatisticians; and, Investigators with expertise in current clinical trials conduct and methodology.

Individual collaborators of the test substance(s) or any other individual with vested interests in the outcome of the study are not eligible to serve on the DSMB although they may attend open sessions of the DSMB meetings.

Conflict of Interest

No member of the DSMB should have direct involvement in the conduct of the study.

Furthermore, no member should have certain vested interests that may affect impartial,

independent decision-making by the DSMB.

Composition of DSMB Committee

S. No	Name	Designation	Affiliation
1	Dr. Biju George	Chairperson	Internal Member
2	Dr. Jacob John	Member Secretary	Internal Member

3	Dr. Jayaprakash Muliyil	Scientist & Epidemiologist	External Member
4	Dr. Prasanna Samuel	Biostatistician	Internal Member
5	Dr. Abi Manish	Clinician	Internal Member
6	Dr. Premila Wilfred	Pharmacologist	Internal Member

4.3 Institutional Bio-Safety Committee

All proposals that deal with recombinant DNA, genetically modified organisms (GMO) and Living modified organisms (LMO) should be presented to the Institutional Biosafety Committee (IBSC). After approval from the IRB, the PI should apply for IBSC clearance. The following documents are required for submission to the IBSC portal.

1. IRB approval letter
2. Form C1 and supporting annexures
3. Form B1 for importing organisms.

Institutional Bio Safety Committee (IBSC) reviews all recombinant research carried out in the organisation depending upon the category of experiments. IBSC can note the information provided by PI, give permission before start of the experiments or forward it to Review Committee on Genetic Manipulation (RCGM) for approval as per the Recombinant DNA Safety Guidelines, 1990 of DBT.

After the proposal review, if any queries are raised, the same is forwarded to the Principal Investigator of the study. And after satisfactory clarification of the queries approval is provided. The PI should also register the study in the BioRRAP portal and provide the number to the research office for uploading the study documents to the Indian Biosafety Knowledge Portal (IBKP). After uploading the study documents, we may get queries from the Review Committee on Genetic Manipulation (RCGM), which will be forwarded to the PI for clarification. If the study involves import of organisms, then only after RCGM approval can we proceed to import the microorganisms.

After the softcopy is accepted, a signed copy must be uploaded in the IBKP portal.

The IBSC should be registered with Department of Biotechnology (DBT) and renewed once in 3 years.

The IBSC shall have the following members:

• Head of the organization or his designate (a suitable senior officer) as the Chairperson

• Three or more scientists engaged in rDNA work or molecular biology with at least one outside expert in the relevant discipline.

• A member with medical qualifications - Biosafety Officer (in case of work with pathogenic agents/large scale use).

• A nominee of DBT.

IBSC in CMC meets once in six months

Composition of IBSC Committee

S. No	Name	Designation	Affiliation
1	Dr. Solomon Sathishkumar	Principal	Chairman
2	Dr. Jacob John	Addl. Vice Principal (Research)	Member Secretary
3	Dr Joy Sarojini Michael	Professor	Biosafety Officer
4	Dr K A Balasubramaniam	Emeritus Professor	External Expert
5	Dr Sitara Swarna Rao A	Professor	Internal Member
6	Dr Rajesh Kannangai	Professor	Internal Member
7	Dr Molly Jacob	Professor	Internal Member
8	Dr Alok Srivastava	Professor	Internal Member
9	Dr RV Shaji	Professor	Internal Member
10	Dr G. Dhinakar Raj	Director, Center for Animal Health Studies	DBT Nominee

4.4 Patenting Process- Invention Facilitation And Screening

Patenting is important for the progress of treatment of many disorders and an important part of progress in medical science. The Patent Facilitatory Committee was instituted in 2014 and was operated from 2015. It is meant to streamline all patenting process & emerge the growth of patenting in CMC to facilitate research, innovation & foster growth of inventions.

It is imperative that specific processes are adhered to within the institution, and inventions that are intended to be patented from CMC Vellore are assessed and submitted to the Patent Office in the right format.

The current IP policy of our institution is directed by CMC Council minute numbers: **Intellectual Property Committee 11560:1-10** ***(AC. Min. No.71-c: 8-09)*** AC. 104-a: 12/09; Ex. 12775/1/10, **Intellectual Property Policy for CMC 11542:1-10; (**AC. 71-b: 8/09; Ex. 12733/11/09). As adherent with these policies, a researcher or PI who wishes to secure IP by filing patents should write a request (in a prescribed format) to the Vice-Principal (Research) with a brief outline of the IP claims, and

potential commercial value. A preliminary committee will be constituted by the Principal to examine claims, go through the write up of the invention and make recommendations.

After final approval by the IP Committee, an application to the Central Patent Office can be submitted. The invention once patented, is the property of Christian Medical College, Vellore

Composition of IPR committee

S. No	Name	Designation	Affiliation
1	Dr. Solomon Sathishkumar	Principal	Convener
2	Dr. Ebby George Simon	Associate Director (Medical)	Chair
3	Dr. Mark Ranjan Jesudason	Associate Director (Admin)	Vice Chair
4	Dr. Selvamani B	Associate Director (Finance)	Member
5	Mr. Paul Chandra Kumar	Treasurer	Member
6	Dr. Vinay Oommen	Council Secretary	Member
7	Dr. Rajesh I	Medical Superintendent	Member
8	Dr. Jacob John	Additional Vice Principal (Research)	Member
9	Dr. Nihal Thomas	Head, Endocrinology	Member
11	Dr. Sivakumar Balasubramanian	Head, Bioengineering,	Member
12	Dr. Thomas Ram	Head, Technology Transfer Office	Member
13	Mrs. Divya	Legal Officer	Member
14	Dr. Kripa Jalapathy	Adjukines applied solutions	Member

4.5 Adjunct Faculty

The senatus has approved a proposal to allow Visiting Faculty to be appointed at CMC. The reason for initiating this process was to strengthen our links with faculty at collaborating institutions within and outside India, in order to enhance our research and teaching.

The steps to be followed for appointment of Adjunct Faculty area:

1. A department or faculty member nominates an Adjunct Faculty candidate by submitting a completed nomination form and the nominee's CV to the research office via the Head of the Department.

2. A nominations committee selected by the Principal and Additional Vice – Principal (Research) meets as and when required to review all nominations and recommend their approval or rejection.

