



THE UNIVERSITY OF
CHICAGO
UChicago Medicine

**Pritzker School
of Medicine**

Pritzker
Summer Research Program
Guidelines & Requirements
2019

December 6, 2018

Application Timeline

Introduction to the Pritzker Summer Research Program (SRP) Meeting	12/06/2018
Link to Online Application Sent to Students	12/06/2018
Deadline to Meet with Mentor.....	1/25/2019
Online Application Due.....	2/07/2019
“Intent to Participate” Form Due to BSLC 104 (This form needs both student and mentor signatures).....	2/07/2019
Notification of SRP Application Status.....	March 2019

Summer Research Program Schedule

Students funded through the Pritzker Summer Research Program are required to participate as described below. (Weekly project deadlines will be available on the SRP website). srp.uchicago.edu

Spring Quarter SRP Elective Begins	3/25/2019
Summer Research Program Begins.....	6/10/2019
Research Seminar #1: Introduction to Research.....	April - tbd
Research Seminar #2: Preparing your Written Report.....	6/10/2019
Stipend Check #1.....	7/01/2019
Research Seminar #3: Preparing your Final Presentation.....	7/22/2019
Research Forum–Day 1.....	8/21/2019
Research Forum–Day 2.....	8/22/2019
Concluding Assembly & Award Presentation	8/23/2019
Stipend Check #2.....	8/23/2019

SRP Objective

The objective of the Summer Research Program is to provide rising second year medical students exposure to medical research which animates and excites the student concerning the scientific basis of medicine.

SRP Goals

- To promote critical thinking and interest in research
- To teach investigational skills from discovery to dissemination (scientific presentation and paper writing)
- To inspire the development of future physicians who are able to integrate research into their careers

Selecting a Mentor/Project

Students should carefully select a mentor who has the time and willingness to commit to discussion/direction for the project.

Students should inquire about the scope of the project, persons available as resources (technicians, post-docs), and the size of the lab. It is critical to have a discussion with the mentor as to the feasibility of completing the work in eleven weeks. The complexity of the research set-up, availability of all apparatuses that are required, the expectations of the mentor, idea of time commitment per week and the mentor's goals versus the student's goals for the experience should be ascertained.

Student and mentor should meet early and at least weekly to set and review goals and expectations for the Summer Research Program, which would include:

- Establishing close working relationships on a day-to-day basis for problem-solving and trouble-shooting the student's research technology
- Establishing a limited, achievable goal for the project during the eleven week summer program, which provides opportunity for student advancement of knowledge in an area promoting the student's self-interest and ownership of their project
- Enabling the student to acquire familiarity and expertise in utilizing one or more research techniques relevant to the mentor's program and the student's project
- Facilitating the student's participation in regular laboratory meetings, journal clubs and/or other research team activities, which enhances the student's scientific communication and awareness of how their research activity interacts with other laboratory or group activities
- Required participation in cluster group discussions with a research team leader and students with similar interests
- Learning how to write up research in the form of a scientific report
- Bringing the research to a productive close with a student/mentor review of data at the end of the eleven weeks, and working with the student to prepare his/ her research paper for final submittal prior to the presentation for the Summer Research Forum on either August 21 or 22, 2019; and discussing the integration of research training and subsequent medical training in developing a career progressing toward the goal of becoming a clinician-scientist.

