**Alaska Scientific Crime Detection Laboratory**

**Statement of Qualifications**

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| **Name** | Shelly Thao | **Date** | 10 May 2021 |

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| **Job Title** | Forensic Technician I |

**Indicate all disciplines in which you currently perform testing or calibration work according to the Scope of Accreditation:**

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| **☐** | **Drug Chemistry** | **☐** | **Toxicology - Testing** |
| **☐** | **Biology** | **☐** | **Firearms/Toolmarks** |
| **☐** | **Latent Prints** | **☐** | **Crime Scene** |
| **☐** | **Breath Alcohol (non-accredited discipline)** |

**For each discipline checked in the table above, list all categories in which you perform work:**

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| **Evidence:** accessioning all sections’ items, transfers from sections to evidence vault to ship items back to agencies, evidence transfer of biology long term storage (LTS) items  **DNA:** maintenance of instruments in the lab spaces, CODIS entries, LTS item transfers and storage |

**Education:** List all higher academic institutions attended (list high school only if no college degree has been attained)**.**

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| Institution | Dates Attended | Major | Degree Completed |
| University of Alaska Fairbanks (UAF) | 08/2017 – 05/2020 | Biochemistry with Music Performance minor  Associate of Science | BSc Biochemistry w/ Music Performance minor  AS Associate of Science |
| University of Alaska Anchorage (UAA) / Mat-Su College | 08/2014 – 05/2016 | General Studies | AAS General Studies |
| Colony High School | 08/2009 – 05/2014 | HS Diploma | HS Diploma |

**Continuing Education:**  List formal coursework, conferences, workshops, in-service and other training received applicable to past and current forensic related positions.

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| Course Title | Source of Training | Date(s) of Training |
| Undergraduate Research: Molecular Work | UAF Chemistry Course X1 & UAF Weltzin Lab | 01/2018 – 04/2020 |
| Analytical Chemistry w/ Labs | UAF Chemistry Courses X2 | 08/2019 – 04/2020 |
| Biochemistry | UAF Chemistry Courses X2 | 01/2019 - 12/2019 |
| SDS-PAGE Gels | UAF Kuhn and Oliver Labs | 08/2018 – 05/2019 |
| Fundamentals of Biology w/ Labs | UAF Biology Courses X2 | 01/2018 – 12/2018 |
| Organic Chemistry w/ Labs | UAF Chemistry Courses X2 | 08/2017 – 05/2018 |
| Intro Microbiology w/ Lab | UAS Microbiology Course X1 | 08/2015 – 12/2015 |

**Testimony:** Complete the information below for testimony provided.

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| Discipline or Category of Testimony | Period of Time in Which Testimony Occurred | Approximate Number of Times Testified |
| N/A | N/A | N/A |

**Professional Affiliations:** List professional organizations of which you are or have been a member. Indicate any offices or other positions held and the date(s) of these activities.

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| Organization | Period of Membership | Offices or Positions Held/Dates |
| UAF Alumni | 08/2018 - current | Member |
| American Institute of Chemistry | 04/2020 – 04/2022 | Member |
| Society for Neuroscience | 10/2019 – 10/2020 | Member |
| UAF SSS Trio Program | 08/2017 – 05/2020 | Member & Ambassador (10/2019 – 04/2020) |

**Employment History:** List all scientific or technical positions held, particularly those related to forensic science. **List current position first.** Add additional sections as necessary.

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| **Job Title** | Undergraduate Student Researcher | **Tenure** | N/A |
| **Employer** | UAF – BLaST and INBRE (Weltzin Lab) | | |
| Provide a brief description of principal duties: | | | |
| Department of Chemistry and Biochemistry, University of Alaska Fairbanks  Advisors: Dr. Maegan Weltzin and Dr. Karsten Hueffer  Project: “Rabies virus glycoprotein interactions with neuronal nicotinic subtypes”  • Performed cell and molecular assays to support research studies  • Interpreted and analyzed research data to draw conclusions on outcomes  • Maintained material and stock levels consistent with business requirements while meeting target capital objectives  • Collaborated with materials purchasing specialist to meet production requirements and quality standards  • Created posters and presented at four local conferences and a national conference  • Used Prism GraphPad to perform qualitative and quantitative analysis of graphs and statistical data • Performed routine data analysis to correct and verify data entry  • Maintained a safe, organized working environment by setting up and sterilizing equipment  • Prepared fact sheets, tables, and graphs to summarize research results  • Encouraged good habits and modeled practical problem-solving for lab colleagues  • Followed quality standards and procedures to minimize errors and maximize lab productivity and results  • Developed standard operating procedures and document workflows for current and future process steps  • Attended bi-weekly lab meetings to discuss project progress and any concerns regarding progress and lab tasks  • Peer-mentored three different students on molecular techniques and project concepts | | | |

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| **Job Title** | Volunteer Student Researcher | **Tenure** | N/A |
| **Employer** | UAF Murphy and Oliver Labs | | |
| Provide a brief description of principal duties: | | | |
| Department of Chemistry and Biochemistry, University of Alaska Fairbanks  Advisors: Dr. Carl Murphy and Dr. Ryan Oliver  • Created a protocol for NMR data analysis of samples  • Analyzed rat blood plasma via 600 MHz NMR  • Identified metabolomic peaks in NMR spectra  • Compiled metabolomics NMR data | | | |

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| **Job Title** | Lab Manager Assistant | **Tenure** | N/A |
| **Employer** | Mat-Su College Science Labs | | |
| Provide a brief description of principal duties: | | | |
| Department of Natural and Physical Sciences, Mat-Su College  Supervisor: Mr. Richard Chiolero  • Assisted Lab Manager with setting up chemistry and biology lab  • Put together an online inventory of chemicals and supplies  • Disposed of microbiological wastes and biohazardous wastes | | | |

**Other Qualifications:** List below all personal certifications identifying the issuing organization and the dates; all scientific publications and/or presentations you have authored or co-authored, research in which you are or have been involved, academic or other teaching positions you have held, and any other information which you consider relevant to your qualifications.

