

# Jake Miller-Dawson

8501 w 7<sup>th</sup> ave, Lakewood, CO 80215-720 212 4388-jakedawson4721@gmail.com

---

## EDUCATION AND CERTIFICATION

---

### **Bachelor of Science, Arts**

Colorado State University (CSU), Fort Collins, CO

**December 2019**

### **Master of Science**

Colorado State University, (CSU), Fort Collins, CO

**May 2021**

### **Emergency Medical Technician Certification**

Front Range Community College (FRCC), Fort Collins, CO

**May 2022**

### **Intravenous Technician Certification**

Oquirrh Mountain Phlebotomy School LLC, Denver, CO

**September 2022**

### **Basic Life Support (CPR and AED)**

American Heart Association, Fort Collins, CO

**January 2022**

## PROFILE

---

- Very open-minded and hard-working with strong communication skills in high-pressure situations
- Strong teamwork skills from participating in group sports over the course of 14 years and working alongside others of different backgrounds and abilities
- Capable of always having an upbeat attitude and mindset from past work experience and volunteer service
- Multilingual with near fluency in German
- Exceptional leadership skills from organizing and running school events

## WORK EXPERIENCE

---

### **Littleton Adventist Hospital, Emergency Department, Critical Care Technician, Littleton, CO**

July 2023-April 2024

- Providing care for all patients arriving in the Emergency Department by hooking up to oxygen and cardiac monitors, placement of IV for intravenous therapy, performance of EKG, and blood collection for lab testing, as well as training new technicians to Emergency Department responsibilities
- Critical role in full/partial trauma cases, cardiac alerts, stroke alerts, coagulation alerts, and code blue cases through cardiac monitoring, establishment of IV access and therapy, and CPR
- Occasional responsibility of organization of patient care through establishing specialty consult, inpatient bed requests, and interfacility transport
- Working on a team to provide exceptional emergency care alongside other technicians and RNs, as well as Physician Assistants and Emergency/Trauma Physicians

### **Saint Anthony's Hospital, Emergency Dept Observation Unit, Critical Care Technician, Lakewood, CO**

November 2022-July 2023

- Aiding in care for patients admitted to observation status from the Emergency Department and working directly with multiple RNs, as well as Physician Assistants and Nurse Practitioners
- Primarily responsible for placement of IVs, performance of EKGs, and blood collection for lab testing including syringe draws, PIVO utilization, and use of butterfly needles
- First point of contact for admitted patients, including settling of patient into room, obtaining initial vital signs, subsequent vital signs every 4 hours, and monitoring/maintaining adequate oxygen saturation
- Critical role in rapid responses and sepsis alerts in placing a second IV in patients and obtaining multiple blood draws for various lab tests and blood cultures

### **CSU MIP Department, Robertson Lab, Research Associate, Fort Collins, CO**

June 2021-September 2022

- Testing experimental drug compounds in Balb/c acute and chronic TB efficacy models against *Mycobacterium tuberculosis* in a A/BSL-3 setting

- Mouse handling skills including scruffing, oral gavage, subcutaneous, intraperitoneal injections for drug administration, and submandibular bleeds to measure drug pharmacokinetic activities
- Performing genomic DNA prep, PCR, gel electrophoresis, gel extraction, and genomic sequencing to study mutations in *Mycobacterium tuberculosis* genes that lead to drug-resistance
- Developing experimental assays testing drug-drug interactions *in vitro* as well as testing cidalty of drug compounds against *Mycobacterium tuberculosis in vitro*
- Mentoring multiple undergraduate microbiology students in lab experimentation and aseptic technique

**CSU MIP Department, Zabel Lab, Research Associate and Team Lead, Fort Collins, CO**

August 2020-April 2021

- Screening saliva samples from students and faculty at CSU for COVID-19
- Following specialized protocol for assumed hot samples including generation of droplets for ddPCR and data interpretation
- Working with a team of researchers including post-doctorate fellows, PhD students, Master's students, and undergraduates to screen saliva samples totaling over 139,000 samples tested
- Aliquoting, freezing, and archiving frozen positive samples for future research in addition to performing variant assays to test for SARS-CoV-2 variants

**Scribe America, Scribe Ambassador, Fort Collins/ Loveland/Aurora, CO July 2018- August 2020**

- Documenting history and charting details for patients under Internal Medicine at Poudre Valley Hospital and Medical Center of the Rockies, Emergency Medicine at Anschutz Medical Center
- Direct exposure to medical care and management
- Tracking and managing multiple patients from emergency room and outside facilities

## LEADERSHIP AND SERVICE

---

**Research Associate, Team Lead/Mentor**

August 2020-September 2022

- Main point of communication between all working members in the lab at any given time
- Ensuring protocols are followed and performed to the best of all members' abilities
- Organizing breaks, ensuring staff coverage, and closing the lab for the night after all samples are processed
- Teaching undergraduate microbiology students how to perform experimental assays using aseptic technique and guiding them through undergrad and life following graduation

**Medical Scribe, Trainer/Scribe Ambassador**

May 2019-August 2020

- Teaching new scribes hospital flow, correct charting and documentation, and incorporation of pertinent lab results and radiology in relation to chief complaint
- Discussing progress of multiple trainees with other scribes trainers and coordinating direction of training
- Changing training methods to suit each individual person based on their learning abilities

**Honors Program, Student**

Fall 2015-December 2019

- Demonstrating a higher level of critical thinking at the University level
- Increased public speaking and leadership skills
- Volunteered time to organizations such as Serve 6.8 Resource Center and Homeless Gear and other non-profit organizations in the future

**Medical Bacteriology Lab, Undergraduate Teaching Assistant**

January 2018-May 2018

- Prepared future laboratory sessions for students by growing bacterial cultures, taking inventory of necessary supplies, and maintaining laboratory equipment
- Helped teach undergraduate students about aseptic laboratory technique
- Proctored exams and organized final written exam

## RESEARCH AND PUBLICATIONS

---

- Wagner, K., Fox, P., Gordon, E., Hahn, W., Olsen, K., **Miller-Dawson, J.**, Markham, A., ... & Zabel, M. D. (2023). "A multiplexed, paired-pooled droplet digital PCR assay for detection of SARS-CoV-2 in saliva". *Scientific Reports*, PMID: 36813822.
- Ramey, M., Kaya, F., Bauman, A., **Miller-Dawson, J.**, Podell, Br., ... Robertson, G. (2023) "Drug Distribution and Efficacy of the DprE1 Inhibitor BTZ-043 in the C3HeB/FeJ Mouse Tuberculosis Model" *Antimicrobial Agents and Chemotherapy*. PMID: 37791784.