Program Structure

- The Summer Research Program is a twelve week program, since short term training grants permit funding for a minimum of three months.
 - The summer component is an eleven week program beginning on Monday, June 10, 2019 and ending Friday, August 23, 2019. Please note that the program begins one week before the start of the UChicago Summer Quarter.
 - Additionally, students are required to participate in a research elective during Spring Quarter to meet the additional week requirement of the twelve week program. You will receive 50 units of credit for this work.
- The Summer Research Program Steering Committee, consisting of both basic and clinical science faculty members, meets periodically throughout the program to discuss the progress of the students and any additional issues that may arise.
- Students meet weekly in Cluster Groups. Cluster Group faculty leaders have a structured set of experiences that they are asked to complete over the tenure of the program including discussion of the research progress of each student and the opportunity to have the students present their work in a small group prior to the Summer Research Forum.
 - Cluster Group participation is an integral part of the Summer Research Program and, as such, is a required activity of the program. Unexcused absences will be viewed as relinquishing participation in the Summer Research Program.
 - Each Cluster Group will identify a student liaison who will work directly with the Cluster Group faculty leaders to set up times & locations of the weekly meetings.
- Four full group research seminars have been planned. The first seminar focuses on scientific integrity. The second is designed to introduce students to research and the process of experimentation. The third seminar is to prepare students on how to present their research. The final seminar occurs at the Concluding Assembly where prizes and awards are given. These seminars are required—the dates can be found on the 2019 calendar (and may be subject to change).
- The online application will be available to all MS1 students on December 6, 2018 following the *MS1 Introduction to the Summer Research Program* meeting. The application is to be submitted online on or before February 7, 2019.
 - Applications will be reviewed competitively for appropriateness. Emphasis will be placed on funding feasible research projects in which the student applicants have an opportunity to test a well-defined hypothesis.
 - Notification of the Summer Research Program application status will be sent out prior to Spring Break. Student may be asked to work with mentors to revise their application.
- Approximately one week before the end of the program, each student is required to submit a paper discussing their research, and outlining their research procedures and findings.
- All students funded through this program are required to present their research at the Summer Research Forum, held the last two days of the eleven weeks. Each student will give a seven minute presentation, followed by a two minute question and answer session. Students are judged by faculty from both the clinical and basic sciences for a variety of awards.
- Research mentors are required to provide a small contribution of \$400 in non-federal funds in order to extend the total program budget to fund all rigorous projects.
- The main hub of the Summer Research Program is the web application, **srp.uchicago.edu**. This is where student progress will be tracked, for both research and logistical purposes.

SRP Spring Elective

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 (because short term training grants permit funding for a minimum of three months).

The objectives of the spring research elective are as follows:

1. to conduct a rigorous review of the literature necessary to become well-versed in the topic of the student's proposed summer research project
2. to learn and begin to conduct methods and procedures necessary for the student to successfully complete the proposed summer research project

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 during Spring Quarter in order to prepare you to hit the ground running on June 10th.

By completing the online 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.

Stipend & Funding

- The Summer Research Program has three major funding sources: the National Institute on Aging (NIA); the Minority Summer Research Grant from the National Heart, Lung, and Blood Institute (NHLBI); and the Pritzker School of Medicine.
- Depending on funds available, funding source, and time students allocate, stipends for non-mission related projects will range from \$4,000 to \$5,000.
- Payments are made in two increments over the eleven week summer period. Prior to receiving the first stipend check, students must submit their research references, hypothesis and introduction on the SRP website, and receive mentor validation. The final stipend payment is distributed at the end of the program after the student's work is submitted and validated by mentor on the SRP website.
- Students funded by the NHLBI are able to offer research mentors an opportunity for a \$550 off-set for student research supplies. Information will be provided to these mentors about the availability of these funds.

Role of the Research Mentor

In order to ensure a better understanding of the expectation of the research mentor's role, see the following:

- The student's project should be of a reasonable scope to ensure the likelihood that, within eleven weeks, the student will be able to describe results in the required presentation at the Summer Research Forum, and, where possible, obtain publishable results.
- The student should not be assigned as a research technician to accomplish someone else's project in the lab.
- The lab mentor needs to invest sufficient time in the student, including weekly conferences to discuss results and, where necessary, help to focus (or refocus) the direction of the project.
- The student and the research mentor should discuss the written report that is to be provided to the Pritzker School of Medicine at the close of the program.
- During the last week of the program the research mentor should discuss with the student how the information should be presented in the Summer Research Forum, including a practice presentation to the mentor and members of the lab.
- The research mentor should be available to attend their student's presentation at the Summer Research Forum to provide any necessary feedback to the judges or others in attendance.
- The research mentor is primarily responsible for validating the student's online assignments. This is important in order for students to receive their stipend. srp.uchicago.edu
- Research mentors are required to provide a small contribution of \$400 in non-federal funds in order to extend the total program budget to fund all rigorous projects.

