



# ASDRP

Aspiring Scholars Directed Research Program

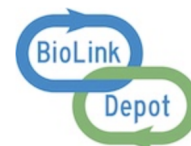
# [NewsBytes]

## *Week of February 8-15, 2025*

### Announcements, Shoutouts, and Accolades

#### **Hexagon Bio, Curia Bio, Ardelyx Donates Equipment and Consumables**

*Our commitment to keeping our lab expenditures at a minimum continues with additional donations received from Hexagon Bio (Menlo Park), Curia Biologics (San Carlos), and Ardelyx (Fremont) this week. Edward Njoo and Akira Yamamoto identified equipment, laboratory supplies, cold storage units, dry storage units and much more to enhance the wet and dry labs on campus. Dr. Njoo has established an extensive network of research labs and professionals who let us know when donations of all kinds are available. On most occasions, the donations require the ASDRP team to act very quickly and pick up most often occurs on the same day. Thank you to Ardelyx, Hexagon Bio, and Curia Biologics! This element to our laboratory operations is a major operational undertaking that has enabled us as a nonprofit to provide research supplies and opportunities to our students.*



*This Sunday afternoon is our monthly donation pick up from [Biolink Depot](#) in Oakland.*

*“Bio-Link Depot provides millions of dollars worth of donated laboratory equipment and supplies for free to educators and researchers, to promote scientific training for students at all levels. We have diverted more than 100 tons from landfills in the last year.”*



#### **Akira Yamamoto sets up new Mass Spectrometer for Student Research Use**

*Mr. Yamamoto, our laboratory Director, has recently set up a new Mass Spectrometer for our student researchers. This instrument, the latest addition to our mass spectrometry core lineup, is a Thermo TSQ triple quadrupole LC-MS instrument that was donated from industry and will bring new levels of high resolution mass spectrometry to our life science divisions. The Yamamoto, Njoo and Salgotra lab research projects benefit from the new Mass Spectrometer. Mass Spectrometry is useful for measuring the mass-to-charge ratio ( $m/z$ ) of one or more molecules present in a sample. These measurements can often be used to calculate the exact molecular weight of the sample components as well.*

*Events schedule list is subject to change with or without notice. Please check the ASDRP website for the most up to date information.*

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*Student researchers who want to use a Mass Spectrometer, must successfully complete all safety, PI and Core Instrument training. Once the students have completed the required training, they are given access to utilize the Mass Spec in their research projects. Over fifty student researchers are trained to use a Mass Spec under the direct supervision of their advisor.*

## **Research 101 and 201 are in FULL SWING!**

*This weekend is our third week of running this semester's rendition of Research 101, our foundations course for first semester students, and Research 201, our next-level advanced research methodology seminar for second and third semester students. In Research 101, Mr. Michael Amadi, one of our course instructors, started with the question of "what amount of scientific research is hypothesis driven" - in this module, we explained to students that science is often nonlinear and does not necessarily follow a simplistic one-directional "scientific method" process as they learn in grade school. This iterative process of hypothesis generation and validation is a key aspect of all research.*

*In Research 201, our department leads Dr. Larry McMahan and Dr. Edward Njoo this week launched a new module on giving students the practical skills to identify the BEST literature sources to reference in preparing the introduction / background statement in a research paper. In addition to engaging in vibrant breakout room discussions on "how old can/should references be?" in citations, the team also gave students practical pointers on how to efficiently create references in scientific writing, and also introduced our students to Mendeley and Zotero, two of the most common reference managers for creating and managing large bodies of literature for in-text citations. Please remind your students to attend and participate!*

## **Save the Date! ASDRP Research Expo & Symposium is March 22, 2025**

*The **In Person** ASDRP Summer 2024 Semester Research Symposium and Expo showcases some of the original scientific findings of 1000+ high school student researchers who conducted research across 200+ projects in a wide array of STEM fields. Students come from throughout the Bay Area, across the U.S., and internationally! The Symposium features students presenting the research they completed throughout the Fall 2024 & Spring 2025 semester and during their participation in ASDRP.*

*The Research Symposium & Expo showcases the students' novel results to their peers, parents, community, and friends. Importantly, these scientific projects conducted by students are original research with cutting-edge results, completed on \$10M+ worth of donated research equipment with highly qualified research mentors, and are not traditional "science lab" projects whose results are known. This event is a premier opportunity for high school students to be exposed to genuine research, scholarship, peer review, scientific reading and writing, and scientific presentation at a young age before college. At the completion of the Symposium, the students will be able to leverage their own published works in demonstrating their competitive advantage as they prepare to matriculate to college. We invite you to join us in the beginning of a wonderful journey for these young scientists.*

*Please come, view research posters, ask the students questions, listen to oral presentations, support these great kids, celebrate their accomplishments, and have fun!*

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The event is held at [Mission College](#) in Santa Clara. Mission College continues to be an incredible partner and allows the ASDRP community to utilize the [Gillmor Center](#). The Gillmor Center is **118,000 square foot** three-story interdisciplinary classroom facility. A big thank you to [Dr. Omar Murillo](#), [Clement Lam](#), and [Brian Shively](#) who make our partnership with Mission College possible.

