

2018 LIFE SCIENCES SUMMER INSTITUTE HIGH SCHOOL STUDENT RESEARCH PROGRAM APPLICATION INSTRUCTIONS

Program dates: June 18–August 10, 2018

Deadline to apply: March 30, 2018 (5:00 p.m. PST)*

Program description:

The Life Sciences Summer Institute (LSSI) is an internship program developed for San Diego County students interested in gaining hands-on laboratory research experience. LSSI consists of an unpaid one-week pre-internship “boot camp” training held at either Miramar or Grossmont College followed by a 7-week paid research internship at the Salk Institute, The Scripps Research Institute, UCSD-Research Scholars Program, or other institutes or companies.

At the end of the internship, students will have:

- Received 1.0 unit of college credit for the pre-internship “boot camp” course
- Completed 120–280 hours of paid work experience in a research laboratory, gaining college prep units at UCSD Extension
- Produced a scientific poster and abstract highlighting summer research projects
- Presented work in front of peers, mentors, teachers, family and industry partners
- Participated in many seminars, career panels, networking events and other enrichment activities

Eligibility:

Applicants must...

- Be San Diego County residents AND have completed their most recent semester of high school at a public or private high school within San Diego County
- Be at least 16 years of age on or before June 25, 2018
- Have successfully completed at least one year each of high school level chemistry and biology
- Have a minimum grade point average of 3.0
- Be able to commit to 40 hours/week for the duration of the program
- Applicants under 18 must submit a blank work permit application (available from your high school career center or counseling office)
- Be able to provide their own transportation

A special emphasis is placed on identifying students who are: a) from low-income households, b) first generation college bound students, and/or c) of ethnic groups historically underrepresented in the sciences (e.g. Black and African-American, Latino, Native Pacific Islander, Native American, etc.).

**Note: late and/or incomplete applications will not be accepted and will be notified within two weeks after the deadline. All applications will become property of the San Diego Workforce Partnership and will not be returned.*

Confirmation of receipt: An email will be sent within 2 weeks after the deadline stating that your application was received.

Application selection: Only students selected to be interviewed will be contacted between April and May 2018.

Questions: Submit any questions to biotech@workforce.org. Due to the high volume of emails we receive during the application process, please allow for a 2 business-day response time.

Participating research institutes:

Please remember to review participating research institute program descriptions online (see links below). You will have the opportunity to select where you want to apply to in the online application.



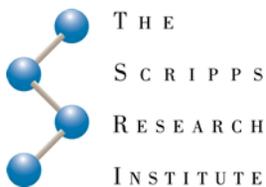
www.salk.edu

Salk Scholars program interviews will begin in mid-May with final notification no later than June 1. Please note that only students selected for an interview will be contacted. In addition to the requirements of the summer research experience provided by the Salk Scholars Program there will be several internship slots, called "Linton Fellows," who will receive additional exposure to the understanding of business/entrepreneurship in the biotechnology industry.

These scholars will participate in additional project components outside of the regular program research activities. Students interested in being considered for these Linton Fellows positions should complete the following short-answer questions in the online application (150-word max each question):

- *What excites you about the idea of pursuing an entrepreneurial career path in biotechnology?*
- *What qualities and skills do you possess that make you think you'd be success at entrepreneurship?*
- *If you could create a biology related product or service what would it be?*

For more information, visit salk.edu/about/education-outreach



THE
SCRIPPS
RESEARCH
INSTITUTE

The Scripps Research Institute internship program offers participants an academic structure that integrates hands-on laboratory research with professional skills development and mentoring. Applications are reviewed in the month of April and selections and offers are made in early May. For more information, visit education.scripps.edu/community/california/hsintern



Work one-on-one with UCSD researcher faculty in their labs as part of the **UCSD Academic Connections Research Scholars program**. The program runs from July 8–28, 2018. Please note

that this is provided to LSSI students on a scholarship basis and is non-paid. Students do not need to submit a separate application with UCSD. For more information, visit academicconnections.ucsd.edu

We also have many internships available at a variety of biotech research institutes and companies around San Diego. In the past two years, we have placed students with BioLabs, Lab Fellows, iAssay, Dorota Skowronska-Kracyzyc's Lab at UCSD, the UCSD Department of Ophthalmology, the UCSD

Helen Brown Lab, UCSD's Kavli Institute for the Brain and Mind, New Leaf Biofuels, Buster Biofuels, Grossmont College and the Scripps Institute of Oceanography.

