

SRP Application - Student Information

Please work with your mentor to complete and submit this online application by Thursday, February 1, 2024. This application includes five sections: Student Information, Mentor Information, Project Information, Oversight* and Certification.

*Please note that your project must have either IRB, IACUC, or Quality Determination approval at the time it is submitted to be reviewed and considered for funding. If your project has not been submitted for IRB or IACUC review by February 1, 2024, you will need to submit details for a back-up project.

The online application automatically saves your work as you move from page to page. This will be especially useful should the Steering Committee ask you to revise the information prior to approving your project.

Once you have submitted this application, please complete the Intent to Participate Form by reading and signing and having your mentor read and sign. The form is available for download below. You can also find it on the SRP section of the website. The Intent to Participate Form must be submitted to Candi Gard via email at cgard@bsd.uchicago.edu by February 1, 2024.

Please note that most fields below are required. Optional fields will be marked as such.

Please work with your mentor to complete and submit this online application by Thursday, February 1, 2024. This application includes five sections: Student Information, Mentor Information, Project Information, Oversight* and Certification.

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Please note that most fields below are required. Optional fields will be marked as such.

Please take a moment to download the Intent to Participate form. Both you and your mentor should fill out the form completely. Please send to Candi Gard via email at cgard@bsd.uchicago.edu by February 1, 2024.

[Attachment: "2024 SRP Intent to Participate Form.pdf"]

Student Name:

(last name, first name)

Student Email:

(uchicagomedicine.org email)

I attest I can commit to SRP without interruptions

- Yes
 No

Are you applying for external summer opportunities and/or funding?

- Yes
- No

Please describe the external opportunity and/or funding for which you are applying:

Mentor Information

Mentor Name:

((last name, first name))

Department:

Section:

((if applicable))

Email:

I attest my mentor reviewed and approved my application

- Yes
- No

When did you identify your mentor?

- August
- September
- October
- November
- December
- January
- February

How many mentors did you meet before making your selection?

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9 or more

How did you find your mentor?
select all that apply

- Scholarly Opportunities Online Catalog
- S&D Track Leader
- S&D "E-Harmony" Advice
- S&D Team
- Website
- Course Faculty or Lecturer
- Career Advisor
- Peer (MS2-MS4)
- Other (please specify below)
- None of the above

Please specify your selection of Other above:

How important were the following criteria in choosing your mentor?

	Not at all important	Minimally important	Somewhat important	Important	Very important
Mentor's specialty is one I am considering	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mentor's specialty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mentor's track record of leading students to publications	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mentor seemed interested in me personally	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mentor is a career role model for me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mentor received positive reviews from prior students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mentor enthusiasm for their work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mentor availability to students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mentor success in research overall	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What other characteristics did you consider in choosing a mentor?

Does your mentor have a Lab Contact (a post-doc, lab manager, phd student) who will play a role in your research?

- Yes
- No

Lab Contact's Name:

Lab Contact's Email:

Project Information

Title of Research Project

Did you locate this project in the 2024 Scholarly Opportunities Online Catalog?

- Yes
 No
-

Please indicate which categories best describe your research. Select all that apply

- Basic/Translational Sciences
 Clinical Research
 Health Services and Data Science
 Community Health
 Global Health
 Healthcare Delivery Improvement Sciences
 Medical Education
-

NIH & Foundation Funding for SRP is provided by certain priority areas.

Please select all of the categories that apply to your research:

- Aging/Studies of Older People (NIH)
 Blood
 Brain/Neurology
 Diabetes
 Ethics
 Gastro/Digestive Diseases
 Heart
 Kidney (NIH)
 Lung
 Nutrition (NIH)
 Oncology
 None of the above
-

All participants in SRP participate in Cluster Groups to further advance learning regarding general research issues and to facilitate review of progress by faculty and peers.

Please select all of the categories that apply to your research:

- Anesthesia
- Basic Pathways
- Cancer
- Cellular Mechanisms
- Community Based Research
- Endocrinology
- Gastroenterology
- Geriatrics
- Health Disparities
- Hospital Care
- Immunology
- Medical Education
- Medical Ethics
- Medical Imaging
- Molecular/Cell Biology
- Neuroscience
- Orthopaedics
- Otolaryngology or Allergy
- Pediatrics
- Quality/Cost of Care
- Surgery
- None of the above

Project Description

What is the Hypothesis?

A scientific hypothesis is a declarative sentence about something in the world that can be determined to be true or false based on empirical investigation. The characteristics of a testable hypothesis are below:

Translation of your question into an educated prediction or guess.

