Utkarshna Sinha

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GitHub : sinhaut

Education

- **University of Toronto** — Toronto, ON
  Honours Bachelor of Science, Human Biology & Psychology — *June 2018*

Research & Design Experience

- **Pharmacy and Microbiology Departments, University of Toronto** — Toronto, ON
  Research Student — *Sept 2016 – Apr 2017*
  - Identified and conducted lab experiments to investigate antimicrobial resistance and synthetic biology applications
  - Employed bioinformatics software (CLC Workbench, MEGA, etc.) and Excel to analyze results
  - Presented research findings in manuscript style reports, on posters, and on Powerpoint to faculty and students
- **Bioengineering Department, University of Toronto** — Toronto, ON
  Biomedical Engineering Capstone Design Project — *Sept 2017 – Apr 2017*
  - Designed, & prototyped an electronic medical device to alleviate post-surgical complications in pediatric patients
  - Developed an Android game for interactive assessment of lung function using Unity3D, C# & Maya
  - Used SolidWorks to design device components for 3D printing
  - Identified stakeholder requirements through a user-centered approach by conducting informational interviews
- **Pennsylvania State University** — Hershey, PA
  Research Assistant, Physiology Department — *Summer 2014, 2015*
  - Experimentally investigated the effect of ambient air pollution on lung disease
  - Collected, analyzed, and visualized data from experiments using statistical methods on MS Excel
  - Presented orally and on posters at international (EB 2015) and national (GWIS, WiSE, CUCOH, & OQUIC) conferences

Leadership Experience

- **City of Toronto - Youth Nutrition Advisory** — Toronto, ON
  Committee Member — *Jan 2017 – Dec 2017*
  - Created plans to increase nutrition awareness for the City of Toronto's youth spaces in high-priority areas
  - Organized workshops to engage at-risk youth aged 12 - 20 in adopting a healthy nutrition plan
- **University of Toronto Biomod Team** — Toronto, ON
  Founder and President — *Sept 2014 – Aug 2016*
  - Managed a team of 60 life science and engineering undergraduate students to research, design, and prototype a biomolecular design project
  - Coordinated team finances by communicating with, and establishing relationships with internal and external sponsors to pitch the project to secure over $6000 in funding
- **Journal of Undergraduate Life Sciences** — Toronto, ON
  Editor — *Sept 2016 – Apr 2017*
  - Peer-reviewed primary and review articles written by undergraduate students for clarity, scientific proficiency and provide constructive feedback to the authors
  - Articles were subsequently edited by professors and published in JULS, the UofT undergraduate student journal

Publications

- Cabello N, Mishra V, **Sinha U**, DiAngelo SL, Chroneos ZC, Ekpa NA, Cooper TK, Caruso CR, Silveyra P. 2015. Sex differences in the expression of lung inflammatory mediators in response to ozone. *American Journal of Physiology*
- Clark ST, **Sinha U**, Zhang Y, Wang PW, Donaldson SL, et al. PBP3 is a common adaptive target among P. aeruginosa isolates from cystic fibrosis patients treated with β-lactams. *International Journal of Antimicrobial Agents.* (Pending Review)
- **Sinha U**, Fuentes N, Spinelli AM, Caruso C, Nicoleau M, DiAngelo S, Mishra V, Chroneos ZC, Silveyra P. ATF3 regulation of the lung inflammatory response to ozone. (Pending Submission)