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| **Presentations**  **Thao, S.,** Spain, C., Hueffer, K., and Weltzin, M. (March 2020). Rabies viral glycoprotein inhibition of neuronal nicotinic subtypes. Oral  Presentation at the University of Alaska Fairbanks’ Chemistry Seminar, Fairbanks, AK.  Macander, S., **Thao, S.,** Murphy, C., and Oliver, R. (December 2019). NMR-Based Comparison, Identification, and Quantification of Whole and Polar Extraction Methods of Arctic Ground Squirrel Plasma. Poster presented at University of Alaska Fairbanks Chemistry Department Potluck, Fairbanks, AK.  **Thao, S.,** Spain, C., Hueffer, K., and Weltzin, M. (October 2019). Rabies viral glycoprotein inhibition of neuronal nicotinic subtypes. Poster presented at Society for Neuroscience Conference, Chicago, IL.  Macander, S., **Thao, S.,** Murphy, C., and Oliver, R. (September 2019). NMR-Based Comparison, Identification, and Quantification of Whole and Polar Extraction Methods of Arctic Ground Squirrel Plasma. Poster presented at Alaska IDeA Network of Biomedical Research Excellence (INBRE) Retreat, Talkeetna, AK.  **Thao, S.,** Spain, C., Hueffer, K., and Weltzin, M. (September 2019). Rabies virus glycoprotein derived peptide interaction with various nAChRs. Poster presented at Biomedical Learning and Student Training Research Mixer, Fairbanks, AK.  **Thao, S.,** Spain, C., Hueffer, K., and Weltzin, M. (September 2019). The study of a derived dog rabies virus glycoprotein peptide’s interactions with nicotinic acetylcholine receptors. Poster presented at Alaska IDeA Network of Biomedical Research Excellence (INBRE) Retreat, Talkeetna, AK.  **Thao, S.,** Spain, C., Hueffer, K., and Weltzin, M. (May 2019). Rabies virus glycoprotein derived peptide interaction with various nAChRs. Poster presented at One Health Research Conference of Alaska, Fairbanks, AK.  **Thao, S.,** Spain, C., Hueffer, K., and Weltzin, M. (April 2019). Rabies virus glycoprotein derived peptide interaction with various nAChRs. Poster presented at University of Alaska Fairbanks’ Research Day, Fairbanks, AK.  **Awards**  Biomedical Learning and Student Training Undergraduate Research Experience; UAF BLaST from 08/2018 – 05/2019  Biomedical Learning and Student Training Scholar; UAF BLaST from 08/2019 – 04/2020  Biomedical Learning and Student Training Travel Award; UAF BLaST from 10/2019  Biomedical Learning and Student Training Scientist of the Month; UAF BLaST from 04/2020  IDeA Network of Biomedical Research Excellence Undergraduate Research Assistantship; UAF INBRE from 05/2019 – 08/2019  UAF Weltzin research from August 2017 – April 2020  Peer mentor (UAF Weltzin Lab) from 09/2018 – 04/2020  **Webinars**  Forensic Science: Challenges, Considerations, and a Path Forward webinar (Zooms/YouTube); Center for Statistics and Applications in Forensic Evidence (05/2021)  Assessing Footwear Examiner Performance Webinar (Zooms/YouTube); Center for Statistics and Applications in Forensic Evidence (05/2021)  **Trainings/Certs**  Lab Safety Series Chemical Hygiene; EHS Training (05/2021)  Lab Safety Series Corrosives; EHS Training (05/2021)  Lab Safety Series Ergonomics; EHS Training (05/2021)  Lab Safety Series Flammables; EHS Training (05/2021)  Lab Safety Series Fume Hoods; EHS Training (05/2021)  Lab Safety Series Personal Protective Equipment; EHS Training (05/2021)  Lab Safety Series Pollution Prevention; EHS Training (05/2021)  Lab Safety Series Spill Control; EHS Training (05/2021)  Lab Safety Series Toxics; EHS Training (05/2021)  Safety Data Sheets; EHS Training (05/2021)  Toxicology; EHS Training (05/2021)  Back Safety; EHS Training (05/2021)  Material Handling and Storage Procedures; EHS Training (05/2021)  Slips, Trips and Falls; EHS Training (05/2021)  APSIN Basic Certification of Completion; State of Alaska Department of Public Safety (05/2021)  JT Training Completion LIMS 3.8; Justice Trax (04/2021)  First Aid/AED/CPR Certification; American Heart Association (04/2021)  Bloodborne Pathogens Certification; EHS Training (04/2021)  Office Safety Certification; EHS Training (04/2021)  Working Safely – Job Safety Analysis (General); EHS Training (04/2021)  Fire Safety Certification; Fire Extinguisher Training (04/2021)  Firearms Safety Certification; Metropolitan Police Department (04/2021)  **Teaching Positions**  Tutor; Private from 10/2018 – 11/2018 and 10/2019 – 12/2019 |