Take a position and try to provide a direction..."increase", "decrease", "no effect", "related to", "higher", "lower"

Associated with a numerical probability (this is the educated guess)

Conservative (believable)

Use precise terminology (provide some background to explain terms that are not universally known)

Measurable (make sure the terms are measurable...for example if you are measuring "cognitive status," you may want to state: Cognitive status, as measured by lower MMSE score...)

Try to start with "We hypothesize that..."

Background of the Research Problem and the Hypothesis to be tested:

Please write this in your own words, do NOT copy from the research mentor's grant.

Specific Aims

Develop 2-3 research style specific aims that match your hypothesis and can be accomplished within the duration of the Summer Research Program (June 10- August 23).

Research-style aims have three parts: (1) an Aim Title, which is a short sentence or phrase (2) a brief description of the research strategy, and (3) the outcome you will measure, and how you will measure it.

Examples:

Aim 1: To describe sleep patterns of first year medical students. 70 first year medical students will report hours spent sleeping and daytime sleepiness using a smartphone app. Total sleep minutes will be compared between the weeks immediately preceding and following exams. Sleepiness will be measured using the Epworth Scale.

Aim 1: To describe patterns of microRNA expression in children with sickle cell disease and relationship to clinical presentations. From a biobank of 75 children with sickle cell disease, microRNA expression will be measured by XXX. Specific microRNA associated with clinical features of acute chest syndrome and stroke will be identified.

Aim 1: To conduct a needs assessment of elderly patients who have refused Covid vaccination. Using a smartphone-based survey, we will query 300 patients over 65 years old in the primary care clinic to better understand the barriers to receiving Covid vaccination, including trust, information, transportation, and input from family members.

Outline of Methods and Approaches

Your methods section should aim to be 2-3 paragraphs describing the study design, how data will be collected (or what you are measuring) and then how you will analyze it. Keep in mind that the Summer Research Program is only three months long.

To frame this, please begin by using the PICOTS framework. (development of research approach)

Population: (Please include a number of subjects planned to enroll)

Intervention:

Comparator:

Outcomes:

Timing:

Setting:

Population:

Intervention:

Comparator:

Outcomes:

Timing:

Setting:

Outline of Methods and Approaches

Your methods section should aim to be 2-3 paragraphs describing the study design, how data will be collected (or what you are measuring) and then how you will analyze it. Keep in mind that the Summer Research Program is only three months long.

Your Role in the Project

More often than not, research at the University of Chicago is ongoing, and you may be working with others as a subset of a larger project. Please clarify your role in the project (what you will primarily be responsible for doing over the summer versus other people who will help you). Please describe how your work will require full time effort (40 hours a week) for 11 weeks. How will you spend your time?

Personal Learning Goals

Please tell us how the research you are proposing supports your own personal learning goals this summer.

Please enter three goals - use bullets, if possible

What potential pitfalls of your research do you think will occur during the program?

What can you do to ensure productive research during the program?

Does this project require that you use STATA for data analysis?

Note: STATA and any other software is to be PROVIDED BY THE MENTOR (SRP funds student stipends only). We follow this metric to better understand statistical usage need for SRP to plan for the future.

- Yes
- No

Will you be requiring data to be pulled by CRI (Center for Research Informatics)?

- Yes
- No

Does this project require international travel?

Note: If an international project is accepted for funding, additional paperwork will be necessary.

- Yes
- No

Which dates will you be out of the country?

Start Date:

End Date:

What will you be doing during your international stay?

Will your mentor be with you?

- Yes
- No

Will you have access to staff resources to help you at your destination while you are there?

- Yes
- No

Spring Preparatory Requirement

Since short term training grants permit funding for a minimum of three months, students are required to participate in a research elective during spring quarter (50 units) to meet an additional one week requirement of the eleven week summer program. This requirement translates into a MINIMUM of 1 hour per week working directly with your faculty mentor, and 4 hours per week of independent study (learning lab techniques, literature review, etc.)Note: your mentor may have additional requirements in order to prepare you to hit the ground running on June 10th.

Please indicate the number of direct and independent hours during the Spring Quarter that your mentor has approved per week:

Hours with mentor:

(hours)

Hours of independent study:

(hours)

Total hours/week:

By completing this application, you are registering for a 50-unit elective. You do not need to do any additional paperwork to register. The registrar will follow-up with your mentor at the end of Spring Quarter to determine if this requirement has been fulfilled.

Institutional Research Oversight

(IRB, IACUC, and Quality Determination)

Federal regulations require an Institutional Review Board (IRB) to review research on human subjects if the research involves federal funding.

