

# **MAHATMA GANDI INSTITUTE OF MEDICAL SCIENCES, SEWAGRAM**

## **NOTIFICATION:** **SCHEME FOR PROMOTING UNDERGRADUATE RESEARCH**

MGIMS, Sewagram believes that promoting research aptitude among undergraduate students will help them become more inquisitive and analytical in their approach and in turn lead to adoption of deeper learning approaches. In long run, it will help them become physician-researcher to bridge the gap between bench and bedside research.

It is more than two decades that the institute made efforts to encourage undergraduate students to apply for ICMR short term studentship (ICMR STS). In nineties, Department of Community Medicine also started engaging students in group projects under its Essential National Health Research (ENHR) scheme. To strengthen it further, in collaboration with Dreyfus Health Foundation, Washington DC and Health Action by People (HAP), Thiruvananthapuram, Department of Community Medicine started conducting a two-day workshop for undergraduate students, where expert facilitators help students frame a research question, decide appropriate methods to find answer. In 2008, under a funded project by OVATIONS, ICRAAG; a mentorship program was implemented for two years, in which 32 undergraduate students were identified and attached to 32 faculty from different departments who work as mentors. The students under the tutelage of their mentors conducted their short research projects. Periodic academic programs were also arranged to build the research capacity of the students as well as the mentors under the program. In 2014, the birth centenary year of Dr. Sushila Nayar, an award for undergraduate research was instituted.

All of these efforts at institute level has succeeded in building a norm where more and more students are coming forward and applying for research studentship with ICMR and/ or MUHS. We have also observed that several students carry on with their research projects even when they do not receive a grant from ICMR or MUHS. In recent years, our undergraduate students also bagged several prizes in state/ national level conferences for their presentation of their oral papers.

Keeping this in mind, honorable President of Kasturba Health Society, Shri Dhirubhai Mehta, decided to launch an annual institutional grant for promoting undergraduate research at MGIMS, Sewagram and sanctioned an annual grant of Rs. 300,000. The current document, 'Notification – Scheme for promoting undergraduate research at MGIMS, Sewagram', provides details of activities and guidelines for its implementation for promoting undergraduate research at MGIMS, Sewagram using the above-mentioned grant.

The following activities are proposed:

- I. Dr Sushila Nayar Short-term Research Grant for a) individual projects and b) group projects.
- II. Dr Sushila Nayar Travel Grant for students presenting paper in national/ international conference
- III. Dr Sushila Nayar Memorial Award for Undergraduate Research: This award initiated in year 2014 will be brought under the current scheme.
- IV. Incentives for undergraduate students for publication in scientific journals.
- V. Conduct Workshops/ CMEs to build the research capacity of undergraduate students as well as their mentors.

A maximum amount of Rs. 150,000 for DSN-STRG (item I), Rs. 80,000 for travel grant (item II), and a total amount of Rs. 15,000 for award (item III), Rs. 30,000 for incentives for publications (item IV), and Rs. 25,000 for organization of workshops/ CMEs (item V) to build research capacity.

A 'Committee for Promotion of Undergraduate Research' will be constituted by the Dean and will be entrusted with responsibility to coordinate the activities and to ensure that guidelines for the Undergraduate Research Grants are followed. This committee will have between 6-10 faculty members and two student representatives. The faculty members will be appointed by the Dean and would comprise of at least one faculty member each from pre-clinical subjects, para-clinical subjects, medicine and allied subjects, surgery and allied subjects, one faculty member each trained in Epidemiology/Research Methodology and Ethics. In addition, up to four faculty members may be co-opted. One of these members will be appointed as coordinator of the committee. Two student representatives (one boy and one girl preferably from final year) will be selected based on their participation in research. The quorum for a meeting of the committee shall be considered complete if six members (including the student representatives) are present.

Apart from the above-mentioned activities, the committee will try to build an environment conducive for undergraduate research by 1) ensuring timely information to all students regarding funding/ studentship, training programs and opportunities for dissemination of their research work, 2) creating a list of faculty members interested to mentor undergraduate students for research, and 3) consultation with undergraduate students to identify their needs related to participation in research.

