

Astraea Therapeutics Mountain View

Prefer students who are interested in organic chemistry. The research in our laboratory involves drug design, organic synthesis, and medicinal chemistry of potential medications for drug abuse treatment. Hands-on experience in organic chemistry laboratory techniques desirable. There will be opportunities to learn the process of pharmaceutical drug discovery. There will also be opportunities to learn computer-assisted drug design techniques.

Notes: Near light rail and bus systems. Some nearby eatery choices.

Bay Area Biotechnology Education Consortium (BABEC) at SJSU Downtown San Jose

The student intern will assist in development and testing of experiments relating to fluorescent bacterial transformation for the Bay Area Biotechnology Education Consortium. The focus of the project will be construction of a plasmid with new fluorescent properties. The candidate must be prepared for extensive laboratory work, such as basic molecular biology, gel electrophoresis, bacterial transformation, and PCR. The intern will be expected to maintain a detailed laboratory notebook and must be familiar with standard laboratory practices, such as sterile technique.

Notes: SJSU is near public transportation VTA and bus systems. Parking on university lots is by purchased permit only. Plenty of restaurant and on-campus cafeteria choices. Please see http://www.sjsu.edu/about_sjsu/visiting/campus_maps/directions/.

California State University East Bay, Chemistry Hayward

Laboratory research assistant position at CSUEB with a biomedically-oriented synthetic organic chemist. Job is to directly assist Bachelor's and Master's degree researchers with recrystallization, distillation, rotary evaporation, radial chromatography, and other routine lab jobs. Attend weekly group meetings to discuss research findings. Should have a good interest/training/background in Chemistry or Biology.

Note: Accessible by BART and other public transportation. Directions at http://www.csu Hayward.edu/about_csuh/campuses_and_locations/driving.html - hayward.

Cordis/Conor Medsystems Fremont

The Cordis West Coast I/T group plans, delivers and supports all information technology systems and projects for the local business unit as well as other global sites within the J&J Franchise. Working as a member of the I/T team, duties and responsibilities include: 1) Learning how to setup and support PC systems and instrument connectivity for laboratory systems, 2) Shadow of all individual I/T team members to learn and provide feedback on their various projects (Manager to Desktop Support), 3) Learning how to upgrade and manage I/T intranet portal using MS SharePoint, 4) Assist in I/T systems migration from our Menlo Park facility to the new Fremont facility and 5) Exposure to Cordis software validation and project management methodologies. The student will understand the overall landscape of Information Technology functions in an established, multi-site corporation from project management, collaboration with business unit, and technical support. The intern will be exposed to all aspects of the life cycle of an I/T project from initiation to completion within an R&D environment. Requires good communication skills, motivated with a desire to learn, able to work in a team environment as well as independently, working knowledge and/or interest in Microsoft Operating system, Office, Internet/Intranet and general knowledge and/or interest in PC hardware, peripherals, and networking concepts.

Note: Need to have personal transportation. Eateries not nearby.

LifeScan, Inc., Business Intelligence



Milpitas

Business Intelligence (BI) is the function within LifeScan Information Technology. It provides Data Warehouse services – data extract, integration, reporting and analytics capabilities to Diabetes Franchise departments i.e. Sales and Marketing, Customer Service, R&D, QA, etc. Disaster planning and recovery of our application, is part of a critical business operation in the event of natural disasters i.e. floods, earthquake, typhoon, etc. The student will assist BI team members with compilation of key documentation for various BI tools i.e. Cognos, SAS, Autonomy. In addition, the student will perform bench test to validate the content of the documentation. The student will develop technical skills in the area of Data Warehouse tool installation and non-technical skills such as collaboration, teaming and adaptability. The outcome of the project will allow the student an understanding of Business Intelligence, its tools and its importance within the Diabetes Franchise. The student will gain high level experience on Business Intelligence reporting and analysis tools. Additionally, the ability to design and create documents using Microsoft Office tools (Word, Vizio, PowerPoint, Excel).

Note: Accessible by bus system. On-site cafeteria.

LifeScan, Inc., Global Customer Solutions, Learning & Development

Milpitas

The Customer Service L&D team is responsible for developing and delivering online training content to LifeScan Customer Service teams throughout the world. This team works cross functionally with departments all across the company to ensure that the Customer Service team is aligned with LifeScan Quality Systems and Policies. Some of the key functions of this team include maintaining an online training content manager and an online reference website. The intern will be responsible for migrating content from online training modules to the Customer Service Knowledgebase website. For each module, the contained literature will have to be reformatted and reworded to fit in the new web environment. The intern will assess and modify each module on a case-by case basis. The intern will have to survey Managers, Supervisors, and Customer Service Representatives to gain input on design requirements. This project is for someone interested in web design and content editing. Upon completing this assignment, the intern will have an understanding of an instructional designer role within the customer service department. The participant will get an opportunity to expand/enhance their knowledge in web content editing. Also, the intern will have an opportunity to develop collaboration, interpersonal, and presentation skills as he/she interacts with business partners.