3. The appointed Adjunct Faculty is sent a letter by the Principal informing them of their appointment for up to four years and details of the terms of their appointment as specified by the sponsor and institutional rules. After 4 years, depending on the continuing of the association, extensions can be made for further periods.

The term of appointment of Adjunct Faculty can be accessed here

4.6 Core Research Chair

The Chairs include: The Jacob Chandy Research Chair for Pre-Clinical Sciences, The Hilda Lazarus Research Chair for Para-Clinical Sciences and the Ida Scudder Research Chair for Clinical Sciences and are available to any faculty member conducting research in an appropriate discipline.

The applicants should be:

1. Permanent members of the faculty of CMC, Vellore.

2. Associate Professor or Professor Level

3. Secured up to 50 lakhs of cumulative funding in the previous 5 years. Only investigator-initiated grants will be considered. Funding will determine 25% of the score. Scores will be graded as follows- 30 lakhs to 1 crore will be 5 points, 1-2 crores will be 10 points, 2-4 crores will be 15 points, and 4-6 crores will be 20 points and >6 crores, 25 points.

4. Have at least 15 (including review articles and invited editorials) published in the last 5 years. Case reports, Publications in nonpeer reviewed journals, letters (except research letters). Book chapters and commentaries are not included Publications will count for 40% of the score which will be divided under distinct categories.

The applicant should provide a 500-word summary which demonstrates their research focus, the importance of the area, the research undertaken and the impact. The summary should be supported by the applicant's publications (both titles and abstracts of these publications should be provided along with the application). This summary and the supporting publications will be considered and scored by the selection committee, with a maximum score of 15%. The number of publications in an applicant's career will be graded for a maximum of 15%, with up to 5 points for 11-50 publications, 10 points for 50 to 100 publications and 15 points for >100 papers. As stated earlier, only peer reviewed research articles, research letters, review articles, invited editorials and commentaries will be considered. Comments, correspondence, case reports and book chapters will not be considered.

Impact factor will contribute to a maximum 5%, with the impact factors of the top 5 publications of an applicant being added to give the highest possible score, which will be considered as 5%. The remaining applicants' impact factors will be added similarly but graded as a percentage of the leading applicant's score. Cumulative citations will similarly contribute to 5% of an applicant's score.

PhD and other Dissertations -PhD students and other dissertations guided in the last 10 years will contribute to a maximum of 20% of the score, with each PhD student registered counting for 3 points and each other dissertation for 1 point. Points for students are up to a maximum of 20%.

Patents - Patents will contribute up to 10% of the score. A general guideline will be about 2.5 points for a submitted patent application, 5 points for a patent received and 10 points for a patent that has resulted in a product. A product such as the Bombay-Vellore Hand, which is notnecessarily patented, will also be considered a product and scored equally. More than one patent can only contribute to up to 10% of the total score.

5. Be currently actively engaged in research.

6. Have at least 2 more years of service in CMC, Vellore.

7. Outcomes will be evaluated every 2 years at midterm review.

8. Eligibility for all staff, subject to department demonstrating that the work can be handled with existing or proposed staffing structure.

9. Be appointed for a duration of 4 years, position subject to a midterm review. Leave may be taken to a maximum of 6 months. Leave in excess of 6 months would require vacation of the chair. Leave should be connected to the research project and should be taken within existing eligibility for leave. Annual Reports of work done should be submitted and reviewed by the selection committee.

10. Change to temporary staff any level. The salary saving from a faculty member moving to core research can be used to support until the end of the core research position.

11. Core Research Personnel completing 4 years may opt for re-appointment and be subject to the above criteria.

1. A selection committee chaired by the Principal, convened by the Addl. Vice-Principal (Research), consisting of the Director, Medical Superintendent, Associate Director (Human Resources) and two leading researchers in the institution will be responsible for the selection, reviewing annual reports and the mid-term review. If any potential committee member is an applicant, a replacement will be nominated by the Principal.
2. The scores generated by the scoring system outlined below will constitute part of the evaluation, but importance will also be given to institutional, departmental, and national research priorities.

All changes to selection will be instituted prospectively after all changes and approvals are finalized, and after all current incumbents have completed their terms.

4.7 Travel Grants

CMC Vellore with the support of the Vellore Christian Medical College Foundation (VCMCF) have initiated the Travel grant support for both Faculty and Students to attend both National and International conferences. For the National conference, a sum of INR 25,000/- and for the international, a sum of 1,00,000/- is provided.

To apply for the travel grant, the applicant will have to submit the filled-in travel grant form along with the acceptance letter for presentation at the conference from the organizing committee and a copy of the abstract.

The screening committee will review all submitted applications, and the committee's decision will be final. A total of 4 travel grants will be available half-yearly from January to June and July to December (2 National and 2 International). Not more than one grant will be given per year for a department. The paper should be sent for publication within 6 months of the conference, and if accepted, a copy of the paper should be submitted to the research office.

Eligibility criteria –

1. Faculty at or below the level of associate professor (Grade 2) in broad specialties; faculty at or below the level of associate professor (Grade 1) in higher specialties.

2. Both confirmed and unconfirmed faculty are eligible.

3. The travel grant will be awarded only once during the tenure of the recipient's service at CMC.

4.7 **Documents for Principal's signature**

1. All documents submitted for the principal's signature will be taken on the principal's letterhead. (except UC)
2. The standard turnaround time for documents submitted for signature will be two working days, depending upon the availability of the signing authority.
3. The legal clearance document will accompany All MoUs/MoAs/Agreements. Without the clearance document, it will not be possible for the principal to sign.

All codal documents must be completed, formatted, and then forwarded to the research office for signature.

4.8 Article Processing Fee

Christian Medical College Vellore has established an institutional mechanism to cover APC to facilitate high- quality research and disseminate results widely for investigators who need access to alternate sources of covering APC. The APC policy can be access here

Eligibility

Faculty Eligibility: All confirmed faculty or those with equivalent privileges can apply for APC support from the research office.

Authorship Eligibility: If more than one faculty is listed on a publication, those who are first, second, third, senior (last), or corresponding author are eligible to apply for APC support, provided they have been listed as co-investigators in the IRB proposal (on which the paper is principally based). The first and corresponding author must be from CMC.

Funding Limit

Per Manuscript: Up to ₹ 3,20,000 will be permissible for any one manuscript from institutional APC support, provided the other criteria for quality of publication are met.

Per Faculty: Eligible faculty may apply for support any number of times. A faculty member can receive up to ₹ 4,00,000 in four years.