The University of Chicago has determined that all research undertaken at this institution, or by those persons affiliated with this institution, must undergo the same level of review that falls under federal guidelines. The University of Chicago currently has five independent IRBs:

1 Social and Behavior Sciences IRB

Social Service Administration IRB

3 Biological Sciences Division IRBs (known as Committees A, B, and C). Each IRB is fully constituted with the appropriate number of scientific and non-scientific, affiliated and non-University-affiliated members, as well as members from different genders and ethnic backgrounds, as required by federal regulations.

The Biological Sciences Division (BSD) Institutional Review Boards are administered by the Office of Research Services. The BSD IRBs are responsible for all biological or medical research conducted at the University of Chicago and/or the University of Chicago Medicine.

Proposals that do not have IRB or IACUC approval or exemption by the beginning of Spring Quarter (March 28, 2024) will NOT be considered for SRP funding.

Will human subjects or tissues be studied?

- Yes
 No

Is this research approved by the IRB?

- Yes
 No, this research received an exemption by the IRB
 No, this research has been determined to be quality improvement by the Center for HDSI
 No, this protocol was submitted to the IRB but has not yet been approved
 No, but this protocol will be submitted to the IRB

Submission Date:

Date Difference:

IRB protocol number:

WARNINGS Since your protocol is not scheduled to be submitted by February 1, 2024 you must provide a back-up project. Two new sections have been unlocked in your survey queue and will allow you to share the details of that project and its oversight.

Using animals in research or teaching requires the prior approval of the Institutional Animal Care and Use Committee (IACUC).

The IACUC works closely with the Animal Resources Center (ARC), which is responsible for the animal procurement, facilities, husbandry, and specialized veterinary services. The use of animals in research and teaching is governed by federal regulations issued by the United States Department of Agriculture and the National Institutes of Health Office for the Protection from Research Risks. The University has developed policies and procedures for both the IACUC and the ARC which ensure institutional compliance with these agencies' regulations.

Will animal subjects or tissues be studied?

- Yes
- No

Is this research approved by the IACUC?

- Yes
- No, this research received an exemption by the IACUC
- No, this protocol was submitted to the IACUC but has not yet been approved
- No, but this protocol will be submitted to the IACUC

Submission Date:

Date Difference:

IACUC protocol number:

WARNINGSSince your protocol is not scheduled to be submitted by February 1, 2024 you must provide a back-up project. Two new sections have been unlocked in your survey queue and will allow you to share the details of that project and its oversight.

Required NIH Questions

The next three questions will NOT have any impact on your application.

As part of our obligation to the NIH, we will periodically ask you to report on your research experiences. Your participation is imperative to the receipt and renewal of funding from the NIH for programs such as the Summer Research Program, MD/PhD programs, various minority training programs (including pipeline programs for younger students) and other large institutional training grants. This is part of a longitudinal tracking system that includes reassessments at graduation and every five years thereafter. your responses to these periodic assessments is part of ensuring that Pritzker remains a top academic institution for years to come.

Do you intend to pursue a career in Academic Medicine?

- Definitely
- Likely
- Not Likely
- Absolutely Not

How extensively do you expect to be involved in research during your medical career?

- Exclusively
- Significant involved
- Somewhat involved
- Involved in a limited way
- Not involved

Are you interested in a career that relates to any of the following areas?
select all that apply

- Aging/Studies of Older People
- Blood
- Brain/Neurology
- Diabetes
- Ethics
- Gastro/Digestive Diseases
- Heart
- Kidney
- Lungs
- NCI - Cancer
- Nutrition
- None of the above

Backup Institutional Research Oversight

(IRB, IACUC, and Quality Determination)

Federal regulations require an Institutional Review Board (IRB) to review research on human subjects if the research involves federal funding.

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The Biological Sciences Division (BSD) Institutional Review Boards are administered by the Office of Research Services. The BSD IRBs are responsible for all biological or medical research conducted at the University of Chicago and/or the University of Chicago Medicine.

Proposals that do not have IRB or IACUC approval or exemption by the beginning of Spring Quarter (March 18, 2024) will NOT be considered for SRP funding.

Will human subjects or tissues be studied?

- Yes
- No

Is this research approved by the IRB?

- Yes
- No, this research received an exemption by the IRB
- No, this research has been determined to be quality improvement by the Center for HDSI
- No, this protocol was submitted to the IRB but has not yet been approved
- No, but this protocol will be submitted to the IRB

Submission Date:

IRB protocol number:

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The IACUC works closely with the Animal Resources Center (ARC), which is responsible for the animal procurement, facilities, husbandry, and specialized veterinary services. The use of animals in research and teaching is governed by federal regulations issued by the United States Department of Agriculture and the National Institutes of Health Office for the Protection from Research Risks. The University has developed policies and procedures for both the IACUC and the ARC which ensure institutional compliance with these agencies' regulations.

