2016-2017

MMSc Student Research Guidebook

OFFICE OF RESEARCH OVERVIEW & CONTACTS

Research activities at the Harvard School of Dental Medicine aim to set the international standard and pace for basic discoveries, clinical application, and research training in an area that lies at the heart of dental medicine. By leveraging its scientific strengths and focusing on the area of skeletal development, growth and homeostasis, as well as clinical and health policy research, Harvard School of Dental Medicine has established a strategic direction for its research programs. Exciting opportunities, both scientific and organizational, are on the horizon for clinical and translational research in areas where we already have basic science strength. As the only School within Harvard University with its own clinical facility, Harvard School of Dental Medicine continues to differentiate itself through a unique emphasis on basic and clinical research combined with exemplary patient care and education. Below are several people you will get to know in the HSDM Office of Research. Please do not hesitate to contact any of us with questions or concerns regarding your project and/or research requirements at HSDM. Our offices are located on the fourth floor of the REB.

DR. BJORN R. OLSEN, Dean and Professor (bjorn_olsen@hms.harvard.edu) 617-432-1874

DAWN DECOSTA, Administrative Director (dawn_decosta@hsdm.harvard.edu) 617-432-1121

LEANNE JACOBELLIS, Coordinator (leanne_jacobellis@hsdm.harvard.edu) 617-432-5743

MMSC STUDENT RESEARCH GUIDEBOOK

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You must attend each class session and present your research on a date TBA.

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You must present a poster at HSDM's 2-day Student Research Day on April 19 & 20, 2017.

INDIVIDUAL PROGRAM RESEARCH REQUIREMENTS

Please see your Program Director as each Program has specific guidelines tracked through their office.

MMSc Class of 2018

ADVANCED GRADUATE EDUCATION RESEARCH SEMINAR SERIES

You must attend each class session.

HSDM STUDENT RESEARCH DAY

You must attend HSDM's 2-day Student Research Day on April 19 & 20, 2017.

INDIVIDUAL PROGRAM RESEARCH REQUIREMENTS

Please see your Program Director as each Program has specific guidelines tracked through their office.

MMSc Class of 2019

INTRODUCTION TO RESEARCH COURSE

You must attend all class sessions (August – December 2016), Mondays 3-5pm.

NIH-FORMATTED RESEARCH PROPOSAL EXAMINATION

Draft proposal submission deadline, emailed to Dawn DeCosta, is February 3, 2017.
Proposal check-in meetings with examiners will be February 13-20, 2017.
Final proposal submission deadline, emailed to Dawn DeCosta and your examiners, is March 3, 2017.
Proposal examinations will take place March 13-24, 2017.

ADVANCED GRADUATE EDUCATION RESEARCH SEMINAR SERIES

You must attend each class session.

HSDM STUDENT RESEARCH DAY

You must attend HSDM Student Research Day on April 19 & 20, 2017.

INDIVIDUAL PROGRAM RESEARCH REQUIREMENTS

Please see your Program Director as each Program has specific guidelines tracked through their office.

INTRODUCTION TO RESEARCH COURSE

The course director is Dr. Bjorn R. Olsen, Professor and Dean for Research, and the administrative contact is Dawn DeCosta. The goal of this course is to guide MMSc, DMSc, and PhD students through an introduction to research from a broad scientific perspective. Each of the course sessions will be taught by different postdoctoral fellows and faculty members and based on a chapter in *Research in Medical and Biological Sciences* which will be distributed to each student. Seasoned researchers will share tips from personal experiences with successful grant writing and will answer questions that students have regarding challenges that they are facing in their own proposal writing.

This course, taken in MMSc students' first year of study, is mandatory for all HSDM MMSc students, and attendance in all classes is required to pass this course. Grading is on a pass-fail basis and is based on class participation. You may request an excused absence by emailing Dawn DeCosta with the course date you will miss and why. The Dean for Research will decide if your absence is approved. More than one unexcused absence will result in a failing grade and you will have to repeat the course next year.