Pooling of APC across authors: Eligible authors listed as first, second, third, senior (last), or corresponding author can share the costs from individual APC eligibility. The corresponding author should submit the request for APC with written, signed concurrence of eligible authors indicating their agreed contribution to the APC. If alternate, non-institutional resources can cover part of the APC, the remainder can be met per the criteria above.

Journal Quality Criteria

The journal must be listed as a Q1 or Q2 journal in Scopus or have a Clarivate Impact Factor of>= 2 per the latest published list available with the library.

CMC aims to support our faculty in pursuing high-quality research and wide dissemination of results. These resources are allocated from institutional maintenance funds and are capped yearly based on budgetary allocations. Wherever possible, please consider using alternate funding sources or journals with lower APC to maximise the impact of these resources.

Exceptional scenarios will be reviewed by an ad-hoc committee instituted by the Principal.

4.9 Doctor of Philosophy (PhD)

Christian Medical College is affiliated with 4 universities namely

- The Tamil Nadu Dr. M G R Medical University (TNMGR)
- Sree Chitra Tirunal Institute for Medical Sciences & Technology (SCTIMST)
- Thiruvalluvar University and
- Regional Centre for Biotechnology (RCB)

Those who are working within the organization are eligible to pursue a PhD. Like (JRF, SRF)

Post PG experience of 2 years

The study proposal is to be reviewed and approved by the EC, after which the student should apply for eligibility on the university website. They should also check for the guide in the subject discipline they are choosing.

4.9.1 PhD Candidate Registration

The Tamil Nadu Dr. M.G.R. Medical University

1. The candidate should contact the department/ Research Office to identify a guide in the department.
2. Once the candidate has identified the Guide, they should apply to the university for eligibility to pursue a PhD. The following details are required for applying for eligibility
    a. IRB approval
    b. Should have attended the Research Methodology course by the university

   c. The candidate should fill in the eligibility application online and upload CDSCO EC registration, NOC from EC, NOC form principal, Ethics clearance letter, and permission letter from the research office.
3. The university will raise queries if needed or provide approval.
4. After approval, the candidate should apply for a provisional registration.
   a. Provisional application form contains
   b. 4 copies of the proposal write-up with the project title signed by the guide and student signature.
   c. University eligibility certificate
   d. Provisional fee payment receipt
5. For the final thesis submission
   a. Logbook
   b. Thesis 4 copies along with the head of the institute letter
   c. Synopsis submission from the head of the institution
6. After which a viva notice is issued, and eventually the viva is completed
7. After successfully completing the viva, the candidate should download the degree application from the university website, and the same will be signed by the head of the institute and apply for PhD convocation.

Sree Chitra Tirunal Institute for Medical Sciences & Technology (Jan & July)

1. The candidate should contact the department/ Research Office to identify whether the department is registered along with a guide in the department to pursue a PhD.
2. Once the candidate has identified the Guide, they should apply to the university for eligibility to pursue a PhD. The following details are required for applying to PhD
   a. PhD application
   b. Research Proposal
   c. Fee payment
   d. HSC, UG & PG certificates
   e. NOC form the HOD, guide and Head of the institution
3. After which a letter of confirmation will be sent to the candidate, guide, and Head of the institution
4. After which the candidate is advised to complete the coursework exam
5. Every year, a semi-annual report is required to be submitted.
6. The final thesis evaluation is held along with the DAC members
7. The DAC meeting minutes will be forwarded to the university along with the fee payment receipt
8. The university will issue a notice for viva if everything is satisfactory.
9. After completion of the viva, the viva attendance of the same must be signed by the Head of the institute, and the same must be forwarded to the university.
10. The university will then scrutinize and issue the degree certificate

Thiruvalluvar University

1. To apply for PhD at Thiruvallur University, the following documents are required to be submitted.
    a. Online filled application form for admission to Ph.D. degree
    b. Challan No. IB250927 Date: 22-01-2021
    c. Department approval letter for conducting PhD programme
    d. Selection list Annexure
    e. Minutes of the Departmental Selection Committee
    f. Supervisor Ph.D. recognition order
    g. Supervisor Declaration Annexure
    h. Self-attested copy of Community certificate, Aadhar card**,** Transfer certificate, 10th, and 12th Mark sheet, UG, PG degree certificates.
    i. Original eligibility certificate
    j. PhD Research Proposal (500 words) signed by both the supervisor and candidate
    k. Self-attested copy of Common Entrance Test Result
2. The university will send an eligibility approval for pursuing the PhD
3. Joining report to be submitted to the university with the guide and Head of the Institution.
4. The institute will forward an admission card letter mentioning the details of the Constitution of the doctoral committee (CDC).
5. A six-monthly progress report is to be sent mandatorily
6. A synopsis application form signed by the Head of the Institution is to be forwarded to the university.
7. After which a viva notice is issued, and eventually the viva is completed
8. The candidate must apply for the degree convocation form on the university's online portal.

Regional Centre for Biotechnology

1. The notice of PhD is printed in both the internal newsletter and the national newspaper.
2. The advertisement is broadcast in October and the interview is held in November. The selected candidates will be allowed to start the PhD in January.
3. The list of applicants will be reviewed and shortlisted by the department, and the student will be informed of the same.
4. The shortlisted candidate's details are sent to the university
    a. Marksheet
    b. degree certificates and
    c. Form 1A
5. The university will send a confirmation stating the student is selected along with the details for fee payment.
6. The department must pay an annual fee.
7. After the candidate pays the fee, the university will send a confirmation of admission (Form 2) to the guide and the institution.
8. The student is required to send in an annual progress report.
9. The guide conducts a coursework exam (Form 3), and a signed copy by the head of the institute is forwarded to the university.

10. The candidate should submit four copies of the Thesis signed by the candidate and the guide.
11. The university sends a viva notice, and the degree certificate is issued after successfully completing the viva.