Will animal subjects or tissues be studied?

- Yes
- No

Is this research approved by the IACUC?

- Yes
- No, this research received an exemption by the IACUC
- No, this protocol was submitted to the IACUC but has not yet been approved
- No, but this protocol will be submitted to the IACUC

Submission Date:

IACUC protocol number:

Backup Project Information

Title of Research Project

Did you locate this project in the 2024 Scholarly Opportunities Online Catalog?

- Yes
- No

Check below to see detailed descriptions of the different research categories:

[Check here](#)

Basic/Translational Sciences: This Track encompasses research that investigates core scientific concepts and pathways, and often utilizes animals, cell lines, or tissues. This type of research allows one to take a clinically relevant question and investigate causation and underlying mechanisms in a controlled system. Projects are usually lab-based, but also include translational medicine including genomics/pathology.

Track Leaders: Erika Claud, MD & Ronald Cohen, MD

Clinical Research: Main area of focus is the trials of therapeutics, such as a clinical trial evaluating a new drug or device in the direct care of patients. Working with patients is not by default clinical; it often requires the test of a clinical intervention that does not fit the other tracks.

Track Leaders: Daniel Rubin, MD, MS & Gregory Ruhnke, MD

Community Health: This Track prepares students to promote population health. Projects will likely include community-based participatory research, diversity and equity research, health disparities research, needs assessments for community, primary care-oriented work, advocacy, and work in community sites/settings such as: schools, prisons, churches, and health centers. Students will develop necessary skills in establishing community partnerships for research and advocacy, public speaking, fundraising, consensus building, community organizing, organizational management, team building and inter-professional collaboration.

Track Leaders: Deborah Burnet, MD, MAPP & Mai Pho, MD

Global Health: This Track provides students with the skill-set to function most effectively in any global setting, working not only with individual patients, but with health systems and institutions as a whole, often within resource-limited settings.

Successful completion of this track also requires: students working outside of the U.S. or with data collected outside of the U.S.

Track Leader: Brian Callender, MD, MA

Healthcare Delivery Improvement Sciences: This is most applicable for quality and safety projects that are impacting our local health care system working with faculty and staff at UCM, often affiliated with Healthcare Delivery Science & Innovation. Projects include quality improvement, safety/medical error, and clinical informatics projects that aim to improve our local delivery system. It is likely that some projects could overlap with the Health Services & Data Science track. This track focuses more on the science of improvement.

Successful completion of this track also requires: participation in the HCDIS S&D Elective during your MS1 year or completion of IHI open school modules (more information can be obtained from Dr. Oyler and Dr. Vinci).

Track Leaders: Julie Oyler, MD & Lisa Vinci, MD, MS

Medical Education: In this Track, students will learn the principles behind health professions curriculum development and evaluation, learner assessment strategies, instructional methodology, as well as teaching skills. Research projects range from determining the outcomes of educational interventions to exploring current cutting-edge strategies in medical education, as well as evaluating curricula. Essentially, projects will focus on the documented need for students, residents, faculty, advanced practice providers, and caregiver/patients to learn an important concept/skill.

Successful completion of this track also requires: participation in the Medical Education S&D Elective during MS1 or completion of readings/reflections at the direction of Dr. Farnan and Dr. Fromme during the S&D Block (more information can be obtained from Dr. Farnan and Dr. Fromme). Additionally, students will participate in some type of teaching experience during medical school, including but not limited to serving as a Peer Educator, the fourth year Becoming a Resident Teacher elective, or the fourth year Learners as Teachers elective.

Track Leaders: Jeanne Farnan, MD, MHPE & H. Barrett Fromme, MD, MHPE

Health Services & Data Science: Affiliated with Healthcare Delivery Science & Innovation, this Track is an integrated program of research and training experiences designed to expose students to quantitative and qualitative empirical approaches to understanding how people and systems work within medicine. From micro-interaction research at the dyadic level (e.g., doctor/patient communication about end-of-life wishes) to macro-level research at the national level (e.g., regional relationships between the prevalence of faith-based hospitals and access to prenatal services), and using ideas and theories from the social sciences, medical ethics, and related fields. Projects include health services/health outcomes research, big data/data science, medical ethics, patient decision making, empowerment, doctor-patient relationship, communication, and health policy/economics among others.