## **I. Guidelines for Dr Sushila Nayar Short-term Research Grant**

### **For individual projects**

- 1) Applicant must be an under-graduate student at MGIMS, Sewagram (in 1<sup>st</sup> to 8<sup>th</sup> semester) at the time of submitting application.
- 2) Only those students who have submitted their research proposal for ICMR short-term studentship (ICMR STS) or MUHS Short-term Research Grant (MUHS STRG) in the previous round for these research studentships will be eligible to apply for Dr Sushila Nayar Short-term Research Grant (DSN-STRG).

### **For group projects**

- 3) A project, where more than one under-graduate students are involved, will be classified as a group project. All students involved in such projects must be an under-graduate student in 1st to 8th semester at the time of submitting application.
- 4) Group projects may be submitted directly for DSN-STRG as there are no provisions for group projects under ICMR STS or MUHS STRG.

### **Guidelines common to individual and group projects**

- 5) Students desirous to be included under this grant should submit online a copy of their research proposal before 31 Jan in each academic year. The proposal should describe a brief work plan of proposed research giving a short introduction, objectives, methodology with sample size and appropriate statistical methodology, implications of the research study, and a tentative budget for the research work. The student may include the case report form, informed consent form or any other questionnaire also as part of project proposal or can submit them as separate attachments. The Student and Guide should ensure that they select a suitable brief topic for this studentship, which can be completed within 4 months without asking for extension.
- 6) The maximum admissible amount per research grant (both for individual as well as group projects) will be Rs 10,000 including a contingency amount of Rs 2000. The tentative budget to be included with the proposal should not exceed Rs 8000. The grant will be sanctioned based on the budget proposed. All purchases of equipment or reagents, wherever required, will be done through the Central Store. For regular investigations being conducted in Kasturba Hospital, the investigations will be raised through the hospital information system. The contingency amount of Rs 2000 will be paid to the student on production of original bills only if the report is submitted before the due date.
- 7) One research grant per under-graduate student in an academic year will be admissible under this research grant for individual projects. However, s/he may participate in one group project as well in the academic year under this research grant.
- 8) Clearance from the Institutional Ethics Committee should be obtained before 15 April of the academic year and submitted online on the designated webpage for this purpose.

- 9) For each project (both individual and group projects), there must be as a Guide a faculty member from any of the departments of the institute. In addition, a maximum of two co-guides (faculty member or post-graduate student) may also be included for a project.
- 10) The review process for the submitted proposals will be initiated in first week of February each year after the submission process for ICMR STS is completed. The selection of the student, for the award of Research grant will be done after a technical evaluation of the research plan purely based on the merit of the proposal. All proposals will be scrutinized by a member of the Committee for Promotion of Undergraduate research for originality of the idea and to ensure that it fulfils all requirements laid down for DSN-STRG. Proposals will be submitted for plagiarism check and proposals failing the plagiarism will be rejected outright. Each proposal fulfilling the criteria for DSN-STRG and passing the plagiarism check will then be sent to one or two reviewer/s. The reviewers will assess the proposals using grading criteria prepared for this purpose (attached as Annexure 1). A meeting of the Committee for Undergraduate Research will be conducted in presence of the Dean in the second fortnight of April, after the list of projects selected for ICMR STS is declared. Short-listed applicants based on the comments of the reviewers will be invited to present their proposal. The assessment of the reviewer/s will be presented in the meeting. Final decision regarding the grant will be conveyed to the applicant and guide before 15 May in each academic year.
- 11) The Committee for Undergraduate Research may accept or reject any proposal or all proposals. In any accepted proposal, the committee may suggest amendments. If committee makes any suggestions, then it should be complied by concerned student within two weeks from obtaining such letter from the committee. The decision of the committee in this regard shall be final. Request for reconsideration or any objections on selection will not be entertained.
- 12) Once selected under DSN-STRG, the students will be expected to complete their data collection, analysis and report writing within 4 months and submit the final report for the research project latest by 30 Sep of the academic year. A system of online submission for the final report will be developed for this purpose.
- 13) All final reports will be scrutinized by Committee for Promotion of Undergraduate Research. The comments from these reviewers will be discussed in a meeting of the members of Research Committee, who will decide if the report should be accepted under DSN-STRG. Following acceptance of final report, students completing the research project will be conferred a certificate of completion of their project and the contingency amount of Rs. 2000 will be released.
- 14) All students completing their project under DSN-STRG should submit their paper for presentation in Dr Sushila Nayar Award Ceremony for Under-graduate research. In addition, they should ensure dissemination of the research finding by publishing their research work in an appropriate journal and presenting their research work in a conference.