Note: Accessible by bus system. On-site cafeteria.

LifeScan, Inc., Customer Solutions, Master Data

Milpitas

The Customer Solutions department creates and implements strategies that support communication and improved service with suppliers and customers electronically. This process includes purchase orders, shipping notices, invoices, etc. The Customer Solutions department brings retailers and manufactures together, enhances global commerce and improves customer value. The student intern will work with LifeScan's top 15 accounts to ensure product master data is correct in customers' purchasing systems. The project will entail retrieving and correcting data from the customer's purchasing system, then work to get the customer system updated. As time permits, work will be done to ensure the electronic data interchange files are also updated to ensure accuracy of purchases and invoices. Students will develop communication skills and learn to communicate ideas in a professional environment. They will learn the skills necessary to work independently in as well as part of a team to provide a better end result. Students will learn the importance of time management and being organized. Upon completion of this project the student will have an understanding of the electronic order system for customers in a medical device company. The student will present their accomplishments and recommendations for future improvements to the order system to the Customer Solutions team via a Power Point presentation.

Note: Accessible by bus system. On-site cafeteria.



LifeScan, Inc., World Wide Financial Planning & Analysis Milpitas

The WW FP&A organization consolidates analyzes & reports financial information for the WW Diabetes Care Franchise. This includes several J&J companies such as LifeScan, Animas, J&J Diabetes Institute, SymCare and Children with Diabetes. This financial information is used for internal reporting to allow the Diabetes Care Franchise Global Management Board to make business decisions & help to grow our business. The Diabetes Care Franchise has migrated to a new financial reporting system utilizing SAP. This project would offer a student experience in, 1) Basic understanding of the SAP BPC system as it relates to finance data entry, 2) Work with Finance Managers & Analysts in understanding the need for and emphasis on this type of analysis in making business decisions, 3) Data entry of financial information into the SAP system for accurate historical comparisons utilizing the new system, 4) Opportunity to interview strategic finance individuals to understand their role in the finance organization. Pre-requisite skills needed to successfully complete the project are organization skills, attention to detail, good communication skills, Microsoft Excel a plus but not required. The outcome of the project will allow the student an understanding of the importance of financial data in strategic planning for an organization. In addition, the student will have the opportunity to present their accomplishments via a PP presentation during a finance team meeting.

Note: Accessible by bus system. On-site cafeteria.

LifeScan, Inc., Franchise Services, Business Relations Milpitas

The Franchise Services department is responsible for business relationship management for global strategic affairs and the LifeScan web development team which includes the internal website **Diabetes Connect** and public website www.LifeScan.com. Student will be responsible for analysis of Social media tools to enhance LifeScan's visibility in the social media realm. Student will, 1) Research corporate policies regarding use of social media tools in marketing, 2) work closely with GSA and Marketing individuals to research opportunities and sites for diabetes franchise engagement in social media. (twitter, facebook, website), 3) benchmark other J&J social media engagements, 4) understand how these tools are being used and identify the benefits obtained and 5) assist in creating a social media roadmap for the global strategic affairs and marketing groups. The outcome of the project will allow the student an understanding of different social media tools and how they can be implemented in a business environment. They will understand the advantages and shortfalls of engagement in the social media arena. At the end of the project, the student will present their learnings and recommendations for social media engagement via Power Point presentation to the team. The student will gain hands-on experience developing social media tools and develop skills to enhance their critical thinking, analysis and collaboration experience. This is an excellent opportunity to assist in the creation of a social media program for the diabetes franchise. Pre-requisite skills needed to successfully complete the project: Strong computer skills with experience and knowledge using the face book application, knowledge of other social media tools appreciated.

Note: Accessible by bus system. On-site cafeteria.