Track Leaders: Rochelle Naylor, MD & Micah Prochaska, MD, MSc

Please indicate which categories best describe your research. Check box above to see detailed descriptions of all categories. Select all that apply

- Basic/Translational Sciences
- Clinical Research
- Health Services and Data Science
- Community Health
- Global Health
- Healthcare Delivery Improvement Sciences
- Medical Education

NIH & Foundation Funding for SRP is provided by certain priority areas.

Please select all of the categories that apply to your research:

- Aging/Studies of Older People
- Blood
- Brain/Neurology
- Heart
- Lung
- Oncology
- None of the above

All participants in SRP participate in Cluster Groups to further advance learning regarding general research issues and to facilitate review of progress by faculty and peers.

Please select all of the categories that apply to your research:

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- Basic Pathways
- Cancer
- Cellular Mechanisms
- Community Based Research
- Endocrinology
- Gastroenterology
- Geriatrics
- Health Disparities
- Hospital Care
- Immunology
- Medical Education
- Medical Ethics
- Medical Imaging
- Molecular/Cell Biology
- Neuroscience
- Orthopaedics
- Otolaryngology or Allergy
- Pediatrics
- Quality/Cost of Care
- Surgery
- None of the above

Project Description

What is the Hypothesis?

A scientific hypothesis is a declarative sentence about something in the world that can be determined to be true or false based on empirical investigation. The characteristics of a testable hypothesis are below:

Translation of your question into an educated prediction or guess.

Take a position and try to provide a direction..."increase", "decrease", "no effect", "related to", "higher", "lower"

Associated with a numerical probability (this is the educated guess)

Conservative (believable)

Use precise terminology (provide some background to explain terms that are not universally known)

Measurable (make sure the terms are measurable...for example if you are measuring "cognitive status," you may want to state: Cognitive status, as measured by lower MMSE score...)

Try to start with "We hypothesize that..."

Background of the Research Problem and the Hypothesis to be tested:

Please write this in your own words, do NOT copy from the research mentor's grant.

Specific Aims

Develop 2-3 research style specific aims that match your hypothesis and can be accomplished within the duration of the Summer Research Program (June 13 - August 26).

Outline of Methods and Approaches

Your methods section should aim to be 2-3 paragraphs describing the study design, how data will be collected (or what you are measuring) and then how you will analyze it. Keep in mind that the Summer Research Program is only three months long.

Your Role in the Project

More often than not, research at the University of Chicago is ongoing, and you may be working with others as a subset of a larger project. Please clarify your role in the project (what you will primarily be responsible for doing over the summer versus other people who will help you).

Personal Learning Goals

Please tell us how the research you are proposing supports your own personal learning goals this summer.

How can you adapt your proposed work if a stay at home advisory/order is in effect ?

- No modifications needed
- Minor modification needed
- Major modifications needed
- Will not be able to complete - would need a new project

Please explain your response above:

Does this project require that you use STATA for data analysis?

Note: STATA and any other software is to be PROVIDED BY THE MENTOR (SRP funds student stipends only). We follow this metric to better understand statistical usage need for SRP to plan for the future.

- Yes
- No

Does this project require international travel?

Note: If an international project is accepted for funding, additional paperwork will be necessary.

- Yes
- No

Which dates will you be out of the country?

Start Date:

End Date:

What will you be doing during your travel related to your research?

Will your mentor be with you?

- Yes
- No

Will you have access to staff resources to help you at your destination while you are there?

- Yes
- No

Spring Preparatory Requirement

Since short term training grants permit funding for a minimum of three months, students are required to participate in a research elective during spring quarter (50 units) to meet an additional one week requirement of the eleven week summer program. This requirement translates into a MINIMUM of 1 hour per week working directly with your faculty mentor, and 4 hours per week of independent study (learning lab techniques, literature review, etc.)Note: your mentor may have additional requirements in order to prepare you to hit the ground running on June 10th.

Please indicate the number of direct and independent hours during the Spring Quarter that your mentor has approved per week:

Hours with mentor:

(hours)

Hours of independent study:

(hours)

Total hours/week:

By completing this application, you are registering for a 50-unit elective. You do not need to do any additional paperwork to register. The registrar will follow-up with your mentor at the end of Spring Quarter to determine if this requirement has been fulfilled.

Certification

By selecting "I Agree," I certify that I have worked with my mentor to complete this application and am aware of my responsibilities in participating in the 2024 Summer Research Program beginning Monday, June 10, 2024. In order for this application to be reviewed, I am aware that I must submit a signed Intent to Participate Form (including both my signature and my mentor's signature) to Candi Gard via email at cgard@bsd.uchicago.edu no later than February 1, 2024. You can download the Intent to Participate Form below.

I Agree

You can download the Intent to Participate Form here:

[Attachment: "2024 SRP Intent to Participate Form.pdf"]