## **II. Dr Sushila Nayar Travel Grant for students presenting paper in national/ international conference**

### **Eligibility of paper for travel grant:**

- 1) The paper must be based on a project conducted when the applicant was an undergraduate student at MGIMS, Sewagram and s/he must be an under-graduate student or intern at MGIMS, Sewagram at the time of conduct of the conference for which fellowship is requested.
- 2) The research project may be a funded or non-funded project. For projects, which are part of ICMR STS, MUHS STRG or DSN-STRG, a proof for submission of the final report must be available. Exception could be made if the due date for submission of the final report is not over.
- 3) Prior approval for the research work by Institutional Ethics Committee (IEC) must be available. In case of individual project, the applicant must be the principal/ first investigator of the project (verifiable from the ethics approval letter by IEC). In case of group project, an undergraduate student must be the first investigator (verifiable from the ethics approval letter by IEC) and the applicant must be one of the investigators. For projects involving minimal risk (as per ICMR 'Ethical Guidelines for Biomedical Research on Human Participants'), a letter of exemption from Institutional Ethics Committee (IEC) must be obtained. However, for studies involving primary data collection, certificate of minimal risk or an IEC approval after initiation of subject enrolment and/or data collection, will not be acceptable.
- 4) Students must submit a letter by the moderator/ guide declaring that the research project is a bonafide work of the student/s applying for the award.
- 5) There must be proof for the paper being accepted for presentation in the conference.
- 6) One student will be eligible for a maximum of one in-country travel grant and one international travel during whole of MBBS Course.
- 7) In case of papers based on group project, only one student will be eligible for the travel grant. In case of multiple claims, opinion of the moderator/ guide will be considered final. Further, the name of the applicant must be included in the ethics committee approval for the project.

### **Travel grant for presenting paper in an in-country conference:**

- 1) The conference must be national/state level conference of a registered society or a registered professional association. In addition, Student Conferences conducted by a Medical College or a State Health University will also be considered.
- 2) The travel grant will cover the registration fee, accommodation expenses and 3 AC train ticket to and fro from Sewagram to the railway station closest to the venue of the conference with the maximum amount of the travel grant being Rs. 5000 for one student. If the student travels by air or in a higher class in train or by car, the grant will consider 3 AC train ticket on the shortest train route from Sewagram to the destination provided the actual expenditure on travel is higher.

### **Travel grant for presenting paper in international conference:**

- 1) The conference must be organized outside India by an international registered society or an international professional association.

2) The travel grant will cover registration fee, accommodation expenses, visa fee and travel by air (economy class) and/or train (3 AC) with the maximum amount of the travel fellowship being Rs. 25000 for one student.