LifeScan, Inc., Global Health Milpitas

The Occupational Health Services Dept. at LifeScan is a shared service from J&J's Global Health and Benefits. Its goal is to mitigate in prevention of injuries and illnesses and to provide medical surveillance for employee groups identified under potential risk exposures. We are part of a Corporation effort in creating and sustaining a global culture of health for its employees, their families and the communities. Key areas of focus include raising awareness on the HIV/AIDS epidemic, providing life style modification tools and resources for smoking cessation, physical activity, healthy eating and for building emotional resilience. The Global Health team is interested in updating its Archiving process. This proposed project would entail one student to analyze the current Archiving system in place. We will look at an In-Service to be provided by Archiving Department. The student

will work with J&J Occupational Health Nurses (registered nurses who are certified in Occupational Health) and Certified Health Technicians (certified medical technicians) to understand the current processes for recordkeeping, archiving and other related systems. The student will gain understanding of a occupational health office, be exposed to professional medical staff and learn the importance of proper recordkeeping to provide required data analysis, cost savings, and statistical report outs. Student also may have opportunity to observe onsite medical clinic laboratory work. At the end of the assignment, student will be asked to provide recommendations to process improvements for system revisions via power point presentation to the group. This project is compatible with a student interested in a career in Nursing or Medical technology. The student intern will learn about the operations of a medical office and provide suggestions for process improvement to current record keeping systems.

Note: Accessible by bus system. On-site cafeteria.

LifeScan, Inc., International Regulatory Affairs Milpitas

The Regulatory Affairs department is responsible for obtaining approval from various government agencies to market LifeScan product in different countries. Submissions are created according to medical device regulations in the countries in which we do business. This includes working with many regulatory agencies such as Heath Canada, US Food & Drug Administration, Japanese, Chinese, Middle Eastern, African and Latin American health authorities as well as J&J regulatory professionals around the globe. The student will work in a team environment, focused on global medical device submissions for the Diabetes Care Franchise. The student will assist the Global Regulatory Affairs team with global medical device submissions activity. This project would offer a student global experience in: Tracking the regulatory submission registration process for different countries. Analyzing and updating the registration database. Assist with softcopy and hardcopy filing and e-mails. Observing and participating in various approval process steps for global medical devices. Communicating with various Regulatory Affairs personnel by email and phone. *Communications skills training will be provided.* Exposure to notary process for different countries in U.S. and abroad. The student should expect to spend the majority of time using the computer and reading regulatory submissions documents. Tasks involve analysis and problem solving. An interest in international affairs and ability to interact with people on a global basis are a definite plus. The outcome of the project will allow the student an understanding of importance of regulatory affairs in an organization. In addition, the student will have the opportunity to present their accomplishments via PP presentation during a Regulatory Affairs team meeting.

Note: Accessible by bus system. On-site cafeteria.

LifeScan, Inc., Sales & Operations Planning Milpitas

Sales & Operations Planning manages the balance of supply & demand through demand forecasting, systems strategies, and master data management for the Americas region. The student will experience analyzing US demand forecasting strategies for the SMBG market and assist in developing an Executive S&OP deck to share outcomes from the Demand Plan for the launch of a new product. Student use PP software to develop presentation to highlight decisions that are in need of action. Sit in on regional S&OP meetings to gather background information on business strategy. Help support the creation of the regional and executive S&OP decks. The outcome of the project will provide the student an understanding of our SMBG demand forecasting process for new products. The student will also gain hands-on experience with developing a new product demand plan for a US business. Additionally, the ability to design future state system requirements and align the business and supply chain franchise processes is of added value to both the student and the organization. The skills developed will assist the student in critical thinking, analysis, collaboration & teaming, prudent risk taking, and sense of urgency.

Note: Accessible by bus system. On-site cafeteria.

LifeScan, Inc., Supplier Quality Milpitas

The Supplier Quality department is responsible for monitoring the external manufacturing of finished devices (meters, lancets, control solutions and lancing devices). This includes suppliers for components to manufacture products in our own factories and within the Diabetes Franchise to ensure product and the components comply with J&J requirements. The student will work closely with Quality Assurance management to create life cycle charts for the different LFS meter products and populate the information in Sharepoint (LifeScan's intranet database) via an internal database. The meter life cycle would capture critical information from launch to end of life (EOL) of each meter type including launch date of product, manufacturing site, kitting site, product enhancements, quality issues (CAPAs, RMBs, stop shipments, Recalls). The information captured would include key dates, serial number/lot number information with a brief description of the change. If time permits the role can be expanded to include creating database/indexes such as excel or Sharepoint for Supplier Quality documents such as Quality agreements, Quality Plans, Customer defined quality documents etc. The final outcome of the project will allow the student to experience setting up a database, an understanding of the different LFS products, insight into product quality/operations and would also provide cross functional/global exposure. The student would be working with a mentor in a team environment and collaboration with other individuals. The student would have opportunity to meet with other key individuals to understand different roles with in the suppliers.

Note: Accessible by bus system. On-site cafeteria.