Application guidelines:

Here are a few tips for making sure your application is the best representation of you!

Responsibilities:

- Students have complete responsibility for contacting LSSI with any questions and/or concerns they may have regarding the program and/or application. If you're wondering about a document, if you're not sure how to fill something out or whether particular information needs to be included—ASK US! Your teachers, counselors, parents, etc. can certainly advise you but always be sure to double check with us about any details if necessary.
- Be your own advocate. It is important for the students to advocate for themselves. YOU are applying for this position, not your parents. Any questions etc. need to come from you.
- LSSI contact email address is: biotech@workforce.org. Ask early and ask often!

Application:

- Extra documentation (e.g. copies of certificates, awards, additional letters of recommendation, pictures, etc) will NOT be accepted and will be subject to disqualification.

Email address:

- LSSI's staff and partners main form of communication is via email (primarily biotech@workforce.org).
- It is important that students include their personal email address (not their parent's) on their application. If necessary, please create a new email address that is professional and will only be used to communicate with LSSI and/or other employers.
 - Examples of professional email addresses include: john.doe@yahoo.com, jdoe@hotmail.com, johnd@gmail.com.
 - Examples of unprofessional email addresses include: skaterboy@gmail.com, foxylady@hotmail.com, gigglez27@yahoo.com
- Remember to check your email often during the selection and interview periods!

Signatures

- You may print documents, have your parents sign them, scan or photograph them, and upload them to your application. We do NOT accept digital signatures.

LSSI APPLICATION CHECKLIST AND INSTRUCTIONS

Below is a list of what will be required in your application and instructions for each item. As noted above, applications that are missing any of the following components will not be accepted.

- ☐ Complete online LSSI application by Friday, March 30, 2018 (5:00 p.m. PST)

The first time you log on to the application, fill out the basic information on the first page to create a username (your email) and password. Next, click "Save and Continue" through all 7 pages until you reach the "Thank you" page. You will then receive an email with a link to log back in to your application using your email address and password that you just created. There is also a log in link on the website at: www.C2Csd.org/STEAM.

Fill out the "Basic Information" page and click "Save and Continue"

The screenshot shows the 'LIFE SCIENCES SUMMER INSTITUTE 2018' application form. The left sidebar lists navigation options: Basic Information, Personal Information, Internship Information, Short Answers, Salk - Linton Fellow, Essays Uploads, Review and Submit, and Thank You. The main content area is titled 'Basic Information' and contains a form with the following fields:

BASIC INFORMATION	
What is your first name? *	Boba
Last name? *	Fett
What is your phone number? *	(619) 123 -1234
What is your email address? *	biotech@workforce.org
Please create a password. *	*****

Below the password field, a note states: "Passwords must contain at least one number, one uppercase letter, and one special character (e.g. !, @, #, etc.). It must be at least 8 characters in length." A "Save and Continue" button is located at the bottom of the form.

Continue clicking "Save and Continue" until you reach the "Thank you!" page

The screenshot shows the 'LIFE SCIENCES SUMMER INSTITUTE 2018' application form at the 'Thank you!' stage. The left sidebar lists navigation options: Basic Information, Personal Information, Internship Information, Short Answers, Salk - Linton Fellow, Essays Uploads, Review and Submit, and Thank You. The main content area is titled 'Thank you!' and contains the following text:

Your application has been submitted. Thank you for your interest in LSSI.

To log in and continue working on your application, click this link: http://lssi.xyz/apply/modules/submission_accounts/login.php?form_id=1

[Click here](#) to put through another submission.

You will then receive an “Application Created” email; use the link to log back in at any time

LSSI Application Created!



