

# 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 and recommend ideal dosage rates of coagulant providing cost savings of \$25,000 per annum
- 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

### Undergraduate Research Student

**Pharmaceutical Production Research Facility** 📅 05/2020 - 09/2019

📍 University of Calgary

- 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), cell sorting, microscopy, protein isolation, mass-spec and chromatography
- 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

### Founder & CEO

**stores24x7.com** 📅 01/2019 - Ongoing 📍 Calgary, Alberta, 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

### Undergraduate Research Student

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

📍 University of Calgary

- 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)
- Abstract published in Biological Psychiatry, Volume 85, Issue 10, S338
- 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** 📅 07/2016 - 09/2017 📍 University of Calgary

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

### Entrepreneurship Projects

**Hunter Hub for Entrepreneurial Thinking** 📍 University of Calgary

- Shaping the entrepreneurial ecosystem in Calgary by hosting social innovation events at the University of Calgary of ~25 participants/event
- 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 (2017-Ongoing)

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 Semester, Jason Lang Scholarship (3x), HYRS Alumni,

## VOLUNTEERING

### Friendly Visiting Volunteer

**Multiple Sclerosis Society of Canada**

📅 2016 - Ongoing

- 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

- 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

## PUBLICATIONS

Personality changes with subcallosal cingulate deep brain stimulation in patients with treatment resistant depression

**Manuscript in Review (Biol. Psychiatry)**

📅 11/2020