Cluster Group Guidelines

- Cluster Group faculty leaders will begin to meet with students the first week of the Summer Research Program to outline the goals of the Group, and will meet each week thereafter until the conclusion of the program.
- Each Cluster Group will identify one Student Liaison to facilitate communication throughout the program between their Cluster Group faculty leaders and the students in their Cluster Group.
- It is imperative that students assigned to that Cluster Group attend as one of the professional activities of the program and actively participate with faculty leaders who are volunteering their time during the summer.
- The normal structure of these group sessions is for students to present their project hypothesis, research methodologies, progress and problems. Suggestions, guidance, and critiquing are all part of the exchange between students and the Cluster Group Leader.
- One of the most important goals of the Cluster Group is to facilitate the writing of the final scientific report.
- Each week students will be required to submit a section of their report to the SRP website (srp.uchicago.edu). Part of each Cluster Group session will be devoted to the essentials of that section of the final scientific report.
- If progress is being impeded for a student for whatever reason, it is appropriate to raise these concerns to the Cluster Group Leader. Should the Cluster Group Leader not be able to resolve the issue, the problem(s) will be remanded to the Summer Research Program Co-Chairs for discussion.
- When feasible, Cluster Group Leaders are encouraged to talk about broader professional development issues (such as how one incorporates research into one's career goals, and the resulting rewards, difficulties, and sacrifices) as well as consideration of other research opportunities beyond the summer (resources, funding, and mentor availability).
- Cluster Group Leaders may be asked to validate the student's online assignments if the mentor is unavailable.
- Attendance is required and recorded at all Cluster Group weekly meetings.

Institutional Research Oversight (IRB, IACUC and Quality Determination)

Institutional Approval or Exemption is required for all research conducted through Pritzker's Summer Research Program. Please note that a faculty member (not a resident or student) must be the Principal Investigator (PI) on research protocols. Additionally, work CANNOT BEGIN until official approval/exemption has been obtained.

Institutional Review Board (IRB)

bsd.uchicago.edu

All studies involving people or human samples require IRB approval. While some of this research may be exempt from IRB approval, **only the IRB can determine EXEMPT status.** (The investigator cannot simply decide that the study meets criteria for exemption.) Please refer to the IRB webpage for additional information.

- Recall that you have completed IRB training as part of your Scholarship & Discovery 1A course.
- Additional training WILL be required for work with pediatric patients.
- Additional training MAY be required to be added to your particular research project.

Institutional Animal Care and Use Committee (IACUC)

researchadmin.uchicago.edu/iacuc/index.shtml

All studies involving lab animals require IACUC approval. Please refer to the IACUC webpage for additional information.

Quality Improvement (QI) Determination

<https://hdsi.uchicago.edu/qi-determination/>

A formal review process is required to ensure clear distinction between human subjects research and quality improvement initiatives to ensure the protection of our patients, investigators, and the institution. If you believe your research is eligible for QI determination, you will need to submit a QI review application so your project can be reviewed by the Center for Healthcare Delivery Science and Innovation.

For students who submit an application for a project that does not have institutional approval/exemption or has not been submitted for institutional/exemption by February 7, 2019:
You will be required to include an additional "back-up project" that is approved or exempt as part of the application process. If your initial project is not approved by March 25, 2019, and you still want to participate in SRP, you will be REQUIRED to pursue the back-up project for your spring elective and summer work.

Authorship

Many students will be authors on abstracts, posters, or manuscripts that result from Summer Research. All students will receive training on authorship criteria during the one of required SRP research seminars. Students will be responsible to know the formal criteria for authorship that are endorsed by the International Committee of Medical Journal Editors (ICMJE). <http://www.icmje.org/icmje-recommendations.pdf> (accessed 12/2017)

Authorship requires all of the following:

- Substantial contributions to: the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; AND
- Drafting the work or revising it critically for important intellectual content; AND
- Final approval of the version to be published; AND
- Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Data Security

Please be aware that portable data is vulnerable data and that the leading cause of data loss is stolen or misplaced personal computing devices. Moving data, especially protected health information (PHI), poses unique security risks for the University. Failure to abide by a few common-sense principles could result in disastrous consequences.

Some Guidelines:

- Personal computing devices are becoming more and more portable and securing sensitive information stored on those devices is more important than ever. We are all at risk and the stakes are high. Secure your device by following the steps outlined in the device specific guidelines located under the Guidelines and Procedures section at <http://security.bsd.uchicago.edu/security-policies/>.
- All devices (e.g., laptops, computer, tablets, and phones) must be protected with strong passwords AND encrypted. If you lose a device that is encrypted, it significantly decreases the burden of proof about data loss. Although it may seem obvious, do not write the password on the encrypted media. For more information, visit <http://security.bsd.uchicago.edu/encryption>.
- Never email unencrypted PHI to someone outside of the University. If you must email PHI, the Secure E-Mail Portal provides a secure way for employees to email Restricted information, such as PHI, to recipients outside of UCM and the BSD. For more information, visit the UCM Information Security Office Data Guardian Program webpage at <http://home.uchospitals.edu/> ; Go to Quick Links on the left hand side of the screen and click on “Information Security Office” > Data Guardian Program.
- Everyone must enroll in 2Factor Authentication (2FA). 2FA enhances the security of your CNetID by using your phone to verify your identity. This prevents anyone but you from using your account to log in to University websites, even if they know your CNetID password. Please visit <https://2fa.uchicago.edu> and click on ‘Go to 2Factor’ to enroll today!
- Never store restricted information in an unencrypted state where it might be compromised. This includes removable media such as flash drives and CDs. UChicagoBox — a cloud-based file storage and sharing service is available for storing patient information (HIPAA). Please visit <http://security.bsd.uchicago.edu/wp-content/uploads/sites/2/2016/09/UChicago-Box-Instructions-for-BSD.pdf> for instructions on how to use the UChicagoBox, as well as a step by step guide on how to secure Restricted information.
- If you suspect that your data has been compromised, report it immediately to your mentor/PI and the departments below:

DEPARTMENT

BSD Information Security Office
UCM Information Security Office
UCM Privacy Program
Anonymous Resource Line

EMAIL/PHONE

security@bsd.uchicago.edu
help@bsd.uchicago.edu, or by phone # 773-702-3456
hpo@bsd.uchicago.edu, or by phone # 773-834-9716
1-877-440-5480, select option 2

FAQs

1. Why are certain projects considered part of the “mission”?

SRP positions are funded through NIH training grants which are to train students in the NIH mission areas. A minority training grant also exists for funding projects related to cardiovascular disease and hematology. The remainder of positions are funded through the Pritzker School of Medicine. Because Pritzker funding is finite, ensuring SRP funding for Pritzker students overall depends on ensuring that at least half of our students work in our mission areas.

2. I looked through the Scholarly Opportunities Online Catalog and have not found a project that I am interested in. What should I do?

We advise that you review the Scholarly Opportunities Online Catalog and **favorite any and all projects that you may be interested in**. Schedule a meeting with the faculty who very likely will showcase the SRP project and/or other related projects. **Many faculty have additional projects that may not be listed in the Scholarly Opportunities Online Catalog**. Often times, faculty know of other projects (with them or other faculty) that are IRB approved and may be relevant to your area of interest. If you are still at a loss, contact scholarshipanddiscovery@bsd.uchicago.edu as soon as possible to discuss potential opportunities.

3. I have an idea about a project, how can I find a mentor?

We strongly encourage that you **pursue an ongoing IRB-approved project with a mentor who is invested in that project**. Student-initiated research projects for the SRP are unlikely to be approved for several reasons including: 1) lack of IRB approval or delay in project initiation due to seeking IRB approval (IRB approval may take months); 2) lack of a mentor investment in the project. The goal of SRP is to provide you with the skills and experience of conducting research. For those with the desire to conduct a student-initiated project, obtaining a PhD or additional training equivalent with mentorship is appropriate.

4. When should I begin meeting with a research mentor?

You can meet with a mentor if you find a project you are interested in. You may find it helpful to wait until after the Introduction to the Summer Research Program meeting on December 6, 2018. Projects listed in the Scholarly Opportunities Online Catalog indicate faculty interest in mentoring students for research projects and can facilitate finding a project. You will also have the opportunity to interact with experienced mentors from each department who can connect you to other mentors or recommend projects based on your interest.

5. I emailed a potential mentor last week and have not heard back from him/her? What should I do?

We recommend that you pursue two or three opportunities at the same time. You do not need to wait to hear from one faculty member before investigating other options. **Keep in mind that faculty are busy**. They may be away at a conference, dealing with a major deadline, or trying to keep up with multiple e-mails. **You must factor this into the time it will take to contact your mentor (and set up an appointment)**. Many students often get into a bind because they wait until two or three weeks before the deadline to find a mentor, only to panic since the mentor can't meet with them for a variety of reasons listed above. These applications also tend to be of lower quality since less time and faculty input is invested in them. If you truly cannot coordinate a meeting time with your mentor (or do not hear back at all), we strongly advise that you pursue a different mentor and project. Your mentor should be invested in you and if they are not able to contribute the time to ensure a timely and high quality application for the deadline, it is unlikely that your summer experience will be much different. If you miss the application deadline (as with all research and educational opportunities including medical school), it is unlikely that your application will be considered.