The LSSI Team <biotech@workforce.org>

Tuesday, January 16, 2018 at 10:13 AM

To: ○ Alexander Becker

This sender failed our fraud detection checks and may not be who they appear to be. Learn about [spoofing](#)

[Feedback](#)

Hello Boba, Thanks for creating your LSSI application! To log back in to your application and continue working on it, use this link and type in your email and password: http://lssi.xyz/apply/modules/submission_accounts/login.php?form_id=1

The most recent edits to your application were made on: 2018-01-16 10:13 AM

NOTE: The document does NOT auto-save. You must click “Save and Continue” before exiting your application. You can then log back in and continue working at any time before 5 pm on March 30th, at which point all material in the application will be final.

All documents must be uploaded in the online application by the due date and time to be eligible for review, including your letters of recommendation. All documents must be in a PDF format with a maximum file size of 3 MB. Incomplete applications will NOT be accepted. **NO EXCEPTIONS!**

Application Items

The online application will include the following...

Personal and demographic Information

- First Name
- Last Name
- Email
- Phone Number
- Address
- High School
- Grade
- GPA
- Date of Birth
- Gender
- Ethnicity
- Parents’ Education Levels
- Parents’ Place of Employment
- Number of Siblings and Their Ages
- Number of People in Your Household

Institute selection

- Salk
- Salk-Linton
- Scripps
- UCSD
- Other

Cover letter

- Cover letter is an introduction to yourself and explains why you are submitting an application
- Should be no longer than one page
- Sample cover letter link: <http://www.wikihow.com/Write-a-Cover-Letter>

High school transcript (official or unofficial)

Résumé

- Résumé should be no longer than one page, and include ONLY relevant information
 - This is 'you at a glance' - keep it short, sweet, and to the point.
- Suggested information/sections to include: contact information, education, any and all work experience, skills and abilities, and other relevant information as it applies to the internship program
- Resume builder: www.cacareerzone.org/guide/resumecreation will guide you to create one

Handwritten Essay

- The LSSI High School Student Research Program includes laboratories focused on the overarching areas of neurosciences, genetics, biochemistry, chemistry, and immunology in addition to molecular, plant, computational, and cell biology. You will be asked in the online application to rank your interest in those areas. Briefly explain your ranking of the research interests, including any strong preferences you have for or against working in any specific area. Explain why you prefer (or do not prefer) to work with laboratory animals. This information will be used as a guide for assigning students to projects. We will make every effort, but cannot guarantee, to assign students to projects that meet their stated preferences.
- PLEASE RESPOND IN YOUR OWN HANDWRITING (not typed).
- Descriptions of the Research Sectors are as follows:

Neuroscience - research that spans the structure, function, evolutionary history, development, genetics, biochemistry, physiology, pharmacology, computational neuroscience and pathology of the nervous system.

Molecular Biology - understanding the interactions between the various systems of a cell, including the interactions between genes encoded in the DNA, RNA, and protein biosynthesis and learning how these interactions are regulated. Many other disciplines make use of techniques that molecular biology invented: DNA cloning, genetic manipulation etc.

Genetics - the study of gene regulation and the involvement of genes in development of cancer, including patterns of inheritance.

Plant Biology - the study of the mechanisms of plant growth control influenced by hormonal or environmental factors using a combination of molecular, cellular, genetic, biochemical, or genomic approaches. The higher plant *Arabidopsis* (the lab rat of the plant world) or the green algae *Chlamydomonas* or *Volvox* will be used as a model system.

Chemistry - synthesis of medicinally relevant small molecules and natural products, design of synthetic routes, and development of novel methodologies which are widely applicable within the field. Disciplines include organic, inorganic, and organometallic chemistry.

Computational Biology - probes the complexity of biology using techniques from computer science, applied mathematics, and statistics. This includes understanding protein and genome sequences (computational genomics), large amounts of experimental data such as gene expression profiles (bioinformatics) and computational modeling, which builds programs to simulate biological processes from cell division to organ growth to brain function.

Biochemistry - the next step up from molecular biology, biochemistry combines synthetic organic chemistry and chemical principles to study molecular design, chemical synthesis, and biological investigations of molecules with specific biological actions such as enzyme inhibitors, DNA cleaving molecules, antitumor agents, and chemical catalysts. The focus of biochemistry is on the function of proteins, the actual effectors of genes. Biochemists will research if and how proteins become modified when cells receive a certain signal, if proteins travel to different parts of the cells to activate a certain pathway etc.