4.9.2 PhD Guideship

MGR
New Guide

1. To apply for guideship, the candidate should have 12 years of experience post PG.
2. If yes, the candidates will have to fill out the university application form and submit the following supporting documents along with it
    a. Copy of degree Certificates (UG/PG/Ph.D.).
    b. Copy of Council Registration Certificates.
    c. Service particulars.
    d. Break up details of PG Teaching experience, including the specialty, with supporting documents.
    e. Service Certificate from the Institution mentioning the specialty and subject taught in the PG degree courses.
    f. Copy of Research Article Published in the National/International Journals – More than 3 nos.
    g. Copy of Research Article Published in the PUBMED indexed publications.
    h. Letter of Undertaking stating the inclusion of the University name in all research articles to be published in future and to conduct workshops periodically.
    i. Participation certificate for attending the Research methodology and Biostatistics workshop conducted by the university.
    j. Processing fee of INR. 3,000/- and 18% of GST thereon (total INR.3540/-)
    k. Is the applicant already registered as a Guide / Co-guide in other Universities? If registered, could you furnish the relevant documents?
    l. Nature of study of the PhD programme, whether full-time or part-time with supporting documents.
    m. Furnish the details of one year of research experience in the Post Graduate Institution after completing your Ph.D programme.

Renewal of Guideship/Co-Guideship

The following documents are required for the Recognition of Renewal of Guideship

1. Guide renewal application form.
2. Copy of degree certificates (UG/PG/Ph.D).
3. Copy of Council Registration Certificates.
4. Service certificate from the Institution, mentioning the specialty and subject taught in the PG degree courses.
5. Letter of Undertaking regarding the inclusion of the unviersity's name in all research publications in future and to conduct workshops periodically.

6. Copy of Research Article Published with the inclusion of the name of the Tamil Nadu Dr. MGR Medical University, Chennai.
7. Furnish supporting documents with details of workshops related to Research being conducted in the institution during the Guideship period.
8. Copy of Guideship certificate previously issued by this university.
9. Details of workshops related to research participated/conducted in your institution during the Guideship period.

The following documents are required for the **Recognition of Renewal of Co-guideship**

1. Guide renewal application form.
2. Copy of degree certificates (UG/PG/Ph.D).
3. Copy of Council Registration Certificates.
4. Service certificate from the institution, mentioning the specialty and subject taught in the PG degree courses.
5. Letter of Undertaking regarding the inclusion of the university's name in all research publications in future and to conduct workshops periodically.
6. Copy of Research Article Published with the inclusion of the name of the Tamil Nadu Dr MGR Medical University, Chennai.
7. Furnish supporting documents with details of the workshop related to research conducted in the institution during the Guideship period.
8. Copy of the Co-guideship certificate previously issued by this university.
9. A workshop related to research was participated in/conducted at your institution during the guideship period.

SCTIMST

Faculty from departments recognized by the university for conducting PhD programmes can apply for guideship. The recognized departments are:

1. CSCR
2. Community Health
3. Bioengineering

The following documents are required to apply for guideship/Co-guideship in SCTIMST

1. University Application form
2. CV
3. Letter from the Head of the Institution.

Regional Centre for Biotechnology

The following details are needed for applying for guideship/Co-guideship

1. Guideship application form
2. CV
3. Letter from the Head of the Institution

Thiruvalluvar University

The following details are needed for applying for guideship/Co-guideship

1. Guideship application form
2. CV
3. Letter from the Head of the Institution

4.9.3 PhD Department Recognition

MGR

The following details are required for department recognition

The department should have registered PhD guides and co-guides to apply for guideship

1. Dept recognition form (Type A for clinical and Type B form for non-clinical).
2. Guideship certificate.
3. Fee payment slip (One-time registration fee).
4. Letter from the Head of the institution.

After submission of the above documents the university will form an inspection team that will visit the department to verify the details:

1. Department details (e.g., teaching faculty, laboratory etc.)
2. Institution details (accounts, library, pollution control, planning, and lab facilities)
3. Research details (ongoing studies, research collaboration)
4. Ethics committee registration details
5. Animal Ethics registration details and other supporting documents based on the type of Form.
6. Fee payment (Affiliation fee & Inspection fee)

SCTIMST

The following documents are required for department recognition

1. Academic program application to be filled out and forwarded to the university.
2. Letter from the Head of the Institution.

After reviewing the application, an inspection team will visit the department concerned, after which an affiliation order is issued.

Regional Centre for Biotechnology

The following documents are required for department recognition

1. Application form
2. Letter from the Head of the Institution

Thiruvalluvar University

The following documents are required for department recognition

1. Application form
2. Letter from the Head of the Institution

4.10 Graduation Awards

4.10.1 Undergraduate Research Award

A prize is awarded each year to the Undergraduate student who submits the best research paper. The Committee set up for evaluating Undergraduate Research Award grades reports on a 10-point scale on five aspects, relevance, methodology, analysis, conclusions, presentation, and discussion.

The participants for the Undergraduate Research Award should submit their abstracts on or before the deadline. The abstracts should be mailed to the research office. A full manuscript needs to be submitted along with the abstract.

1. This research award will only be given to a single individual. Group projects will not be considered.
2. The study should have been presented to the IRB committee and approved by the IRB.
3. Please download the manuscript template for the Undergraduate Research Award from the research website.

4.10.2 The Rev. Fr. Lourdu M. Yeddanapalli S.J. Medal

The Rev. Fr. Lourdu M. Yeddanapalli S. J. Medal is awarded to a Scientist in the Christin Medical College, Vellore who has made an outstanding contribution to basic or applied sciences in India. No person is eligible to receive the award more than once.

The nomination may be sent with details of academic career and accomplishments of the nominee with details of research papers, articles, books etc. published during the preceding 5 years to the Additional Vice-Principal (Research) Committee on or before the deadline.

The office of research will check the eligibility of the applicants, and the applications will then be forwarded to A selection committee nominated by the Addl. Vice principal (Research). The committee then scores each application, and the results are forwarded to the Addl. Vice principal (Research).

4.10.3 IJMPO award

The IJMPO award was established to recognize the outstanding research conducted by a post-graduate student during their training in Christian Medical College, Vellore. The award was instituted with support from the Indian Journal of Medical and Paediatric Oncology. This award is open to all postgraduate students, including Master's, MD/DM, MS/MCh and PhD trainees who have passed their post-graduation within the last two years. Papers published in the previous calendar year arising

out of work done during the training programme are eligible for the award and are ranked on their significant contributions to basic or clinical medical research.

An annual broadcast will be sent for the IJMPO award. The copies of relevant published papers are to be forwarded to the research office along with the applications in PDF format.

The office of research will check the eligibility of the applicants, and the applications will then be forwarded to a selection committee nominated by the Addl. Vice Principal (Research). The committee will score each application, and the results will be forwarded to the Addl. Vice Principal (Research).