The course will meet during the fall semester on Mondays from 3-5pm in the REB auditorium on the following dates:

- August 29
- September 12
- September 19
- September 26
- October 3
- October 17
- October 24
- November 7
- November 14
- November 21
- November 28
- December 5
- December 12

Class will not be held on September 5, October 10, or October 31

AGE RESEARCH SEMINAR SERIES

The AGE Research Seminar Series is mandatory for all AGE students. The class will meet during the fall and spring semesters on Thursday afternoons from 5:00-6:00pm in the REB auditorium unless otherwise noted. The course director is Dr. Joshua Chou <Joshua_Chou@hsdm.harvard.edu>. **Course dates are the same as the Multidisciplinary Case Presentation Seminar dates.**

The goal of the AGE Research Seminar Series is for DMSc, MMSc, and selected Certificate candidates to share their current research with faculty, students, and staff from all departments of HSDM. The seminars provide students with the chance for academic and research exchange among the different departments. Attendance of this course is mandatory for all Advanced Graduate Education students. Graduating MMSc students (class of 2017) are required to prepare an abstract summarizing their research that will be distributed one week prior to their scheduled presentation. Each oral presentation is scheduled for 20 minutes, plus 10 minutes for questions. Presenters are encouraged to elicit feedback from faculty. Mentors are expected to attend on the day of their student's presentation. Grading is on a pass-fail basis and is based on class participation.

Absences: You may request an excused absence by writing to leanne_jacobellis@hsdm.harvard.edu with the course date you will miss and why. The Course Director will decide if your absence is approved. **More than one unexcused absence will result in a failing grade.**

NIH-FORMATTED RESEARCH PROPOSAL AND EXAM

MMSc Class of 2019 only

The NIH-formatted proposal should follow the NIH format below (approximately 12 single spaced pages total). The proposal would in most cases describe a testable hypothesis based on evaluation of the relevant literature, describe critical experiments to test the hypothesis, describe interpretation of expected outcomes, and discuss alternative strategies should problems arise. If you would like to see examples from previous years, please see Dawn DeCosta. The format follows a typical NIH proposal and includes the following:

1. Specific Aims
2. Research Strategy
    a. Significance
    b. Innovation
    c. Approach
3. Literature Cited

Please see specific deadlines on page 3 and note that the NIH-formatted proposal must be approved by your Program Director and Research Mentor before submission to the Office of Research. The signature sheet is provided in this Guidebook (page 12). The Office of Research will assign two members of the MMSc Examination Committee to review your proposal. You will have a check-in meeting with your examiners after the submission of your proposal, which must adhere to the format listed above. The purpose of this check-in meeting is for you to obtain critical feedback and suggestions prior to your examination. Students must bring a copy of the NIH-Formatted Proposal Check-In Form (page 13) to the meeting. Based on examiner's feedback, you must submit a revised proposal to Dawn DeCosta and to your examiners by March 3, 2017. If you do not adhere to these guidelines you will receive an automatic fail.

The primary goal of the NIH-Formatted Research Proposal **examination** is to evaluate the student's ability and potential for entering the world of original scholarship and/or experimentation. A large attribute for success in one's future professional/academic career is the ability to identify and define a specific testable hypothesis based on evaluation of the relevant literature, to propose critical experiments to test the hypothesis, and to interpret the outcomes in a way that indicates awareness of the limitation of the methods used. You will be examined on your proposal (about 1 hour) in front of 2 members of the MMSc Examination Committee. The Office of Research will assign examiners and schedule this for you. You must bring a copy of the NIH-Formatted Research Proposal Examination Grading Sheet (page 14) to your exam. Please note that if you are 15 or more minutes late to your exam, you will receive an automatic fail.

1. Please be prepared to give a 10 minute overview of your project (you may use a PowerPoint presentation if you like)
2. Discuss why you chose this project/topic
3. Invite questions from the reviewers
4. Be prepared to answer questions regarding:
    a. the significance of your research questions
    b. the specific aims
    c. the selected methods (i.e. what would you do if the experiments do not work out as planned)?
    d. the expected outcomes i.e. what would the implications of successful outcomes be for the field or specialty?

ACADEMIC, PROFESSIONAL, AND SCIENTIFIC CONDUCT

PREPARATION OF PAPERS AND OTHER WORK

All homework assignments, projects, lab reports, papers and examinations submitted for a course are expected to be the student's own work. Students should always take great care to distinguish their own ideas and knowledge from information derived from other sources. The term "sources" includes not only published or electronic primary and secondary material, but also information and opinions gained directly from other people. It is each student's responsibility to understand the expectations of academic integrity, proper forms of citation and submission of one's own work. In addition, collaboration in the completion of assignments is prohibited unless explicitly permitted by the instructor, in which case it must be acknowledged.

