

SANCHIT CHOPRA

Chemical/Biomedical Engineering & Entrepreneurship Student
@ University of Calgary | Seymour Schulich Scholar

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EXPERIENCE

Chemical Engineering Intern

NOVA Chemicals Corp.

📅 05/2020 - Ongoing 📍 Calgary/Joffre Site

- Assisting process engineering in manufacturing infrastructure focusing on demineralization, clarification, co-gen, and river water systems
- Developed a mathematical model for a settling pond to predict total organic carbon that provided insight into seasonality changes and ideal dosage rates of coagulant
- Studied high turbidity in the phosphate removal system by correlating ASPEN process data to inventory data and provided recommendations to reduce chemical usage and shift turbidity within spec
- Targeted cause of early regeneration in demineralization system and developed a sampling tool for improved inspection
- PowerBI/Excel Dashboard for visual management of site-wide cost data for leadership

Undergraduate Research Student

Pharmaceutical Production Research Facility

📅 05/2020 – 09/2019

- 📍 University of Calgary, Dr. Michael Kallos Laboratory
- Designed/performed experiments for large scale production of human nerve and skin-derived Schwann cells required for clinical applications
- Cultured human cell lines in static before passaging into stirred suspension bioreactors (10mL and NDS-100mL), microscopy, protein isolation, mass-spec
- Optimized growth factors including feeding, agitation and seeding densities resulting in 15x fold expansions (2x more than static culture)
- Delivered on-stage presentation at Biomedical Engineering Society's Annual Meeting (Philadelphia, USA) and poster presentations at Alberta Biomedical Engineering Conference and Hotchkiss Brain Institute Symposium

Undergraduate Research Student

Mathison Centre for Mental Health Research & Education 📅 05/2018 – 09/2018

- 📍 University of Calgary, Dr. Rajamannar Ramasubbu
- Linear mixed model analysis of longitudinal repeated mixed measures (SPSS), administering TMS (visor2 XT), electroencephalography setup and processing (MATLAB), MRI Level 1 Training, Data analysis (R/MATLAB/SPSS/Excel)
- Abstract published in Biological Psychiatry, Volume 85, Issue 10, S338
- Co-author: *Personality changes with subcallosal cingulate deep brain stimulation in patients with treatment resistant depression*. Journal of Psychiatry and Neuroscience (in review)
- Acknowledged in *Long versus short pulse width subcallosal cingulate stimulation for treatment-resistant depression: a randomized, double-blind, crossover trial*. Lancet Psychiatry.2020; 7: 29–40

Student Research Assistant

Ungrin Laboratory

📅 05/2018 – 09/2018

- 📍 University of Calgary, Department of Comparative Biology & Experimental Medicine
- Using CRISPR/Cas9 technology to model FSHD in vitro
- Synthesizing genetically engineered elements, nucleofection protocols, gel electrophoresis, cell culture, marker staining, quantitative PCR, synthetic biology
- Presented findings at McCaig Institute Summer Student Symposium Alberta Sanofi Biogenius Competition - Top 5 & best senior project/gold medal from Genome Alberta

Founder & CEO

Stores24x7.com

📅 01/2019 - Ongoing 📍 Calgary, AB, Canada

- We help you succeed on the web and grow your bottom line.
- Website design, logo design, search engine marketing and optimization, social media, digital marketing and web analytics
- Actively working with City of Calgary helping local businesses have an online presence amidst the COVID-19 pandemic

Heritage Youth Researcher Summer Program

University of Calgary

📅 07/2016 – 09/2016 📍 Calgary, AB, Canada

- Examining the dental health of declining muskox and caribou populations
- Spy-Hill lab: Muskox jaw surgery, dental health analysis (incisor breakage, molar wear pattern, enamel defect, soft tissue and bone abnormalities)
- Working with hunters and guides of Cambridge Bay and Kugluktuk for muskox jaw samples

Entrepreneurship Projects

Hunter Hub for Entrepreneurial Thinking, University of Calgary

- Program Developer, Social Innovation (Hunter Hub for Entrepreneurial Thinking)
- HelpAKid.org - Increasing transparency of donations worldwide
- UMetabolic: Personalized Dietary Monitoring - 50 Startups, Schulich Incubator
- DormMarket.com - Student Marketplace

EDUCATION

BSc. in Chemical Engineering, Specialization in Biomedical Engineering, Minor in Entrepreneurship and Enterprise Development

University of Calgary, Schulich School of Engineering
(May 2022 Expected Graduation)

FEATURED AWARDS

Seymour Schulich Scholarship

Academic merit as well as contribution to school life, community service and/or entrepreneurial talent.
Full-ride scholarship. (\$37,200)

Cannon Lachapelle Scholarship for Entrepreneurship

Demonstrating creativity and innovation in new ways of doing, thinking and supporting the UCalgary campus community and/or society beyond. (\$10,000)

Other Awards

- Next36 Finalist: Accelerating the growth of Canada's most talented young entrepreneurs.
- Deans List Winter 2020, Jason Lang Scholarship (3x)
- Biomedical Engineering Undergrad research funding (2019), Mathison Centre Undergrad research award (2018), HYRS Alumni
- StartUpCalgary/50-Start-Ups Presenter, Great Kids Award (2017)
- Alberta Sanofi Biogenius Comp Top 5 (2017), Genome Alberta Senior Award Best Project (2017), R&D Grant SAIT (2016)

VOLUNTEERING

Friendly Visiting Volunteer

Multiple Sclerosis Society of Canada

📅 2016 – Ongoing (paused due to COVID-19)

Visit a person who has progressive MS, cognitive impairment and severe depression every week
Fundraising events, including Hike for MS, A&W Burgers for MS research funding

Patient Experience Visitor

Alberta Health Services - Foothills Medical Centre

📅 09/2015 - 03/2020 (~5 years, paused due to COVID-19)

- 3 hour shift weekly to interact and help the patients recover from traumatic injuries.
- Assist language barrier (Hindi to English)

Director for Autism Works

Enactus - Calgary Chapter

📅 03/2019 - 05/2020

Managed a start-up development project for entrepreneurs with autism - grant writing, website design, grant writing