**Eugene Zhou**

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# EDUCATION

##### University of Southern California, School of Pharmacy – Los Angeles, CA August 2018 – Present

*Doctor of Philosophy, Clinical and Experimental Therapeutics*

##### University of Southern California, Marshall School of Business – Los Angeles, CA August 2018 – Present

*Master of Business Administration*

##### University of Southern California, School of Pharmacy – Los Angeles, CA May 2018

*Master of Science, Management of Drug Development*

##### University of California, Berkeley – Berkeley, CA August 2012

*Bachelor of Arts, Integrative Biology*

**WORK EXPERIENCE**

## USC School of Pharmacy - Los Angeles, CA August 2018 - Present

## *Research Associate*

* Lead and develop innovative multidisciplinary research projects with biomedical engineering and clinician collaborators to produce new therapeutics for unmet needs.
* Manage R&D budgets, timelines, and deliverables for research projects.
* Clearly define and communicate project and expectations to Master’s students and lab volunteers working on project.
* Maintain documentation for experimental methods and results for reproducibility, reports, and publications

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## Eyemedics, LLC - Pasadena, CA February 2017 –August 2018

*Drug Development Consultant/Project Manager*

* Developed formulation for lead intravitreal product while being under budget by 90+% by taking a multi-faceted approach, focusing on FDA guidance and safety prior to chemistry.
* Coordinate *in vitro* and GLP animal toxicology studies with collaborating sites, CRO’s, and key stakeholders

## Facilitate onboarding of new personnel by outlining expectations, establishing communication channels and data management systems.

* Develop, plan, initiate, and engage subject matter experts in executing new projects.
* Assist in developing deliverables and establish meeting management (set agendas, create meeting minutes, and maintain decision logs)
* Review budgets and contracts

## Developed innovative and safe drug formulations in accordance with target product profile and FDA regulatory guidance.

* Write and file scientific reports and project documents in management system and distribute to relevant individuals.
* Propose tools and strategies to optimize product development and studies.

## Literature search, patent and data mining

## USC School of Pharmacy - Los Angeles, CA November 2013- August 2018

## *Research Lab Assistant*

* Research emphasizes the translation of basic science concepts to the drug discovery space for the goal of developing a product that can treat disease in humans.
* Work closely with a cross-functional team to support translational and pre-clinical science
* Lead laboratory group and collaborate with other project teams to integrate new chemical entities and biomedical engineering for innovative therapies.
* Develop, implement, optimize, and troubleshoot in-vitro and ex-vivo assays.
* Independently design and execute screening and mechanistic studies.
* Formulation development for in vivo studies in accordance with regulatory guidance
* Compound and formulation stability studies using HPLC
* Liquid Chromatography/Mass Spectrometry (LC-MS/MS) triple quad assay development
* Plan, conduct, analyze, interpret and communicate results generated from studies
* Independently design and execute Pharmacokinetic (PK) studies in rodents
* Analysis of PK samples for the determination of bioavailability
* Basic PK modeling

## PAREXEL International – Glendale, CA March 2013-June 2014

## *Lab Technician*

* Possess detailed knowledge of study protocol lab procedures.
* Collect, process and ship labs, pharmacokinetic, and pharmacodynamic samples according to clinical study protocol.
* Ensures all equipment is functioning properly and have updated maintenance record
* Handles and disposes of hazardous and non-hazardous materials in accordance with safety protocols.
* Train new lab technicians
* Assumes responsibility for accurate documentation

# PROJECTS

##### Mechanistic Dissection of Drusen Clearance Using Phototherapy

##### Use bioinformatics technologies, qPCR, and other -Omics level techniques to analyze experimental results and decipher underlying molecular pathways for how post-treatment observations occur.

##### Development of Novel Near-Infrared Light-Activated Nano-Drug Carrier for Traumatic Brain Injury

* Collaborate with biomedical engineers and synthetic chemists to develop a targeted therapy for an unmet medical need.
* Develop new analytical methods for analysis of breakdown metabolites using in vitro and ex vivo models.
* Develop formulation for drug delivery of novel family of nano-cage compounds.
* Used metabolomics approach to drive development criteria for synthesis of next family of nano-cages.

##### Development of Biomimetic Lipoxin Analogue for Treatment of Wet Macular Degeneration

* Develop novel intravitreal formulation for biomimetic lipoxin by incorporating ICH guidelines and toxicology database into formulation development criteria.
* Establish safety profile of new drug product using in vitro, ex vivo, and in vivo models.
* Establish drug product stability profile and degradation products using ICH guidelines.

##### Development of Ultrasound Transducer for Trans-Scleral Drug Delivery

* Collaborate with biomedical engineers and ophthalmologists to develop a device and method for delivering drug products across the sclera to bypass intravitreal injections.
* Establish electrical parameters for ultrasound treatment by using ultrasound imaging techniques.
* Developed and used ex-vivo assay to measure subsequent drug diffusion into the vitreous humor.

##### Development of Small Molecule for Treatment of Duchenne’s Muscular Dystrophy

* Developed oral and subcutaneous formulations for a novel small molecule to be used for in vivo efficacy studies.
* Develop targeted LC-MS/MS assay to study degradation of candidate compound.
* Design and run pharmacokinetic studies in rodents.

**COMPUTER SKILLS**

* Mastery of Microsoft Office programs including Word, Excel, and PowerPoint
* Mastery of both Macintosh and Windows platforms
* Experienced with GraphPad Prism, JMP, Tableau, and IBM SPSS
* Basic experience with Matlab, R and Python programming languages