**NATALIE NOVOTNA**

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**EDUCATION**

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| **MASTER OF SCIENCE: FORENSIC SCIENCE,** Syracuse University, Syracuse, NY  Advanced Forensic Science Master’s Program: Biology Concentration  Research Projects: Optimizing Separation of Prokaryotic and Eukaryotic Mixed Samples Through Chemical and Enzymatic Treatments, Whole Genome Amplification of Single Cell Samples for Forensic Casework  GPA: 3.899/4.00  Relevant Coursework: Statistics for the Forensic Sciences, Forensic DNA Analysis, Forensic Analysis of Biological Evidence, Molecular Genetics, Forensic Toxicology, Forensic Pathology  **BACHELOR OF SCIENCE: BIOCHEMISTRY,** Virginia Tech, Blacksburg, VA  Magna Cum Laude graduate  GPA: 3.65/4.00  Relevant Coursework: General Biochemistry I, II, Laboratory Problems in Biochemistry and Molecular Biology, Genetics, Biological Statistics, General Microbiology  **BACHELOR OF ARTS: CHEMISTRY,** Virginia Tech, Blacksburg, VA  Magna Cum Laude Graduate  GPA: 3.65/4.00    Relevant Coursework: Physical Chemistry, Physical Chemistry Laboratory, Analytical Chemistry, Analytical Chemistry Laboratory, Organic Chemistry  **THE AMERICAN SOCIETY FOR BIOCHEMISTRY AND MOLECULAR BIOLOGY (ASBMB)**  Certified Degree in Biochemistry and Molecular Biology | MAY 2022  MAY 2020  MAY 2020  MAY 2020 |

**EXPERIENCE**

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| **RESEARCHER**, Charles University, Prague, Czech Republic  Constructed allelic ladder for big cats (*Panthera* genus) targeting tRNA-Proline region, utilized ZYMO RESEARCH kits, performed fragmentation analysis and sequence analysis on SeqStudio, performed genetic genealogy testing for customers (Y-chromosome, mtDNA HVR1 and HVR2), presented results on a SWFS (Society for Wildlife Forensic Science) 2022 conference  **GRADUATE COURSE ASSISTANT,** Forensic and National Security Sciences Institute, Syracuse University  Assisted in teaching FSC 474/674 Forensic DNA Analysis, guided students with their assignments and understanding the material, performed troubleshooting with Osiris Software  **GRADUATE RESEARCH STUDENT,** Forensic and National Security Sciences Institute, Syracuse University   * Extracted DNA using QIAGEN kits, amplified whole genomes with Illustra Single Cell GenomiPhi DNA Amplification kit, quantified the amount of DNA with QuBit Fluorometer and QuantStudio 3, co-amplified known loci utilizing PowerPlex Fusion 6C System, and analyzed samples using 3500xL Genetic Analyzer in Osiris Software, troubleshooted with vendors * Trained undergraduate and graduate students in forensic laboratory techniques, communicated with vendors/technical support and presented results, wrote and developed protocols of new/changed methods   **INTERNSHIP IN DNA/BIOLOGY EVIDENCE DEPARTMENT**, Center for Forensic Sciences, Onondaga County Health Department, Syracuse, NY  Completed over 130 hours in The Wallie Howard Jr. Center for Forensic Sciences, observed and shadowed analysts from DNA/Biological evidence section processing casework, prepared samples and kits for new employee training, did statistical analysis on sexual assault cases in Excel | JULY 2022-PRESENT  JANUARY-MAY 2022  JANUARY 2021-  MAY 2022  SUMMER 2020 |

**LEADERSHIP EXPERIENCE**

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| **SYRACUSE UNIVERSITY VARSITY WOMEN’S TENNIS TEAM**, Syracuse, NY  Set an example of individual and team accountability, commitment to team culture and managed high-pressure environments in competition as a player and coach  **VIRGINIA TECH VARSITY WOMEN’S TENNIS TEAM,** Blacksburg, VA  Completed 20 hours/week of team training, travel, and competition, while using hard-work and perseverance to develop strong leadership and time management skills both in athletics and academics | AUGUST  2020-  MAY 2022  AUGUST 2016-MAY 2020 |

**SKILLS**

* Proficient in forensic laboratory techniques including DNA extraction, PCR amplification (Human and non-human), whole genome amplification, profile interpretation and sequencing, developing new amplification kits for target organism
* Experience with instruments (and software) including Applied Biosystems Veriti Thermal Cycler, Lightcycler 480 II, QuantStudio 3 & 5, 3500xL Genetic Analyzer, SeqStudio
* Proficient in body fluid identification tests including Phenolphthalein, p30, Phadebas tests, and more
* Ability to understand and follow complex oral and written instructions
* Experience with communicating with vendors and technical support
* Ability to write protocols and present results clearly to professional and lay audiences
* Utilizing time-management, flexibility, fast-learning, and leadership on a daily basis
* Experience using Blackboard, Canvas, Microsoft Office suite, Zoom, Teams