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## **On the Horizon: Upcoming Events**

**Saturday, February 8, 2025 @ 10:00 - 11:30 AM**

**Research 101, Module 3: “Finding and Reading Scientific Literature”, Mr. Clinton Cunha**

*Research 101 is mandatory for all first semester students, and covers the fundamentals of research methodology, best practices, and basic statistics and writing skills. Module 3/Week 3, Mr. Cunha will be sharing a lesson on the dynamic process of research and the importance of finding and reading scientific literature. Discussions will center around how, why and practical examples will be provided during the session. First Semester Students are required to join us at [10:00 AM PDT via Zoom](#).*

**Saturday, February 8, 2025 @ 12:00 - 1:30 PM**

**Research 201, Week 3, Module 1 / Lecture 1: “Summarizing Research Space”, faculty-led**

*Week 3 of Research 201, our training course mandatory for all second and third semester, has its third practical session. Week 3 module will cover Summarizing Research Space: Identifying and Collecting Prior Articles in a Field. This module is designed to hone skills in starting on the path of collecting, distilling, and summarizing large bodies of prior literature in the field. All second and third semester students are required to join us at [noon on Zoom](#).*

**Saturday, February 8, 2025 @ 7:00 - 8:00 PM**

**Spring School Year Seminar: The Logic of Chemical Synthesis (Dr. Njoo) @ Seminar Room**

*This seminar meets on Saturday nights, with a focus on retrosynthetic analysis, strategies in atom- and step-economical total synthesis of natural products, and mechanistic study of named reactions. In person only, open to all students.*

**Tuesday, February 11, 2025 @ 5:00 - 7:00 PM**

**Spring 2025 In Person Safety Training - For Registered Students ONLY**

***Phase 2 (in-person walkthrough):** Facility walkthrough and training with either Dr. Pazzi or Dr. Kushnerov. Must have Phase 1 completed satisfactorily, including a 100% score on the final safety exam. You must have completed the online safety training modules in Canvas and registered in advance for the training.*

**Wednesday, February 12, 2025 @ 6:30 - 7:15 PM**

**Bi-weekly Parent Fireside Chat on Zoom**

*Join us every other week on Tuesday at 6:30 PM on Zoom for the ASDRP Parent Fireside chat. We will be talking about how to volunteer during the March 22, 2025 Expo & Research Symposium, Research/Publications, Launching of the advisor labs and next steps in the Spring semester for all students & parents.*

**Zoom Link:** <https://us06web.zoom.us/j/86088443622?pwd=mlwoEOGlvm1LPOKUaXa8X1nCbejBJ9.1>

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**Friday, February 14, 2025 @ 5:00 - 6:00 PM**

**Computational Resources Training, Module 2: "Internet Security, Phishing, and Malware"**

**Mr. Dennis Liu**

*The training occurs every week for five weeks and is mandatory for all first semester students in CSE or who recently transferred to research groups who use ASDRP computing resources for research.*

Join us on [Google Meet](#).

**Friday, February 14, 2025 @ 6:00 - 7:00 PM**

**Spring 2025 School Year Seminar: "On the Importance of Data Curation" Prof. Robert Downing**

*With the increasing public access to [very] large datasets, for all purposes, it is become imperative that someone in the inbound data stream has to make decisions, some of them very important, on the \*exact\* low-level modifications that have to be made. This is further compounded by external attempts to import data without it being validated. Here, we'll discuss how to perform this critical task, & why its uninteresting name guarantees there will be opportunities for anyone that can perform these tasks.*

Join us on [Google Meet](#).

**Saturday, February 15, 2025 @ 10:00 - 11:30 AM**

**Research 101, Module 4: "Plagiarism and Intellectual Property", Mr. Clinton Cunha**

*Research 101 is mandatory for all first semester students, and covers the fundamentals of research methodology, best practices, and basic statistics and writing skills. Module 4/Week 4, Mr. Cunha will be sharing a lesson on practical ways to ensure you avoid common research pitfalls that include plagiarism and intellectual property theft. Discussions will center around how, why and practical examples will be provided during the session.*

First Semester Students are required to join us at [10:00 AM PDT via Zoom](#).

**Saturday, February 15, 2025 @ 12:00 - 1:30 PM**

**Research 201, Week 4, Module 1 / Practical 1: "Workshop on developing rigorous, substantive, and specific background literature searches related to one's area of research", faculty-led**

*Week 4 of Research 201, our training course mandatory for all second and third semester, has its fourth practical session. Week 4 module will be a workshop dedicated to developing practical researcher skills on rigorous, substantive, and specific background literature searches related to one's area of research. All second and third semester students are required to join us at [noon on Zoom](#).*

**Saturday, February 15, 2025 @ 7:00 - 8:00 PM**

**Spring School Year Seminar: The Logic of Chemical Synthesis (Dr. Njoo) @ Seminar Room**

*This seminar meets on Saturday nights, with a focus on retrosynthetic analysis, strategies in atom- and step-economical total synthesis of natural products, and mechanistic study of named reactions. In person only, open to all students.*

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