AUTHORSHIP GUIDELINES

Authorship is an explicit way of assigning responsibility and giving credit for intellectual work. The two are linked. Authorship practices should be judged by how honestly they reflect actual contributions to the final product. Authorship is important to the reputation, academic promotion, and grant support of the individuals involved, as well as to the strength and reputation of their institution. The Faculty Council of Harvard Medical School has endorsed the following statement. Although authorship practices differ from one setting to another, and individual situations often require judgment, variation in practices should be within these basic guidelines.

- Everyone who is listed as an author should have made a substantial, direct, intellectual contribution to the work. For example (in the case of a research report) they should have contributed to the conception, design, analysis and/or interpretation of data. Honorary or guest authorship is not acceptable. Acquisition of funding and provision of technical services, patients, or materials, while they may be essential to the work, are not in themselves sufficient contributions to justify authorship.
- Everyone who has made substantial intellectual contributions to the work should be an author. Everyone who has made other substantial contributions should be acknowledged.
- When research is done by teams whose members are highly specialized, individual's contributions and responsibility may be limited to specific aspects of the work.
- All authors should participate in writing the manuscript by reviewing drafts and approving the final version.
- One author should take primary responsibility for the work as a whole even if he or she does not have an in-depth understanding of every part of the work.

EXAMINATION RULES

In order to avoid improper behavior during an examination, students should refrain from communication with other students while an exam is in progress. They should neither retain nor refer to any books, papers or other resources during an examination except with the express permission of the instructor. For violation of the examination rules or dishonesty in an examination a student may be required to withdraw from the Dental School. Students who fail to obey the instructions of an examination proctor are liable to disciplinary action.

SCIENTIFIC INTEGRITY

In setting standards of practice for scientific and clinical research, the Faculty of Medicine at Harvard University has endorsed several guidelines or procedures which relate to ethical conduct. Students who perform research are advised to familiarize themselves with these policies in order to perform research of the highest integrity. This information is available in the document, *Faculty Policies on Integrity in Science*, which may be obtained online at http://hms.harvard.edu/content/faculty-policies-integrity-science.

SUBMITTING A GRANT APPICATION

If you plan on submitting a grant application, please work with the Office of Administration and Finance. They must be notified prior to the submission deadline. All grant applications must be approved through the Office of Administration and Finance as well as your Program Director prior to submission. This pertains to all funding (including but not limited to government awards, foundation awards, dental society awards) even if they do not require institutional approval. If you have any questions about this policy, please contact andrea_morris@hsdm.harvard.edu.

HSDM STUDENT RESEARCH DAY

Implemented in 1998, Student Research Day at Harvard School of Dental Medicine is an annual event held each April. For the past 15 years, this program has grown exponentially. The primary focus of this all day event is for graduating DMD, MMSc, and DMSc students to showcase their research to faculty as well as fellow students at Harvard School of Dental Medicine, the Forsyth Institute, and Harvard Medical School. Please note that Research Day is a mandatory event and all students must attend regardless of whether or not they are presenting a poster.

Graduating students present a research poster to faculty who in turn evaluate their work. Faculty reviewers look at six criteria when evaluating posters:

1. Student's ability to describe the work and its significance;
2. Organization and clarity of the poster presentation;
3. Introduction and formulation of hypothesis and scientific method;
4. Quality and extent of work done by the student;
5. Student's overall understanding of the project; and
6. Overall evaluation of the poster and presentation.

HSDM STUDENT RESEARCH DAY GUIDELINES: Abstracts

All students presenting a poster at this year's 2-day 2017 Research Day must submit an abstract (400 words maximum) of their research to the Office of Research for inclusion in an abstract book. Please email your abstract in the format specified in this Guidebook (pages 10-11) to Leanne Jacobellis **by March 10, 2017 at the latest**.

Your abstract should include brief sections that clearly and concisely describe:

1. Significance and background of the study
2. Innovation
3. Approach (experimental design, expected outcomes and interpretation)
4. Results
5. Conclusions

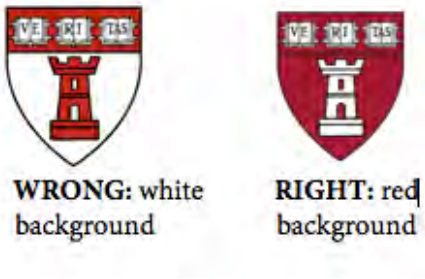
HSDM STUDENT RESEARCH DAY GUIDELINES: Posters

All MMSc students must present a poster at Student Research Day prior to graduation. For Research Day 2017, we will be using electronic posterboards. *You will not need a printed poster*; instead, you will be able to plug a flash drive into your e-posterboard to display PowerPoint, Keynote, PDF, or media files. Please see http://eposterboards.com/formatting-options/ for information on poster file formatting.