6. I'm interested in going into specialty X (i.e., dermatology, radiology, ENT, orthopedic surgery, etc.). Will doing research help me get into that specialty?

Please note you are not “closing yourself out of a specialty” through a choice of SRP Project. Residencies expect you will dabble in research, especially early in your medical education. Moreover, you will have an opportunity to do specialty-specific research in your fourth year when you will ultimately decide what you will go into. While it is important to identify a mentor in your clinical area of interest, these “clinical” mentors may not be suitable research mentors (especially if they are predominantly engaged in clinical work). Smaller, predominantly clinical specialties often may not have numerous research mentors and/or opportunities. In addition, it is important to remember that **high quality research that leads to scholarly work (regardless of field) will enhance your residency application.** It is in your best interest to find a mentor with a demonstrable track record of mentoring students and producing scholarly work. By limiting the clinical specialty of your potential research mentor, you are forgoing opportunities with successful mentors in basic science & clinical research applicable to many types of patient problems and/or specialties (i.e. immunology research relevant for dermatology; cancer biology or ethics relevant for almost any specialty, etc.)

7. I would like to go abroad and do research somewhere else. Can I get funding through SRP?

In general, SRP funding is available for a limited number of global health research opportunities with University of Chicago faculty mentors who have IRB-approved projects that are ongoing. SRP funding is only available for work with University of Chicago faculty members. For those students that are funded through other mechanisms who wish to participate in the SRP forum, applications will be considered. Please refer to the Scholarship & Discovery team inquiry form for further information.

8. I would like to participate in an international health, military or other service-learning opportunity (or have some other personal commitment during the summer). Does this mean that I cannot participate in SRP?

It depends on the degree to which the opportunity or commitment interferes with your required obligations in the program. Many students take advantage of international or service opportunities that occur after SRP ends and before school starts (ideal case). If this is not possible, the SRP application includes an area to describe your schedule conflicts, whether payment is provided for your participation in another activity that overlaps with SRP time, and a plan to overcome the barrier to your participation in SRP. Your potential mentor must also agree to this plan. Keep in mind that your SRP application (and funding level) will be evaluated for the quality of the research proposed AND the level of conflict with completing the research. The committee will review each application on a case by case basis. For students with conflicts, SRP reserves the right to adjust funding commensurate with degree of participation.

9. I would like to PE the Human Body Course and also do SRP. Is this allowed?

For students who wish to participate in SRP, we recommend serving as an anatomy PE after the conclusion of SRP in late August to allow for full participation in SRP especially towards the end of the research when the focus is on preparing the final paper and presentation. Rare exceptions may be made for exceptional students who wish to participate fully as an anatomy PE and also in SRP. These decisions are made by SRP Co-Chairs in conjunction with Dr. Callum Ross and are based on their ability to function as an anatomy PE while incurring a full-time obligation of SRP, the quality of the research proposed, the mentor for the project, and the student's ability to carry out the research.

10. When can I begin working on the SRP project?

We recommend waiting until after the Steering Committee has reviewed your application and notified you of your acceptance into the program at the beginning of the Spring Quarter. Research proposals may be rejected or require substantial revision prior to acceptance, therefore it is important that you invest the time necessary to develop a scientifically rigorous proposal with your mentor. Use time during the Winter Quarter to find a mentor and to develop a robust project.

11. I need STATA or statistical support for my project. What should I do?

As a student, you have full access to STATA 13 from your personal device using the remote desktop.

Please also note that if you are using a PC, remote desktop should be automatically installed; if you are a Mac user, you will need to personally install the remote desktop. With questions regarding this process, please contact IT services: itservices@uchicago.edu or 773-702-5800

To access STATA 13 using the remote desktop, please follow the directions below:

- 1) Click on the Start Menu → Select All Programs → Accessories → Remote Desktop Connection
- 2) In the Computer field, type: vlab.uchicago.edu. Select Connect.
- 3) Use your Cnet ID to log in. The Domain should be “adlocal”. Once logged in, select Start.
- 4) Click on the Start Menu once more and select Programs → Applications → STATA 13
- 5) Explore and enjoy endless possibilities of data analysis at your fingertips

If you do not have a personal computer or prefer to access STATA remotely from a lab, you can access STATA 13 remotely using the computers in the Crerar library (<http://www.lib.uchicago.edu/e/crerar/index.html>).