The Parkinson's Institute Sunnyvale

The Parkinson's Institute is a non-profit clinical and basic research organization with a major emphasis on translational research. The mission of the Institute is to find the cause and cure for Parkinson's disease, and to provide comprehensive patient care for those affected by the disease. The students will participate in the Neurogenetics Program at the Parkinson's Institute. The program is committed to elucidating the role of genetic and epigenetic factors in Parkinson's disease and related disorders and translates these findings into new and better therapies. The lab is establishing a new stem cell model for Parkinson's disease using patient skin samples and the novel technique of reprogramming. The students will work with experienced researchers and will learn basic sterile tissue culture techniques and will observe and be involved in standard assays to characterize stem cells and neuronal cell types. They will learn maintenance of a tissue culture lab and data management.

Note: Accessible by bus system. Eateries nearby.

Regenerative Sciences Institute Sunnyvale

Construction and expression of chimeric proteins for cancer therapy. Students will use modern molecular biology techniques to build and express chimeric proteins for the development of new anti-cancer therapeutics. Participants will learn advanced PCR and cloning techniques as well as become familiar with scientific reasoning and troubleshooting.

Note: Accessible by bus system. Eateries nearby.

San José State University, Administrative Justice Downtown San Jose

Forensic DNA PCR optimization Different conditions during amplification may lead to varying levels of quality in the results. Some of the factors that may alter the quality include the temperature of annealing, the concentration and quality of the template, the ionic composition of the amplification master mix, and the presence of PCR inhibitors or contaminating DNA. Amplification of STRs from biological evidence may result in the generation of repeat slippage products (also known as stutter)

due putatively to slipped strand mispairing. In this mechanism, a region of the primer and template partially extended duplex denatures and then reanneals out-of register with non-base paired loops of single or multiple repeats being formed on either primer or template strands. The consequence of this may be a product that is shorter or longer than the template strand. In the forensic genetic markers, most of the products are 1 repeat shorter. This mechanism is also implicated in neuromuscular disorders such as Huntington's disease and Fragile X as triplet-repeat expansion. Lower levels or elimination of repeat slippage may assist in the interpretation of mixtures as repeat slippage of one of the donor's alleles may occur in the same size as the true allele of the other donor. Another set of factors that may influence the results of PCR are the presence of inhibitors. Some known inhibitors include heme (hematin) in blood samples, melanin in tissues and hair, polysaccharides and bile in feces, humic compounds in soil, urea in urine and dyes in denim. Research projects in this area in my laboratory have not yet been initiated thus providing an area for undergraduates to develop and test their own hypotheses.

Notes: SJSU is near public transportation VTA and bus systems. Parking on university lots is by purchased permit only. Plenty of restaurant and on-campus cafeteria choices. Please see http://www.sjsu.edu/about_sjsu/visiting/campus_maps/directions/.

San José State University, Chemistry, Vitamin D Downtown San Jose

The student laboratory intern will assist in the expression, purification and characterization of peptides or proteins. The peptides/proteins are related to various projects in the lab involving vitamin D receptors or RNA virus model systems. The responsibilities of the intern will include extensive laboratory work that will involve micropipetting, growth and maintenance of bacterial cultures, transformation of bacteria, column purification of proteins, micropipetting, and gel electrophoresis. If the peptides/proteins are successfully purified during the internship timeframe, the intern will also be able to do further procedures to measure binding affinities and other physical characteristics of the peptides/proteins. Independent work is expected once taught laboratory procedures. The intern will be required to do independent literature research on the topic and maintain a careful and detailed lab notebook. Excellent record-keeping, dilution, and solution preparation skills are a plus. Great communication skills, maturity, and responsibility are required. The candidate must be willing to work as part of a team, but should also be self-directed and able to work independently.

Notes: SJSU is near public transportation VTA and bus systems. Parking on university lots is by purchased permit only. Plenty of eatery choices near and on-campus. Please see http://www.sjsu.edu/about_sjsu/visiting/campus_maps/directions/.

Santa Clara University, Santa Clara County Biotechnology Education Partnership (SCCBEP) Santa Clara (near San Jose airport)

The student lab assistant intern will be supporting SCCBEP's kits and summer teacher workshops. The intern will work on inventorying, cleaning, testing, and refilling mobile lab kits under the supervision of SCCBEP staff. The process may involve lifting boxes, weighing out chemicals, aliquoting reagents, preparing buffers, and gathering supplies from the storage lab. There will also be experimental work testing the reagents used in SCCBEP supported labs. Interns will help with workshops for high school science teachers and may involve some clerical work. Techniques involve micropipetting, gel electrophoresis, bacterial plating, restriction enzyme digests, use of blood glucose monitors, and column chromatography. The intern will also be responsible for designing follow-up experiments based upon results. Independent work is expected once laboratory procedures are taught. Attention to detail is critical. Careful and detailed lab notebooks are required to monitor experiments and progress. Excellent record-keeping, dilution, and solution preparation skills are a plus. Great communication skills, maturity, and responsibility are required. The candidate must be willing to work as part of a team, but should also be self-directed and able to work independently.