POSTER LAYOUT

Keep in mind that the poster is a guide for your verbal "talking-points," therefore the best use of space is usually for an abstract, minimal bulleted highlights of your project (e.g.: Specific Aims, Significance, Innovation, Approach, Results, Conclusions, References) and multiple graphics. It is a good idea to include the abstract at the beginning. Please be sure to include references, and keep in mind that small fonts are not viewer friendly while graphics are viewer friendly.

If you want to include the HSDM shield on your poster, please be sure to use the correct one (updated in 2012). Leanne Jacobellis can provide you with a jpg file.



WRONG: white background

RIGHT: red background

FUNDING FOR RESEARCH TRAVEL AND POSTER PRINTING

If you present a research poster at a national or international conference, then you are eligible to apply for a $500 travel stipend and poster printing through the Office of Research. Please note that students may receive one travel award per fiscal year (July 1-June 30). Please complete an Application for Research Travel Funds (page 15) to apply.

TRAVEL AWARDS: Travel awards are in the form of reimbursement by check and you must submit all receipts in your name confirming you are the purchaser. Should you choose to split/share travel expenses with another student, we recommend you pay for your portion (easily done with credit cards) and get documented confirmation of it so you can submit proof of your share. ***You will not be reimbursed for shared costs with another student who has paid an entire bill/invoice in their name.*** If it is not possible for the vendor to split a transaction and one person must front an entire cost, it will be up to you and your travel partner to make personal arrangements on how to transfer costs/money between yourselves. Harvard can only reimburse costs to the actual documented purchaser.

POSTER PRINTING: If you need to present a poster at a research event and your Mentor/PI does not have resources to pay for your poster printing, the HSDM Office of Research will reimburse you for the printing of your poster. We recommend using phdposters.com for printing. Please follow the guidelines on their site. You will be able to pick up your poster at 375 Longwood Ave. (If you submit your poster using your @hsdm.harvard.edu email, or any harvard.edu account, you should not be charged tax. We are unable to reimburse any shipping fees or rush charges.) Please complete an Application for Research Travel Funds (page 24) to request reimbursement.

IRB/IACUC APPROVAL PROCESS

HMS and HSDM students conduct independent research projects, and thus the Committee on Human Subjects (CHS) allows these students to serve as Principal Investigators on their own studies. If appropriate, students may be added to their Mentor/PI's protocol instead of submitting their own application. Student research must meet minimal risk exemption or expedited review criteria (though some minimal risk studies may require full CHS review depending on the research topic, activities, population and/or location). HMS and HSDM students are subject to the same policies, guidelines and regulations as the Faculty of Medicine conducting their own research projects for which they either receive funding through or from HMS or HSDM, or students who receive no funding but are working as an "agent" of HMS or HSDM, must receive approval from the CHS. Additionally, students who receive funding through or from HMS or HSDM to work as personnel on a research project must receive approval from the CHS. Harvard University requires that all researchers with human subjects responsibilities complete a human subjects protection training course at least every two years. Students must complete the mandatory online IRB training even if they are working on their Mentor/Principal Investigator's protocol. See http://www.hms.harvard.edu/orsp/human/human.html for more information.

RESEARCH MENTORS

Students have chosen research mentors at HSDM, The Forsyth Institute, as well as throughout the Longwood Medical Area and beyond. Mentor information may be found at Harvard Catalyst Profiles: connects.catalyst.harvard.edu/PROFILES. The importance of mentor and project selection should not be overlooked: they are crucial to the quality of your experience and the successful completion of your requirements. Thus, you should expect to devote a considerable amount of time to this step, critically assessing the research environment offered by the mentor. Clearly, you should find the proposed project interesting and important. Beyond that, it is essential that the specific aims of the project be clearly delineated and feasible within the available timeframe. The mentor should have the resources to enable you to achieve the specific aims. If your project involves human subjects, you should ask whether the mentor has obtained the necessary IRB approval. If the mentor has not obtained approval, you should plan for additional time so that the mentor can obtain such approval. Remember that no research involving human subjects can be started before the project has received IRB approval. Ideally, a mentor will have demonstrated productivity by a record of publication and a record of private or public funding in a given area. A mentor does not have to be in the field of dentistry.