Statistical software, including STATA, is often provided by mentors. Since not all students require STATA and a variety of software programs are used by mentors, we rely on faculty to provide resources that you will need to complete your project. Students who wish to purchase their own copy of software for their laptop can do so through ITS (<http://answers.uchicago.edu/page.php?id=20254>) or directly through the manufacturer at their own expense.

Also know that biostatistical support is available to faculty mentors through the Biostatistics Clinic and an appointment can be made through the following website (biotime.uchicago.edu/Clinic.aspx). The Biostats Clinic provides free, short-term statistical consultation.

12. How can I make sure that I get a paper out of my SRP project?

A Summer Quarter project in and of itself is unlikely to lead to scholarly work (especially a publication).

Students who continue their relationship with their mentor well into their medical school training (i.e. second year, Fentress award during fourth year) are more likely to successfully produce scholarly products (posters, abstracts, papers) than those that limit themselves to Summer Quarter exposure. Therefore, we advise not pursuing any project with the expectation that your summer work alone will result in a scholarly product. We do, however, strongly encourage students to work with mentors that have a track record of scholarly work with students. *HINT: It's often a good idea to ask students who have worked with a mentor before regarding their success in this area.*

Frequently Asked Questions about Scholarship & Discovery

13. What will mentors know about Scholarship & Discovery?

Many of the mentors that have listed in the Scholarly Opportunities Online Catalog are experienced mentors who have sponsored students for many years. While we have sent out information to the faculty who listed in the Scholarly Opportunities Online Catalog explaining Scholarship & Discovery, it is very possible that mentors are still learning about the initiative. We advise that you talk to mentors about working with them over the summer first and keep in mind that they may still be learning about Scholarship & Discovery. If any mentors are unclear, you can direct them to our website (scholarshipdiscovery.uchicago.edu) and email (scholarshipanddiscovery@bsd.uchicago.edu) and we can follow up with information. The key for mentors to understand is that they don't need to "do anything extra" to be your Scholarship & Discovery mentor other than to help you to complete a project.

14. Do I have to do SRP for Scholarship & Discovery? Do I have to use my SRP project for S&D?

Remember summer work is optional – while we anticipate many of you will choose to participate in SRP and use your SRP project for Scholarship & Discovery, it is not required that you do so. We encourage you to choose the best project that matches your broad interests and also take advantage of other opportunities available to Pritzker students in a variety of activities (TA, community service, travel, etc.). Your track choice will be made in the beginning of second year.

Summer Research 2019–“Intent to Participate”

DUE February 7TH

Both students and mentors who wish to be considered for participation must complete this form as part of the application process. This is to be dropped off in HARD COPY to Candi Gard (BSLC 104) no later than February 7, 2019.

STUDENT SECTION:

My signature below indicates that I have submitted my application online and that I intend to participate in the Summer Research Program and adhere to its requirements as described in the *2019 SRP Guidelines and Requirements document*. My full participation in this program will culminate in a presentation at the Research Forum as well as a stipend provided in two payments.

Some of the responsibilities associated with this program include participating in the Spring elective, reporting to the lab/mentor by Monday June 10, 2019 (one week prior to the beginning of Summer Quarter) to begin the project and attend the activities identified in the *2019 SRP Guidelines and Requirements booklet*. This includes the Summer Research Program seminars as well as the Cluster Group meetings. (Any date conflicts are noted in my application for consideration.)

All assignments will need to be uploaded on time and validated by my mentor. Assignments will need to be validated prior to the receipt of stipend payments.

I will work closely with my mentor on my final paper and presentation. I will present my research project on the date and time that will be assigned to me (either August 21st or August 22nd). I will also attend the Concluding Assembly on August 23rd.

Student Signature Date

Student Name (Please Print)

MENTOR SECTION:

My signature below indicates that I agree to mentor the above mentioned student for the:

- A. Required Spring Elective (March 25, 2019–June 7, 2019)
- B. 11 weeks of the Summer Research Program (June 10, 2019 - August 23, 2019)

Some of the responsibilities associated with mentoring include establishing a close working relationship with this student, meeting weekly to discuss the project, reviewing the student’s work, including the assignments that are uploaded on the SRP website for validation, and providing constructive criticism to help the student prepare the final paper and his/her oral presentation.

I am encouraged to attend the student’s final presentation on the date to which s/he is assigned (either August 21st or August 22nd).