**Application process:**

Students desirous of applying for the travel grant should submit application online in the google form designed for this purpose. Application may be submitted prior to the conference once the student has proof for acceptance of his/ her paper (oral or poster) OR within a month after the conference. However, please note that travel grant for a conference attended in given financial year (April – Mar) can only be considered within the same financial year. The following documents need to be uploaded for the application to be considered for travel grant:

- Acceptance letter from the organizers of Conference and the full text of the paper proposed to be presented in the Conference
- Proof for attending the conference and presenting paper (if application is made after attending the conference)
- Approval letter from institutional IEC
- Scanned copy of a letter by guide declaring that the research work is a bonafide work of the student/s
- If the paper is based on a group project, no-objection certificate(s) from the other student investigators

**Sanction process:**

All travel grant applications fulfilling the criteria mentioned above will be shortlisted. The paper will also be reviewed using a grading criteria by the committee. This grading will be utilized to select applications, if number of applications are more than the number of grants available. However, if the committee feels that the quality of paper is substandard, they may accept or reject any application or all applications. The decision of the committee in this regard shall be final. Request for reconsideration or any objections on selection will not be entertained.

The Committee for Promotion of Undergraduate Research will meet every two months – in second fortnight of March, May, July, September, November and January to finalize travel awards based on the merit of the paper being presented. During each meeting, starting from the meeting in March, the committee will have authority to sanction one in-country travel grant every two months and one international travel grant every six-months. Within a financial year, the leftover award money will be carried forward to the next meeting. However, the unutilized amount would lapse at the end of each financial year. If no applications are eligible for international travel grants, the available budget may be utilized for travel grant for in-country conference.

**Submission of the Claim:**

The applicant shall submit the following documents within one month after the conference is over or the grant is sanctioned. However, the claim must be made before the end of financial year. The following documents need to be provided in original for sanction.

- Original receipt for registration fee, accommodation expenses, tickets, boarding pass for air travel and any other document required by account section;
- Statement of account giving full details of expenditure incurred towards registration fee, travel, visa fee (in case of international travel grant);
- Details of assistance received from conference organisers or any other organization;
- A declaration that the student did not receive assistance from any organization for the expenses claimed from MGIMS, Sewagram; and
- Certificate of participation in the conference.

### **III. Dr Sushila Nayar Memorial Award for Undergraduate Research**

To promote research interest among under-graduate students, Shri Dhirubhai Mehta, honorable President, Kasturba Health Society, instituted an annual award in 2014 for under-graduate research in the memory of Dr Sushila Nayar. This award helps groom undergraduate students to present their papers in national and international fora. Guidelines for this award has already been developed and award ceremony have been held in the year 2015 & 2016. This award will be brought under the current scheme.

#### **Criteria for eligibility of projects for 'Dr Sushila Nayar Memorial Award for Undergraduate Research' are as follows:**

- 1) Applicant must be an under-graduate student or intern of MGIMS, Sewagram at the time of submitting application.
- 2) The research work must be completed and a full report must be available. Research proposals or incomplete projects will not be eligible for this award.
- 3) The research work may be individual or group project initiated by undergraduate student/s. In case of group project, application must be signed by all students participating in the project.
- 4) The research project may be a funded or non-funded project. However, for projects, which are part of ICMR/ University studentship program or funded, details should be provided.
- 5) Prior approval for the research work by Institutional Ethics Committee (IEC) must be available. The under-graduate student/s should be the principal/ first investigator of the project verifiable from the ethics approval letter by IEC.
- 6) Students must submit a letter by the moderator/ guide declaring that the research project is a bonafide work of the student/s applying for the award.

#### **Submission process:**

Students desirous of applying for the award should submit the following on an online portal created for this purpose latest by 15 Feb each year.

- 1) Format to be filled providing details of the student/s, guide and co-guide, studentship awarded or any other funding source, presentation of the paper in any other conference including awards received, if any
- 2) Manuscript: The manuscript should include: a. Title of paper b. Abstract c. Introduction d. Methodology e. Result f. Discussion g. References
- 3) Scanned copy of a letter by guide declaring that the research work is a bonafide work of the student/s
- 4) Copy of letter of approval from the ethics committee

#### **Review process:**

The review process will start after 15 Feb. All manuscript submitted for the award will be sent to two or three reviewers for assessing the technical strength of the paper. One of the reviewers should be preferably from outside MGIMS, Sewagram.