CORE RESEARCH FACILITIES

There are numerous core research facilities available in the Longwood Medical Area. These cores are listed on the HSDM Office of Research website at http://www.hsdm.harvard.edu/depts/research/Hmsareacores.html. Please contact Jim McBride (jim_mcbride@hsdm.harvard.edu), Director of Core Labs at HSDM, if you are interested in learning more about our facilities or have questions regarding facilities, equipment, or training. It is important to note that you must be trained to use equipment and access laboratories at HSDM.

HSDM MMSc STUDENTS

HSDM Student Research Day Abstract Format

ABSTRACTS THAT DO NOT FOLLOW THIS FORMAT WILL NOT BE ACCEPTED AND MUST BE CORRECTED BY THE STUDENTS. Please see the sample abstract on the following page for an example of correct formatting.

1. Margins must be 2 inches on all four sides.

2. Justify abstract text paragraphs (block style).

3. Use Times New Roman 9 only. Do not use all caps.

4. The abstract title must not exceed two lines and must be a maximum of fifteen words. Double space after the abstract title. Bold and center all this information.

Type your name, then single space.
Type "Harvard School of Dental Medicine, MMSc (your specialty, i.e. periodontology, orthodontics)" class of [your year of anticipated graduation] on one line, then double space.

Type the name and degrees (eg DMD, PhD – no periods) of your research sponsor on one line, then single space.
On the next lines, type their department, hospital and/or school. The sponsor's name and information cannot take up more than three single spaced lines. Only the principal sponsor can be listed.

4. **Bold and center the abstract title, your name, school, anticipated year of graduation, and your sponsor's information.** Do not bold the abstract text.

5. Double space between the sponsor information and the beginning of the abstract text.

6. Indent five spaces (the tab key default works well) at the beginning of each paragraph of text. Do not double space between paragraphs. **Abstracts cannot exceed 400 words.**

7. Footnotes, references, and tables **are not permitted**.

8. Your abstract will not be edited. You are responsible for correcting typographical errors prior to submission. Abstracts will be published and are widely circulated to faculty, students, donors and administrative offices.

9. Abstracts must be submitted electronically as an attachment in Word. Please do not submit PDF files as we cannot use this format when preparing the online abstract book.

HSDM MMSc STUDENTS
Sample Research Day Abstract

Effects of Implant Length, Abutment Screw Length, and Implant-Abutment Connection Type on Dental Implant Reverse Torque Value

Junhyck Kim
Harvard School of Dental Medicine, MMSc (Prosthodontics) class of 2013

Brian M. Chang, DDS, FACP, FAAMP
Section Head, Maxillofacial Prosthodontics, Cleveland Clinic

Significance and background of the study: Dental implant abutment screw loosening is a concern in implant prosthodontics. Various studies in the past have investigated at various aspects of implant design features design to combat this issue. Reverse torque value is a measurement of the amount of force it takes to dislodge a dental implant abutment screw after preload, and is the standard measurement for implant prosthetic stability. The purpose of this study was to investigate effects of implant length, abutment screw length, and implant-abutment connection type on reverse torque value for a single dental implant after centric and eccentric loading application.

Innovation: A clinical application of this study would be the development of shorter dental implants. A previous study presented the fact that crown to implant ratio could be a lot greater compared to natural tooth, which contributed to a movement toward shorter implant development. Shorter implants will require shorter abutment screws. The intent with the present study would offer insight on future implant abutment development to prevent fractured screw complications for our patients.

Approach (experimental design, expected outcomes and interpretation): 6 test groups (n = 10) with variable implant lengths (5mm vs. 10mm), abutment screw lengths (short vs. regular), and implant-abutment connection types (external vs. internal) were prepared in resin block, mounted inside of a custom built stainless steel mount, and subjected to cyclic loading of 49N for 240,000 cycles at a rate of 1.5Hz using the chewing simulator CS-4.8 (SD Mechatronik, Feldkirchen-Westerham, Germany). A digital torque gauge (Mark-10 model TT03-12, Long Island, NY) was used to measure the resultant reverse-torque values.

Results: Internal connection type has resulted in higher reverse-torque value when the 10-mm implant fixture length was used, regardless of abutment screw length. However, when the 5-mm implant fixture length was used, external connection type has shown higher reverse-torque value than that of internal connection type.