NOTE: I also agree to contribute \$400 in non-federal funds towards the student’s stipend.

Mentor Signature Date

Mentor Name (Please Print)

Name of Administrator (Please Print)

FAS Account Number

SRP Application

Please work with your mentor to complete and submit this online application by Thursday, February 7, 2019. This application includes five sections: Student Information, Mentor Information, Project Information, Oversight* and Certification.

*Please note that your project must have either IRB or IACUC 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 7, 2019, 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. You can receive a return code to log back into your application by selecting "Save and Return Later" at the bottom of the page. If you lose or forget your return code, please contact Candi Gard or Michael McGinty and they will send it to you promptly.

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 in BSLC 104 by February 7, 2019.

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

Student Information

Please take a moment to download the Intent to Participate form. Both you and your mentor should fill the form out completely. Please return to Candi Gard in BSLC 104 by February 7th, 2019.

[Attachment: "2019 Intent to Participate Form.pdf"]

Student Name:

_____ (last name, first name)

Email:

_____ (uchospitals email address)

Do you wish to be considered for Innovation Funding (instead of SRP)?

- Yes
 No

Do you anticipate that you will miss any part of the Summer Research Program (June 10-August 23)

- Yes
 No

Please submit your request to the committee for their consideration by providing the dates that you propose to miss. Please be aware that the committee reserves the right to prorate your stipend based on your proposed leave.

Proposed start date:

Proposed end date:

Please explain the reason for your proposed absence:

Please indicate any of the programs in which you plan to participate. Please be aware that you cannot be paid at the same time you are in SRP.

(select all that apply)

- Anatomy PE
- MCA Pipeline Program PE or RA
- Military
- Other, please specify below
- None of the above

Please specify your selection of Other, above:

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:

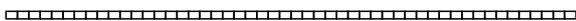
How likely are you to use this project to fulfill your Scholarship & Discovery requirement?

- Not very likely
- Somewhat unlikely
- Not sure
- Somewhat likely
- Very likely

At this time, which S&D Track do you intend to pursue?

- Scientific Investigation: Basic Science
- Scientific Investigation: Clinical Research
- Scientific Investigation: Social Sciences
- Community Health
- Global Health
- Healthcare Delivery Sciences
- Medical Education

On a scale from 0-100, (where 100 is complete certainty), how certain are you of your track choice?



(Place a mark on the scale above)

Student Information - continued

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
- Significantly 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

Mentor Information

Mentor Details

Name:

(last name, first name)

Department:

Section:

(if applicable)

Email:

When did you identify your mentor?

- August 2018
 September 2018
 October 2018
 November 2018
 December 2018
 January 2019
 February 2019

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
 None of the above

Please specify your selection of Other, above:

How important were the following criteria in choosing your mentor?

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

What other characteristics did you consider in choosing a mentor?

Lab Contact Person (if applicable)

Name:

((optional) last name, first name)

Email:

Project Information

Title of Research Project:

Did you locate this project in the 2019 Scholarly Opportunities Online Catalog?

- Yes
 No

Please indicate which categories best describe your research:
(select all that apply)

- Basic Sciences
 Clinical Research
 Social Science
 Community Health
 Global Health
 Healthcare Delivery 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 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 Information - continued

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 used 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

Can be accomplished within the duration of the Summer Research Program (6/10-8/23).

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

(as it relates to the research you are proposing)

Project Information - continued

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

- Yes
 No

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.

Does this project require international travel?

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

- Yes
 No

What 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

Project Information - continued

Spring Preparatory Requirement

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, since short term training grants permit funding for a minimum of three months. 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.

Oversight

Federal regulations require an Institutional Review Board (IRB) to review research on human subjects if the research involved 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 Behavioral Sciences IRB
- 1 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 Medical Center.

Proposals that do not have IRB or IACUC approval or exemption by the beginning of Spring Quarter (March 25, 2019) 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 7, 2019 you must provide a back-up project. The next section will allow you to share the details of that project.

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.

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 No

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Submission date: _____

Date Difference: _____

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Backup Project Information

Title of Research Project:

Did you locate this project in the 2019 Scholarly Opportunities Online Catalog?

- Yes
 No

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Backup Project Information - continued

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Submission date: _____

IACUC protocol number:

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 2019 Summer Research Program beginning Monday June 10, 2019. 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 in BSLC 104 no later than February 7, 2019.

I Agree