KRISTEN STEENBERGEN

Bioinformatician

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SUMMARY

Enthusiastic soon-to-graduate bioinformatics master's student with extensive biotech lab experience and strong molecular biology background. Motivated to perform well individually and as a team with a proven history of producing quality results promptly while working independently with minimal oversight. Looking to use strong R and Python programming skills to conduct bioinformatics analyses. Experienced in writing, testing, and debugging code, as well as working with high-dimensional -omics data. Interested and available for part-time or project-based remote work.

EDUCATION

MASTER'S DEGREE

M.S. Biotechnology
Concentration: Bioinformatics
Johns Hopkins University
Current GPA: 4.0
2019 – Present
Expected Graduation: May 2022

BACHELOR'S DEGREE

Agriculture: Biotechnology
Minor: Chemistry
Dordt University
GPA: 3.9
2004 – 2008

SKILLS

- Python and R / Bioconductor
- MySQL
- Linux
- RStudio
- Git
- Cloud Computing
- Statistics
- LaTeX

WORK EXPERIENCE & PROJECTS

RESEARCH VOLUNTEER

University of Texas Health San Antonio, Alexander Bishop Lab via The Bioinformatics Research Network January 2021 - Present

- Analyzed transcriptomic changes and R-loop dynamics in Ewing sarcoma cell lines treated with a splicing inhibitor.
- Completed differential gene expression, and differential transcript usage analysis using R/Bioconductor on RNA-Seq data.
- Presented results and code in RMarkdown reports at regular lab meetings.
- Collaborating remotely using Github, Slack, and Zoom.
- Middle authorship expected at publication.

GRADUATE STUDENT

Johns Hopkins University 2019-Current
Academic project highlights:

- Created an application to allow users to browse mutations in h-CoV-2019 Variants. This project utilized a SQL database, python CGI scripts, JQuery, CSS, and HTML5, and can be found at www.covidvariantbrowser.com.
- Completed a research manuscript as part of a group to detail our research regarding the analysis of a novel SNP reported in the literature.

RESEARCH TECHNOLOGIST

Government of Alberta, Field Crop Development Centre, Biotechnology Lab 2008 – 2014

- Participated in various research projects including high throughput genotype screening for various SNPs in barley cultivars, and assay development for detecting Fusarium graminearum.
- Programmed automated Liquid Transfer Workstation robot to autonomously complete DNA extractions and PCR plate preparation increasing lab efficiency.
- Utilized various biotechnology applications. Lab skills listed on the following page.
- Completed technical writing and editing for reports, posters, and publications.
- Analyzed data, and facilitated experiment design, scheduling, and troubleshooting.

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LAB SKILLS

- qRT-PCR
- High Throughput Screening
- DNA/RNA Extraction
- ELIZA
- Western Blot
- Affinity Chromatography
- Fungal Culture
- Media Preparation
- Electrophoresis

PROFESSIONAL DEVELOPMENT

- DataCamp: ChIP-seq with Bioconductor
- DataCamp: Data Visualization with ggplot2

VOLUNTEER

- Waskasoo Community Association Board – Director-at-Large
  2013 – Present
- Waskasoo Community Gardens Committee – Member
  2016 - Present

WORK EXPERIENCE (CONTINUED)

STUDENT PRACTICUM

Plasmapheresis Department, Hematech Inc. Spring 2008

- Completed a research project involving protein purification of colostrum from transgenic cattle.
- Analyzed data and compiled results that optimized the purification process and enhanced internal efficiency.

CHEMISTRY LAB TEACHING ASSISTANT

Dordt University Fall 2005

- Provided instructional assistance, grading, and tutoring to students during lab hours.

STUDENT INTERNSHIP

Canadian Pacific Genetics Centre, Abbotsford Veterinary Clinic Summer 2005

- Assisted with embryo transfer and in vitro fertilization procedures for dairy cows.
- Performed media preparation, embryo processing, cryopreservation, and embryo culturing.

RESEARCH

- K.Kumar; J. Zantinge; K. Xi; **K. Steenbergen**; P. Juskiw; S. Waterman; M. Holtz. Plant Pathogen Interaction Enzyme Expression (PPIEE) assay for linking enzymes to fusarium head blight resistance in barley. Poster presented at: Plant Pathology Society of Alberta Annual Meeting; October 2014; Canmore, AB.
- K.Kumar; P. Juskiw; K. Xi; S. Lohr; **K. Steenbergen**; J. Zantinge; M. Holtz. Evaluation of Seed Assay to Screen Barley for Fusarium Head Blight Resistance. Poster presented at: Plant Pathology Society of Alberta Annual Meeting; November 2013; Brooks, AB.
- K. Kumar; **K. Steenbergen**; P. Juskiw; K. Xi; J. Zantinge; M. Holtz. Detection of resistance in barley to Fusarium graminearum through an in vitro seed germination assay. Poster presented at: 7th Canadian Workshop on Fusarium Head Blight; November 2011; Winnipeg, MB.
- S. Xue; J. L. Zantinge; **K.J. Steenbergen**; and P.E. Juskiw. Molecular markers identified that are linked to resistance or susceptibility of barley to scald. Poster presented at: Plant Pathology Society of Alberta Annual Meeting; October 2010; Lethbridge, AB.

REFERENCES AVAILABLE UPON REQUEST