4.10.4 Senatus Award

The Senatus has instituted an award of a gold medal for the best paper published every year by a junior member of the faculty (i.e., a non-Senatus member). A panel of experts will scrutinize the submission and decide on the best paper. The paper will be scored based on relevance of objectives, study design, analysis, presentation, discussion, impact, and the prominence of the journal is which the article is published. A covering letter and a copy of the paper should be forwarded to the office of research before the deadline.

For the Senatus award an Annual Broadcast will be circulated within the organization. All papers published between April of the previous year and March of the current year are eligible to be considered. Only the first author will be considered, and the author should be a non-Senatus member, (Associate Professor Grade II or below) when the paper was accepted for publication.

The details must be emailed to the office of Research before the deadline. The office of research will check the eligibility of the applicants, and the applications will then be forwarded to a selection committee nominated by the Addl. Vice Principal (Research). The committee will score each application, and the results will be forwarded to the Addl. Vice Principal (Research).

4.10.5 PhD award

Candidates who have completed their PhD within the past year are eligible to apply. Only those who have completed their PhD at universities affiliated with CMC are eligible for the PhD award. An annual notification will be sent a few months prior to the PG graduation. Candidates must email their details along with the provisional certificate to the research office before the deadline.

SECTION 5

5 PROCEDURES AND FORMS TO BE USED FOR SUBMISSIONS

This section begins with an overview of the process of submitting applications to the IRB and

contain forms to be used for submission to the IRBs for Research Grants (for external funding and Fluid Research funding), Ethics approval, Progress reports, Final Reports and for reporting Adverse events.

This section also contains forms that will be used by the IRBs for evaluating proposals.

If you have any doubts regarding the appropriate form to be used or procedures to be followed, please contact research@cmcvellore.ac.in

5.1 Flowchart for initiating a research study in CMC

(Allow about 3-4 months from first application to recruitment of personnel)

Step 1

Read the Policies and Procedures document of the IRB and following guideline s before initiating the research

- The Declaration of Helsinki,
- The ICMR Ethical Guidelines for Biomedical and Health Research 2017 and The New Drugs And Clinical Trials Rules, 2019
- The Indian GCP Guidelines

Use appropriate format for proposal from IRB applications site on the intranet. (Refer 5.2 Formats)

View Appendices

Completed application with all supporting documents should be emailed to the office of

research (research@cmcvellore.ac.in) on or before the submission deadline.

Step 2

Be present for the IRB meeting at the required time to answer clarifications.

It is mandatory that the guide should be present for PG dissertations

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Step 3

The IRB will provide clearance for studies involving humans
If any amendments are suggested please send the revised proposal to the IRB at the earliest or re-submit for the next meeting.

If the study involves animals, only research committee approval will be provided and separate clearance is required from the Animal Experimentation Committee

↓

Step 4

After final approval from the IRB, a letter is needed to the Treasurer to start an account and to activate fluid research funding. For personnel and capital items, AC approval is needed. Write to respective Administrative heads (Principal / MS / GS) depending on category of staff to be employed. (Refer 5.2 Formats)

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Step 5

After AC approval, advertise and recruit through respective Administrator.

Get two or more quotes for capital items and raise a purchase request.

(Refer 5.2 Formats)

↓

Step 6

Annual report and final report to be submitted to the committee (Refer 5.2 Formats)

(This applies to all proposals)

5.2 FORMATS

5.2.1 Format for Application for IRB clearance for Interventional Studies.doc

5.2.2 Format for Application to IRB for studies of Test of Diagnostic Accuracy

5.2.3 Format for Application to IRB for Observational Studies

5.2.4 Format for Application to IRB for other study designs

5.2.5 Format for submitting Protocol Amendments

5.2.6 Format for Reporting Adverse Events

5.2.7 Format for submitting Annual Reports to IRB for Studies Approved by IRB

5.2.8 Format for submitting Final Reports for Interventional Trials approved by the IRB

5.2.9 Format for submission to IRB of Final Reports of Diagnostic Test Accuracy

5.2.10 Format for Submission of Final Reports to IRB of Observational (Case Control, Cohort, Observational) Studies

5.2.11 Format for Submission of Final Report for Other Study Designs

5.2.12 Indian Council of Medical Research Materials Transfer Agreement

5.2.13 IRB Reviewer Checklist

5.2.14 Draft format for Informed Consent

5.2.15 Draft format for Tissue Banking

5.2.16 Checklist for Projects involving Artificial Intelligence(AI)/Machine Learning (MI) development/utilization

6 APPENDICES

Appendix I	Clinical Trial Registry-India Dataset and Description
Appendix II	Instructions for registering trials in the Clinical Trials Registry- India
Appendix III	CONSORT Statement (http://www.consort-statement.org/) for interventional trials and its extensions.
Appendix IV	QUADAS (a tool for assessing the quality of tests of diagnostic accuracy)
Appendix V	STARD Statement (Standards of Reporting of Diagnostic Accuracy)
Appendix VI	STROBE Statement (https://www.strobe-statement.org/) Strengthening the Reporting of Observational Studies in Epidemiology
Appendix VII	Draft format for Informed Consent (Refer 5.2 Formats)
Appendix VIII	Guidelines for use of animals
Appendix IX	IRB Processing Fee Letter from Principal, CMC Vellore
Appendix X	Current membership of the Research Committee of the Silver & Blue IRB
Appendix XI	Current membership of the Ethics Committee of the Silver & Blue IRB

6.1 Appendix - X

Current membership of the Research Committee of the Silver IRB

S. No	Name	Qualification	Designation	Affiliation	Term period as member
1.	Dr. Suceena Alexander	M.D, D.M. (Nephro), FRCP (Lon.), FASN, Ph.D.,	Chairperson – (Research Committee), IRB, Professor, Department of Nephrology, CMC Ranipet Campus.	Internal Clinician	2024 - 2028
2.	Dr. Prasanna Samuel	M. Sc, Ph.D.,	Secretary, Research Committee, Associate Professor, Department of Biostatistics, CMC College Campus, Vellore.	Internal Statistician	2022 - 2025
3.	Dr. D. J. Christopher	DTCD DNB, FRCP(Glasg), FCCP(USA)	Professor, Department of Pulmonary Medicine, CMC Ranipet Campus, Vellore.	Internal Clinician	2023 - 2026
4.	Dr. Rajdeep Ojha	M. Tech, Ph.D.,	Associate Professor, Department of Physical Medicine and Rehabilitation, CMC College Campus, Vellore.	Internal Basic Medical Scientist	2024 - 2026
5.	Dr. Sridhar Gibikote	DMRD, DNB	Professor, Department of Radiology, CMC Town Campus, Vellore.	Internal Clinician	2023 - 2026
6.	Dr. Sridhar S	DCH, DNB	Professor, Department of Neonatology, CMC	Internal Clinician	2024 –2026

