DYLAN AMMONS

DVM-PhD candidate
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Summary

I am a clinically driven bioinformatician with experience in next-generation sequencing data analysis in non-traditional animal models. My PhD work focused on clinical and computational investigation in the setting of canine immuno-oncology. Early in my PhD program I used immunological assays to investigate immune responses to intervention in dogs with cancer, then in the latter half of my program I used computational approaches to develop canine transcriptomic tissue atlases. Moving forward, I hope to develop my computational skills while continuing to use next-generation sequencing approaches to enhance animal and human health.

Experience

Graduate Research Assistant | Immunologist/Bioinformatician
08/2017 – 08/2023 Fort Collins, CO

Tasks:

- Contribute to study design, sample processing, and Illumina library preparation
- Analyze and interpret single-cell RNA sequencing, bulk-RNA sequencing, and NanoString data
- Give formal and informal presentations of results throughout study progression
- Develop and maintain bioinformatics analysis pipelines
- Prepare formal scientific write-ups of findings

Skills & Expertise

Computational: Single-cell RNA sequencing • Bulk RNA sequencing • Deconvolution algorithms • NanoString

Programming: R • Bash • Python • Git • Slurm • Microsoft SharePoint

Laboratory: Flow cytometry • Immuno-assays • Tissue culture • Clinical sample handing • Next-generation sequencing library preparation

Soft: Communication • Problem solving • Data visualization

Education

Colorado State University, Doctor of Veterinary Medicine — expected 2025
Colorado State University, PhD Immunology — 2023
Ursinus College, Molecular Biology and Neuroscience double major, Biostatistics minor — 2017

Relevant publications & pre-prints

Ammons, Dylan T., et al. "Single-cell RNA sequencing reveals the cellular and molecular heterogeneity of treatment-naïve primary osteosarcoma in dogs." (2023).

Ammons, Dylan T., et al. "A single-cell RNA sequencing atlas of circulating leukocytes from healthy and osteosarcoma affected dogs." Frontiers in Immunology 14 (2023): 1162700.

Ammons, Dylan T., et al. "Reprogramming the canine glioma microenvironment with tumor vaccination plus oral losartan and propranolol induces objective responses." Cancer Research Communications 2.12 (2022): 1657-1667.