Notes: SCU is across the street from transit terminal for BART, CalTrain, VTA and bus systems. There are 4 hour public street parking near Alumni Science Building. Plenty of nearby eateries. Directions <http://www.scu.edu/map/parking/directions.cfm>, campus map at <http://www.scu.edu/map/>.

Santa Clara University, Biology

Santa Clara (near San Jose airport)

“On the Trail of ‘Living Fossils’: Distribution, Dispersal and Isolation in Dragonflies”. For this project, we will study the distribution, movement and population genetics of the Black Petaltail dragonfly, *Tanypteryx hageni*. This species is a member of the oldest living family of dragonflies, known from fossils as far back as the Jurassic. These dragonflies live in wetlands and bogs in the Coastal Mountains, the Sierras and the Cascades in northern California and Oregon, but have relatives in some very distant places: Japan, Chile, New Zealand and Australia. The larvae of these dragonflies, which live in the bogs, can live as long as five years, while the adults fly for only a few weeks. Thus, populations can be isolated from one another in space—movement between bogs within the mountains may be difficult—and in some cases, individuals may be isolated by time, since only a small number of the larvae in each bog will emerge together in the same year to mate. We will be visiting sites throughout this region to collect and measure adult and larval dragonflies. These will be used for genetic analysis, to look at how isolated these mountain habitats are from one another, and whether individuals can move between them. We will also study adult movements through radiotracking, in which we will attach small radiotransmitters to the dragonflies to track them over several days.

This work will involve travel in northern California and Oregon from July 6th to August 6th, with one return trip to the San Jose area. The work will involve visits to some remote sites in natural areas and parks, and will include camping for accommodations. Students taking part in this project will get to work on collecting dragonflies, on taking body measurements such as total length, on photographing individuals and on helping to do radiotracking work. Some hiking may be required in sampling, and day-to-day work will potentially be muddy. Students must have parent permission before applying!

Notes: SCU is near public transportation BART, Caltrain, VTA and bus systems. There are 4 hour public street parking near Alumni Science Building. Plenty of nearby eateries. Directions at <http://www.scu.edu/map/parking/directions.cfm> and campus map at <http://www.scu.edu/map/>.

Santa Clara University, Biology

Santa Clara (near San Jose airport)

As the vertebrate embryo develops, certain classes of embryonic stems are formed that give rise to the neural, gut and muscle and connective tissues cells. One class of these embryonic stem cells are called mesenchymal stem cells. A subset of these cells has the potential to develop into myoblasts (precursors to striated muscle cells), osteoblasts (precursors to bone cells), chondrocytes (precursors to cartilage), adipocytes (precursors to fat cells), and hemangioblasts (precursors to the blood cell lineage). A mouse cell line has been isolated which can grow in culture in an undifferentiated state and retains the capacity to form all of these different cell types, depending upon the growth conditions and external signaling proteins that are included in the growth medium. This cell line is called c2c12 cells. The research project is focused on examining how these factors induce the specific differentiation of the c2c12 cells into these various cell types.

Notes: SCU is near public transportation BART, Caltrain, VTA and bus systems. There are 4 hour public street parking near Alumni Science Building. Plenty of nearby eateries. Directions at <http://www.scu.edu/map/parking/directions.cfm> and campus map at <http://www.scu.edu/map/>.

Stanford University, Biology

Stanford

In boring terms, we study the mechanism of host cell quality control in the secretory pathway. However, it contains some of the coolest and most important biology of the cell! Cells communicate with the outside world through many means, with one the most important conduits of communication



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occurring through the secretion of proteins through the secretory pathway. These secreted proteins have a wide range of biological functions, including mediating the ability of cells to stick to neighboring cells or to travel throughout the body and stimulating immune responses. In this project you will use a variety of biochemical, molecular and cell biology techniques to study how the cell maintains a tight control on the quality of proteins that are traveling along the assembly line of the secretory pathway, destined for the cell surface. A group of us are working on ER associated degradation. We are all really nice and fun people to be around!

Notes: Stanford is easily accessible by the public transportation system. Plenty of eateries on and off campus.