			Town Campus, Vellore.		
7.	Dr. Nihal Thomas	MD, MNAMS Ph.D. (Copenhagen)	Professor, Department of Endocrinology, Diabetes, and Metabolism, CMC Town Campus, Vellore.	Internal Clinician	2024 – 2026
8.	Dr. Rohin Mittal	MS, DNB	Professor, Department of General Surgery, CMC Town Campus, Vellore.	Internal Clinician	2022 – 2025
9.	Dr. Joe Varghese	MD, Ph.D.,	Professor, Department of Biochemistry, CMC, College Campus, Vellore.	Internal Basic Medical Scientist	2022 –2025
10.	Dr. Christhunesa Soundararajan C	M.Sc., Ph.D.,	Professor, Department of Neurological Sciences, CMC Ranipet Campus.	Internal Basic Medical Scientist	2022 – 2025
11.	Dr. Elizabeth Vinod	MD (Physiology) Adjunct Scientist, CSCR	Physician, Department of Physiology, CMC College Campus, Vellore.	Internal Basic Medical Scientist	2022 – 2025
12.	Dr. Grace Rebekah. J	M.Sc., Ph.D.,	Lecturer, Department of Biostatistics, CMC College Campus, Vellore.	Internal Statistician	2023 – 2026
13.	Dr. Poonkuzhali B	M.Sc, Ph.D.,	Professor, Department of Hematology, CMC Ranipet Campus.	Internal Basic Medical Scientist	2024 - 2026
14.	Dr. Biju George	MD, DM	Professor, Department of	Internal, Clinician	2025 – 2028

			Haematology, CMC Ranipet Campus.		
15.	Dr. AT Prabhakar	MD, DM	Professor, Department of Neurology, CMC Ranipet Campus.	Internal, Clinician	2025 - 2028
16.	Mrs. Anne Jarone	M. Sc (Nursing)	Professor, College of Nursing, CMC Nursing Campus, Vellore.	Internal Nurse	2023 –2026
17.	Dr. Rohini Ann Mathew	M.D Pharmacology	Assistant Professor, Department of Clinical Pharmacology, CMC College Campus, Vellore.	Internal Pharmacologist	2023 - 2025
18.	Prof. Beulah Emmanuel	M.S.W., Ph.D. (Social work & Criminology)	Professor & Trainer Academy of Prisons & Correctional Administration, Vellore	External Social work	2023 - 2026
19.	Rev. Joseph Devaraj	B. Sc, BD	Chaplaincy Department, CMC, Vellore	Internal, Social Scientist	2023 - 2026

In addition, for proposals related to Stem Cell Research, two invited external experts in Stem Cell Research will review and provide input to the Research Committee

Current membership of the Research Committee of the Blue IRB

S. No	Name	Qualification	Designation	Affiliation	Term period as a member
1.	Dr. Prasanna Samuel	M. Sc, Ph.D.,	Secretary, Research Committee, Associate Professor, Department of Biostatistics, CMC College Campus, Vellore.	Internal Statistician	2025 - 2028
2.	Dr. Shyam Kumar NK	DMRD, DNB, FRCR, FRANZCR	Professor, Department of Radiology, CMC Town Campus, Vellore.	Internal Clinician	2023 –2026
3.	Dr. Barney Isaac	DNB (Respiratory Diseases)	Physician, Department of Pulmonary Medicine, CMC Ranipet Campus.	Internal Clinician	2024 – 2027
4.	Dr. Sathish Kumar	MD, DCH	Professor, Department of Child Health, CMC Town Campus, Vellore.	Internal Clinician	2024 –2027
5.	Dr. Balu Krishna S	MD, DNB, DMRT	Professor, Department of Radiotherapy, CMC Ranipet Campus.	Internal Clinician	2024 – 2027
6.	Dr. Mahasampath Gowri	M Sc, Ph D. (Biostatistics)	Lecturer, Biostatistics, CMC College Campus, Vellore.	Internal Statistician	2023 –2026
7.	Dr. Cecil Thankachan Thomas	MS (Gen. Surgery)	Professor, Department of General Surgery, CMC Town Campus Vellore.	Internal Clinician	2022 –2025
8.	Dr. Elizabeth Tharion	MD, DM	Professor, Department of Physiology, CMC College Campus, Vellore.	Internal Clinician	2022 –2025
9.	Dr. Anuradha Chandramohan	DMRD, MD	Professor, Department of Radiology, CMC Town Campus, Vellore.	Internal Clinician	2022 –2025
10.	Dr. Ekta Rai	MD, MRCA	Professor, Department of Anaesthesia, CMC Town Campus, Vellore.	Internal Clinician	2022 – 2025

11.	Dr. Sivakumar Balasubramanian	M. Tech in Biomedical Engineering, Ph.D. in Bioengineering	Professor, Department of Bioengineering, CMC College Campus, Vellore.	Internal Clinician	2023 – 2026
12.	Dr. Venkata Raghava Mohan	MD, MPH	Professor, Department of Community Health, CMC College Campus, Vellore.	Internal Clinician	2024 - 2027
13.	Dr. Harshad Arvind Vanjare	DMRD, MD, FRCS	Associate Professor, Department of Radiology, CMC Town Campus, Vellore.	Internal Clinician	2024 - 2027
14.	Dr. Ashish Jacob Mathew	DNB (General Medicine), D.M.	Professor, Department of Immunology & Rheumatology, CMC Town Campus, Vellore.	Internal Clinician	2024 - 2027
15.	Dr. Asha Solomon	M.Sc., Ph.D., Nursing	Professor, Medical-Surgical Nursing, College of Nursing, CMC Town Campus, Vellore.	Internal Nurse	2023 – 2026
16.	Dr. Ramamani	MD (Anaesthesia)	Professor, Department of Neuroanaesthesia, CMC Town Campus, Vellore	Internal Clinician	2024 - 2027

