

DEAN STIPANIC

Skills

CHARACTERIZATION

UV-Vis Spectroscopy
H NMR
C NMR
Dynamic Light Scattering
SEM
FTIR

WET LAB

Organic Synthesis
Thin-Layer Chromatography
Column Chromatography
Safe Chemical Handling

SOFTWARE

MATLAB
C++
Python
Microsoft Office

Employment

Avro Life Sciences

Jan./'20 - Aug./'20

Research Engineer

- Developed and tested novel Ionic Liquid combinations on Franz Diffusion cells to gauge the ability of these combinations to permeate through skin
- Synthesized, purified and characterized novel surfactant and polymer constituents which were added to transdermal formulations currently being tested
- Analyzed diffusion and characterization data, presented my findings at weekly team meetings and used the results to determine the next steps for each of the formulation components
- Conducted thorough literature review of current research in the transdermal drug delivery field to develop synthetic schemes and testing procedures for new formulation constituents

Frank Gu Research Group - University of Toronto

Sept./'18 - Apr./'19

Nano-medicine Researcher

- Developed and scaled synthesis of amphiphilic block polymers for use in targeted drug delivery applications
- Characterized resulting nanomaterials by NMR, dynamic light scattering, TEM and UV-Vis, and interpreted obtained data to determine the best course of action for the project
- Collaborated with Myx Therapeutics, a start-up spun off from the Frank Gu Lab, to optimize pharmaceutical encapsulation and stability of polymeric micelles
- Independently managed multiple projects which required time management, technical planning and prioritizing tasks
- Designed and implemented SOPs based on literature for best laboratory practices, record keeping, reporting and safety
- Advanced oral, written, and visual communication skills by presenting data to supervisors and colleagues at weekly lab meetings, maintaining a daily log of experiments and data, and delivering oral presentations

Evertz Microsystems Ltd

Jan./'18 - Apr./'18

Hardware Design Engineer

- Spearheaded thorough testing plans to prove the functionality of several products
- Designed and implemented infrastructure for a Python application used to automatically test new hardware, saving several hours of manual verification per product revision
- Maintained daily engineering log detailing all testing and code additions/modifications
- Surpassed expectations as shown by highest possible performance evaluation of "Outstanding"

Activities

iGem Synthetic Biology Design Team

Jan./'18 - Jan./'20

Lab and Design Team Member

- Collaborated with interdisciplinary group of students through ideation, revision, planning and execution of synthetic biology design project
- Established keen research ability by performing literature review, identifying interesting research directions, and designing experiments
- Swiftly became conversant in synthetic biology principles and gained ability to apply these principles through independent study
- Acquired thorough wet and dry lab training, as well as hands-on experience with techniques such as; Cell Culturing, PCR, Gel Electrophoresis, DNA Purification, DNA Cloning and Flow Cytometry

Markham Aquatic Club

Sept./'12 - June/'16

Competitive Swimmer

- Balanced heavy workload and intense training schedule while using excellent time management skills to maintain a competitive academic average

Education

University of Toronto

Sept./'21 - Present

Candidate for Masters of Applied Science, Chemical Engineering

University of Waterloo

Sept./'16 - Apr./'21

Bachelor of Applied Science, Nanotechnology Engineering