Conclusions: The reverse-torque value of external connection type for 5-mm implant fixture length has shown to be comparable to that of 10-mm implant fixture length. Therefore, there is a great promise of short dental implants with a good single implant prosthetic stability for the patient care.

HSDM MMSc STUDENTS
NIH-FORMATTED RESEARCH PROPOSAL
Signature Sheet

This signature sheet verifies that you have read and approved the NIH-formatted research proposal of the student named below. Please sign and date this form and return the original to the Office of Research.

STUDENT

PROGRAM DIRECTOR **DATE**

RESEARCH MENTOR **DATE**

ADDITIONAL COMMENTS

HSDM MMSc STUDENTS
NIH-FORMATTED RESEARCH PROPOSAL
Check-In Form

STUDENT

EXAMINERS **CHECK IN DATE**

EXAMINER CHECKLIST

1) The scope of the project is realistic and can be carried out by a single investigator and with some technical assistance in 3 years ☐ **YES** ☐ **NO**

2) Does the project address an important problem or a critical barrier to progress in the field? ☐ **YES** ☐ **NO**

3) Student presented a clear overview of the project. ☐ **YES** ☐ **NO**

4) Student followed the proper format for their written proposal (Specific Aims, Research Strategy, Significance, Innovation and Approach, Literature Cited. ☐ **YES** ☐ **NO**

5) Student presented a clear rationale for the hypothesis/research questions. ☐ **YES** ☐ **NO**

6) Student showed a good understanding of the strengths and weaknesses of the methods chosen. ☐ **YES** ☐ **NO**

7) Student defined expected outcomes of the study. ☐ **YES** ☐ **NO**

8) Are potential problems, alternative strategies, and benchmarks for success presented? ☐ **YES** ☐ **NO**

ADDITIONAL COMMENTS

HSDM MMSc STUDENTS
NIH-FORMATTED RESEARCH PROPOSAL EXAMINATION
Grading Sheet

STUDENT

EXAMINERS **EXAM DATE**

EXAM GRADE:

☐ **PASS** (No revisions necessary)
☐ **CONDITIONAL PASS** (See details below)
☐ **FAIL** (See details below)

The evaluators will issue a passing grade if the following recommendations are met:

Student must make the recommended changes to his or her proposal by (DATE to be decided by evaluators):

Revision Approval Method (Please check one):

☐ Revisions can be sent by student to committee via e-mail for approval.
☐ Revisions are extensive and committee must be re-convened.
☐ Other: _____

☐ FAIL (Proposal must be completely re-done. Exam must be re-taken.)

Comments regarding this decision:

APPLICATION FOR RESEARCH TRAVEL FUNDS from the HSDM Office of Research

The HSDM Office of Research considers funding requests from students who are traveling to present research at national and regional meetings and conferences. Students may receive up to $500 per fiscal year (July 1-June 30) in research travel funding.

If you need to present a poster at a research event and your Mentor/PI does not have resources to pay for your poster printing, the HSDM Office of Research will reimburse you for the printing of your poster. We recommend using phdposters.com for printing. Please follow the guidelines on their site. You will be able to pick up your poster at 375 Longwood Ave. (If you submit your poster using your @hsdm.harvard.edu email, or any harvard.edu account, you should not be charged tax.) We are unable to reimburse any shipping fees or rush charges.

Please note that we cannot fund all requests, nor can we consider requests that are not research-related.

Please submit this completed form (either printed or by email) to Dawn DeCosta along with:

- Confirmation of acceptance to present research at conference/meeting, including title of research presentation
- Receipts or proof of payment for all reimbursement/funding requested ***Proof of payment must be in the name of the student requesting the reimbursement.***

Student: _____

Degree program: _____

Expected year of graduation: _____

Travel dates: _____

Conference or meeting name: _____

Location and conference/meeting dates: _____

Title of research poster/presentation: _____

_____

Name of Research Mentor: _____

Have you applied, or do you plan to apply, for other HSDM funds to support this trip? If so, please specify the amount and the department/offices from which you have requested funding.

_____

_____

Total amount of funding requested: _____

Please describe what the funding will cover (poster printing, airfare, hotel, conference registration, etc.):

_____

For Student Research Mentor: I have reviewed this funding request and approve this student's application for travel funds.

_____

(Signature and date)

Mentor's name (printed): _____

If your mentor is not local, please ask him/her to email approval of this application to Dawn DeCosta (dawn_decosta@hsdm.harvard.edu).