6.2 APPENDIX - XI

Current membership of the Ethics Committee Silver

S. No	Name	Qualification	Designation	Affiliation	Term period as a member
1.	Dr. J. Amalorpavanathan	M.S (Gen. Surg), Dip. NBE (Gen. Surg), M. Ch (Vascular Surgery)	Chairperson, Ethics Committee, IRB, CMC Vellore, Vascular Surgeon, Retired Faculty, Chennai.	External Clinician	2022 - 2026
2.	Dr. BJ Prashantham	MA (Counseling Psychology & Theology), Dr. Min (Clinical Counseling)	Chairperson, Ethics Committee, IRB. Director, Christian Counseling Centre, Vellore.	External Social Scientist	2025 -2028
3.	Dr. Jacob John	MD, Ph.D.,	Secretary, Ethics Committee, Addl. Vice Principal (Research), Professor, Department of Community Health, CMC College Campus, Vellore	Internal Clinician	2024 -2028
4.	Dr. George Thomas	D. Ortho, Ph.D.	Orthopedic Surgeon, Department of Trauma Orthopaedics, CMC Ranipet Campus.	Internal Clinician	2024 - 2027
5.	Dr. Jayaprakash Muliyil	M.D, MPH, Dr. PH (Epid), DMHC	Retired Professor, Department of Community Health, CMC, Vellore.	External Scientist & Epidemiologist	2024 - 2026
6.	Dr. Anuradha Rose	M.D, MHSC (Bioethics)	Professor, Department of Community Health,	Internal Clinician	2023 - 2026

			CMC College Campus, Vellore		
7.	Dr. Blessed Winston. A	M.D Pharmacology	Physician, Clinical Pharmacology, CMC Ranipet Campus.	Internal Pharmacologist	2023-2026
8.	Mrs. Mary Anbarasi Johnson	M. Sc., Ph.D.,	Professor & Head, Paediatric Nursing College of Nursing, CMC Town Campus, Vellore.	Internal Nurse	2023 –2026
9.	Rev. Dr. T Arul Dhas	MSc, BD, DPC, Ph.D., (Edin)	Retired Chaplain, CMC College Campus, Vellore	External Social Scientist	2024 –2027
10.	Mr. C. Sampath	B. Sc, BL	Sr. Legal Officer, Vellore	External Legal Expert	2022 -2024
11.	Mrs. B. Scholastica Mary Vithiya	M. Phil, Ph.D.,	Assistant Professor, Auxilium College, Vellore.	External Layperson	2022 – 2025
12.	Ms. Seema Rao	B.A. LLB (H), LLM, MBL	Legal Officer, CMC Town Campus, Vellore.	Internal Legal Expert	2024 – 2027

Current membership of the Ethics Committee Blue

S. No	Name	Qualification	Designation	Affiliation	Term period as member
1	Dr. B. J. Prashantham	MA (Counseling Psychology & Theology), Dr. Min (Clinical Counseling)	Chairperson, Ethics Committee, IRB. Director, Christian Counseling Centre, Vellore.	External Social Scientist	2023 –2026
2	Dr. Jayaprakash Muliyil	MD, MPH, Dr, PH (Epid), DMHC	Deputy Chairperson, Retired Professor, Department of Community Health, CMC College Campus, Vellore.	External Scientist & Epidemiologist	2024 –2026

3	Dr. Jacob John	MD, Ph.D.,	Secretary, Ethics Committee, Addl. Vice Principal (Research), Professor Department of Community Health, CMC College Campus, Vellore.	Internal Clinician	2024 -2028
4	Dr. Ratna Prabha	MD (Pharmacology)	Professor, Department of Clinical Pharmacology, CMC Town Campus, Vellore.	Internal Pharmacologist	2022 –2025
5	Rev. Rainard Pearson	BA., B. Th., M. Div.,	Sr. Chaplain, Chaplaincy Department, CMC Town Campus, Vellore.	Internal Social Scientist	2023 – 2025
6	Mr. Samuel Abraham	MA, PGDBA, PGDPM, M. Phil, BL.	Sr. Legal Officer, CMC Ludhiana.	External Legal Expert	2022 –2025
7	Mrs. Dorathy Devakirubai. T	M.Sc., Nursing	Professor OBG Nursing, CMC Town Campus, Vellore.	Internal Nurse	2024 – 2027
8	Mrs. Jeyalinda Christopher	M.Sc., Nursing	Professor, Medical-Surgical Nursing, College of Nursing, CMC Vellore.	Internal Nurse	2023 – 2025
9	Dr. B. Scholastica Mary Vithiya	M. Phil, Ph.D.	Associate Professor, Auxilium College, Vellore	External Layperson	2022 –2025
10	Prof. Beulah Emmanuel	M.S.W., Ph.D. (Social work & Criminology)	Professor & Trainer Academy of Prisons & Correctional Administration, Vellore	External Social work	2023 - 2026
11	Ms. Seema Rao	B.A. LLB (H), LLM, MBL	Legal Officer, CMC Town Campus, Vellore.	Internal Legal Expert	2023 – 2026

12	Dr. Sushil Mathew John	MS (Gen. Surgery)	Professor, Department of General Surgery, CMC Town Campus, Vellore.	Internal Clinician	2024 – 2027
13	Ms. Divya	ML	Legal Officer, CMC Town Campus, Vellore.	Internal Legal Expert	2024 – 2027

7 Frequently asked questions (FAQs)

1. What is the purpose of the IRB SOP 2.0?

The IRB SOP 2.0 outlines the policies and standard operating procedures for the Institutional Review Board (IRB) at Christian Medical College (CMC) Vellore. It ensures compliance with Indian regulatory norms and the institution's guiding principles for biomedical research.

2. What are the main sections of the IRB SOP 2.0?

1. Principles and regulations governing biomedical research in India.
2. Policies and procedures of the IRB at CMC Vellore.
3. Policies for specific research situations.
4. Forms for IRB submissions and reports.

3. **What is the primary role of the Institutional Review Board (IRB) at Christian Medical College (CMC) Vellore, and how many IRBs exist?**

The primary role of the IRB at CMC Vellore is to protect the rights, dignity, welfare, and privacy of human research participants. CMC Vellore operates two IRBs: the Silver IRB and the Blue IRB. Each IRB is composed of a Research Committee (RC) which assesses scientific validity, and an Ethics Committee (EC) that addresses ethical considerations. The Silver IRB reviews all external research, faculty proposals, and interventional trials, while the Blue IRB reviews non-interventional studies from trainees.