Cell Biology - studies of cells' physiological properties, their structure, organelles, environmental interactions, their life cycle, division and death.

Immunology - research topics include physiological functioning of the immune system in states of both health and disease; the response to bacteria and viruses, improvement of vaccines, malfunctions in immunological disorders (autoimmune diseases, hypersensitivities, immune deficiency, allograft rejection); and the physical, chemical and physiological characteristics of the immune system in vitro, in situ, and in vivo.

Environmental Sciences - generally refers to the study of the environment and the solution of environmental problems. Environmental sciences incorporate a wide range of scientific fields, but specifically in the context of this application, LSSI may have internships working in clean energy, biofuel production, and/or oceanography.

Typed Essay

- Please briefly address the following topics in a separate page typed. Essay should not exceed 1000 words.

What area of science research are you most interested in? Please relate this to a past personal or classroom experience.

What benefits do you hope to gain from a research internship?

Describe your extracurricular interests and hobbies, including any honors or awards.

Animal and stem cell work preference statement.

Student Certification/Consent Form and Parent Consent Form (if applicant is under age 18 at time of application)

- Download the Certification and Consent form from the website: c2csd.org/STEAM
- Complete the form by hand, sign it, scan it, and upload it as a pdf to your application

TWO letters of recommendation

- Type in the names and email addresses of your 2 recommenders into the online application and press "Save and Continue" or "Update" (see screenshot below). You will then need to send your recommender an email with the Recommendation Form attached and instructions to submit the Letter of Recommendation on letterhead along with the Recommendation Form to LSSIapp2018@workforce.org. You may use the sample email below.
- The Recommendation Form can be downloaded at: www.c2csd.org/STEAM
- Recommendations should be from your biology teacher, principal, other teacher, advisor/counselor or work supervisor who can evaluate your potential for this summer research experience, taking into consideration your accomplishments, intellectual prowess, independent work habits, capacity for critical and analytical thinking and/or ability to organize and express ideas clearly and intelligently.
- **It is strongly recommended that one letter of recommendation come from a math or science teacher.**

Fill in recommender information in the application and click "Save and Continue" or "Update"

How did you hear about us?	<input type="radio"/> Flyer <input type="radio"/> Friend <input type="radio"/> LSSI Alumni <input type="radio"/> LSSI Staff <input type="radio"/> Teacher <input type="radio"/> School Administrator <input type="radio"/> Social Media <input type="radio"/> Other
Who will write your first recommendation letter?	Jabba The Hutt
What is your first recommender's email address?	JtHutt@gmail.com <i>Once you've determined your recommenders, download the recommender form from the website: www.C2Csd.org/STEAM and send it to your recommender. They will then submit the letter of recommendation and recommendation form to LSSIapp2018@workforce.org</i>
Who will write your second recommendation letter?	Luke Skywalker
What is your second recommender's email address?	ForceUser1@yahoo.com <i>Once you've determined your recommenders, download the recommender form from the website: www.C2Csd.org/STEAM and send it to your recommender. They will then submit the letter of recommendation and recommendation form to LSSIapp2018@workforce.org</i>

UPDATE

Send your recommender an email (like the sample below) with the Recommendation Form pdf attached

Dear [insert Recommender's name],

I am applying to the Life Sciences Summer Institute (LSSI), the San Diego Workforce Partnership's internship program for talented high schoolers interested in a career in life sciences and health care. As a part of the application process, I am required to submit 2 letters of recommendation from teachers or mentors who can evaluate my potential for this program. I would be honored if you would be one of my recommenders.

Please submit a letter of recommendation on letterhead AND the recommendation form (see attached) to LSSIapp2018@workforce.org by 5 pm on Friday, March 30th. The letter should include information about my accomplishments, independent work habits, capacity for critical and analytical thinking, and/or ability to organize and express ideas clearly and intelligently.

The letter and recommendation form will remain completely confidential.

If you have any questions or concerns, please contact the LSSI Team at biotech@workforce.org.

For more information about LSSI, please visit: www.C2Csd.org/STEAM

*Thank you,
[insert your name]*