**Paper presentation and final judgement for award:**

The selected students will be invited to present their research paper in the Academy of Medical Sciences in the first week of April 2016. The mode of presentation will be decided depending on the number of entries received. For submissions of more than ten, there will be two rounds of presentation – first poster round through which 6 students will be short-listed for presentation in the next round. If the submissions are 10 or less, it will be conducted in a single round where students will make an oral presentation. Two to three judges (preferably the reviewers who assessed the manuscript earlier for technical strength) will be invited during the award session.

Based on the average of scores given by all judges, paper will be selected for best paper, first runners-up and second runners-up award. Starting from 2017, a cash award of Rs. 2500, Rs. 1500 and Rs. 1000 respectively for the above-mentioned awards will be initiated. The criteria for judging the technical strength of the projects as well as poster/ oral presentation is given in Annexure #.

#### **IV. Incentives to Undergraduate Students for publishing papers in scientific journals**

Incentives will be provided to all publications in scientific journals which fulfil the criteria defined below.

**Criteria for eligibility of a published article in a scientific journal under the scheme are as follows:**

- 1) The journal must be indexed with either PubMed (<https://www.ncbi.nlm.nih.gov/nlmcatalog?term=currentlyindexed%5BAI%5D>), IndMED ([http://indmed.nic.in/journal\\_list.html](http://indmed.nic.in/journal_list.html)), UGC list of journals (<https://www.ugc.ac.in/journallist/>) or SCOPUS or official journal of a medical college or a professional body. Official journal of a medical college or a professional body must have a transparent peer review procedure clearly published either in hard copy of journal or displayed on journal webpage.
- 2) The first author of the article must be an under-graduate student or intern of MGIMS, Sewagram on the date of publication of the article (date of submission of the article may be considered only if acknowledgement of submission of the article is produced). In case the undergraduate student is the second author of the article, a statement of equal contribution must be documented in the published journal article.
- 3) The article must be an original research article, a systematic review or published under the section opinion/perspectives/hypotheses representing an original scientific idea. Letter to editor, book review, abstracts published as part of proceedings of a conference or any other type of publication will not be acceptable under this scheme.
- 4) For all original research articles, the student/s must submit a letter from his/ her guide declaring that the research project is a bonafide work of the student/s.

##### **Process**

A circular will be issued in January each year inviting claim for incentives under this scheme. Students will be required to claim incentives by filling format on an online portal created for this purpose before the due date of 31 January. The Subcommittee for Undergraduate Research will be responsible to verify if the article meets all above-mentioned criteria.

##### **Review**

All articles meeting the above criteria will be sent to two independent reviewers. The reviewers will assess these papers using grading criteria prepared for this purpose (attached as Annexure #). Final selection of articles under this scheme will be done in a meeting of the Committee for Promotion of Undergraduate Research convened in the presence of the Dean. The decision of the committee in this regard shall be final. Request for reconsideration will not be entertained.

All selected papers will receive a cash incentive of Rs. 2500 along with a certificate. In addition, the Dean may decide to give higher incentives for articles published in prestigious medical journals with impact factor of 2 or more.

## **V. Conduct Workshops/ training activities to build the research capacity of undergraduate students as well as their mentors**

The Committee for Promotion of Undergraduate Research will conduct periodic workshops/ training activities for building research capacity of undergraduate students as well as their mentors. These training activities will be conducted mostly during the weekends and participation will be voluntary in nature. Prior permission and sanction for expenses for these workshops will be obtained from the Dean for each workshop. The expenses will be mostly for snacks, stationary or learning resource materials. A nominal registration fee to ensure participation may also be charged.

Department of Community Medicine already conducts a workshop on Research Methodology (Essential National Health Research) for the undergraduate students during their 3<sup>rd</sup> semester. In addition, we propose to conduct workshops/ training activities on research designs, sampling methodology, database management and scientific writing. The decision regarding conduct of these workshops will be made in participatory manner involving the students. Teams of resource persons will be constituted by the Committee for this purpose.