4. What is the process for submitting research proposals to the IRB?

Researchers must submit (via email to research@cmcvellore.ac.in) their proposals using specific application forms available on the Research Website. The proposals are reviewed for scientific merit by the Research Committee and for ethical considerations by the Ethics Committee.

5. **What are the key ethical principles that guide research involving human participants, according to the documents?**

The core ethical principles are: respect for the autonomy of the individual, beneficence (doing good), non-maleficence (avoiding harm), and justice. Respect for autonomy includes informed consent, where participants are given sufficient information, understand it, and voluntarily agree to participate. Beneficence and non-maleficence involve assessing and minimizing risks while maximizing benefits. Justice ensures that the selection of participants is fair and does not disproportionately burden or benefit specific groups. Additionally, the ICMR guidelines emphasize principles of essentiality, voluntariness, non-exploitation, privacy, and confidentiality, among others.

6. **What constitutes "informed consent," and what are the essential elements that must be addressed?**

Informed consent requires participants to be fully apprised of the research including its impact and risks. Essential elements are:

- **Information:** Participants must receive sufficient information about the research, including its procedures, purpose, risks, anticipated benefits, alternatives, and the right to ask questions and withdraw.
- **Comprehension:** Participants must understand the information presented. This may involve adapting the presentation to their capacity and testing their understanding. For individuals with limited comprehension, consent should be supplemented by a responsible relative or guardian.
- **Voluntariness**: Consent must be given freely without coercion, unfair persuasions, or inducements. It is crucial to consider the setting and timing in which consent is obtained, especially for vulnerable participants. Consent forms are not the only measure of this process.
- **When is re-consent required?** Re-consent is required when a participant reaches the legal age of consent, new information becomes available, the participant regains competence, long-term follow-up is planned, or there are changes in treatment or procedures.

7. **Who are considered "vulnerable participants," and what specific considerations are required when including them in research?**

Vulnerable participants include individuals who may have difficulty giving valid consent or who are at a higher risk of exploitation. This includes the economically disadvantaged, those with mental disorders, children, pregnant/nursing women, the institutionalized, those in dependent relationships, patients with life-threatening diseases, and those with progressive cognitive impairment. Inclusion of these participants requires special justification and extra precautions. This might include multiple consent forms, audio-visual recording of the process and careful review by the IRB. It is often required that proxy consent be obtained from a relative or legal guardian in addition to assent from the participant.

8. **What are the guidelines surrounding the use of stored biological materials for research purposes?**

Biological samples can be anonymous, anonymized (reversibly or irreversibly), coded, or identifiable. Primary use of samples is for the original intended purpose, with ownership remaining with the donor. Secondary use requires IRB review to ensure the new use aligns with the original consent. Consent for biobanking may be multi-layered, providing various choices for future use. Informed, written, and voluntary consent must be given by donors with the capacity to do so. Group consent may be necessary for community-specific research.

9. **What are the policies regarding stem cell research and therapy at CMC Vellore?**

Stem cell research is classified based on the level of manipulation: Minimal, more than minimal, and major. Clinical applications of stem cells require approval from the Indian Council of Stem Cell Research, the Institutional Ethics Committee, and often the Central Drugs Standard Control Organization (CDSCO). The level of approval needed depends on the source of the cells (autologous or allogeneic), whether it is for homologous or non-homologous use, the degree of manipulation, and whether the products are intended for market authorization. Clinical trials involving stem cells must be conducted in certified facilities, and investigators should avoid creating unrealistic expectations.

10. **How does the Institutional Review Board (IRB) ensure research integrity and address misconduct?**

The Office of Research Integrity (ORI), overseen by the Additional Vice-Principal (Research), investigates allegations of research misconduct. This includes fabrication, falsification, and plagiarism of data. The IRB also promotes responsible conduct through education and policy oversight. The ORI assists the Principal with ensuring all research at CMC is conducted with the highest ethical standards.

11. What are the cardinal ethical principles in research?

The cardinal ethical principles include respect for autonomy, beneficence, non-malfeasance, and justice. These principles guide the ethical conduct of research involving human participants.

12. What guidelines govern biomedical research in India?

The guidelines include the ICMR Ethical Guidelines for Biomedical Research on Human Participants (2006), Schedule Y of the Drugs and Cosmetics Act (1940), and other relevant national and international guidelines

13. What costs may research participants incur?

Participants may incur costs related to prolonged treatment, extra diagnostic tests, additional clinical assessments, or extra visits to CMC. These costs must be fully disclosed during the informed consent process.

14. What is the policy on compensation for research-related injuries?

Participants who suffer physical injury as a result of their participation are entitled to financial or other assistance to compensate for any impairment or disability. In case of death, their dependents are entitled to material compensation.

15. What are the policies for research using stored biological products?

Policies include obtaining informed consent for primary use, ensuring anonymity for secondary use, and obtaining permission from the next of kin for post-mortem uses. The IRB must approve all uses of stored biological products.

16. What are the guidelines for research on foetal tissue or organs for transplantation?

Guidelines include obtaining voluntary, informed consent from the mother, ensuring anonymity of donor and recipient, and prohibiting the use of live aborted foetuses. Research must be approved by the Institutional Review Board (Silver).

17. What is the process for reporting serious adverse events (SAEs)?

SAEs must be reported to the Ethics Committee within 24 hours of learning about the event. A detailed written report must be submitted within 10 working days. The PI is responsible for notifying the DCGI and the study sponsor.

18. What records must be maintained and archived?

Records include CVs of IRB members, study protocols, progress reports, amendments, SAE reports, minutes of meetings, and correspondence with regulatory bodies. Records must be archived for at least 3 years after the completion of the study.

19. **What are the procedures for submitting research proposals to the IRB at CMC Vellore, and what documents are typically required?**

Researchers must submit their proposals, along with all required documents, to the appropriate IRB (Silver or Blue) for review. The process starts with a protocol outline detailing the research, its objectives and rationale, methodology, risk-benefit analyses and informed consent processes. Required documents include the protocol itself, investigator CVs, participant recruitment procedures, inclusion/exclusion criteria, consent forms, and approvals from other regulatory bodies. Various formats are provided for different types of studies, including interventional, observational, and diagnostic test accuracy. Additional requirements exist for international collaborations, biological materials exchanges, or studies involving vulnerable populations. All approvals must be received by the IRB before the commencement of research, and fees (only for pharma sponsored RCTs) must be remitted to the institution.

■ END